


CERTIFICATE OF ANALYSIS

Paige Cornell
Vanasse Hangen Brustlin, Inc
101 Walnut Street
Watertown, MA 02272

RE: Eversource Transmission Project (12970.03)
ESS Laboratory Work Order Number: 1810642

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 1:56 pm, Nov 01, 2018

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.



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Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

SAMPLE RECEIPT

The following samples were received on October 23, 2018 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Low Level VOA vials were frozen by the Client on October 18, 2018 at 16:00.

Question I: All samples for EPH were analyzed for a subset of the required MCP list per the client's request.

Lab Number	Sample Name	Matrix	Analysis
1810642-01	MP36	Soil	1010, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8260B Low, 8270D, 9045, 9050A

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PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

C8J0541-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).

Bromomethane (25% @ 20%)

C8J0541-CCV1 Continuing Calibration %Diff/Drift is below control limit (CD-).

1,4-Dioxane (21% @ 20%), Bromoform (27% @ 20%)

CJ82421-BS1 Blank Spike recovery is above upper control limit (B+).

Bromomethane (135% @ 70-130%)

CJ82421-BSD1 Relative percent difference for duplicate is outside of criteria (D+).

Bromomethane (40% @ 20%)

8151A Chlorinated Herbicides

1810642-01 Modified result

MCPP

1810642-01 Peaks found in the retention time window for MCPP did not confirm by GC/MS.

8270D Semi-Volatile Organic Compounds

C8J0525-CCV1 Calibration required quadratic regression (O).

2,4-Dinitrophenol (101% @ 80-120%), Pentachlorophenol (116% @ 80-120%)

C8J0525-CCV1 Continuing Calibration %Diff/Drift is below control limit (CD-).

4-Chloroaniline (22% @ 20%)

C8J0525-CCV1 Initial Calibration Verification recovery is above upper control limit (ICV+).

4-Nitrophenol, Di-n-octylphthalate

No other 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. 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](#)



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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 04-2.1 - 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
- 5035 - 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.



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MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **1810642-01**

Matrices: () Ground Water/Surface Water Soil/Sediment () Drinking Water () Air () Other: _____

CAM Protocol (check all that apply below):

- | | | | | | |
|--|---|---|--|---|------------------------------------|
| <input checked="" type="checkbox"/> 8260 VOC
CAM II A | <input checked="" type="checkbox"/> 7470/7471 Hg
CAM III B | () MassDEP VPH
(GC/PID/FID)
CAM IV A | <input checked="" type="checkbox"/> 8082 PCB
CAM V A | () 9014 Total
Cyanide/PAC
CAM VI A | () 6860 Perchlorate
CAM VIII B |
| <input checked="" type="checkbox"/> 8270 SVOC
CAM II B | () 7010 Metals
CAM III C | () MassDEP VPH
(GC/MS)
CAM IV C | <input checked="" type="checkbox"/> 8081 Pesticides
CAM V B | () 7196 Hex Cr
CAM VI B | () MassDEP APH
CAM IX A |
| <input checked="" type="checkbox"/> 6010 Metals
CAM III A | () 6020 Metals
CAM III D | <input checked="" type="checkbox"/> MassDEP EPH
CAM IV B | <input checked="" type="checkbox"/> 8151 Herbicides
CAM V C | () Explosives
CAM VIII A | () TO-15 VOC
CAM IX B |

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

- A Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? Yes No ()
- B Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? Yes No ()
- C Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? Yes No ()
- D Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? Yes No ()
- E VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). Yes No ()
 b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? Yes () No ()
- F Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? Yes No ()

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

- G Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? Yes No ()*
- Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*
- H Were all QC performance standards specified in the CAM protocol(s) achieved? Yes () No *
- I Were results reported for the complete analyte list specified in the selected CAM protocol(s)? Yes () No *

***All negative responses must be addressed in an attached laboratory 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: Laurel Stoddard
 Printed Name: Laurel Stoddard

Date: November 01, 2018
 Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<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>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.25)		6010C		1	KJK	10/25/18 13:55	2.48	100	CJ82452
Arsenic	8.42 (2.62)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Barium	17.0 (2.62)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Beryllium	0.23 (0.12)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Cadmium	ND (0.52)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Chromium	11.0 (1.05)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Lead	8.08 (5.25)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Mercury	ND (0.028)		7471B		1	MJV	10/25/18 11:30	0.93	40	CJ82453
Nickel	7.21 (2.62)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Selenium	ND (5.25)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Silver	ND (0.52)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Thallium	ND (5.25)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Vanadium	10.2 (1.05)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452
Zinc	13.2 (2.62)		6010C		1	KJK	10/25/18 6:55	2.48	100	CJ82452



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Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77
Initial Volume: 14.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,1,1-Trichloroethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,1,2,2-Tetrachloroethane	ND (0.0009)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,1,2-Trichloroethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,1-Dichloroethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,1-Dichloroethene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,1-Dichloropropene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2,3-Trichlorobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2,3-Trichloropropane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2,4-Trichlorobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2,4-Trimethylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2-Dibromo-3-Chloropropane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2-Dibromoethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2-Dichlorobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2-Dichloroethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,2-Dichloropropane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,3,5-Trimethylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,3-Dichlorobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,3-Dichloropropane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,4-Dichlorobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
1,4-Dioxane	ND (0.0449)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
2,2-Dichloropropane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
2-Butanone	0.0266 (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
2-Chlorotoluene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
2-Hexanone	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
4-Chlorotoluene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
4-Isopropyltoluene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
4-Methyl-2-Pentanone	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Acetone	0.168 (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Benzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Bromobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Bromochloromethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421



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 Client Project ID: Eversource Transmission Project
 Client Sample ID: MP36
 Date Sampled: 10/18/18 14:00
 Percent Solids: 77
 Initial Volume: 14.5
 Final Volume: 10
 Extraction Method: 5035

ESS Laboratory Work Order: 1810642
 ESS Laboratory Sample ID: 1810642-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromodichloromethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Bromoform	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Bromomethane	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Carbon Disulfide	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Carbon Tetrachloride	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Chlorobenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Chloroethane	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Chloroform	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Chloromethane	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
cis-1,2-Dichloroethene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
cis-1,3-Dichloropropene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Dibromochloromethane	ND (0.0009)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Dibromomethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Dichlorodifluoromethane	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Diethyl Ether	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Di-isopropyl ether	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Ethyl tertiary-butyl ether	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Ethylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Hexachlorobutadiene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Isopropylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Methyl tert-Butyl Ether	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Methylene Chloride	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Naphthalene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
n-Butylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
n-Propylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
sec-Butylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Styrene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
tert-Butylbenzene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Tertiary-amyl methyl ether	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Tetrachloroethene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Tetrahydrofuran	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Toluene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421



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 Client Project ID: Eversource Transmission Project
 Client Sample ID: MP36
 Date Sampled: 10/18/18 14:00
 Percent Solids: 77
 Initial Volume: 14.5
 Final Volume: 10
 Extraction Method: 5035

ESS Laboratory Work Order: 1810642
 ESS Laboratory Sample ID: 1810642-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
trans-1,2-Dichloroethene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
trans-1,3-Dichloropropene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Trichloroethene	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Trichlorofluoromethane	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Vinyl Chloride	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Xylene O	ND (0.0022)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Xylene P,M	ND (0.0045)		8260B Low		1	10/24/18 15:33	C8J0541	CJ82421
Xylenes (Total)	ND (0.0045)		8260B Low		1	10/24/18 15:33		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	127 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	92 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	113 %		70-130
<i>Surrogate: Toluene-d8</i>	103 %		70-130



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Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project
 Client Sample ID: MP36
 Date Sampled: 10/18/18 14:00
 Percent Solids: 77
 Initial Volume: 20.1
 Final Volume: 5
 Extraction Method: 3546

ESS Laboratory Work Order: 1810642
 ESS Laboratory Sample ID: 1810642-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: DMC
 Prepared: 10/25/18 15:05

8081B Organochlorine Pesticides

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4,4'-DDD	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
4,4'-DDE	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
4,4'-DDT	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Aldrin	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
alpha-BHC	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
alpha-Chlordane	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
beta-BHC	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Chlordane (Total)	ND (0.0259)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
delta-BHC	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Dieldrin	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Endosulfan I	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Endosulfan II	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Endosulfan Sulfate	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Endrin	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Endrin Ketone	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
gamma-BHC (Lindane)	ND (0.0019)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
gamma-Chlordane	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Heptachlor	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Heptachlor Epoxide	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Hexachlorobenzene	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517
Methoxychlor	ND (0.0032)		8081B		1	10/26/18 13:41	C8J0583	CJ82517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	62 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	62 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	57 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project
 Client Sample ID: MP36
 Date Sampled: 10/18/18 14:00
 Percent Solids: 77
 Initial Volume: 19.7
 Final Volume: 10
 Extraction Method: 3540C

ESS Laboratory Work Order: 1810642
 ESS Laboratory Sample ID: 1810642-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: CAD
 Prepared: 10/25/18 17:24

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1221	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1232	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1242	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1248	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1254	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1260	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1262	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512
Aroclor 1268	ND (0.07)		8082A		1	10/26/18 23:07		CJ82512

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	99 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	98 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	89 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	82 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77
Initial Volume: 20.9
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: SMR
Prepared: 10/25/18 12:11

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons	51.7 (12.5)		8100M		1	10/26/18 2:29	C8J0542	CJ82519
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: O-Terphenyl</i>		85 %		40-140				



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77
Initial Volume: 10.4
Final Volume: 4
Extraction Method: 3546

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 10/30/18 16:00

8151A Chlorinated Herbicides

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2,4,5-T	ND (0.012)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
2,4,5-TP (Silvex)	ND (0.012)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
2,4-D	ND (0.059)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
2,4-DB	ND (0.059)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
Dalapon	ND (0.057)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
Dicamba	ND (0.012)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
Dichlorprop	ND (0.059)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
Dinoseb	ND (0.059)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
MCPA	ND (2.91)		8151A		1	11/01/18 3:02	C8J0692	CJ83033
MCPP	# ND (2.94)		8151A		1	11/01/18 3:02	C8J0692	CJ83033

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: DCAA</i>	<i>94 %</i>		<i>30-150</i>
<i>Surrogate: DCAA [2C]</i>	<i>101 %</i>		<i>30-150</i>



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77
Initial Volume: 15.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/24/18 11:10

8270D Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,2,4-Trichlorobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
1,2-Dichlorobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
1,3-Dichlorobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
1,4-Dichlorobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,4,5-Trichlorophenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,4,6-Trichlorophenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,4-Dichlorophenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,4-Dimethylphenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,4-Dinitrophenol	ND (2.06)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,4-Dinitrotoluene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2,6-Dinitrotoluene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2-Chloronaphthalene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2-Chlorophenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2-Methylnaphthalene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2-Methylphenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
2-Nitrophenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
3,3'-Dichlorobenzidine	ND (0.824)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
3+4-Methylphenol	ND (0.824)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
4-Bromophenyl-phenylether	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
4-Chloroaniline	ND (0.824)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
4-Nitrophenol	ND (2.06)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Acenaphthene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Acenaphthylene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Acetophenone	ND (0.824)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Aniline	ND (2.06)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Anthracene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Azobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Benzo(a)anthracene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Benzo(a)pyrene	ND (0.206)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Benzo(b)fluoranthene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Benzo(g,h,i)perylene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Benzo(k)fluoranthene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77
Initial Volume: 15.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/24/18 11:10

8270D Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
bis(2-Chloroethoxy)methane	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
bis(2-Chloroethyl)ether	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
bis(2-chloroisopropyl)Ether	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
bis(2-Ethylhexyl)phthalate	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Butylbenzylphthalate	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Chrysene	ND (0.206)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Dibenzo(a,h)Anthracene	ND (0.206)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Dibenzofuran	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Diethylphthalate	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Dimethylphthalate	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Di-n-butylphthalate	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Di-n-octylphthalate	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Fluoranthene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Fluorene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Hexachlorobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Hexachlorobutadiene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Hexachloroethane	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Indeno(1,2,3-cd)Pyrene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Isophorone	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Naphthalene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Nitrobenzene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
N-Nitrosodimethylamine	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Pentachlorophenol	ND (2.06)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Phenanthrene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Phenol	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309
Pyrene	ND (0.411)		8270D		1	10/24/18 20:45	C8J0525	CJ82309

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	67 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	77 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	72 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	73 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project
 Client Sample ID: MP36
 Date Sampled: 10/18/18 14:00
 Percent Solids: 77
 Initial Volume: 15.8
 Final Volume: 0.5
 Extraction Method: 3546

ESS Laboratory Work Order: 1810642
 ESS Laboratory Sample ID: 1810642-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 10/24/18 11:10

8270D Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Surrogate: 2-Fluorophenol		72 %		30-130				
Surrogate: Nitrobenzene-d5		73 %		30-130				
Surrogate: Phenol-d6		69 %		30-130				
Surrogate: p-Terphenyl-d14		66 %		30-130				



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project
Client Sample ID: MP36
Date Sampled: 10/18/18 14:00
Percent Solids: 77

ESS Laboratory Work Order: 1810642
ESS Laboratory Sample ID: 1810642-01
Sample Matrix: Soil

Classical Chemistry

<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>Units</u>	<u>Batch</u>
Conductivity	318 (5)		9050A		1	LAB	10/24/18 16:08	umhos/cm	CJ82415
Corrosivity (pH)	5.64 (N/A)		9045		1	CCP	10/23/18 18:25	S.U.	CJ82323
Corrosivity (pH) Sample Temp	Soil pH measured in water at 20.1 °C.								
Flashpoint	> 200 (N/A)		1010		1	LAB	10/26/18 16:46	°F	CJ82628
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	10/26/18 22:47	mg/kg	CJ82627
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	10/26/18 22:47	mg/kg	CJ82627



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CJ82452 - 3050B

Blank

Antimony	ND	5.00	mg/kg wet
Arsenic	ND	2.50	mg/kg wet
Barium	ND	2.50	mg/kg wet
Beryllium	ND	0.11	mg/kg wet
Cadmium	ND	0.50	mg/kg wet
Chromium	ND	1.00	mg/kg wet
Lead	ND	5.00	mg/kg wet
Nickel	ND	2.50	mg/kg wet
Selenium	ND	5.00	mg/kg wet
Silver	ND	0.50	mg/kg wet
Thallium	ND	5.00	mg/kg wet
Vanadium	ND	1.00	mg/kg wet
Zinc	ND	2.50	mg/kg wet

LCS

Antimony	87.1	18.9	mg/kg wet	79.40	110	0-218
Arsenic	62.2	9.43	mg/kg wet	59.00	105	85-115
Barium	222	9.43	mg/kg wet	233.0	95	83-116
Beryllium	55.0	0.42	mg/kg wet	59.50	93	84-116
Cadmium	85.3	1.89	mg/kg wet	98.70	86	84-116
Chromium	233	3.77	mg/kg wet	240.0	97	85-115
Lead	256	18.9	mg/kg wet	276.0	93	84-116
Nickel	276	9.43	mg/kg wet	298.0	93	84-116
Selenium	92.4	18.9	mg/kg wet	100.0	92	86-115
Silver	39.6	1.89	mg/kg wet	39.70	100	81-120
Thallium	123	18.9	mg/kg wet	128.0	96	80-120
Vanadium	196	3.77	mg/kg wet	201.0	98	88-111
Zinc	533	9.43	mg/kg wet	590.0	90	85-115

LCS Dup

Antimony	98.5	18.5	mg/kg wet	79.40	124	0-218	12	20
Arsenic	60.1	9.26	mg/kg wet	59.00	102	85-115	3	20
Barium	211	9.26	mg/kg wet	233.0	91	83-116	5	20
Beryllium	55.0	0.41	mg/kg wet	59.50	92	84-116	0.05	20
Cadmium	83.8	1.85	mg/kg wet	98.70	85	84-116	2	20
Chromium	229	3.70	mg/kg wet	240.0	96	85-115	2	20
Lead	257	18.5	mg/kg wet	276.0	93	84-116	0.5	20
Nickel	271	9.26	mg/kg wet	298.0	91	84-116	2	20
Selenium	91.5	18.5	mg/kg wet	100.0	91	86-115	1	20
Silver	38.4	1.85	mg/kg wet	39.70	97	81-120	3	20
Thallium	122	18.5	mg/kg wet	128.0	95	80-120	0.6	20
Vanadium	192	3.70	mg/kg wet	201.0	95	88-111	2	20
Zinc	527	9.26	mg/kg wet	590.0	89	85-115	1	20

Batch CJ82453 - 7471B

Blank



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch CJ82453 - 7471B

Mercury	ND	0.033	mg/kg wet							
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LCS

Mercury	12.4	1.71	mg/kg wet	12.00		103	80-120			
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LCS Dup

Mercury	12.4	1.65	mg/kg wet	12.00		103	80-120	0.01	20	
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5035/8260B Volatile Organic Compounds / Low Level

Batch CJ82421 - 5035

Blank

1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0100	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0100	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0100	mg/kg wet							
Acetone	ND	0.0100	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Low Level

Batch CJ82421 - 5035

Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0020	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0100	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0572		mg/kg wet	0.05000		114	70-130			
Surrogate: 4-Bromofluorobenzene	0.0489		mg/kg wet	0.05000		98	70-130			
Surrogate: Dibromofluoromethane	0.0532		mg/kg wet	0.05000		106	70-130			
Surrogate: Toluene-d8	0.0499		mg/kg wet	0.05000		100	70-130			

LCS

1,1,1,2-Tetrachloroethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,1,1-Trichloroethane	0.0582	0.0050	mg/kg wet	0.05000		116	70-130			
1,1,2,2-Tetrachloroethane	0.0526	0.0020	mg/kg wet	0.05000		105	70-130			
1,1,2-Trichloroethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Low Level

Batch CJ82421 - 5035

1,1-Dichloroethane	0.0587	0.0050	mg/kg wet	0.05000		117	70-130			
1,1-Dichloroethene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
1,1-Dichloropropene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130			
1,2,3-Trichlorobenzene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
1,2,3-Trichloropropane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130			
1,2,4-Trichlorobenzene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
1,2,4-Trimethylbenzene	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
1,2-Dibromo-3-Chloropropane	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dibromoethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
1,2-Dichlorobenzene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130			
1,2-Dichloroethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
1,2-Dichloropropane	0.0577	0.0050	mg/kg wet	0.05000		115	70-130			
1,3,5-Trimethylbenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130			
1,3-Dichlorobenzene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130			
1,3-Dichloropropane	0.0561	0.0050	mg/kg wet	0.05000		112	70-130			
1,4-Dichlorobenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
1,4-Dioxane	0.861	0.100	mg/kg wet	1.000		86	70-130			
2,2-Dichloropropane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
2-Butanone	0.281	0.0100	mg/kg wet	0.2500		112	70-130			
2-Chlorotoluene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
2-Hexanone	0.260	0.0100	mg/kg wet	0.2500		104	70-130			
4-Chlorotoluene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
4-Isopropyltoluene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
4-Methyl-2-Pentanone	0.258	0.0100	mg/kg wet	0.2500		103	70-130			
Acetone	0.233	0.0100	mg/kg wet	0.2500		93	70-130			
Benzene	0.0578	0.0050	mg/kg wet	0.05000		116	70-130			
Bromobenzene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Bromochloromethane	0.0544	0.0050	mg/kg wet	0.05000		109	70-130			
Bromodichloromethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130			
Bromoform	0.0417	0.0050	mg/kg wet	0.05000		83	70-130			
Bromomethane	0.0676	0.0100	mg/kg wet	0.05000		135	70-130			B+
Carbon Disulfide	0.0608	0.0050	mg/kg wet	0.05000		122	70-130			
Carbon Tetrachloride	0.0585	0.0050	mg/kg wet	0.05000		117	70-130			
Chlorobenzene	0.0555	0.0050	mg/kg wet	0.05000		111	70-130			
Chloroethane	0.0585	0.0100	mg/kg wet	0.05000		117	70-130			
Chloroform	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
Chloromethane	0.0504	0.0100	mg/kg wet	0.05000		101	70-130			
cis-1,2-Dichloroethene	0.0579	0.0050	mg/kg wet	0.05000		116	70-130			
cis-1,3-Dichloropropene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130			
Dibromochloromethane	0.0441	0.0020	mg/kg wet	0.05000		88	70-130			
Dibromomethane	0.0560	0.0050	mg/kg wet	0.05000		112	70-130			
Dichlorodifluoromethane	0.0587	0.0100	mg/kg wet	0.05000		117	70-130			
Diethyl Ether	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
Di-isopropyl ether	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
Ethyl tertiary-butyl ether	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Low Level

Batch CJ82421 - 5035

Ethylbenzene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
Hexachlorobutadiene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
Isopropylbenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130			
Methyl tert-Butyl Ether	0.0510	0.0050	mg/kg wet	0.05000		102	70-130			
Methylene Chloride	0.0594	0.0100	mg/kg wet	0.05000		119	70-130			
Naphthalene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
n-Butylbenzene	0.0586	0.0050	mg/kg wet	0.05000		117	70-130			
n-Propylbenzene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
sec-Butylbenzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Styrene	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
tert-Butylbenzene	0.0563	0.0050	mg/kg wet	0.05000		113	70-130			
Tertiary-amyl methyl ether	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
Tetrachloroethene	0.0545	0.0050	mg/kg wet	0.05000		109	70-130			
Tetrahydrofuran	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
Toluene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130			
trans-1,2-Dichloroethene	0.0561	0.0050	mg/kg wet	0.05000		112	70-130			
trans-1,3-Dichloropropene	0.0482	0.0050	mg/kg wet	0.05000		96	70-130			
Trichloroethene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Trichlorofluoromethane	0.0621	0.0050	mg/kg wet	0.05000		124	70-130			
Vinyl Chloride	0.0575	0.0100	mg/kg wet	0.05000		115	70-130			
Xylene O	0.0564	0.0050	mg/kg wet	0.05000		113	70-130			
Xylene P,M	0.114	0.0100	mg/kg wet	0.1000		114	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0529</i>		mg/kg wet	<i>0.05000</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0508</i>		mg/kg wet	<i>0.05000</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>0.0529</i>		mg/kg wet	<i>0.05000</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0524</i>		mg/kg wet	<i>0.05000</i>		<i>105</i>	<i>70-130</i>			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0522	0.0050	mg/kg wet	0.05000		104	70-130	3	20	
1,1,1-Trichloroethane	0.0590	0.0050	mg/kg wet	0.05000		118	70-130	1	20	
1,1,2,2-Tetrachloroethane	0.0563	0.0020	mg/kg wet	0.05000		113	70-130	7	20	
1,1,2-Trichloroethane	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	4	20	
1,1-Dichloroethane	0.0587	0.0050	mg/kg wet	0.05000		117	70-130	0	20	
1,1-Dichloroethene	0.0585	0.0050	mg/kg wet	0.05000		117	70-130	0.6	20	
1,1-Dichloropropene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130	0.03	20	
1,2,3-Trichlorobenzene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
1,2,3-Trichloropropane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	8	20	
1,2,4-Trichlorobenzene	0.0520	0.0050	mg/kg wet	0.05000		104	70-130	0.5	20	
1,2,4-Trimethylbenzene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	1	20	
1,2-Dibromo-3-Chloropropane	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	11	20	
1,2-Dibromoethane	0.0523	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
1,2-Dichlorobenzene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	0	20	
1,2-Dichloroethane	0.0583	0.0050	mg/kg wet	0.05000		117	70-130	3	20	
1,2-Dichloropropane	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	0.8	20	
1,3,5-Trimethylbenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	2	20	
1,3-Dichlorobenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	0.5	20	



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Low Level

Batch CJ82421 - 5035

1,3-Dichloropropane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	1	20	
1,4-Dichlorobenzene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	1	20	
1,4-Dioxane	0.961	0.100	mg/kg wet	1.000		96	70-130	11	20	
2,2-Dichloropropane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	1	20	
2-Butanone	0.305	0.0100	mg/kg wet	0.2500		122	70-130	8	20	
2-Chlorotoluene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	2	20	
2-Hexanone	0.286	0.0100	mg/kg wet	0.2500		114	70-130	9	20	
4-Chlorotoluene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	0.5	20	
4-Isopropyltoluene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	0.8	20	
4-Methyl-2-Pentanone	0.296	0.0100	mg/kg wet	0.2500		118	70-130	13	20	
Acetone	0.263	0.0100	mg/kg wet	0.2500		105	70-130	12	20	
Benzene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130	0.5	20	
Bromobenzene	0.0522	0.0050	mg/kg wet	0.05000		104	70-130	1	20	
Bromochloromethane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
Bromodichloromethane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	2	20	
Bromoform	0.0431	0.0050	mg/kg wet	0.05000		86	70-130	3	20	
Bromomethane	0.0450	0.0100	mg/kg wet	0.05000		90	70-130	40	20	D+
Carbon Disulfide	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	0.4	20	
Carbon Tetrachloride	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	1	20	
Chlorobenzene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	4	20	
Chloroethane	0.0580	0.0100	mg/kg wet	0.05000		116	70-130	0.8	20	
Chloroform	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	0.2	20	
Chloromethane	0.0501	0.0100	mg/kg wet	0.05000		100	70-130	0.4	20	
cis-1,2-Dichloroethene	0.0586	0.0050	mg/kg wet	0.05000		117	70-130	1	20	
cis-1,3-Dichloropropene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	2	20	
Dibromochloromethane	0.0441	0.0020	mg/kg wet	0.05000		88	70-130	0.05	20	
Dibromomethane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	3	20	
Dichlorodifluoromethane	0.0580	0.0100	mg/kg wet	0.05000		116	70-130	1	20	
Diethyl Ether	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	4	20	
Di-isopropyl ether	0.0590	0.0050	mg/kg wet	0.05000		118	70-130	3	20	
Ethyl tertiary-butyl ether	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
Ethylbenzene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	4	20	
Hexachlorobutadiene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	2	20	
Isopropylbenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	2	20	
Methyl tert-Butyl Ether	0.0542	0.0050	mg/kg wet	0.05000		108	70-130	6	20	
Methylene Chloride	0.0517	0.0100	mg/kg wet	0.05000		103	70-130	14	20	
Naphthalene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	8	20	
n-Butylbenzene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130	2	20	
n-Propylbenzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	2	20	
sec-Butylbenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	2	20	
Styrene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
tert-Butylbenzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	2	20	
Tertiary-amyl methyl ether	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	4	20	
Tetrachloroethene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	4	20	
Tetrahydrofuran	0.0569	0.0050	mg/kg wet	0.05000		114	70-130	14	20	



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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5035/8260B Volatile Organic Compounds / Low Level

Batch CJ82421 - 5035

Toluene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	0.7	20	
trans-1,2-Dichloroethene	0.0553	0.0050	mg/kg wet	0.05000		111	70-130	2	20	
trans-1,3-Dichloropropene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	4	20	
Trichloroethene	0.0575	0.0050	mg/kg wet	0.05000		115	70-130	1	20	
Trichlorofluoromethane	0.0619	0.0050	mg/kg wet	0.05000		124	70-130	0.3	20	
Vinyl Chloride	0.0574	0.0100	mg/kg wet	0.05000		115	70-130	0.2	20	
Xylene O	0.0542	0.0050	mg/kg wet	0.05000		108	70-130	4	20	
Xylene P,M	0.110	0.0100	mg/kg wet	0.1000		110	70-130	4	20	
Surrogate: 1,2-Dichloroethane-d4	0.0546		mg/kg wet	0.05000		109	70-130			
Surrogate: 4-Bromofluorobenzene	0.0490		mg/kg wet	0.05000		98	70-130			
Surrogate: Dibromofluoromethane	0.0530		mg/kg wet	0.05000		106	70-130			
Surrogate: Toluene-d8	0.0502		mg/kg wet	0.05000		100	70-130			

8081B Organochlorine Pesticides

Batch CJ82517 - 3546

Blank										
4,4'-DDD	ND	0.0025	mg/kg wet							
4,4'-DDD [2C]	ND	0.0025	mg/kg wet							
4,4'-DDE	ND	0.0025	mg/kg wet							
4,4'-DDE [2C]	ND	0.0025	mg/kg wet							
4,4'-DDT	ND	0.0025	mg/kg wet							
4,4'-DDT [2C]	ND	0.0025	mg/kg wet							
Aldrin	ND	0.0025	mg/kg wet							
Aldrin [2C]	ND	0.0025	mg/kg wet							
alpha-BHC	ND	0.0025	mg/kg wet							
alpha-BHC [2C]	ND	0.0025	mg/kg wet							
alpha-Chlordane	ND	0.0025	mg/kg wet							
alpha-Chlordane [2C]	ND	0.0025	mg/kg wet							
beta-BHC	ND	0.0025	mg/kg wet							
beta-BHC [2C]	ND	0.0025	mg/kg wet							
delta-BHC	ND	0.0025	mg/kg wet							
delta-BHC [2C]	ND	0.0025	mg/kg wet							
Dieldrin	ND	0.0025	mg/kg wet							
Dieldrin [2C]	ND	0.0025	mg/kg wet							
Endosulfan I	ND	0.0025	mg/kg wet							
Endosulfan I [2C]	ND	0.0025	mg/kg wet							
Endosulfan II	ND	0.0025	mg/kg wet							
Endosulfan II [2C]	ND	0.0025	mg/kg wet							
Endosulfan Sulfate	ND	0.0025	mg/kg wet							
Endosulfan Sulfate [2C]	ND	0.0025	mg/kg wet							
Endrin	ND	0.0025	mg/kg wet							
Endrin [2C]	ND	0.0025	mg/kg wet							
Endrin Ketone	ND	0.0025	mg/kg wet							
Endrin Ketone [2C]	ND	0.0025	mg/kg wet							
gamma-BHC (Lindane)	ND	0.0015	mg/kg wet							



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8081B Organochlorine Pesticides

Batch CJ82517 - 3546

gamma-BHC (Lindane) [2C]	ND	0.0015	mg/kg wet							
gamma-Chlordane	ND	0.0025	mg/kg wet							
gamma-Chlordane [2C]	ND	0.0025	mg/kg wet							
Heptachlor	ND	0.0025	mg/kg wet							
Heptachlor [2C]	ND	0.0025	mg/kg wet							
Heptachlor Epoxide	ND	0.0025	mg/kg wet							
Heptachlor Epoxide [2C]	ND	0.0025	mg/kg wet							
Hexachlorobenzene	ND	0.0025	mg/kg wet							
Hexachlorobenzene [2C]	ND	0.0025	mg/kg wet							
Methoxychlor	ND	0.0025	mg/kg wet							
Methoxychlor [2C]	ND	0.0025	mg/kg wet							
<i>Surrogate: Decachlorobiphenyl</i>	<i>0.0106</i>		mg/kg wet	<i>0.01250</i>		<i>85</i>	<i>30-150</i>			
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>0.0102</i>		mg/kg wet	<i>0.01250</i>		<i>82</i>	<i>30-150</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>0.00950</i>		mg/kg wet	<i>0.01250</i>		<i>76</i>	<i>30-150</i>			
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	<i>0.00943</i>		mg/kg wet	<i>0.01250</i>		<i>75</i>	<i>30-150</i>			

LCS

4,4'-DDD	0.0119	0.0025	mg/kg wet	0.01250		95	40-140			
4,4'-DDD [2C]	0.0112	0.0025	mg/kg wet	0.01250		90	40-140			
4,4'-DDE	0.0122	0.0025	mg/kg wet	0.01250		98	40-140			
4,4'-DDE [2C]	0.0113	0.0025	mg/kg wet	0.01250		90	40-140			
4,4'-DDT	0.0119	0.0025	mg/kg wet	0.01250		95	40-140			
4,4'-DDT [2C]	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
Aldrin	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
Aldrin [2C]	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
alpha-BHC	0.0112	0.0025	mg/kg wet	0.01250		90	40-140			
alpha-BHC [2C]	0.0118	0.0025	mg/kg wet	0.01250		94	40-140			
alpha-Chlordane	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
alpha-Chlordane [2C]	0.0108	0.0025	mg/kg wet	0.01250		86	40-140			
beta-BHC	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
beta-BHC [2C]	0.0112	0.0025	mg/kg wet	0.01250		89	40-140			
delta-BHC	0.0101	0.0025	mg/kg wet	0.01250		81	40-140			
delta-BHC [2C]	0.0108	0.0025	mg/kg wet	0.01250		86	40-140			
Dieldrin	0.0118	0.0025	mg/kg wet	0.01250		94	40-140			
Dieldrin [2C]	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
Endosulfan I	0.0119	0.0025	mg/kg wet	0.01250		95	40-140			
Endosulfan I [2C]	0.0109	0.0025	mg/kg wet	0.01250		87	40-140			
Endosulfan II	0.0119	0.0025	mg/kg wet	0.01250		95	40-140			
Endosulfan II [2C]	0.0108	0.0025	mg/kg wet	0.01250		86	40-140			
Endosulfan Sulfate	0.0121	0.0025	mg/kg wet	0.01250		96	40-140			
Endosulfan Sulfate [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
Endrin	0.0130	0.0025	mg/kg wet	0.01250		104	40-140			
Endrin [2C]	0.0117	0.0025	mg/kg wet	0.01250		93	40-140			
Endrin Ketone	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Endrin Ketone [2C]	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8081B Organochlorine Pesticides

Batch CJ82517 - 3546

gamma-BHC (Lindane)	0.0114	0.0015	mg/kg wet	0.01250		91	40-140			
gamma-BHC (Lindane) [2C]	0.0116	0.0015	mg/kg wet	0.01250		93	40-140			
gamma-Chlordane	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
gamma-Chlordane [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
Heptachlor	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
Heptachlor [2C]	0.0109	0.0025	mg/kg wet	0.01250		87	40-140			
Heptachlor Epoxide	0.0117	0.0025	mg/kg wet	0.01250		93	40-140			
Heptachlor Epoxide [2C]	0.0118	0.0025	mg/kg wet	0.01250		95	40-140			
Hexachlorobenzene	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
Hexachlorobenzene [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
Methoxychlor	0.0117	0.0025	mg/kg wet	0.01250		93	40-140			
Methoxychlor [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
<i>Surrogate: Decachlorobiphenyl</i>	<i>0.0120</i>		mg/kg wet	<i>0.01250</i>		<i>96</i>	<i>30-150</i>			
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>0.0115</i>		mg/kg wet	<i>0.01250</i>		<i>92</i>	<i>30-150</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>0.0113</i>		mg/kg wet	<i>0.01250</i>		<i>90</i>	<i>30-150</i>			
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	<i>0.0113</i>		mg/kg wet	<i>0.01250</i>		<i>90</i>	<i>30-150</i>			

LCS Dup

4,4'-DDD	0.0122	0.0025	mg/kg wet	0.01250		97	40-140	2	30	
4,4'-DDD [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	2	30	
4,4'-DDE	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	0.7	30	
4,4'-DDE [2C]	0.0111	0.0025	mg/kg wet	0.01250		89	40-140	1	30	
4,4'-DDT	0.0117	0.0025	mg/kg wet	0.01250		93	40-140	2	30	
4,4'-DDT [2C]	0.0112	0.0025	mg/kg wet	0.01250		90	40-140	4	30	
Aldrin	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	2	30	
Aldrin [2C]	0.0112	0.0025	mg/kg wet	0.01250		90	40-140	3	30	
alpha-BHC	0.0111	0.0025	mg/kg wet	0.01250		89	40-140	0.5	30	
alpha-BHC [2C]	0.0114	0.0025	mg/kg wet	0.01250		91	40-140	3	30	
alpha-Chlordane	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	0.3	30	
alpha-Chlordane [2C]	0.0106	0.0025	mg/kg wet	0.01250		85	40-140	2	30	
beta-BHC	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	2	30	
beta-BHC [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	2	30	
delta-BHC	0.0104	0.0025	mg/kg wet	0.01250		84	40-140	3	30	
delta-BHC [2C]	0.0106	0.0025	mg/kg wet	0.01250		85	40-140	1	30	
Dieldrin	0.0116	0.0025	mg/kg wet	0.01250		93	40-140	2	30	
Dieldrin [2C]	0.0114	0.0025	mg/kg wet	0.01250		91	40-140	2	30	
Endosulfan I	0.0119	0.0025	mg/kg wet	0.01250		95	40-140	0.02	30	
Endosulfan I [2C]	0.0107	0.0025	mg/kg wet	0.01250		86	40-140	1	30	
Endosulfan II	0.0120	0.0025	mg/kg wet	0.01250		96	40-140	1	30	
Endosulfan II [2C]	0.0107	0.0025	mg/kg wet	0.01250		86	40-140	0.5	30	
Endosulfan Sulfate	0.0120	0.0025	mg/kg wet	0.01250		96	40-140	0.02	30	
Endosulfan Sulfate [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	0.3	30	
Endrin	0.0131	0.0025	mg/kg wet	0.01250		105	40-140	0.7	30	
Endrin [2C]	0.0115	0.0025	mg/kg wet	0.01250		92	40-140	1	30	
Endrin Ketone	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	0.6	30	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8081B Organochlorine Pesticides

Batch CJ82517 - 3546

Endrin Ketone [2C]	0.0117	0.0025	mg/kg wet	0.01250		94	40-140	0.7	30	
gamma-BHC (Lindane)	0.0112	0.0015	mg/kg wet	0.01250		89	40-140	2	30	
gamma-BHC (Lindane) [2C]	0.0114	0.0015	mg/kg wet	0.01250		91	40-140	2	30	
gamma-Chlordane	0.0120	0.0025	mg/kg wet	0.01250		96	40-140	0.8	30	
gamma-Chlordane [2C]	0.0108	0.0025	mg/kg wet	0.01250		87	40-140	2	30	
Heptachlor	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	5	30	
Heptachlor [2C]	0.0105	0.0025	mg/kg wet	0.01250		84	40-140	3	30	
Heptachlor Epoxide	0.0116	0.0025	mg/kg wet	0.01250		93	40-140	0.7	30	
Heptachlor Epoxide [2C]	0.0116	0.0025	mg/kg wet	0.01250		93	40-140	2	30	
Hexachlorobenzene	0.0119	0.0025	mg/kg wet	0.01250		95	40-140	4	30	
Hexachlorobenzene [2C]	0.0106	0.0025	mg/kg wet	0.01250		85	40-140	4	30	
Methoxychlor	0.0115	0.0025	mg/kg wet	0.01250		92	40-140	1	30	
Methoxychlor [2C]	0.0108	0.0025	mg/kg wet	0.01250		87	40-140	1	30	

Surrogate: Decachlorobiphenyl	0.0115		mg/kg wet	0.01250		92	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0112		mg/kg wet	0.01250		90	30-150			
Surrogate: Tetrachloro-m-xylene	0.0107		mg/kg wet	0.01250		86	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0104		mg/kg wet	0.01250		84	30-150			

8082A Polychlorinated Biphenyls (PCB)

Batch CJ82512 - 3540C

Blank										
Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0246		mg/kg wet	0.02500		98	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0236		mg/kg wet	0.02500		94	30-150			
Surrogate: Tetrachloro-m-xylene	0.0230		mg/kg wet	0.02500		92	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0231		mg/kg wet	0.02500		93	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CJ82512 - 3540C

LCS

Aroclor 1016	0.6	0.05	mg/kg wet	0.5000		111	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		102	40-140			
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		103	40-140			
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		107	40-140			
Surrogate: Decachlorobiphenyl	0.0278		mg/kg wet	0.02500		111	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0270		mg/kg wet	0.02500		108	30-150			
Surrogate: Tetrachloro-m-xylene	0.0267		mg/kg wet	0.02500		107	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0247		mg/kg wet	0.02500		99	30-150			

LCS Dup

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		107	40-140	3	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		100	40-140	2	30	
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		99	40-140	4	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		103	40-140	3	30	
Surrogate: Decachlorobiphenyl	0.0261		mg/kg wet	0.02500		104	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0255		mg/kg wet	0.02500		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.0257		mg/kg wet	0.02500		103	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0243		mg/kg wet	0.02500		97	30-150			

8100M Total Petroleum Hydrocarbons

Batch CJ82519 - 3546

Blank

Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Hexatriacontane (C36)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	10.0	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							

Surrogate: O-Terphenyl	4.32		mg/kg wet	5.000		86	40-140			
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LCS

Decane (C10)	1.7	0.2	mg/kg wet	2.500		66	40-140			
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		74	40-140			



CERTIFICATE OF ANALYSIS

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ESS Laboratory Work Order: 1810642

Quality Control Data

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8100M Total Petroleum Hydrocarbons

Batch CJ82519 - 3546

Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		86	40-140			
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Hexatriacontane (C36)	2.4	0.2	mg/kg wet	2.500		94	40-140			
Nonadecane (C19)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Nonane (C9)	1.5	0.2	mg/kg wet	2.500		60	30-140			
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		82	40-140			
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		76	40-140			
Total Petroleum Hydrocarbons	32.1	10.0	mg/kg wet	35.00		92	40-140			
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140			

Surrogate: O-Terphenyl	4.21		mg/kg wet	5.000		84	40-140			
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LCS Dup

Decane (C10)	1.7	0.2	mg/kg wet	2.500		68	40-140	3	25	
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.3	25	
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		76	40-140	2	25	
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		86	40-140	0.3	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.1	25	
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		81	40-140	2	25	
Hexatriacontane (C36)	2.3	0.2	mg/kg wet	2.500		94	40-140	0.2	25	
Nonadecane (C19)	2.3	0.2	mg/kg wet	2.500		92	40-140	0.6	25	
Nonane (C9)	1.5	0.2	mg/kg wet	2.500		61	30-140	2	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.02	25	
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		83	40-140	1	25	
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.2	25	
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		78	40-140	3	25	
Total Petroleum Hydrocarbons	31.8	10.0	mg/kg wet	35.00		91	40-140	0.9	25	
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.2	25	

Surrogate: O-Terphenyl	4.20		mg/kg wet	5.000		84	40-140			
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8151A Chlorinated Herbicides

Batch CJ83033 - 3546

Blank

2,4,5-T	ND	0.010	mg/kg wet							
2,4,5-T [2C]	ND	0.010	mg/kg wet							
2,4,5-TP (Silvex)	ND	0.010	mg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	0.010	mg/kg wet							
2,4-D	ND	0.047	mg/kg wet							
2,4-D [2C]	ND	0.047	mg/kg wet							
2,4-DB	ND	0.048	mg/kg wet							
2,4-DB [2C]	ND	0.048	mg/kg wet							
Dalapon	ND	0.046	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8151A Chlorinated Herbicides										
Batch CJ83033 - 3546										
Dalapon [2C]	ND	0.046	mg/kg wet							
Dicamba	ND	0.009	mg/kg wet							
Dicamba [2C]	ND	0.009	mg/kg wet							
Dichlorprop	ND	0.047	mg/kg wet							
Dichlorprop [2C]	ND	0.047	mg/kg wet							
Dinoseb	ND	0.048	mg/kg wet							
Dinoseb [2C]	ND	0.048	mg/kg wet							
MCPA	ND	2.32	mg/kg wet							
MCPA [2C]	ND	2.32	mg/kg wet							
MCPP	ND	2.35	mg/kg wet							
MCPP [2C]	ND	2.35	mg/kg wet							
<i>Surrogate: DCAA</i>	<i>0.201</i>		mg/kg wet	<i>0.2000</i>		<i>101</i>	<i>30-150</i>			
<i>Surrogate: DCAA [2C]</i>	<i>0.187</i>		mg/kg wet	<i>0.2000</i>		<i>94</i>	<i>30-150</i>			
LCS										
2,4,5-T	0.017	0.010	mg/kg wet	0.01900		90	40-140			
2,4,5-T [2C]	0.014	0.010	mg/kg wet	0.01900		76	40-140			
2,4,5-TP (Silvex)	0.016	0.010	mg/kg wet	0.01900		82	40-140			
2,4,5-TP (Silvex) [2C]	0.016	0.010	mg/kg wet	0.01900		82	40-140			
2,4-D	0.199	0.047	mg/kg wet	0.1880		106	40-140			
2,4-D [2C]	0.184	0.047	mg/kg wet	0.1880		98	40-140			
2,4-DB	0.189	0.048	mg/kg wet	0.1900		100	40-140			
2,4-DB [2C]	0.167	0.048	mg/kg wet	0.1900		88	40-140			
Dalapon	0.310	0.046	mg/kg wet	0.4550		68	40-140			
Dalapon [2C]	0.333	0.046	mg/kg wet	0.4550		73	40-140			
Dicamba	0.015	0.009	mg/kg wet	0.01880		80	40-140			
Dicamba [2C]	0.017	0.009	mg/kg wet	0.01880		88	40-140			
Dichlorprop	0.164	0.047	mg/kg wet	0.1880		87	40-140			
Dichlorprop [2C]	0.164	0.047	mg/kg wet	0.1880		87	40-140			
Dinoseb	0.013	0.048	mg/kg wet	0.09500		13	10-100			
Dinoseb [2C]	0.013	0.048	mg/kg wet	0.09500		14	10-100			
MCPA	16.9	2.32	mg/kg wet	18.60		91	40-140			
MCPA [2C]	18.6	2.32	mg/kg wet	18.60		100	40-140			
MCPP	15.6	2.35	mg/kg wet	18.80		83	40-140			
MCPP [2C]	16.2	2.35	mg/kg wet	18.80		86	40-140			
<i>Surrogate: DCAA</i>	<i>0.234</i>		mg/kg wet	<i>0.2000</i>		<i>117</i>	<i>30-150</i>			
<i>Surrogate: DCAA [2C]</i>	<i>0.228</i>		mg/kg wet	<i>0.2000</i>		<i>114</i>	<i>30-150</i>			
LCS Dup										
2,4,5-T	0.016	0.010	mg/kg wet	0.01900		82	40-140	9	30	
2,4,5-T [2C]	0.013	0.010	mg/kg wet	0.01900		68	40-140	11	30	
2,4,5-TP (Silvex)	0.015	0.010	mg/kg wet	0.01900		80	40-140	2	30	
2,4,5-TP (Silvex) [2C]	0.014	0.010	mg/kg wet	0.01900		76	40-140	8	30	
2,4-D	0.187	0.047	mg/kg wet	0.1880		99	40-140	6	30	
2,4-D [2C]	0.175	0.047	mg/kg wet	0.1880		93	40-140	5	30	
2,4-DB	0.187	0.048	mg/kg wet	0.1900		98	40-140	1	30	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8151A Chlorinated Herbicides

Batch CJ83033 - 3546

2,4-DB [2C]	0.155	0.048	mg/kg wet	0.1900		82	40-140	7	30	
Dalapon	0.302	0.046	mg/kg wet	0.4550		66	40-140	3	30	
Dalapon [2C]	0.326	0.046	mg/kg wet	0.4550		72	40-140	2	30	
Dicamba	0.014	0.009	mg/kg wet	0.01880		76	40-140	5	30	
Dicamba [2C]	0.016	0.009	mg/kg wet	0.01880		84	40-140	5	30	
Dichlorprop	0.158	0.047	mg/kg wet	0.1880		84	40-140	4	30	
Dichlorprop [2C]	0.154	0.047	mg/kg wet	0.1880		82	40-140	6	30	
Dinoseb	0.013	0.048	mg/kg wet	0.09500		13	10-100	0	30	
Dinoseb [2C]	0.013	0.048	mg/kg wet	0.09500		13	10-100	6	30	
MCPA	15.8	2.32	mg/kg wet	18.60		85	40-140	7	30	
MCPA [2C]	17.6	2.32	mg/kg wet	18.60		94	40-140	6	30	
MCPP	15.0	2.35	mg/kg wet	18.80		80	40-140	4	30	
MCPP [2C]	15.4	2.35	mg/kg wet	18.80		82	40-140	5	30	

Surrogate: DCAA	0.215		mg/kg wet	0.2000		108	30-150			
Surrogate: DCAA [2C]	0.200		mg/kg wet	0.2000		100	30-150			

8270D Semi-Volatile Organic Compounds

Batch CJ82309 - 3546

Blank										
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.333	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.333	mg/kg wet							
2,4-Dichlorophenol	ND	0.333	mg/kg wet							
2,4-Dimethylphenol	ND	0.333	mg/kg wet							
2,4-Dinitrophenol	ND	1.67	mg/kg wet							
2,4-Dinitrotoluene	ND	0.333	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.333	mg/kg wet							
2-Methylnaphthalene	ND	0.333	mg/kg wet							
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3'-Dichlorobenzidine	ND	0.667	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.667	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	1.67	mg/kg wet							



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8270D Semi-Volatile Organic Compounds

Batch CJ82309 - 3546

Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.333	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.333	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.333	mg/kg wet							
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachloroethane	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	1.67	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	2.14		mg/kg wet	3.333		64	30-130			
<i>Surrogate: 2,4,6-Tribromophenol</i>	3.40		mg/kg wet	5.000		68	30-130			
<i>Surrogate: 2-Chlorophenol-d4</i>	3.50		mg/kg wet	5.000		70	30-130			
<i>Surrogate: 2-Fluorobiphenyl</i>	2.14		mg/kg wet	3.333		64	30-130			
<i>Surrogate: 2-Fluorophenol</i>	3.50		mg/kg wet	5.000		70	30-130			
<i>Surrogate: Nitrobenzene-d5</i>	2.21		mg/kg wet	3.333		66	30-130			
<i>Surrogate: Phenol-d6</i>	3.53		mg/kg wet	5.000		71	30-130			
<i>Surrogate: p-Terphenyl-d14</i>	2.29		mg/kg wet	3.333		69	30-130			

LCS

1,2,4-Trichlorobenzene	2.24	0.333	mg/kg wet	3.333		67	40-140			
1,2-Dichlorobenzene	2.25	0.333	mg/kg wet	3.333		67	40-140			
1,3-Dichlorobenzene	2.22	0.333	mg/kg wet	3.333		67	40-140			



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8270D Semi-Volatile Organic Compounds

Batch CJ82309 - 3546

1,4-Dichlorobenzene	2.23	0.333	mg/kg wet	3.333		67	40-140			
2,4,5-Trichlorophenol	2.56	0.333	mg/kg wet	3.333		77	30-130			
2,4,6-Trichlorophenol	2.41	0.333	mg/kg wet	3.333		72	30-130			
2,4-Dichlorophenol	2.39	0.333	mg/kg wet	3.333		72	30-130			
2,4-Dimethylphenol	2.44	0.333	mg/kg wet	3.333		73	30-130			
2,4-Dinitrophenol	3.20	1.67	mg/kg wet	3.333		96	30-130			
2,4-Dinitrotoluene	3.05	0.333	mg/kg wet	3.333		91	40-140			
2,6-Dinitrotoluene	2.75	0.333	mg/kg wet	3.333		82	40-140			
2-Chloronaphthalene	2.28	0.333	mg/kg wet	3.333		68	40-140			
2-Chlorophenol	2.36	0.333	mg/kg wet	3.333		71	30-130			
2-Methylnaphthalene	2.28	0.333	mg/kg wet	3.333		68	40-140			
2-Methylphenol	2.40	0.333	mg/kg wet	3.333		72	30-130			
2-Nitrophenol	2.35	0.333	mg/kg wet	3.333		71	30-130			
3,3'-Dichlorobenzidine	1.94	0.667	mg/kg wet	3.333		58	40-140			
3+4-Methylphenol	4.98	0.667	mg/kg wet	6.667		75	30-130			
4-Bromophenyl-phenylether	2.33	0.333	mg/kg wet	3.333		70	40-140			
4-Chloroaniline	1.58	0.667	mg/kg wet	3.333		47	40-140			
4-Nitrophenol	3.45	1.67	mg/kg wet	3.333		103	30-130			
Acenaphthene	2.33	0.333	mg/kg wet	3.333		70	40-140			
Acenaphthylene	2.22	0.333	mg/kg wet	3.333		67	40-140			
Acetophenone	2.47	0.667	mg/kg wet	3.333		74	40-140			
Aniline	1.73	1.67	mg/kg wet	3.333		52	40-140			
Anthracene	2.57	0.333	mg/kg wet	3.333		77	40-140			
Azobenzene	2.34	0.333	mg/kg wet	3.333		70	40-140			
Benzo(a)anthracene	2.53	0.333	mg/kg wet	3.333		76	40-140			
Benzo(a)pyrene	2.70	0.167	mg/kg wet	3.333		81	40-140			
Benzo(b)fluoranthene	2.78	0.333	mg/kg wet	3.333		83	40-140			
Benzo(g,h,i)perylene	2.62	0.333	mg/kg wet	3.333		78	40-140			
Benzo(k)fluoranthene	2.58	0.333	mg/kg wet	3.333		77	40-140			
bis(2-Chloroethoxy)methane	2.37	0.333	mg/kg wet	3.333		71	40-140			
bis(2-Chloroethyl)ether	2.26	0.333	mg/kg wet	3.333		68	40-140			
bis(2-chloroisopropyl)Ether	2.17	0.333	mg/kg wet	3.333		65	40-140			
bis(2-Ethylhexyl)phthalate	2.82	0.333	mg/kg wet	3.333		85	40-140			
Butylbenzylphthalate	2.69	0.333	mg/kg wet	3.333		81	40-140			
Chrysene	2.57	0.167	mg/kg wet	3.333		77	40-140			
Dibenzo(a,h)Anthracene	2.69	0.167	mg/kg wet	3.333		81	40-140			
Dibenzofuran	2.41	0.333	mg/kg wet	3.333		72	40-140			
Diethylphthalate	2.75	0.333	mg/kg wet	3.333		83	40-140			
Dimethylphthalate	2.56	0.333	mg/kg wet	3.333		77	40-140			
Di-n-butylphthalate	2.84	0.333	mg/kg wet	3.333		85	40-140			
Di-n-octylphthalate	3.04	0.333	mg/kg wet	3.333		91	40-140			
Fluoranthene	2.89	0.333	mg/kg wet	3.333		87	40-140			
Fluorene	2.55	0.333	mg/kg wet	3.333		77	40-140			
Hexachlorobenzene	2.42	0.333	mg/kg wet	3.333		73	40-140			
Hexachlorobutadiene	2.23	0.333	mg/kg wet	3.333		67	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8270D Semi-Volatile Organic Compounds

Batch CJ82309 - 3546

Hexachloroethane	2.17	0.333	mg/kg wet	3.333		65	40-140			
Indeno(1,2,3-cd)Pyrene	2.68	0.333	mg/kg wet	3.333		80	40-140			
Isophorone	2.24	0.333	mg/kg wet	3.333		67	40-140			
Naphthalene	2.30	0.333	mg/kg wet	3.333		69	40-140			
Nitrobenzene	2.36	0.333	mg/kg wet	3.333		71	40-140			
N-Nitrosodimethylamine	2.13	0.333	mg/kg wet	3.333		64	40-140			
Pentachlorophenol	3.13	1.67	mg/kg wet	3.333		94	30-130			
Phenanthrene	2.50	0.333	mg/kg wet	3.333		75	40-140			
Phenol	2.46	0.333	mg/kg wet	3.333		74	30-130			
Pyrene	2.50	0.333	mg/kg wet	3.333		75	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	2.29		mg/kg wet	3.333		69	30-130			
Surrogate: 2,4,6-Tribromophenol	4.01		mg/kg wet	5.000		80	30-130			
Surrogate: 2-Chlorophenol-d4	3.76		mg/kg wet	5.000		75	30-130			
Surrogate: 2-Fluorobiphenyl	2.32		mg/kg wet	3.333		70	30-130			
Surrogate: 2-Fluorophenol	3.80		mg/kg wet	5.000		76	30-130			
Surrogate: Nitrobenzene-d5	2.47		mg/kg wet	3.333		74	30-130			
Surrogate: Phenol-d6	3.91		mg/kg wet	5.000		78	30-130			
Surrogate: p-Terphenyl-d14	2.68		mg/kg wet	3.333		80	30-130			

LCS Dup

1,2,4-Trichlorobenzene	2.50	0.333	mg/kg wet	3.333		75	40-140	11	30	
1,2-Dichlorobenzene	2.47	0.333	mg/kg wet	3.333		74	40-140	9	30	
1,3-Dichlorobenzene	2.47	0.333	mg/kg wet	3.333		74	40-140	10	30	
1,4-Dichlorobenzene	2.47	0.333	mg/kg wet	3.333		74	40-140	10	30	
2,4,5-Trichlorophenol	2.79	0.333	mg/kg wet	3.333		84	30-130	9	30	
2,4,6-Trichlorophenol	2.67	0.333	mg/kg wet	3.333		80	30-130	10	30	
2,4-Dichlorophenol	2.62	0.333	mg/kg wet	3.333		79	30-130	9	30	
2,4-Dimethylphenol	2.68	0.333	mg/kg wet	3.333		80	30-130	9	30	
2,4-Dinitrophenol	3.29	1.67	mg/kg wet	3.333		99	30-130	3	30	
2,4-Dinitrotoluene	3.10	0.333	mg/kg wet	3.333		93	40-140	2	30	
2,6-Dinitrotoluene	2.88	0.333	mg/kg wet	3.333		86	40-140	5	30	
2-Chloronaphthalene	2.49	0.333	mg/kg wet	3.333		75	40-140	9	30	
2-Chlorophenol	2.56	0.333	mg/kg wet	3.333		77	30-130	8	30	
2-Methylnaphthalene	2.47	0.333	mg/kg wet	3.333		74	40-140	8	30	
2-Methylphenol	2.55	0.333	mg/kg wet	3.333		77	30-130	6	30	
2-Nitrophenol	2.62	0.333	mg/kg wet	3.333		79	30-130	11	30	
3,3'-Dichlorobenzidine	2.10	0.667	mg/kg wet	3.333		63	40-140	8	30	
3+4-Methylphenol	5.23	0.667	mg/kg wet	6.667		78	30-130	5	30	
4-Bromophenyl-phenylether	2.53	0.333	mg/kg wet	3.333		76	40-140	8	30	
4-Chloroaniline	1.72	0.667	mg/kg wet	3.333		51	40-140	8	30	
4-Nitrophenol	3.52	1.67	mg/kg wet	3.333		106	30-130	2	30	
Acenaphthene	2.58	0.333	mg/kg wet	3.333		77	40-140	10	30	
Acenaphthylene	2.47	0.333	mg/kg wet	3.333		74	40-140	10	30	
Acetophenone	2.66	0.667	mg/kg wet	3.333		80	40-140	8	30	
Aniline	1.88	1.67	mg/kg wet	3.333		56	40-140	9	30	
Anthracene	2.72	0.333	mg/kg wet	3.333		82	40-140	6	30	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8270D Semi-Volatile Organic Compounds

Batch CJ82309 - 3546

Azobenzene	2.54	0.333	mg/kg wet	3.333		76	40-140	8	30	
Benzo(a)anthracene	2.64	0.333	mg/kg wet	3.333		79	40-140	4	30	
Benzo(a)pyrene	2.81	0.167	mg/kg wet	3.333		84	40-140	4	30	
Benzo(b)fluoranthene	2.89	0.333	mg/kg wet	3.333		87	40-140	4	30	
Benzo(g,h,i)perylene	2.76	0.333	mg/kg wet	3.333		83	40-140	5	30	
Benzo(k)fluoranthene	2.71	0.333	mg/kg wet	3.333		81	40-140	5	30	
bis(2-Chloroethoxy)methane	2.63	0.333	mg/kg wet	3.333		79	40-140	10	30	
bis(2-Chloroethyl)ether	2.48	0.333	mg/kg wet	3.333		74	40-140	9	30	
bis(2-chloroisopropyl)Ether	2.38	0.333	mg/kg wet	3.333		71	40-140	9	30	
bis(2-Ethylhexyl)phthalate	2.80	0.333	mg/kg wet	3.333		84	40-140	0.9	30	
Butylbenzylphthalate	2.68	0.333	mg/kg wet	3.333		80	40-140	0.4	30	
Chrysene	2.71	0.167	mg/kg wet	3.333		81	40-140	5	30	
Dibenzo(a,h)Anthracene	2.85	0.167	mg/kg wet	3.333		85	40-140	6	30	
Dibenzofuran	2.64	0.333	mg/kg wet	3.333		79	40-140	9	30	
Diethylphthalate	2.81	0.333	mg/kg wet	3.333		84	40-140	2	30	
Dimethylphthalate	2.69	0.333	mg/kg wet	3.333		81	40-140	5	30	
Di-n-butylphthalate	2.97	0.333	mg/kg wet	3.333		89	40-140	4	30	
Di-n-octylphthalate	2.99	0.333	mg/kg wet	3.333		90	40-140	2	30	
Fluoranthene	3.13	0.333	mg/kg wet	3.333		94	40-140	8	30	
Fluorene	2.75	0.333	mg/kg wet	3.333		83	40-140	8	30	
Hexachlorobenzene	2.59	0.333	mg/kg wet	3.333		78	40-140	7	30	
Hexachlorobutadiene	2.50	0.333	mg/kg wet	3.333		75	40-140	11	30	
Hexachloroethane	2.42	0.333	mg/kg wet	3.333		73	40-140	11	30	
Indeno(1,2,3-cd)Pyrene	2.82	0.333	mg/kg wet	3.333		85	40-140	5	30	
Isophorone	2.43	0.333	mg/kg wet	3.333		73	40-140	8	30	
Naphthalene	2.56	0.333	mg/kg wet	3.333		77	40-140	11	30	
Nitrobenzene	2.65	0.333	mg/kg wet	3.333		79	40-140	12	30	
N-Nitrosodimethylamine	2.35	0.333	mg/kg wet	3.333		71	40-140	10	30	
Pentachlorophenol	3.25	1.67	mg/kg wet	3.333		98	30-130	4	30	
Phenanthrene	2.64	0.333	mg/kg wet	3.333		79	40-140	5	30	
Phenol	2.64	0.333	mg/kg wet	3.333		79	30-130	7	30	
Pyrene	2.46	0.333	mg/kg wet	3.333		74	40-140	2	30	
Surrogate: 1,2-Dichlorobenzene-d4	2.44		mg/kg wet	3.333		73	30-130			
Surrogate: 2,4,6-Tribromophenol	4.13		mg/kg wet	5.000		83	30-130			
Surrogate: 2-Chlorophenol-d4	3.99		mg/kg wet	5.000		80	30-130			
Surrogate: 2-Fluorobiphenyl	2.58		mg/kg wet	3.333		77	30-130			
Surrogate: 2-Fluorophenol	4.05		mg/kg wet	5.000		81	30-130			
Surrogate: Nitrobenzene-d5	2.66		mg/kg wet	3.333		80	30-130			
Surrogate: Phenol-d6	4.07		mg/kg wet	5.000		81	30-130			
Surrogate: p-Terphenyl-d14	2.55		mg/kg wet	3.333		77	30-130			

Classical Chemistry

Batch CJ82415 - General Preparation

Blank			
Conductivity	ND	5	umhos/cm



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
 Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch CJ82415 - General Preparation										
LCS										
Conductivity	1360		umhos/cm	1411		97	90-110			
Batch CJ82627 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							
Reactive Sulfide	ND	2.0	mg/kg							
LCS										
Reactive Cyanide	3.9	2.0	mg/kg	100.3		4	0.68-5.41			
Reactive Sulfide	ND	2.0	mg/kg	10.00		0	0-44			
Batch CJ82628 - General Preparation										
Reference										
Flashpoint	81		°F	81.00		100	97.9-102.1			



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

Notes and Definitions

- Z-10 Soil pH measured in water at 20.1 °C.
- Z-09 ND
- XH Peaks found in the retention time window for MCPD did not confirm by GC/MS.
- U Analyte included in the analysis, but not detected
- Q Calibration required quadratic regression (Q).
- ICV+ Initial Calibration Verification recovery is above upper control limit (ICV+).
- D+ Relative percent difference for duplicate is outside of criteria (D+).
- D Diluted.
- CD+ Continuing Calibration %Diff/Drift is above control limit (CD+).
- CD- Continuing Calibration %Diff/Drift is below control limit (CD-).
- B+ Blank Spike recovery is above upper control limit (B+).
- > Greater than.
- # Modified result
- 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



CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc
Client Project ID: Eversource Transmission Project

ESS Laboratory Work Order: 1810642

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

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

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: Vanasse Hangen Brustlin, Inc (MA) - KPB/TB/HDM

ESS Project ID: 1810642

Shipped/Delivered Via: ESS Courier

Date Received: 10/23/2018

Project Due Date: 10/30/2018

Days for Project: 5 Day

- | | |
|---|--|
| <p>1. Air bill manifest present? <input type="checkbox"/> No
Air No.: <u>NA</u></p> <p>2. Were custody seals present? <input type="checkbox"/> No</p> <p>3. Is radiation count <100 CPM? <input type="checkbox"/> Yes</p> <p>4. Is a Cooler Present? <input type="checkbox"/> Yes
Temp: <u>.1</u> Iced with: <u>Ice</u></p> <p>5. Was COC signed and dated by client? <input type="checkbox"/> Yes</p> | <p>6. Does COC match bottles? <input type="checkbox"/> Yes</p> <p>7. Is COC complete and correct? <input type="checkbox"/> Yes</p> <p>8. Were samples received intact? <input type="checkbox"/> Yes</p> <p>9. Were labs informed about <u>short holds & rushes</u>? <input checked="" type="checkbox"/> Yes / No / NA</p> <p>10. Were any analyses received outside of hold time? Yes <input checked="" type="checkbox"/> No</p> |
|---|--|

- | | |
|---|--|
| <p>11. Any Subcontracting needed? Yes <input checked="" type="checkbox"/> No
ESS Sample IDs: _____
Analysis: _____
TAT: _____</p> | <p>12. Were VOAs received? <input checked="" type="checkbox"/> Yes / No
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? <input checked="" type="checkbox"/> Yes / No / NA</p> |
|---|--|

13. Are the samples properly preserved? Yes / No
- a. If metals preserved upon receipt: Date: 10/18/18 Time: 1600 By: Client
- 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)
01	281341	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	281342	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	281343	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	281344	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
01	281345	Yes	NA	Yes	VOA Vial - Other	Other	
01	281346	Yes	NA	Yes	VOA Vial - Other	Other	

2nd Review

- Are barcode labels on correct containers? Yes / No
Are all necessary stickers attached? Yes / No

Completed By:  Date & Time: 10/23/18 17:20

Reviewed By:  Date & Time: 10/23/18 1721

Delivered By:  Date & Time: 10/23/18 1721



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

http://www.contestlabs.com

Doc # 381 Rev 1_03242017

1810642

CHAIN OF CUSTODY RECORD

39 Spruce Street
 East Longmeadow, MA 01028

Page 1 of 1

Company Name: VHB
 Address: 101 Walnut Street, Watertown, MA
 Phone: 617-607-1841
 Project Name: Eversource Transmission Project
 Project Location: Sudbury, Massachusetts
 Project Number: 12970.03
 Project Manager: Paige Cornell
 Con-Test Quote Name/Number:
 Invoice Recipient:
 Sampled By: TJP

Requested Turnaround Time
 7-Day 10-Day
 Due Date: _____

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

Data Delivery
 Format: PDF EXCEL
 Other: Limit Checker
 CLP Like Data Pkg Required:
 Email To: pcornell@vhb.com; pmckinlay@vhb.com;
 tvlerphillips@vhb.com; thevans@vhb.com
 Fax To #: _____

Ignitability, pH, Reactivity	Conductivity	Pesticide/Herbicide	SVOCs, PCBs, TPH	VOCs	MCP 14 Metals													

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	Date	Time	Matrix Code	Conc Code	Matrix Code	Conc Code											
1	MP36	10/16/18	14:00	S	U			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)

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) _DI
 H2O

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: Temp - 0.1 Ice
 Vials frozen on day of generation by 16:00
 TCLP 20x Rule
 Thank you!

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:	Detection Limit Requirements	Special Requirements
[Signature]	10/23 14:10	MA	<input checked="" type="checkbox"/> MA MCP Required
Received by: (signature)	Date/Time:		MCP Certification Form Required
[Signature]	14:10		<input type="checkbox"/> CT RCP Required
Relinquished by: (signature)	Date/Time:	CT	RCP Certification Form Required
[Signature]	16:19		
Received by: (signature)	Date/Time:		<input type="checkbox"/> MA State DW Required
[Signature]	10/23/18 17:18	Other:	PWSID #
Relinquished by: (signature)	Date/Time:	Project Entity	
[Signature]		<input type="checkbox"/> Government <input type="checkbox"/> Municipality <input type="checkbox"/> MWRA <input type="checkbox"/> WRTA	
Received by: (signature)	Date/Time:	<input type="checkbox"/> Federal <input type="checkbox"/> 21 J <input type="checkbox"/> School	
[Signature]		<input type="checkbox"/> City <input type="checkbox"/> Brownfield <input type="checkbox"/> MBTA	



Other:
 Chromatogram
 AIHA-LAP, LLC

PCB ONLY
 Soxhlet
 Non Soxhlet



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/15/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: SB/MW42
ESTIMATED DEPTH TO WATER (ft.):5'
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: Continuous
TIME OF SAMPLE COLLECTION: 1400
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) OHM
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

5-6 Thermal and Proctor

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

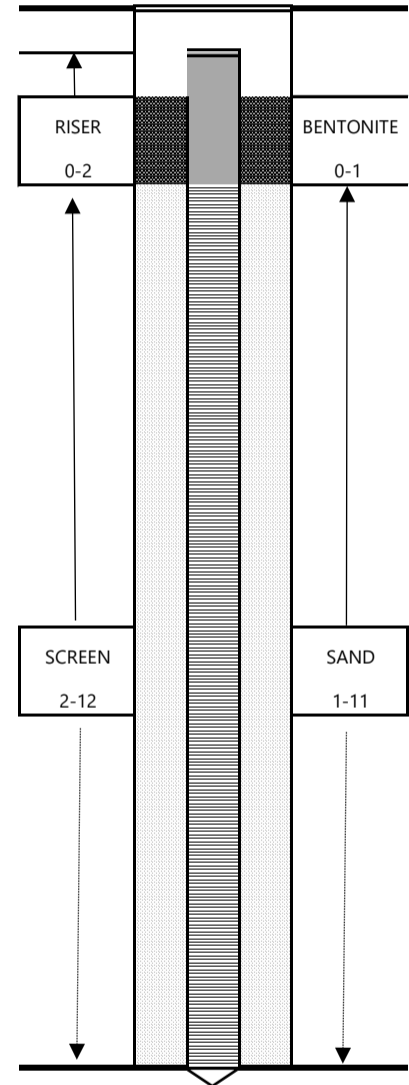
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		1 3 3 4	15	0.0
2-4		5 5 4 5	1	0.0
4-6	VOC	4 4 4 4	4	0.0
6-8		6 14 21 17	15	0.0

12" Dark brown fine sand, silt, some gravel 3" Tan, fine-medium sand, silt, bright orange stain

Same as above bright orange stain noted at 4'

Dark brown, moist, medium-fine sand, salt, loose

12" same as above, saturated 3" clay/silt, grey, dense



SOIL DESCRIPTIONS:

1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY) 2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%) 3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC) 4) MOISTURE (WET, MOIST, DRY) 5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED) 7) COLOR (GREY, BROWN, etc.) 8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.) 9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC) 10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)
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CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/15/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: SB41
ESTIMATED DEPTH TO WATER (ft.): 5'
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: Continuous
TIME OF SAMPLE COLLECTION: 1200
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) OHM
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:
5-6 Thermal and Proctor

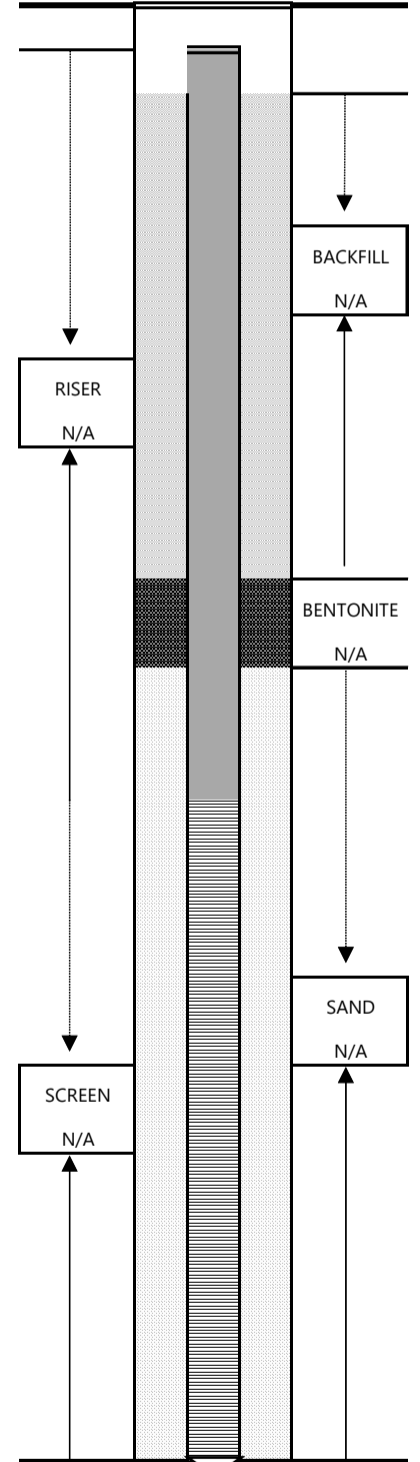
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		1 1 2 4	19	0.0
2-4		2 2 2 2	11	0.0
4-6		1 2 1 1	15	0.0
6-8	VOC	1 1 1 5	11	0.0

6" Forest mat 13" Tan med-coarse sand, loose
Same as above
8" Same as above, wet 5" brown, fine sand, silt, dense, no odor
Brown, fine-medium sand, silt, loose, some gravel, loose



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/15/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: SB40	
ESTIMATED DEPTH TO WATER (ft.):	6'
TOTAL BORING DEPTH (ft.):	8'
SAMPLE COLLECTED?	THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED:	Continuous
TIME OF SAMPLE COLLECTION:	1000
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...)	OHM
FINISH DEPTH:	8'
REFUSAL ENCOUNTERED:	NO

NOTES/SKETCH:
5-6 Thermal and Proctor

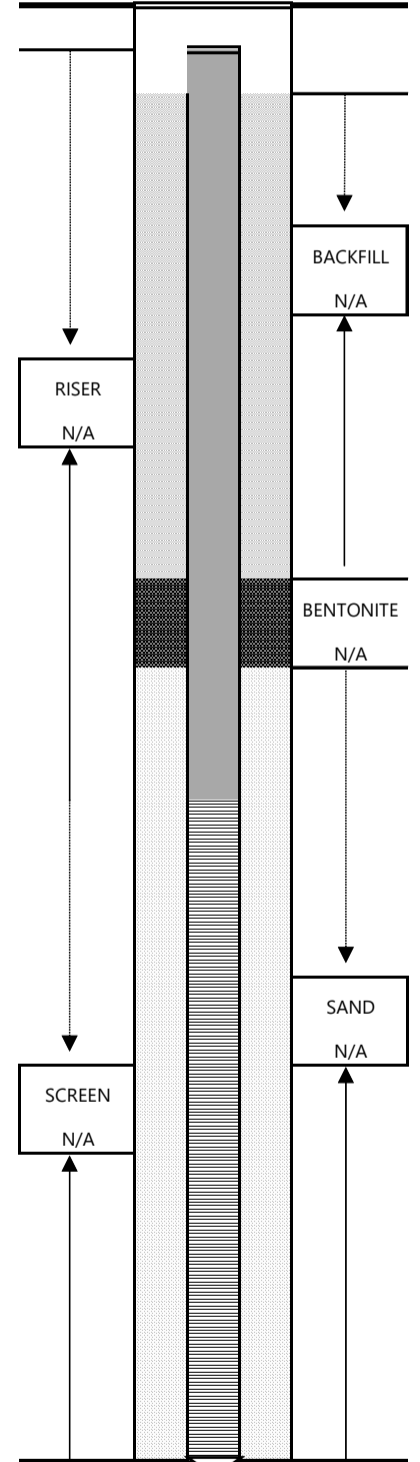
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		1 4 11 25	10	0.0
2-4	VOC	4 11 2 11	12	0.0
4-6		5 4 5 4	13	0.0
6-8		4 6 14 15	21	0.0

1" Forest mat, black 9" medium sand, fine, loose, dry, no odor or staining
Tan fine-medium sand, silt, loose, dry
5" gray, fine-medium sand, silt, loose, wet 5" orange fine-med sand, wet, dense
16" gray-brown, fine-med sand, 1"silt, wet 1" Rock 4" Gray brown, fine-med, sand



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/15/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: SB48
ESTIMATED DEPTH TO WATER (ft.): 7'
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: Continuous
TIME OF SAMPLE COLLECTION: 0900
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) OHM only
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

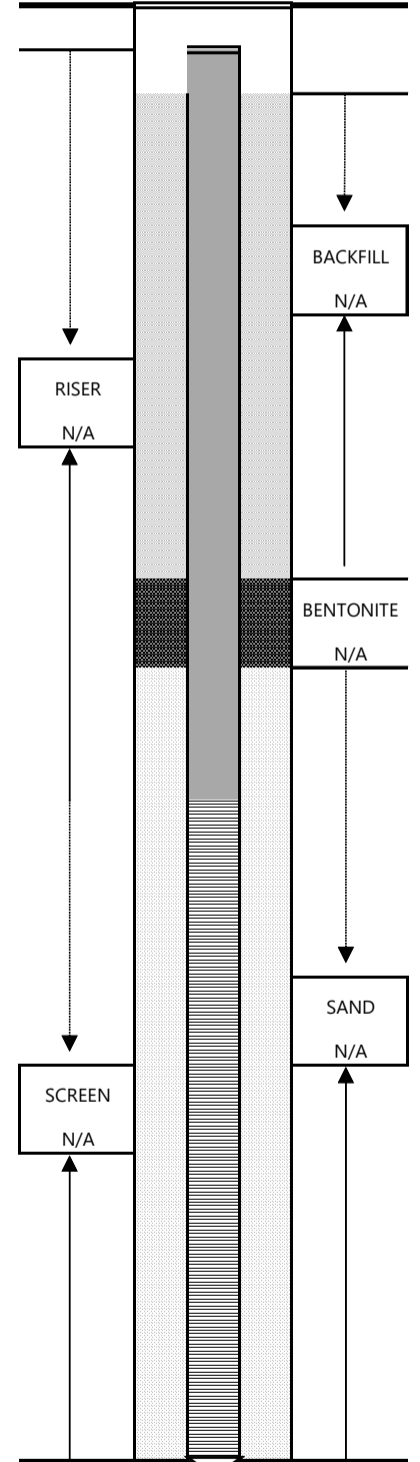
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		7 7 6 4	10	0.0
2-4		4 2 2 3	21	0.0
4-6		1 1 10 11	21	0.0
6-8	VOC	6 12 15 13	13	0.0

2" forest mat, gravel 8" tan loose medium sand, silt, no odor, no stain
12" same as above 9" Dark black fine sand, silty, loose, no odor
13" same as above 8" gray silt, clay, dense
brown fine sand, silt, loose, wet, no odor
End



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/13/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Proctor 5-6'
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: B28
ESTIMATED DEPTH TO WATER (ft.): 6'
TOTAL BORING DEPTH (ft.): 10'
SAMPLE COLLECTED? THERMAL PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: Continuous
TIME OF SAMPLE COLLECTION: 1300
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

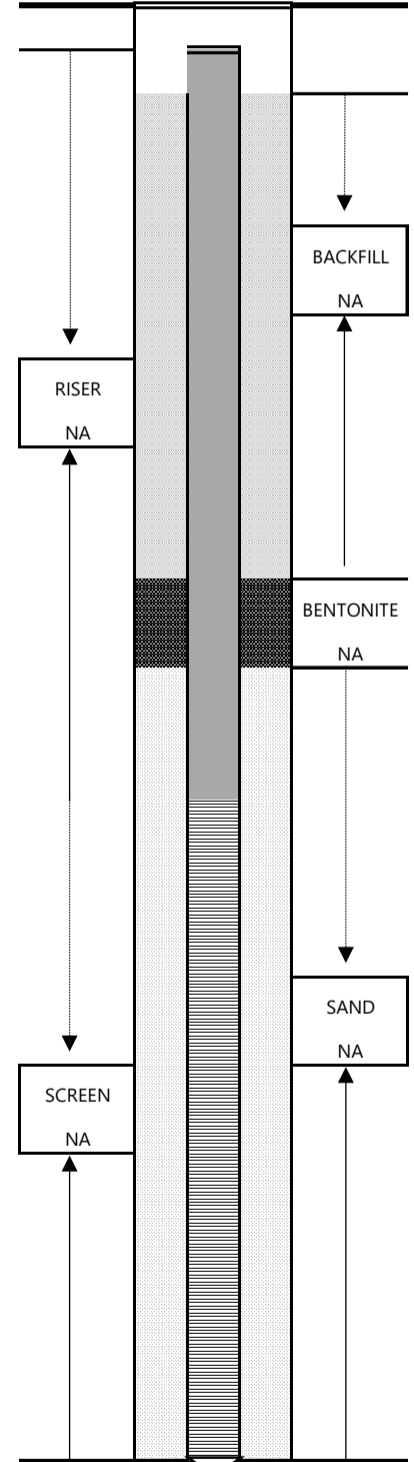
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		3 2 7 2	17	0.0
2-4		19 33 62 59	20	0.0
4-6	VOC	15 50 64 71	21	0.0
6-8		58 61 72 -	6	0.0

Dark brown fine to medium sand with trace gravel, low density, low plasticity, no odor
Light brown fine to medium sand with trace gravel, medium density, low plasticity, dry, no odor
Light brown fine to medium sand with trace gravel, medium density, low plasticity, moist, no odor
Light brown fine to medium sand with trace gravel, medium density, low plasticity, wet, no odor



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/7/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC

LOCATION ID: SB/MW35
ESTIMATED DEPTH TO WATER (ft.):3
TOTAL BORING DEPTH (ft.): 10
SAMPLE COLLECTED?THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8 bsg
TIME OF SAMPLE COLLECTION: 14:50
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) OHM only
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

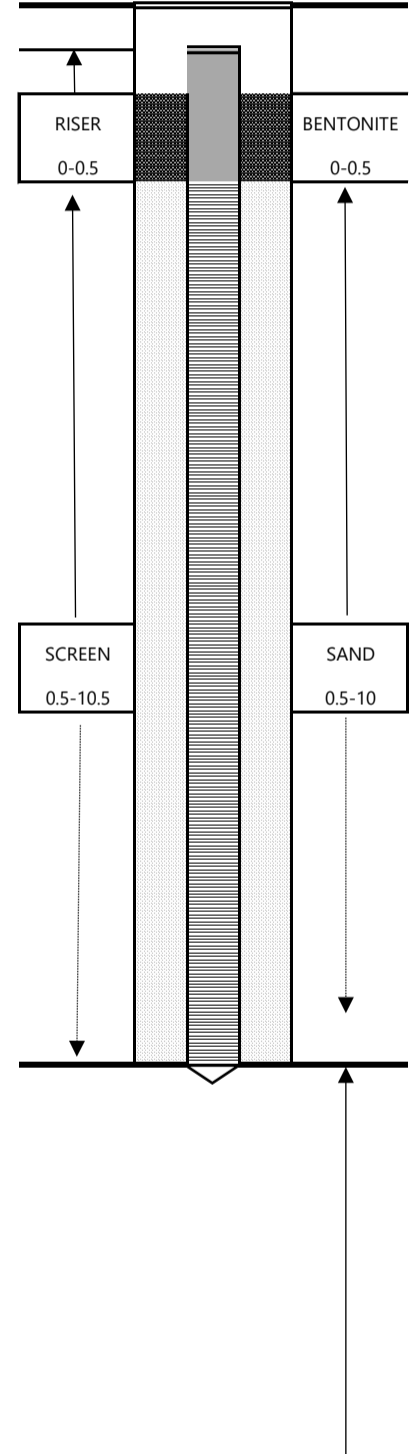
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2	VOC	25 25 25 15	24	0
2-4		12 12 8 7	9	0
4-6		3 10 13 19	19	0
6-8		18 15 20 15	24	0

Dark/black medium-coarse sand w/ angular rocks and coal ash, medium density, low plasticity, dry
Brown medium-fine sand with some rounded gravel, medium density, low plasticity, wet
Light brown fine-medium sand with trace silt, medium density, high plasticity, wet
Light brown fine-medium sand with trace silt, medium density, high plasticity, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/7/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC

LOCATION ID: SB34
ESTIMATED DEPTH TO WATER (ft.):6
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED?THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8 bsg
TIME OF SAMPLE COLLECTION: 14:45
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) OHM only
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

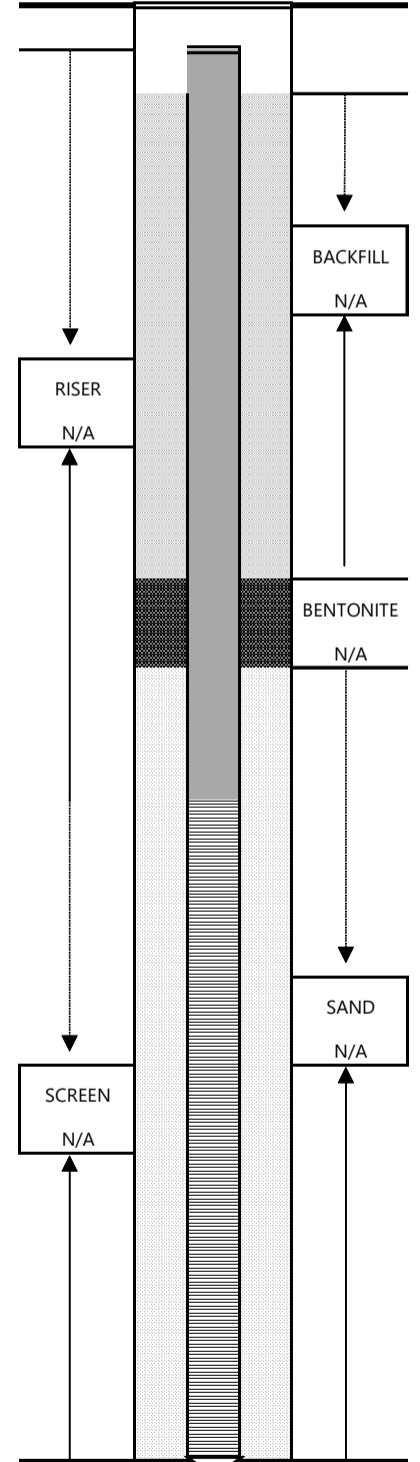
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2	VOC	3 4 3 N/A	24	0
2-4		5 4 4 3	20	0
4-6		4 2 3 4	22	0
6-8		4 5 6 8	17	0

6" Dark brown/black coarse-med sand underlain by medium brown medium fine sand, low density, medium plasticity, dry
Medium-dark brown, medium fine sand with trace sub-rounded rocks, low density, medium plasticity, dry
Medium-dark brown, medium fine sand with trace sub-rounded rocks, low density, high plasticity, damp
Brown fine-medium sand with trace coarse sand and silt, low density, high plasticity, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/7/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC

LOCATION ID: SB36
ESTIMATED DEPTH TO WATER (ft.):6
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8 bsg
TIME OF SAMPLE COLLECTION: 14:45
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) OHM only
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

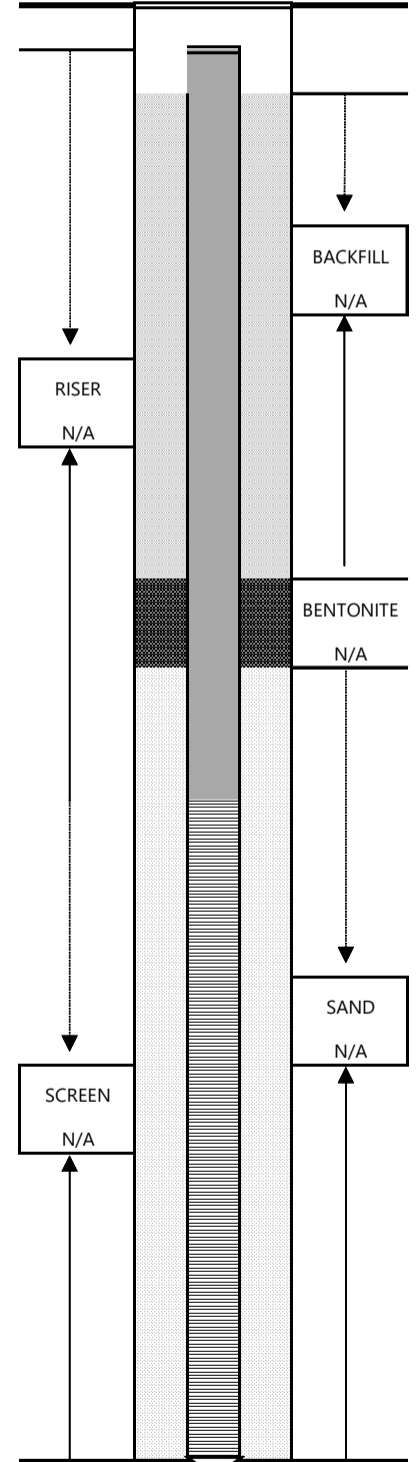
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		7 3 5 7	23	0.0
2-4		7 9 8 8	23	0.0
4-6		4 5 8 9	24	0.0
6-8	VOC	8 8 8 7	20	0.0

3" Dark brown/black medium coarse sand underlain by light brown medium-fine sand with trace sub-rounded gravel, low density, medium plasticity, dry
light brown/gray very fine-fine sand w/ orange streaks, low density, high plasticity, dry
6" fall back, underlain by same material from 2'-4'
Same as above but moist, wet at 8'



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/7/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC

LOCATION ID: SB/MW33
ESTIMATED DEPTH TO WATER (ft.):6
TOTAL BORING DEPTH (ft.): 13'
SAMPLE COLLECTED?THERMAL PROCTOR OHM X Well
DEPTH OF SAMPLE COLLECTED: 0-8 bsg
TIME OF SAMPLE COLLECTION: 14:36
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Well
FINISH DEPTH: 13'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

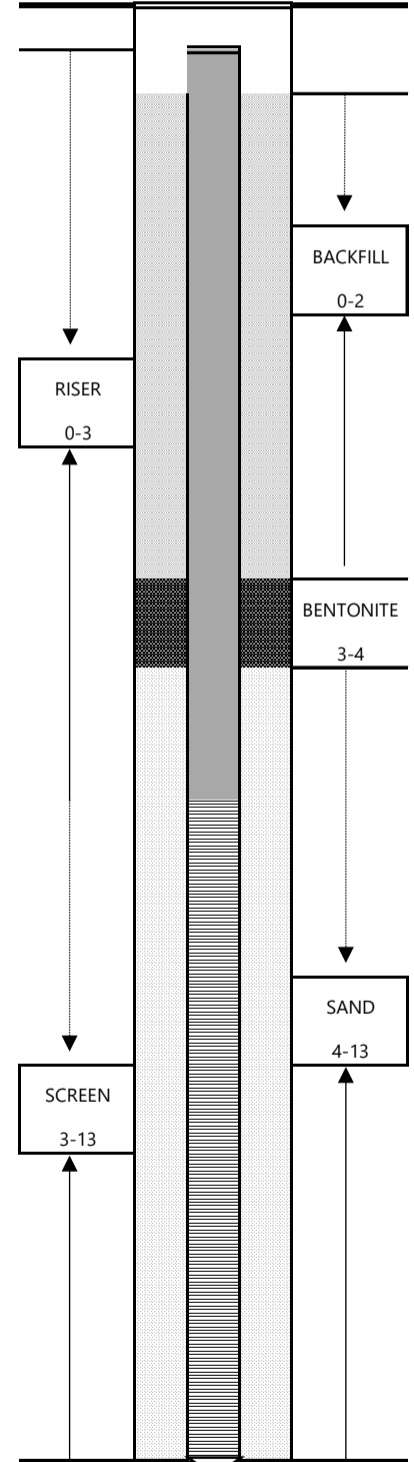
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		1 2 5 6	18	0.0
2-4		8 9 10 10	20	0.0
4-6	VOC	8 10 10 7	10	0.0
6-8		6 6 6 6	11	0.0

4" Dark brown med-coarse sand underlain by light brown finemed sand, low density, low plasticity, dry
light brown w/ orange streaks with trace fine sand, high plasticity, low density, dry
light brown/gray with fine medium sand w/ trace silt and orange streaks ar 6', low density, high plasticity, moist
light brown/gray with very fine-fine sand with trace silt and orange streaks, low density, medium plasticity, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/6/18
DRILLING METHOD: Hollow Stem /
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP35
ESTIMATED DEPTH TO WATER (ft.):7
TOTAL BORING DEPTH (ft.): 15'
SAMPLE COLLECTED? THERMAL PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 15' (proct)
TIME OF SAMPLE COLLECTION:
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...)
FINISH DEPTH:
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

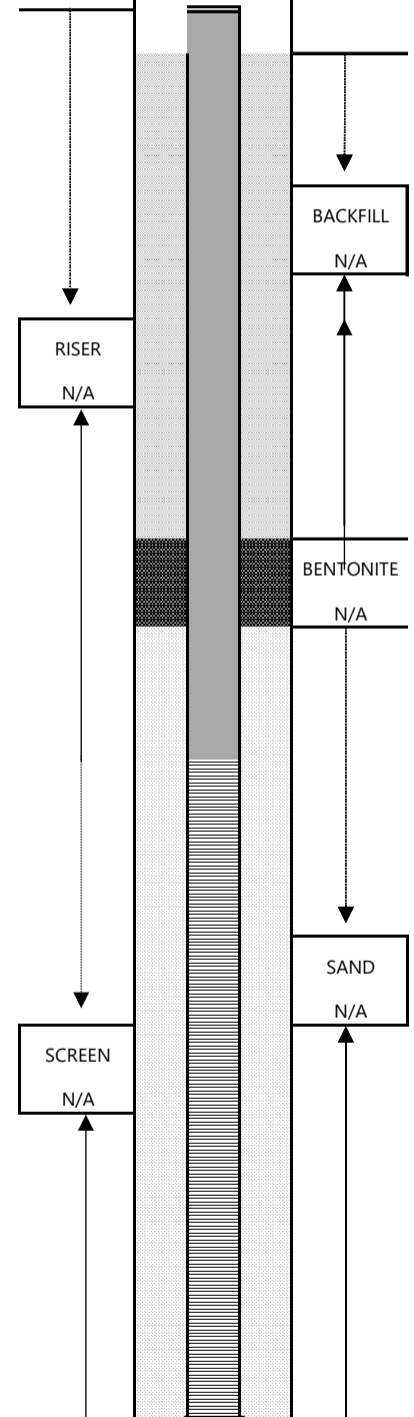
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		4 6 6 6	24	0.0
2-4	VOC	3 5 8 12	16	0.0
4-6		5 6 7 8	14	0.0
6-8		10 12 8 8	16	0.0

SOIL DESCRIPTION

4" Black/Dark Brown, Fine Sand and silt, some organic 20" Tan/brown, silt and fine sand, little rounded gravel
16" Tan, fine sand and silt
14" Tan/light grey, Fine-Medium sand, little silt
6" same as above 10" Tan/light gray. Silt, light fine sand, wet

WELL CONSTRUCTION (ft.)



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/6/18
DRILLING METHOD: Hollow Stem /
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP31
ESTIMATED DEPTH TO WATER (ft.): 2
TOTAL BORING DEPTH (ft.): 15'
SAMPLE COLLECTED? THERMAL PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 15' (proct)
TIME OF SAMPLE COLLECTION:
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Manhole
FINISH DEPTH: 15'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

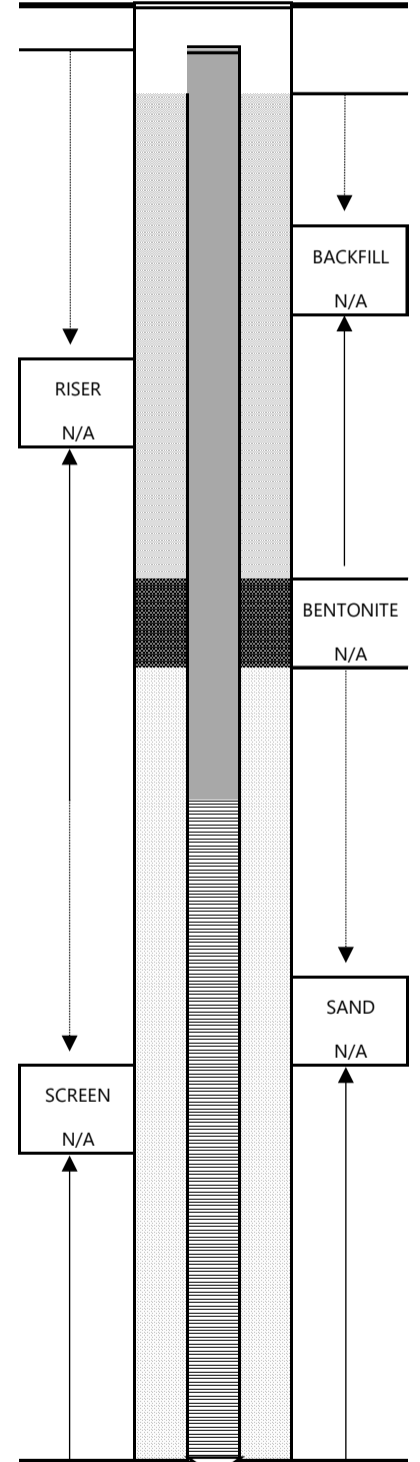
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2	VOC	3 4 3 3	8"	0.0
2-4		3 3 11 8	6"	0.0
4-6		1 3 5 5	16"	0.0
6-8		5 7 7 8	24"	0.0

4" Black, fine-medium sand, little silt, little organic 4" Tan, fine-medium sand, little silt, moist
6" Tan, sand, trace silt, gravel, wet
16" Tan, fine-medium sand, little silt, wet
10" same as above 14" Tan/light grey, silt, trace fine sand, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/6/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP30
ESTIMATED DEPTH TO WATER (ft.):8
TOTAL BORING DEPTH (ft.): 10'
SAMPLE COLLECTED?THERMAL X PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 5-6 (proctor, thermal) 0-8 (OHM)
TIME OF SAMPLE COLLECTION: 1315
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

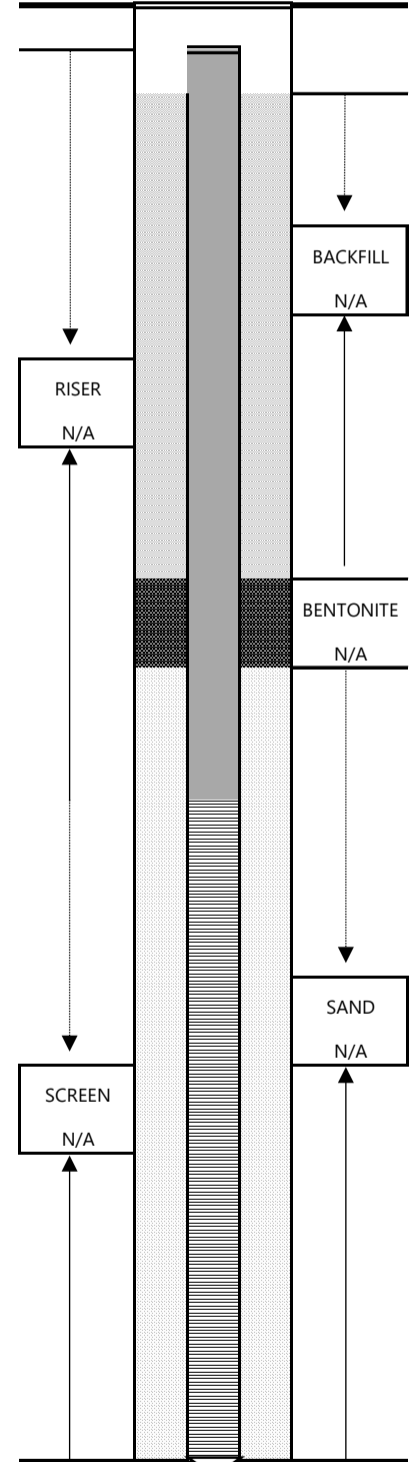
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		2 2 3 5	24	0.0
2-4		6 5 4 3	20	0.0
4-6	VOC	2 2 2 6	24	0.0
6-8		6 6 7 8	20	0.0

6" Black/Brown, fine sand, little silt 18" Tan, fine sand, little silt
12" Tan/Reddish tan, fine sand, little silt 8" Brown/tan, fine sand, some silt
4" Black, fine sand, little silt 16" Tan, brown, fine sand, trace silt 4" Black, silt, some fine sand, little organic
20" Brown/Tan, fine sand and silt, moist



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSEARCH
DRILLING DATE: 11/5/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP29
ESTIMATED DEPTH TO WATER (ft.):
TOTAL BORING DEPTH (ft.): 15'
SAMPLE COLLECTED? THERMAL PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 15' (proctor) 0-8, 6-8) OHM
TIME OF SAMPLE COLLECTION: 1315
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Manhole
FINISH DEPTH: 15'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

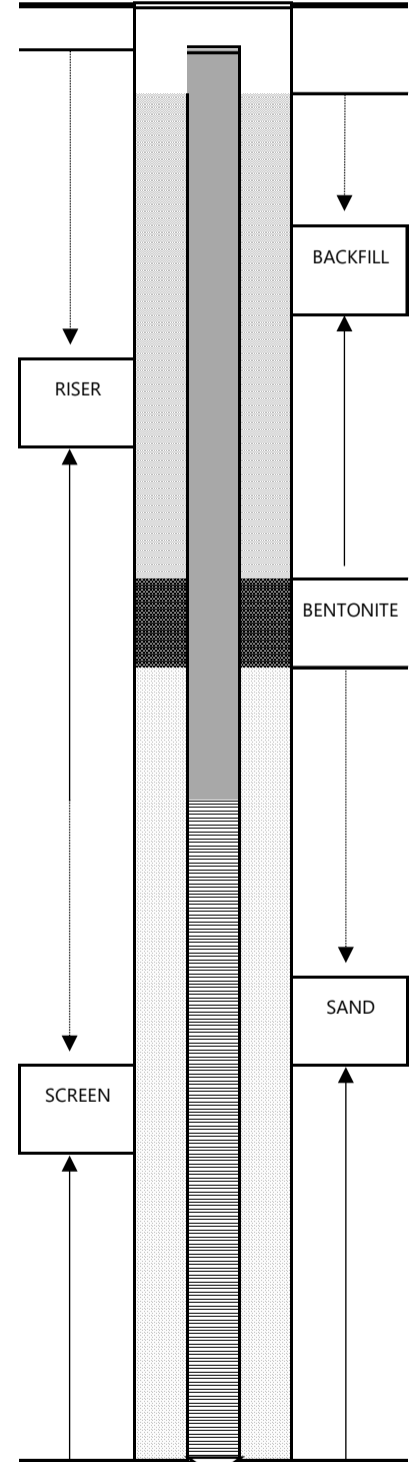
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		4 6 9 8	24	0.0
2-4		7 8 7 7	18	0.0
4-6		3 5 6 6	18	0.0
6-8	VOC Grab		20	0.0

10" black, sand, little silt, trace debris (glass) some org @ surface, fine gravel 14" bright brown, sand, trace silt
8" same as above 10" light tan/light grat, sand, trace silt
18" Same as above
20" light brown/reddish brown, fine sand, some silt, moist, possible redox
End boring @ 15'



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/5/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP28
ESTIMATED DEPTH TO WATER (ft.): 7-8
TOTAL BORING DEPTH (ft.): 10'
SAMPLE COLLECTED? THERMAL X PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 5-6 (thermal) 0-8/6-8 (OHM)
TIME OF SAMPLE COLLECTION:
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

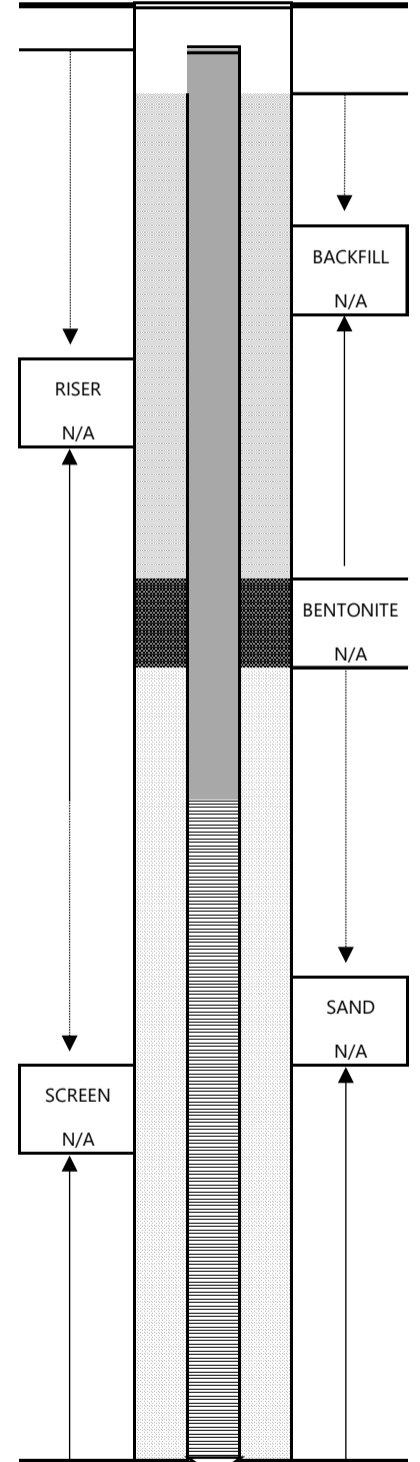
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		2 2 4 6	24	0.0
2-4		6 8 7 8	20	0.0
4-6		4 8 7 7	24	0.0
6-8	VOC	7 7 7 7	22	0.0

8" black, fine-medium sand, light silt, coal ash, gravelly 16" Brown-tan, fine sand, light silt
20" Tan, fine sand, light silt
24" Same as above
12" same as above, moist 4" tan, silt, light fine sand 6" same as 12", wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/5/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP27
ESTIMATED DEPTH TO WATER (ft.): 6'
TOTAL BORING DEPTH (ft.): 15'
SAMPLE COLLECTED? THERMAL PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 15' (Proctor) 0-8/2-4 (OHM)
TIME OF SAMPLE COLLECTION: 1100
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Manhole
FINISH DEPTH: 15'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

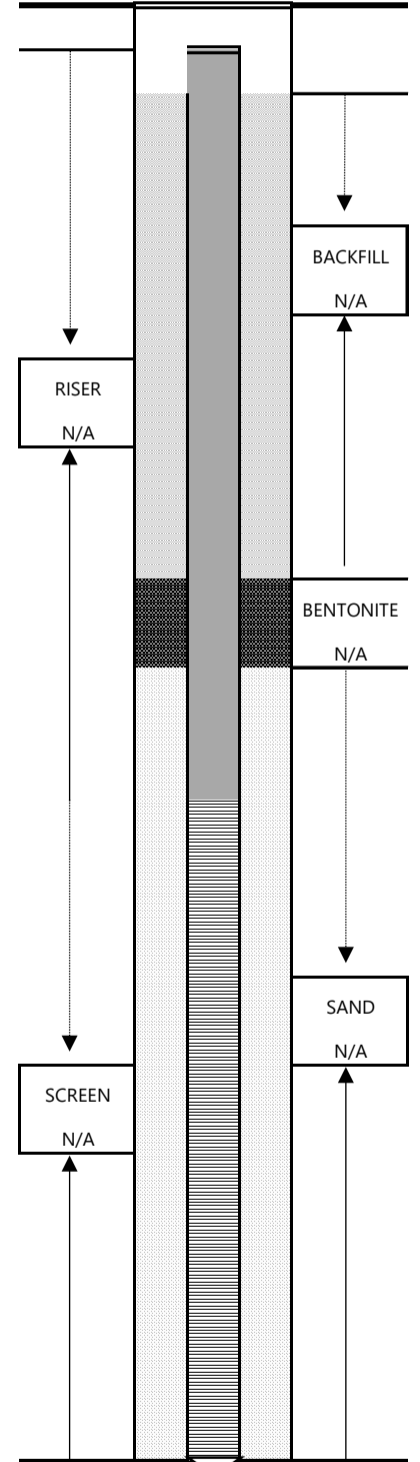
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		2 2 6 6	22	0.0
2-4	VOC	7 7 7 7	20	0.0
4-6		5 5 6 5	16	0.0
6-8		- - - -	20	0.0

8" Black-brown, fine-medium sand and silt, light fine gravel, some org @ top and coal ash 14" tan, fine-medium sand and silt
20" light tan, sand, little silt potential redox observed
16" light tan-light reddish brown, fine-medium sand, light silt, potential redox @ bottom
20" light tan/light gray, fine sand, little silt, moist



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 11/1/18
DRILLING METHOD: Split Spoon
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: MP33
ESTIMATED DEPTH TO WATER (ft.): 8'
TOTAL BORING DEPTH (ft.): 10'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8 Cont
TIME OF SAMPLE COLLECTION: N/A
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

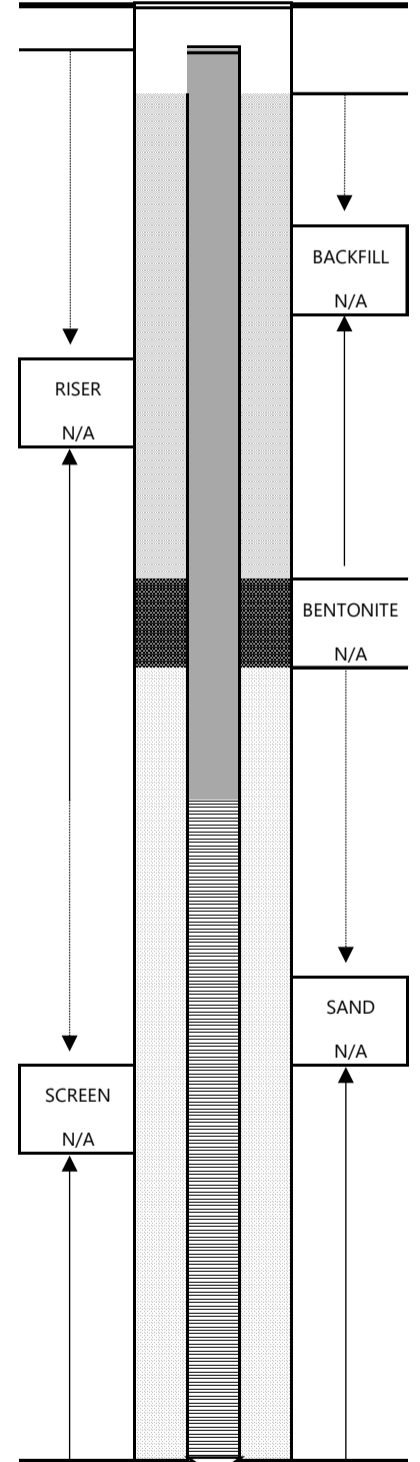
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		3 5 5 6	22	0
2-4		3 3 2 2	20	0
4-6		2 1 1 3	19	0
6-8	VOC	8 8 10 10	19	0
8-10				

6" Top Soil 16" tan medium sand, silt, low density, high plasticity, dry, no odor
6" same as above 14" dark brown, medium sand, silt, high density, low plasticity, wet
19" dark brown medium sand, silty, high density, low plasticity, wet
7" light brown, fine sand, silty, low density, high plasticity, wet 12" grey medium sand, silty clay, low density, high plasticity, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/26/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP39
ESTIMATED DEPTH TO WATER (ft.):
TOTAL BORING DEPTH (ft.): 10
SAMPLE COLLECTED? THERMAL X PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 5-6 (P/T) 0-8 (comp) 2-4 (VOC)
TIME OF SAMPLE COLLECTION: 1235
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

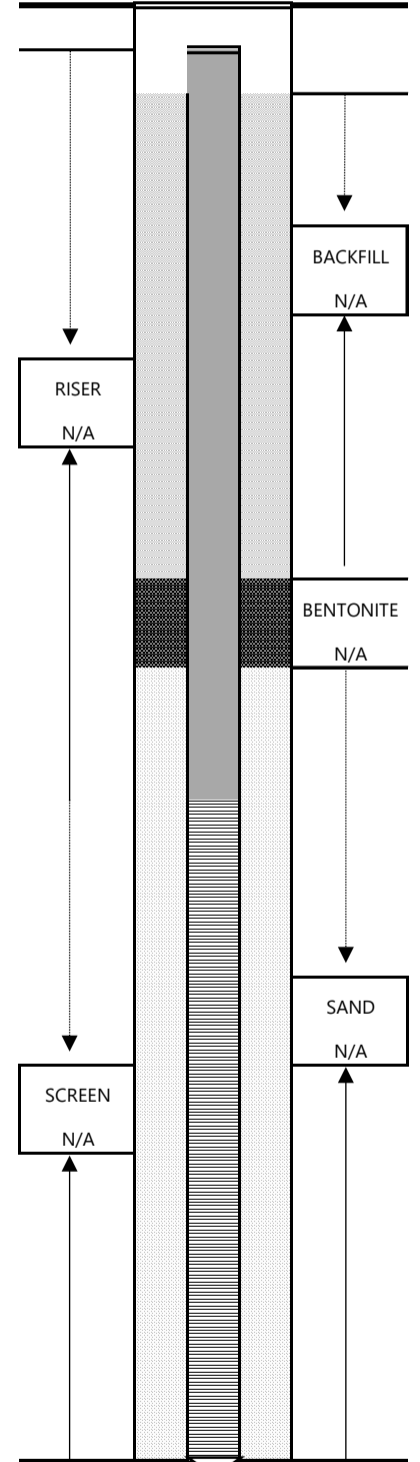
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		4 9 61 41	10	0.0
2-4	VOC	33 26 22 17	20	0.0
4-6		14 13 16 17	10	0.0
6-8		15 14 13 13	24	0.0

8" black, fine sand, little silt 2" light brown/tan sand and silt, hard, gravelly
20" same as above
Same as above
24" Tan, fine- medium sand, silt, Hard, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/26/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP38
ESTIMATED DEPTH TO WATER (ft.):
TOTAL BORING DEPTH (ft.): 16.5
SAMPLE COLLECTED? THERMAL PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' Comp 15' (Proctor)
TIME OF SAMPLE COLLECTION: 1005
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Manhole
FINISH DEPTH: 16.5
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

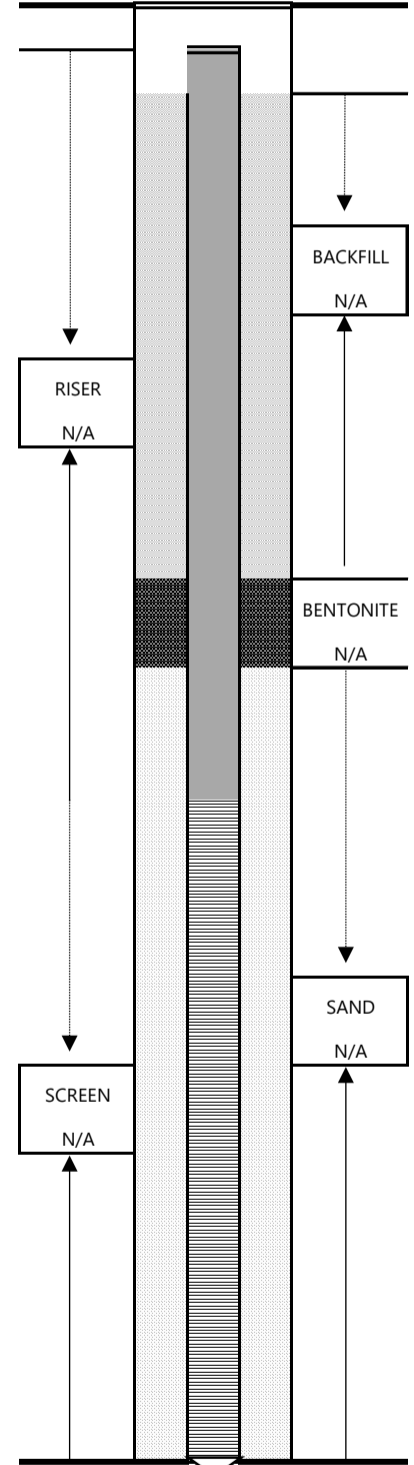
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		4 6 10 8	12	0.0
2-4	VOC	10 10 5 7	4	0.0
4-6		6 15 14 15	24	0.0
6-8		17 20 21 21	24	0.0

6" Black, sand, some silt, granular 3" Brown, medium-course sand 3" Tan, fine sand, some silt, little gravel
4" Reddish Brown, silt, little fine sand
24" Tan, Fine sand and silt, gravelly, hard
24" Brown-Tan/ light gray, silt and fine sand, graqvel, medium density.



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/26/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: MP37
ESTIMATED DEPTH TO WATER (ft.): 8
TOTAL BORING DEPTH (ft.): 10
SAMPLE COLLECTED? THERMAL X PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' Comp
TIME OF SAMPLE COLLECTION: 0830
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

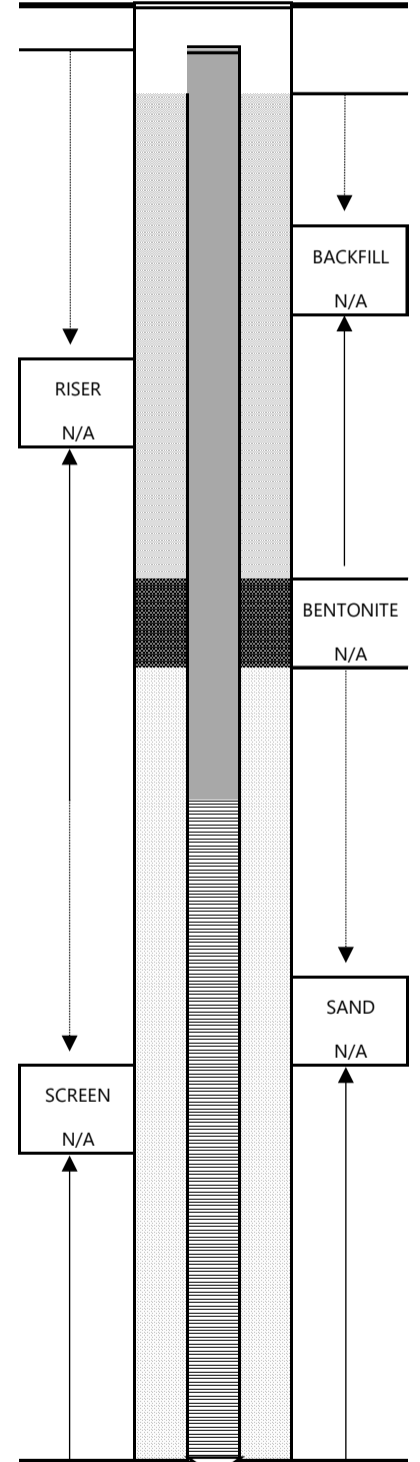
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		2 4 6 5	14	0.0
2-4		6 6 7 5	14	0.0
4-6		5 4 3 3	0	-
6-8	VOC	5 6 12 12	4	0.0

6" Black, medium-coarse sand and silt, granular 8" Tan, fine sand and silt
Same as above
No recovery
4" Light tan/gray, sand, moist



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/25/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: SB39
ESTIMATED DEPTH TO WATER (ft.): Not Encountered
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' (2-4 grab for voc)
TIME OF SAMPLE COLLECTION: 1105
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) ENV
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

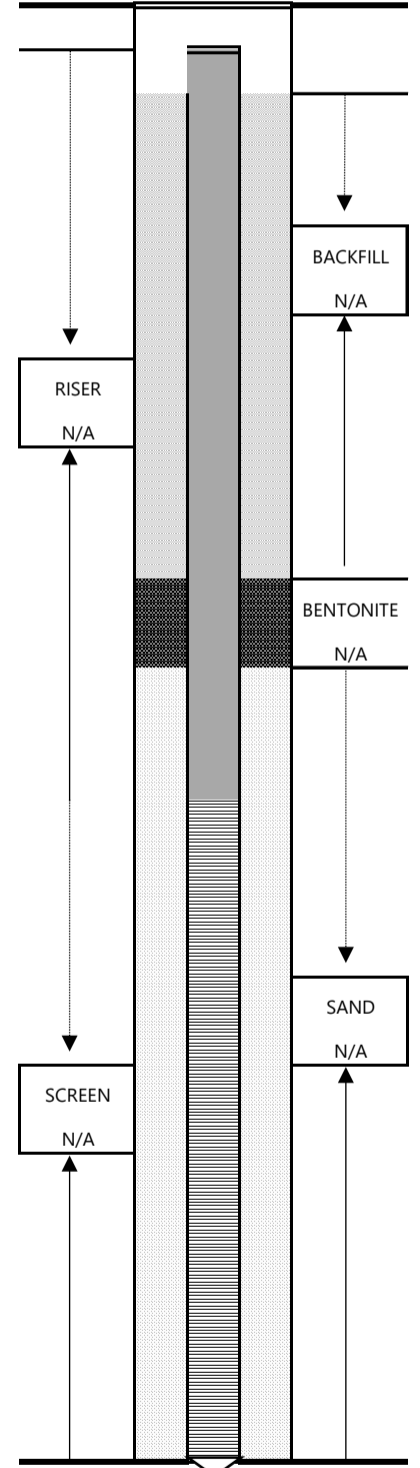
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		4 13 13 17	24	0
2-4	VOC	17 50/1" - -	10	3.1
4-6		20 11 15 19	10	0.1
6-8		10 16 16 16	16	0.2

10" Brown, Silt, some fine sand, some organic 14" Brown, Sand, some silt, very gravelly
10" Same as above, firm, little clay
Same as above
Same as above



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/25/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: SB38
ESTIMATED DEPTH TO WATER (ft.): Not Encountered
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' (0-2 grab for voc)
TIME OF SAMPLE COLLECTION: 1105
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) ENV
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

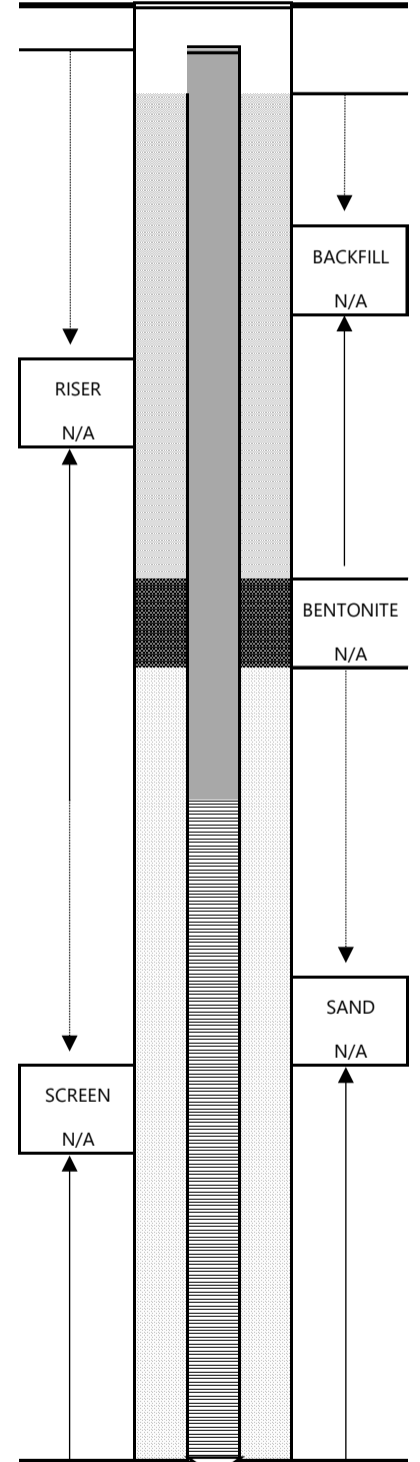
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2	VOC	4 3 4 5	20	0.2
2-4		5 4 3 3	18	0.0
4-6		3 3 2 3	18	0.0
6-8		2 3 2 5	16	0.0

4" Brown, silt and medium-fine sand, some organic 20" Tan, silt and little fine sand
18" same as above
6" Brown, silt and fine sand 12" Tan, silt and fine sand
16" Same as above, trace clay



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/25/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: SB37	
ESTIMATED DEPTH TO WATER (ft.):	Not Encountered
TOTAL BORING DEPTH (ft.):	8'
SAMPLE COLLECTED?	THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED:	0-8' (4-6 grab for voc)
TIME OF SAMPLE COLLECTION:	1020
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...)	ENV
FINISH DEPTH:	8'
REFUSAL ENCOUNTERED:	NO

NOTES/SKETCH:

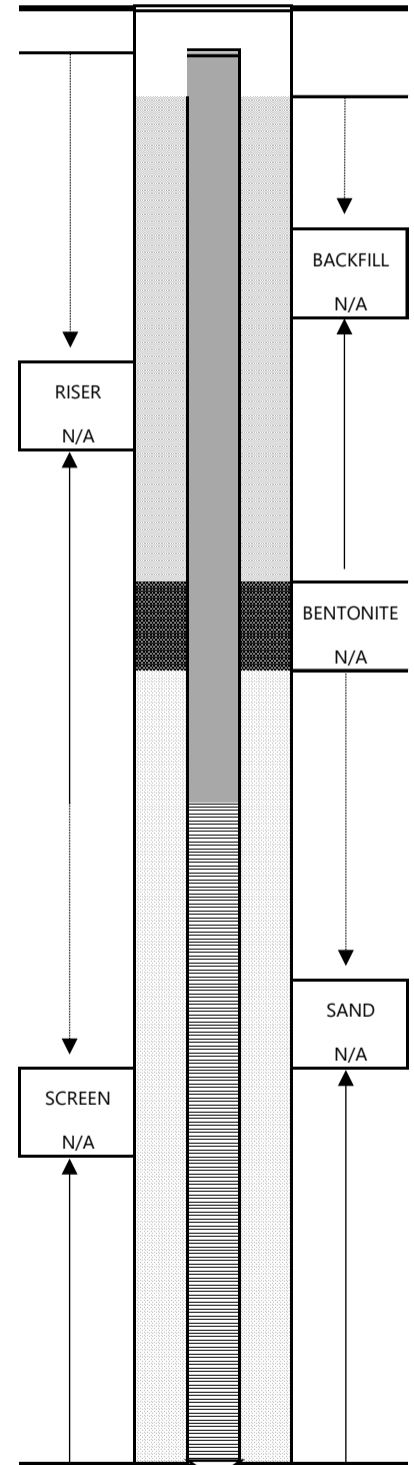
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		3 3 4 4	16	0.5
2-4		6 7 5 4	16	0.0
4-6	VOC	3 4 6 4	12	2.9
6-8		3 6 14 11	6	0.0

6" brown, sand and silt, some organic underlain by light brown/tan sand and silt
4" same as above 12" Tan, silt and fine sand, trace gravel
12" Tan, silt and fine sand, some gravel
6" same as above, clay at bottom



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/25/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: SB50
ESTIMATED DEPTH TO WATER (ft.): 3'
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' (4-6 grab for voc)
TIME OF SAMPLE COLLECTION: 0914
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) ENV
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

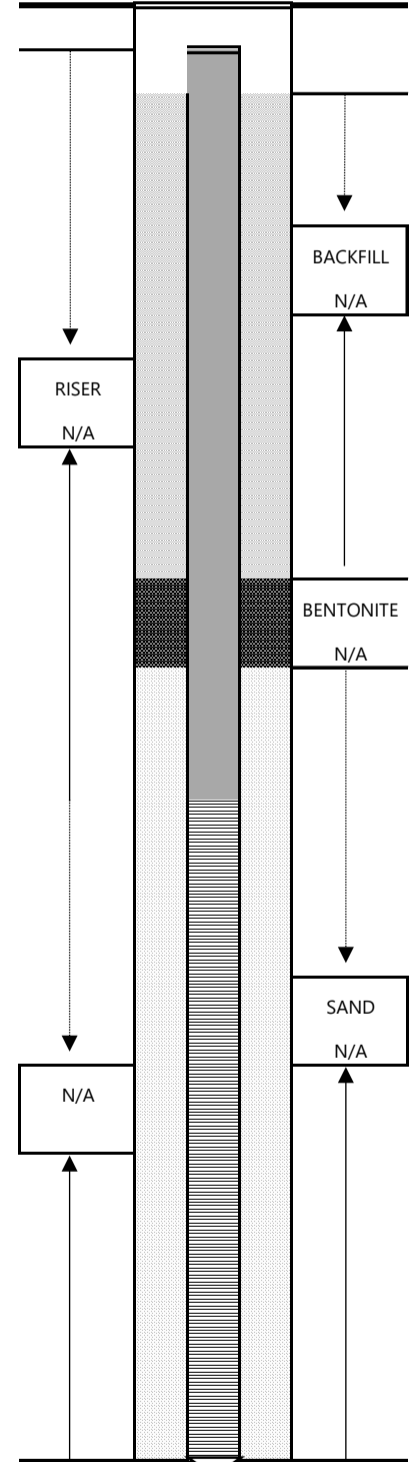
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		2 2 2 2	18	0.1
2-4		3 3 4 10	24	0.0
4-6	VOC	2 2 4 9	18	1.0
6-8		7 8 8 8	18	0.3

9" gray-black fine-medium sand and siltn little gravel, little organic 9" brown-dark brown, fine sand and silt
10" same as above 14" Tan, Fine Sand and Silt, moist
18" tan, fine sand, some silt, moist
9" Same as above, wet 9" Tan, Silt, some fine sand, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/24/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: FTB

LOCATION ID: GB21	
ESTIMATED DEPTH TO WATER (ft.): 2.5	
TOTAL BORING DEPTH (ft.): 16'	
SAMPLE COLLECTED? THERMAL PROCTOR OHM X	
DEPTH OF SAMPLE COLLECTED: 0-8' (o-2' grab voc)	
TIME OF SAMPLE COLLECTION: 10:57	
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) ENV	
FINISH DEPTH: 16'	
REFUSAL ENCOUNTERED: Auger Refusal	

NOTES/SKETCH:
Location ~6' east of SB-51 stake originally to accommodate for geotech for GB-21, move stake

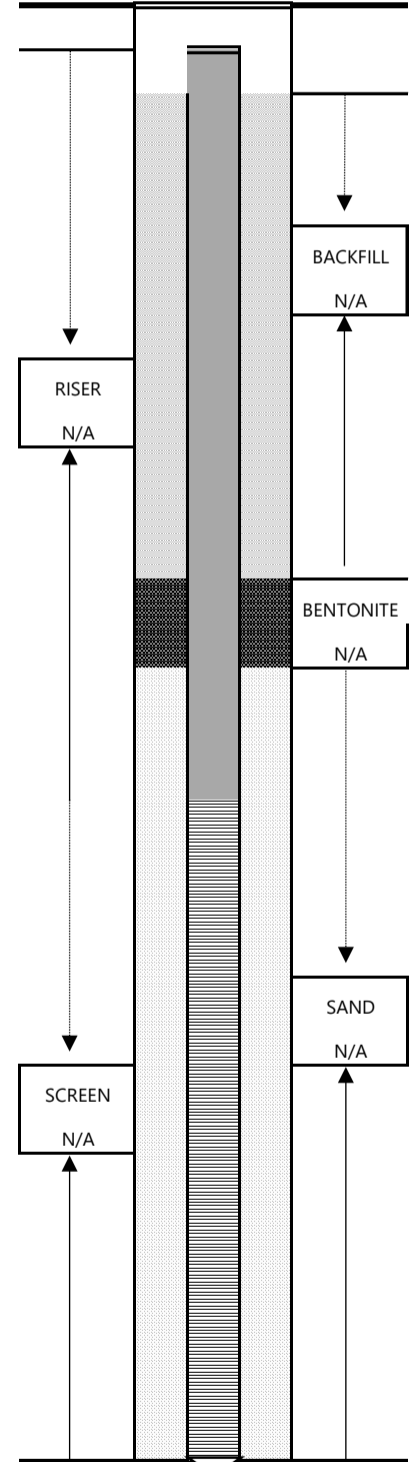
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2	VOCs	3	12	0.0
		4		
		9		
		18		
2-4		13	18	0.0
		10		
		75		
		35		
4-6		7	12	0.0
		18		
		36		
		22		
6-8		12	16	0.0
		19		
		31		
		21		

2" Brown silt and organic material 8" black, sand, little silt, gravel, some coal ash 2" brown sand little silt, gravel
18" brown/tan silt with little fine sand, moist, redox at bottom
4" same as above 4" Dark grey/ tan, medium coarse sand, little silt, gravel, moist 4" Tan, sand, some gravel, moist
16" light tan, medium-coarse sand and gravel, wet



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/18/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: TJP

LOCATION ID: MP36
ESTIMATED DEPTH TO WATER (ft.): 4.25'
TOTAL BORING DEPTH (ft.): 10'
SAMPLE COLLECTED? THERMAL X PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 0-10' OHM 5-6' thermal/proctor
TIME OF SAMPLE COLLECTION: 14:25
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 10'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:

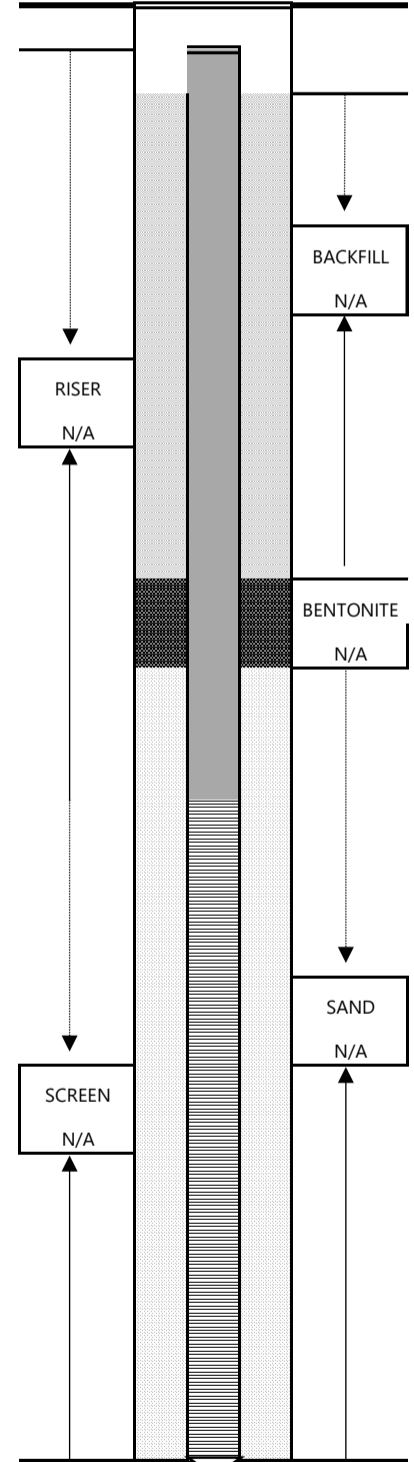
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		2 2 3 2	16	0.0
2-4		2 1 1 1	26	0.0
4-6	VOC	2 2 2 3	23	0
6-8		1 1 8 8	21	0
8-10		5 9 9 11	13	0

top 6" forest mat, under 10" lite brown silty sand, medium fine, low density, high p;lasticity, dry, no odor
Top 2" brown silty sand, medium, under 18" brown silty sand medium, high plasticity, low density, wet, no odor
Same as above for 13", underlain by dark brown silty fine sand, some organics, low plasticity, high density, dry, slight organic odor.
Light brown, silty sand, fine-med for 11", then dark brown silty fine sand, high density, low plasticity, wet, organic odor, 3" of grey fine sand natural.
Light grey/brown for 7", silty fine medium sand then gravel for 6", High plasticity, low density, wet, no odor



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/11/18
DRILLING METHOD: 4'4" Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC, TJP

LOCATION ID: SB49
ESTIMATED DEPTH TO WATER (ft.): ~6'
TOTAL BORING DEPTH (ft.): 8'
SAMPLE COLLECTED? THERMAL PROCTOR OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' OHM
TIME OF SAMPLE COLLECTION: 14:25
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) ENV.
FINISH DEPTH: 8'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH: 4 1/4" Auger

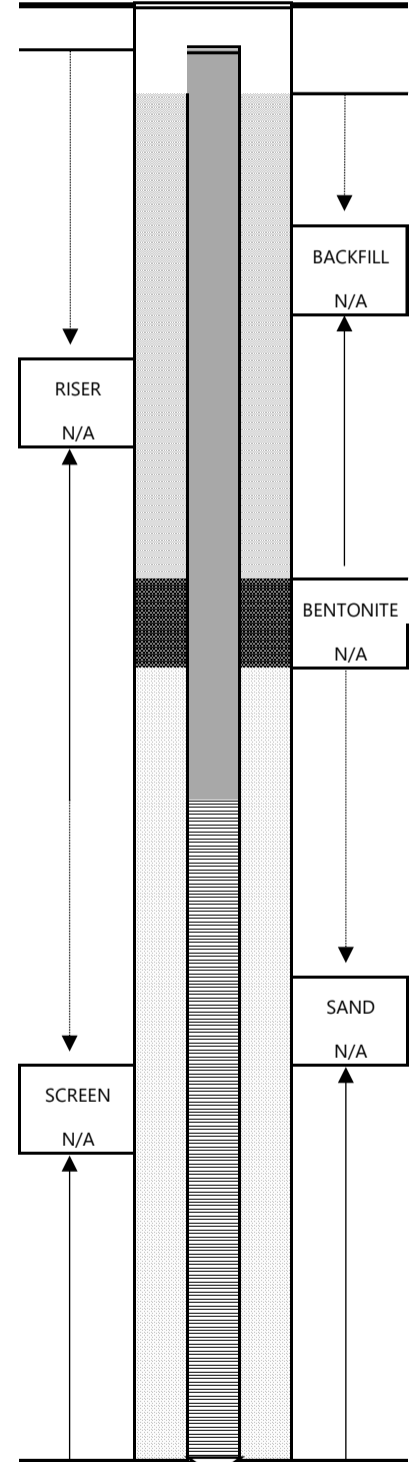
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		4 5 3 3	20	0.0
2-4		3 3 2 2	18	0.0
4-6	VOC	3 4 3 11	7	0.0
6-8		12 14 13 11	17	0.0

first 6" dark brown organic material, medium fine sand, low density, low plasticity, underlain by light brown medium sand, low density, low plasticity, dry, no odor
Brown medium fine sand with trace rounded gravel, orange streaks at ~9", low density, high plasticity, moist, no odor.
Grey/black very fine-medium sand with some silt, low density, medium plasticity, clay at botton, moist, no odor
Grey, very fine-coarse sand with some silt and rounded gravel, clay at bottom 2", medium density, medium plasticity, wet, no odor



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/11/18
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Continuos
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC, TJP

LOCATION ID: MP34
ESTIMATED DEPTH TO WATER (ft.): 7'
TOTAL BORING DEPTH (ft.): 12'
SAMPLE COLLECTED? THERMAL X PROCTOR X OHM X
DEPTH OF SAMPLE COLLECTED: 0-8' OHM, 5-6 Thermal
TIME OF SAMPLE COLLECTION: 14:21
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Intermediate
FINISH DEPTH: 12'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:
4 1/4" Auger

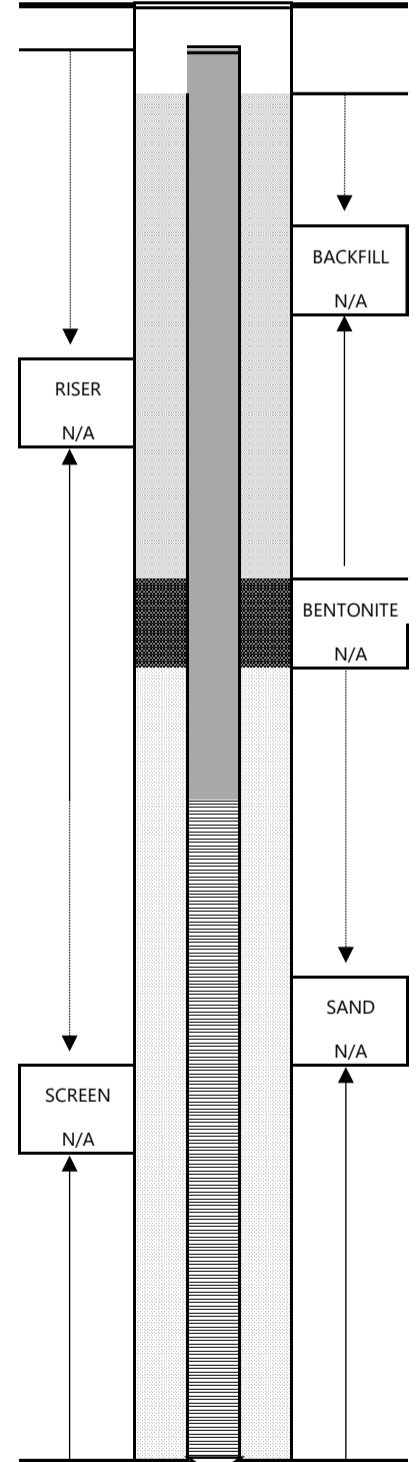
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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0-2		3 3 3 3	17"	0
2-4		7 7 19 31	10"	0
4-6	VOC	13 120/2	N/A	0
6-8		11 119 41 34	8"	0

SOIL DESCRIPTION

Dark brown medium sand with trace sub-angular gravel, low density, low platicity, dry, no odor
light brown, medium-fine sand with some sub-angular gravel and rocks, medium density, low plasticity, dry, rock at ~4'
Wood, no recovery
brown, fine sand, silt, some gravel and rocks, low plasticity, low density, wet.

WELL CONSTRUCTION (ft.)



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)



CLIENT: EVERSOURCE
PROJECT: PROPOSED TRANSMISSION LINE
PROJECT #: 12970.00
DIGSAFE: 20183510192
DRILLER: GEOSSEARCH
DRILLING DATE: 10/11/18
DRILLING METHOD: Hollow Stem /
SAMPLING METHOD: Continuous
PRE-CLEAR DEPTH: N/A
LOGGED BY: PEC, TJP

LOCATION ID: MP32
ESTIMATED DEPTH TO WATER (ft.):
TOTAL BORING DEPTH (ft.): 12'
SAMPLE COLLECTED? THERMAL ___ PROCTOR ___ OHM X
DEPTH OF SAMPLE COLLECTED: 0-8
TIME OF SAMPLE COLLECTION: 10:22
SAMPLING PURPOSE (i.e. MANHOLE, INTERMEDIATE...) Geoboring
FINISH DEPTH: 12'
REFUSAL ENCOUNTERED: NO

NOTES/SKETCH:
12' to native

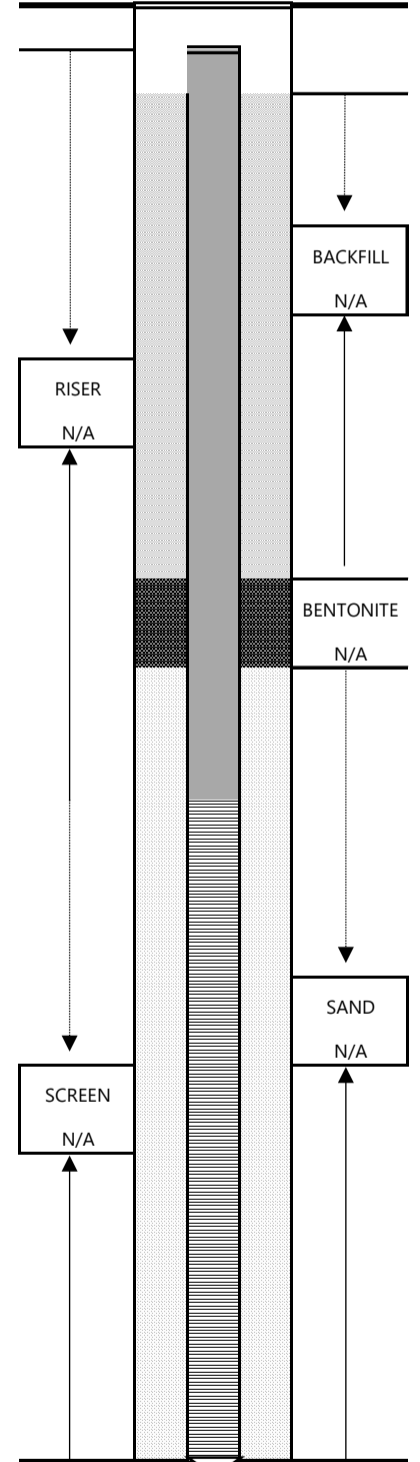
DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
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SOIL DESCRIPTION

WELL CONSTRUCTION (ft.)

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)
0-2		3 6 5 5	12"	0
2-4		6 5 3 4	21"	0
4-6	VOC	4 3 1 2	21"	0
6-8		1 2 2 6	17"	0

Dark brown medium coarse sand with little sub-angular gravel/rocks, low density, low plasticity, dry, no odor
top 14" light brown medium sand, gomogenous, underlain by brown medium sand, low density, low plasticity, dry, no odor
Same as above for 7", underlain by dark brown/black silty fine sand (peat), High plasticity, low density, wet, slight organic odor
Same as above for 12" underlain by grey silty clay, low density, high plasticity, wet, no odor.
end of boring



SOIL DESCRIPTIONS:	
1) PRIMARY GRAIN SIZE (BOULDERS, COBBLES, GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	6) ANGULARITY (V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE (TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	7) COLOR (GREY, BROWN, etc.)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	8) STRUCTURES, STAINING, ALTERATION (LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY, CHANNEL DEPOSIT, etc.)

October 15, 2018

Paul McKinlay
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury/Hudson, MA
Client Job Number:
Project Number: 12970.00
Laboratory Work Order Number: 18J0192

Enclosed are results of analyses for samples received by the laboratory on October 3, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paul McKinlay

REPORT DATE: 10/15/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.00

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J0192

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

PROJECT LOCATION: Sudbury/Hudson, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP-40	18J0192-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332
SW-846 8081B

Qualifications:**DL-03**

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

18J0192-01[MP-40]

SW-846 8082A

Qualifications:**O-32**

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

Analyte & Samples(s) Qualified:

18J0192-01[MP-40]

SW-846 8151A

Qualifications:**V-05**

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

Analyte & Samples(s) Qualified:**2,4,5-T [2C]**

B213836-BLK1, B213836-BSD1

2,4-DB [2C]

B213836-BLK1, B213836-BSD1

SW-846 8260C

Qualifications:**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:**2-Butanone (MEK)**

B214054-BS1

Acetone

B214054-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:**1,2,4-Trichlorobenzene**

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

2-Butanone (MEK)

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

2-Hexanone (MBK)

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

Acetone

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

Bromochloromethane

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

Bromomethane

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

Dibromomethane

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-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**

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

Tetrahydrofuran

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1

V-20

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

Analyte & Samples(s) Qualified:**1,2,3-Trichloropropane**

B214054-BS1, B214054-BSD1, S028040-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**

18J0192-01[MP-40], B214054-BLK1, B214054-BS1, B214054-BSD1, S028040-CCV1

V-36

Initial calibration verification (ICV) 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:**1,4-Dioxane**

B214054-BS1, B214054-BSD1, S028040-CCV1

SW-846 8270D**Qualifications:****V-05**

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

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

B214109-BLK1, B214109-BS1, B214109-BSD1

Bis(2-chloroisopropyl)ether

B214109-BLK1, B214109-BS1, B214109-BSD1

Pyridine

B214109-BLK1, B214109-BS1, B214109-BSD1

V-06

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

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

B214109-BS1, B214109-BSD1

Hexachlorobutadiene

B214109-BS1, B214109-BSD1

V-19

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

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

18J0192-01[MP-40], B214109-BLK1, B214109-BS1, B214109-BSD1

V-20

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

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

B214109-BLK1

Hexachlorobutadiene

B214109-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**

18J0192-01[MP-40], B214109-BLK1, B214109-BS1, B214109-BSD1

Aniline

18J0192-01[MP-40]

SW-846 9045C**Qualifications:****H-03**

Sample received after recommended holding time was exceeded.

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

18J0192-01[MP-40], B213948-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: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Field Sample #: MP-40

Sampled: 10/2/2018 12:12

Sample ID: 18J0192-01

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	0.062	mg/Kg dry	1	R-05	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Benzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Bromobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Bromochloromethane	ND	0.0012	mg/Kg dry	1	R-05	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Bromodichloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Bromoform	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Bromomethane	ND	0.0062	mg/Kg dry	1	R-05, V-34	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
2-Butanone (MEK)	ND	0.025	mg/Kg dry	1	R-05	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
n-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
sec-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
tert-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Carbon Disulfide	ND	0.0037	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Carbon Tetrachloride	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Chlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Chlorodibromomethane	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Chloroethane	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Chloroform	ND	0.0025	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Chloromethane	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
2-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
4-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2-Dibromoethane (EDB)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Dibromomethane	ND	0.0012	mg/Kg dry	1	R-05	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,3-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,4-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
cis-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
trans-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,3-Dichloropropane	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
2,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
cis-1,3-Dichloropropene	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
trans-1,3-Dichloropropene	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Diethyl Ether	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Diisopropyl Ether (DIPE)	ND	0.00062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,4-Dioxane	ND	0.062	mg/Kg dry	1	V-16	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Ethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF

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

Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Field Sample #: MP-40

Sampled: 10/2/2018 12:12

Sample ID: 18J0192-01

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	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
2-Hexanone (MBK)	ND	0.012	mg/Kg dry	1	R-05	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Isopropylbenzene (Cumene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Methylene Chloride	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Naphthalene	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
n-Propylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Styrene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1,1,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Tetrachloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Tetrahydrofuran	ND	0.0062	mg/Kg dry	1	V-16	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Toluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2,3-Trichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2,4-Trichlorobenzene	ND	0.0012	mg/Kg dry	1	R-05	SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1,1-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,1,2-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Trichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2,3-Trichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,2,4-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
1,3,5-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
Vinyl Chloride	ND	0.0062	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
m+p Xylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF
o-Xylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	10/5/18	10/5/18 17:42	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.3	70-130	10/5/18 17:42
Toluene-d8	98.2	70-130	10/5/18 17:42
4-Bromofluorobenzene	102	70-130	10/5/18 17:42

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Field Sample #: MP-40

Sampled: 10/2/2018 12:12

Sample ID: 18J0192-01

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	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Aniline	ND	0.40	mg/Kg dry	1	V-34	SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
4-Chloroaniline	ND	0.78	mg/Kg dry	1	V-34	SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,4-Dinitrophenol	ND	0.78	mg/Kg dry	1	V-19	SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Field Sample #: MP-40

Sampled: 10/2/2018 12:12

Sample ID: 18J0192-01

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	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
4-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Pyridine	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/5/18	10/8/18 15:37	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		68.2	30-130					10/8/18 15:37	
Phenol-d6		72.8	30-130					10/8/18 15:37	
Nitrobenzene-d5		73.0	30-130					10/8/18 15:37	
2-Fluorobiphenyl		73.0	30-130					10/8/18 15:37	
2,4,6-Tribromophenol		76.3	30-130					10/8/18 15:37	
p-Terphenyl-d14		76.8	30-130					10/8/18 15:37	

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Field Sample #: MP-40

Sampled: 10/2/2018 12:12

Sample ID: 18J0192-01

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [2]	ND	0.24	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Aldrin [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
alpha-BHC [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
beta-BHC [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
delta-BHC [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
gamma-BHC (Lindane) [2]	ND	0.024	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Chlordane [2]	ND	0.24	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
4,4'-DDD [2]	ND	0.048	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
4,4'-DDE [2]	ND	0.048	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
4,4'-DDT [2]	ND	0.048	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Dieldrin [2]	ND	0.048	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Endosulfan I [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Endosulfan II [2]	ND	0.095	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Endosulfan sulfate [2]	ND	0.095	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Endrin [2]	ND	0.095	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Endrin aldehyde [2]	ND	0.095	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Endrin ketone [2]	ND	0.095	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Heptachlor [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Heptachlor epoxide [2]	ND	0.059	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Hexachlorobenzene [2]	ND	0.071	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Methoxychlor [2]	ND	0.59	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Toxaphene [2]	ND	1.2	mg/Kg dry	10		SW-846 8081B	10/5/18	10/14/18 0:11	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		103	30-150					10/14/18 0:11	
Decachlorobiphenyl [2]		97.6	30-150					10/14/18 0:11	
Tetrachloro-m-xylene [1]		93.9	30-150					10/14/18 0:11	
Tetrachloro-m-xylene [2]		91.6	30-150					10/14/18 0:11	

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

Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Field Sample #: MP-40

Sampled: 10/2/2018 12:12

Sample ID: 18J0192-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	10/5/18	10/8/18 16:04	KAL
Aroclor-1221 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1232 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1242 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1248 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1254 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1260 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1262 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Aroclor-1268 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	10/5/18	10/8/18 16:04	KAL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.0	30-150					10/8/18 16:04	
Decachlorobiphenyl [2]		89.7	30-150					10/8/18 16:04	
Tetrachloro-m-xylene [1]		86.8	30-150					10/8/18 16:04	
Tetrachloro-m-xylene [2]		88.8	30-150					10/8/18 16:04	

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Sampled: 10/2/2018 12:12

Field Sample #: MP-40

Sample ID: 18J0192-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
Dalapon [1]	ND	75	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/3/18	10/10/18 10:35	PJG
Surrogates		% Recovery			Recovery Limits				
2,4-Dichlorophenylacetic acid [1]		85.7			30-150			10/10/18 10:35	
2,4-Dichlorophenylacetic acid [2]		81.8			30-150			10/10/18 10:35	

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Sampled: 10/2/2018 12:12

Field Sample #: MP-40

Sample ID: 18J0192-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	10	9.9	mg/Kg dry	1		SW-846 8100 Modified	10/5/18	10/7/18 21:42	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		79.2	40-140					10/7/18 21:42	

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Sampled: 10/2/2018 12:12

Field Sample #: MP-40

Sample ID: 18J0192-01

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	10/9/18	10/10/18 18:06	QNW
Arsenic	3.4	2.0	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Barium	35	2.0	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Beryllium	0.45	0.20	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Cadmium	ND	0.20	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Chromium	16	0.39	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Lead	5.1	0.59	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	10/9/18	10/10/18 10:35	AJL
Nickel	11	0.39	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Vanadium	22	0.78	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW
Zinc	22	0.78	mg/Kg dry	1		SW-846 6010D	10/9/18	10/10/18 18:06	QNW

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Project Location: Sudbury/Hudson, MA

Sample Description:

Work Order: 18J0192

Date Received: 10/3/2018

Sampled: 10/2/2018 12:12

Field Sample #: MP-40

Sample ID: 18J0192-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	10/9/18	10/9/18 18:20	DJM
pH @20.2°C	5.8		pH Units	1	H-03	SW-846 9045C	10/3/18	10/3/18 20:12	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	10/6/18	10/8/18 15:40	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	10/6/18	10/8/18 14:45	DJM
Specific conductance	5.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	10/10/18	10/10/18 11:30	EC
% Solids	83.3		% Wt	1		SM 2540G	10/10/18	10/11/18 6:51	DMP

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18J0192-01 [MP-40]	B214426	10/10/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18J0192-01 [MP-40]	B214430	1.00	10/10/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18J0192-01 [MP-40]	B214388	50.0	10/09/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214355	1.53	50.0	10/09/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214378	0.622	50.0	10/09/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214106	10.1	10.0	10/05/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214105	10.1	10.0	10/05/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214108	30.4	1.00	10/05/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B213836	20.1	5.00	10/03/18

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Sample Extraction Data**Prep Method: SW-846 5035-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214054	9.68	10.0	10/05/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214109	30.4	1.00	10/05/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214147	25.5	250	10/06/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0192-01 [MP-40]	B214197	25.5	250	10/06/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18J0192-01 [MP-40]	B213948	20.0	10/03/18

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 B214054 - SW-846 5035

Blank (B214054-BLK1)

Prepared & Analyzed: 10/05/18

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							R-05
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05, V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							R-05
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							R-05
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							R-05
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 B214054 - SW-846 5035

Blank (B214054-BLK1)

Prepared & Analyzed: 10/05/18

n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							V-16
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							R-05
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	0.0509		mg/Kg wet	0.0500		102	70-130			
Surrogate: Toluene-d8	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0492		mg/Kg wet	0.0500		98.4	70-130			

LCS (B214054-BS1)

Prepared & Analyzed: 10/05/18

Acetone	0.453	0.10	mg/Kg wet	0.200		227 *	40-160			L-07A, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0191	0.0010	mg/Kg wet	0.0200		95.4	70-130			
Benzene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130			
Bromobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130			
Bromochloromethane	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			R-05
Bromodichloromethane	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130			
Bromoform	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130			
Bromomethane	0.0117	0.010	mg/Kg wet	0.0200		58.5	40-160			R-05, V-34, L-14 †
2-Butanone (MEK)	0.324	0.040	mg/Kg wet	0.200		162 *	40-160			L-07A, R-05 †
n-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130			
sec-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130			
Carbon Disulfide	0.0196	0.0060	mg/Kg wet	0.0200		98.1	70-130			
Carbon Tetrachloride	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130			
Chlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Chlorodibromomethane	0.0200	0.0010	mg/Kg wet	0.0200		99.8	70-130			
Chloroethane	0.0164	0.010	mg/Kg wet	0.0200		82.0	70-130			
Chloroform	0.0190	0.0040	mg/Kg wet	0.0200		95.0	70-130			
Chloromethane	0.0168	0.010	mg/Kg wet	0.0200		83.8	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		97.4	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2-Dibromoethane (EDB)	0.0195	0.0010	mg/Kg wet	0.0200		97.4	70-130			
Dibromomethane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			R-05
1,2-Dichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,3-Dichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
1,4-Dichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	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
Batch B214054 - SW-846 5035										
LCS (B214054-BS1)										
Prepared & Analyzed: 10/05/18										
Dichlorodifluoromethane (Freon 12)	0.0166	0.010	mg/Kg wet	0.0200		83.2	40-160			†
1,1-Dichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichloroethane	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
1,1-Dichloroethylene	0.0186	0.0040	mg/Kg wet	0.0200		92.9	70-130			
cis-1,2-Dichloroethylene	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
trans-1,2-Dichloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
1,2-Dichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130			
1,3-Dichloropropane	0.0191	0.0010	mg/Kg wet	0.0200		95.3	70-130			
2,2-Dichloropropane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130			
1,1-Dichloropropene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
cis-1,3-Dichloropropene	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130			
trans-1,3-Dichloropropene	0.0194	0.0010	mg/Kg wet	0.0200		96.9	70-130			
Diethyl Ether	0.0188	0.010	mg/Kg wet	0.0200		93.8	70-130			
Diisopropyl Ether (DIPE)	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130			
1,4-Dioxane	0.228	0.10	mg/Kg wet	0.200		114	40-160			V-16, V-36 †
Ethylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130			
Hexachlorobutadiene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
2-Hexanone (MBK)	0.274	0.020	mg/Kg wet	0.200		137	40-160			L-14, R-05 †
Isopropylbenzene (Cumene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
p-Isopropyltoluene (p-Cymene)	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0196	0.0040	mg/Kg wet	0.0200		98.0	70-130			
Methylene Chloride	0.0199	0.010	mg/Kg wet	0.0200		99.7	70-130			
4-Methyl-2-pentanone (MIBK)	0.207	0.020	mg/Kg wet	0.200		103	40-160			†
Naphthalene	0.0180	0.0040	mg/Kg wet	0.0200		89.8	70-130			
n-Propylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
Styrene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
1,1,1,2-Tetrachloroethane	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
1,1,1,2,2-Tetrachloroethane	0.0187	0.0010	mg/Kg wet	0.0200		93.7	70-130			
Tetrachloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
Tetrahydrofuran	0.0189	0.010	mg/Kg wet	0.0200		94.5	70-130			V-16
Toluene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130			
1,2,3-Trichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
1,2,4-Trichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			R-05
1,1,1-Trichloroethane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
1,1,2-Trichloroethane	0.0182	0.0020	mg/Kg wet	0.0200		90.8	70-130			
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Trichlorofluoromethane (Freon 11)	0.0173	0.010	mg/Kg wet	0.0200		86.7	70-130			
1,2,3-Trichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			V-20
1,2,4-Trimethylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130			
1,3,5-Trimethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
Vinyl Chloride	0.0169	0.010	mg/Kg wet	0.0200		84.4	70-130			
m+p Xylene	0.0387	0.0040	mg/Kg wet	0.0400		96.6	70-130			
o-Xylene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0504		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0499		mg/Kg wet	0.0500		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0511		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
Batch B214054 - SW-846 5035										
LCS Dup (B214054-BSD1)										
Prepared & Analyzed: 10/05/18										
Acetone	0.316	0.10	mg/Kg wet	0.200		158	40-160	35.6 *	20	L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0165	0.0010	mg/Kg wet	0.0200		82.6	70-130	14.4	20	
Benzene	0.0158	0.0020	mg/Kg wet	0.0200		79.2	70-130	15.1	20	
Bromobenzene	0.0168	0.0020	mg/Kg wet	0.0200		84.2	70-130	11.7	20	
Bromochloromethane	0.0172	0.0020	mg/Kg wet	0.0200		86.1	70-130	25.6 *	20	R-05
Bromodichloromethane	0.0159	0.0020	mg/Kg wet	0.0200		79.3	70-130	12.8	20	
Bromoform	0.0167	0.0020	mg/Kg wet	0.0200		83.3	70-130	13.0	20	
Bromomethane	0.00938	0.010	mg/Kg wet	0.0200		46.9	40-160	22.0 *	20	L-14, R-05, V-34 †
2-Butanone (MEK)	0.241	0.040	mg/Kg wet	0.200		120	40-160	29.5 *	20	R-05 †
n-Butylbenzene	0.0164	0.0020	mg/Kg wet	0.0200		82.2	70-130	14.1	20	
sec-Butylbenzene	0.0162	0.0020	mg/Kg wet	0.0200		80.9	70-130	17.1	20	
tert-Butylbenzene	0.0164	0.0020	mg/Kg wet	0.0200		82.0	70-130	13.6	20	
tert-Butyl Ethyl Ether (TBEE)	0.0163	0.0010	mg/Kg wet	0.0200		81.5	70-130	15.2	20	
Carbon Disulfide	0.0166	0.0060	mg/Kg wet	0.0200		82.9	70-130	16.8	20	
Carbon Tetrachloride	0.0169	0.0020	mg/Kg wet	0.0200		84.7	70-130	13.6	20	
Chlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	12.1	20	
Chlorodibromomethane	0.0177	0.0010	mg/Kg wet	0.0200		88.5	70-130	12.0	20	
Chloroethane	0.0153	0.010	mg/Kg wet	0.0200		76.3	70-130	7.20	20	
Chloroform	0.0163	0.0040	mg/Kg wet	0.0200		81.5	70-130	15.3	20	
Chloromethane	0.0150	0.010	mg/Kg wet	0.0200		74.8	40-160	11.3	20	†
2-Chlorotoluene	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130	8.48	20	
4-Chlorotoluene	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130	13.1	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	15.7	20	
1,2-Dibromoethane (EDB)	0.0172	0.0010	mg/Kg wet	0.0200		86.2	70-130	12.2	20	
Dibromomethane	0.0167	0.0020	mg/Kg wet	0.0200		83.5	70-130	21.3 *	20	R-05
1,2-Dichlorobenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130	11.9	20	
1,3-Dichlorobenzene	0.0170	0.0020	mg/Kg wet	0.0200		84.8	70-130	14.1	20	
1,4-Dichlorobenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.4	70-130	10.7	20	
Dichlorodifluoromethane (Freon 12)	0.0142	0.010	mg/Kg wet	0.0200		71.2	40-160	15.5	20	†
1,1-Dichloroethane	0.0166	0.0020	mg/Kg wet	0.0200		82.9	70-130	12.9	20	
1,2-Dichloroethane	0.0169	0.0020	mg/Kg wet	0.0200		84.4	70-130	11.8	20	
1,1-Dichloroethylene	0.0159	0.0040	mg/Kg wet	0.0200		79.7	70-130	15.3	20	
cis-1,2-Dichloroethylene	0.0158	0.0020	mg/Kg wet	0.0200		78.9	70-130	12.9	20	
trans-1,2-Dichloroethylene	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130	13.4	20	
1,2-Dichloropropane	0.0168	0.0020	mg/Kg wet	0.0200		83.9	70-130	15.7	20	
1,3-Dichloropropane	0.0170	0.0010	mg/Kg wet	0.0200		85.0	70-130	11.4	20	
2,2-Dichloropropane	0.0154	0.0020	mg/Kg wet	0.0200		76.9	70-130	17.2	20	
1,1-Dichloropropene	0.0163	0.0020	mg/Kg wet	0.0200		81.3	70-130	19.0	20	
cis-1,3-Dichloropropene	0.0168	0.0010	mg/Kg wet	0.0200		84.1	70-130	13.3	20	
trans-1,3-Dichloropropene	0.0170	0.0010	mg/Kg wet	0.0200		85.1	70-130	13.0	20	
Diethyl Ether	0.0165	0.010	mg/Kg wet	0.0200		82.4	70-130	12.9	20	
Diisopropyl Ether (DIPE)	0.0164	0.0010	mg/Kg wet	0.0200		81.8	70-130	13.5	20	
1,4-Dioxane	0.243	0.10	mg/Kg wet	0.200		121	40-160	6.25	20	V-16, V-36 †
Ethylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.7	70-130	12.8	20	
Hexachlorobutadiene	0.0170	0.0020	mg/Kg wet	0.0200		84.8	70-130	14.1	20	
2-Hexanone (MBK)	0.210	0.020	mg/Kg wet	0.200		105	40-160	26.3 *	20	R-05 †
Isopropylbenzene (Cumene)	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130	11.7	20	
p-Isopropyltoluene (p-Cymene)	0.0162	0.0020	mg/Kg wet	0.0200		80.9	70-130	15.2	20	
Methyl tert-Butyl Ether (MTBE)	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130	10.9	20	
Methylene Chloride	0.0176	0.010	mg/Kg wet	0.0200		88.2	70-130	12.2	20	
4-Methyl-2-pentanone (MIBK)	0.185	0.020	mg/Kg wet	0.200		92.3	40-160	11.3	20	†
Naphthalene	0.0156	0.0040	mg/Kg wet	0.0200		78.0	70-130	14.1	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B214054 - SW-846 5035										
LCS Dup (B214054-BSD1)										
Prepared & Analyzed: 10/05/18										
n-Propylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.0	70-130	10.9	20	
Styrene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130	13.2	20	
1,1,1,2-Tetrachloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130	13.6	20	
1,1,2,2-Tetrachloroethane	0.0179	0.0010	mg/Kg wet	0.0200		89.4	70-130	4.70	20	
Tetrachloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130	7.59	20	
Tetrahydrofuran	0.0161	0.010	mg/Kg wet	0.0200		80.4	70-130	16.1	20	V-16
Toluene	0.0157	0.0020	mg/Kg wet	0.0200		78.4	70-130	13.4	20	
1,2,3-Trichlorobenzene	0.0158	0.0020	mg/Kg wet	0.0200		78.8	70-130	15.8	20	
1,2,4-Trichlorobenzene	0.0160	0.0020	mg/Kg wet	0.0200		80.2	70-130	25.9 *	20	R-05
1,1,1-Trichloroethane	0.0156	0.0020	mg/Kg wet	0.0200		78.2	70-130	12.9	20	
1,1,2-Trichloroethane	0.0163	0.0020	mg/Kg wet	0.0200		81.7	70-130	10.6	20	
Trichloroethylene	0.0167	0.0020	mg/Kg wet	0.0200		83.7	70-130	12.1	20	
Trichlorofluoromethane (Freon 11)	0.0150	0.010	mg/Kg wet	0.0200		74.9	70-130	14.6	20	
1,2,3-Trichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	3.30	20	V-20
1,2,4-Trimethylbenzene	0.0155	0.0020	mg/Kg wet	0.0200		77.6	70-130	17.5	20	
1,3,5-Trimethylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.6	70-130	10.6	20	
Vinyl Chloride	0.0145	0.010	mg/Kg wet	0.0200		72.3	70-130	15.4	20	
m+p Xylene	0.0343	0.0040	mg/Kg wet	0.0400		85.6	70-130	12.1	20	
o-Xylene	0.0166	0.0020	mg/Kg wet	0.0200		82.8	70-130	15.0	20	
Surrogate: 1,2-Dichloroethane-d4	0.0502		mg/Kg wet	0.0500		100	70-130			
Surrogate: Toluene-d8	0.0494		mg/Kg wet	0.0500		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0522		mg/Kg wet	0.0500		104	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 B214109 - SW-846 3546

Blank (B214109-BLK1)

Prepared: 10/05/18 Analyzed: 10/08/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-05
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							V-05
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-20
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							V-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 (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							V-20
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
Batch B214109 - SW-846 3546										
Blank (B214109-BLK1)										
Prepared: 10/05/18 Analyzed: 10/08/18										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	4.70		mg/Kg wet	6.67		70.4	30-130			
Surrogate: Phenol-d6	5.07		mg/Kg wet	6.67		76.0	30-130			
Surrogate: Nitrobenzene-d5	2.44		mg/Kg wet	3.33		73.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.69		mg/Kg wet	3.33		80.6	30-130			
Surrogate: 2,4,6-Tribromophenol	6.10		mg/Kg wet	6.67		91.5	30-130			
Surrogate: p-Terphenyl-d14	3.05		mg/Kg wet	3.33		91.5	30-130			
LCS (B214109-BS1)										
Prepared: 10/05/18 Analyzed: 10/08/18										
Acenaphthene	1.21	0.17	mg/Kg wet	1.67		72.9	40-140			
Acenaphthylene	1.22	0.17	mg/Kg wet	1.67		72.9	40-140			
Acetophenone	1.16	0.34	mg/Kg wet	1.67		69.3	40-140			
Aniline	0.816	0.34	mg/Kg wet	1.67		49.0	40-140			V-05
Anthracene	1.29	0.17	mg/Kg wet	1.67		77.1	40-140			
Benzo(a)anthracene	1.28	0.17	mg/Kg wet	1.67		77.0	40-140			
Benzo(a)pyrene	1.28	0.17	mg/Kg wet	1.67		76.9	40-140			
Benzo(b)fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.8	40-140			
Benzo(g,h,i)perylene	1.30	0.17	mg/Kg wet	1.67		78.3	40-140			
Benzo(k)fluoranthene	1.23	0.17	mg/Kg wet	1.67		73.8	40-140			
Bis(2-chloroethoxy)methane	1.27	0.34	mg/Kg wet	1.67		76.4	40-140			
Bis(2-chloroethyl)ether	1.00	0.34	mg/Kg wet	1.67		60.1	40-140			
Bis(2-chloroisopropyl)ether	1.02	0.34	mg/Kg wet	1.67		61.3	40-140			V-05
Bis(2-Ethylhexyl)phthalate	1.20	0.34	mg/Kg wet	1.67		72.1	40-140			
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.9	40-140			
Butylbenzylphthalate	1.26	0.34	mg/Kg wet	1.67		75.8	40-140			
4-Chloroaniline	0.982	0.66	mg/Kg wet	1.67		58.9	15-140			V-34 †
2-Chloronaphthalene	1.13	0.34	mg/Kg wet	1.67		67.8	40-140			
2-Chlorophenol	1.16	0.34	mg/Kg wet	1.67		69.6	30-130			
Chrysene	1.20	0.17	mg/Kg wet	1.67		71.9	40-140			
Dibenz(a,h)anthracene	1.24	0.17	mg/Kg wet	1.67		74.5	40-140			
Dibenzofuran	1.22	0.34	mg/Kg wet	1.67		73.5	40-140			
Di-n-butylphthalate	1.22	0.34	mg/Kg wet	1.67		73.5	40-140			
1,2-Dichlorobenzene	1.13	0.34	mg/Kg wet	1.67		67.6	40-140			
1,3-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.5	40-140			
1,4-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.5	40-140			
3,3-Dichlorobenzidine	1.53	0.17	mg/Kg wet	1.67		91.9	40-140			V-06
2,4-Dichlorophenol	1.31	0.34	mg/Kg wet	1.67		78.3	30-130			
Diethylphthalate	1.25	0.34	mg/Kg wet	1.67		74.8	40-140			
2,4-Dimethylphenol	1.16	0.34	mg/Kg wet	1.67		69.4	30-130			
Dimethylphthalate	1.25	0.34	mg/Kg wet	1.67		74.9	40-140			
2,4-Dinitrophenol	1.25	0.66	mg/Kg wet	1.67		75.0	15-140			V-19 †
2,4-Dinitrotoluene	1.38	0.34	mg/Kg wet	1.67		82.9	40-140			
2,6-Dinitrotoluene	1.39	0.34	mg/Kg wet	1.67		83.6	40-140			
Di-n-octylphthalate	1.21	0.34	mg/Kg wet	1.67		72.5	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	1.18	0.34	mg/Kg wet	1.67		70.6	40-140			
Fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.8	40-140			
Fluorene	1.27	0.17	mg/Kg wet	1.67		76.3	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
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Batch B214109 - SW-846 3546

LCS (B214109-BS1)

Prepared: 10/05/18 Analyzed: 10/08/18

Hexachlorobenzene	1.39	0.34	mg/Kg wet	1.67		83.4	40-140			
Hexachlorobutadiene	1.41	0.34	mg/Kg wet	1.67		84.7	40-140			V-06
Hexachloroethane	1.07	0.34	mg/Kg wet	1.67		64.3	40-140			
Indeno(1,2,3-cd)pyrene	1.29	0.17	mg/Kg wet	1.67		77.1	40-140			
Isophorone	1.23	0.34	mg/Kg wet	1.67		73.8	40-140			
2-Methylnaphthalene	1.37	0.17	mg/Kg wet	1.67		82.2	40-140			
2-Methylphenol	1.05	0.34	mg/Kg wet	1.67		63.1	30-130			
3/4-Methylphenol	1.12	0.34	mg/Kg wet	1.67		67.4	30-130			
Naphthalene	1.22	0.17	mg/Kg wet	1.67		73.1	40-140			
Nitrobenzene	1.20	0.34	mg/Kg wet	1.67		72.0	40-140			
2-Nitrophenol	1.33	0.34	mg/Kg wet	1.67		80.1	30-130			
4-Nitrophenol	1.23	0.66	mg/Kg wet	1.67		74.0	15-140			†
Pentachlorophenol	1.25	0.34	mg/Kg wet	1.67		75.1	30-130			
Phenanthrene	1.28	0.17	mg/Kg wet	1.67		76.9	40-140			
Phenol	1.06	0.34	mg/Kg wet	1.67		63.5	15-140			†
Pyrene	1.26	0.17	mg/Kg wet	1.67		75.3	40-140			
Pyridine	0.732	0.34	mg/Kg wet	1.67		43.9	30-140			V-05 †
1,2,4-Trichlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.6	40-140			
2,4,5-Trichlorophenol	1.29	0.34	mg/Kg wet	1.67		77.7	30-130			
2,4,6-Trichlorophenol	1.30	0.34	mg/Kg wet	1.67		78.1	30-130			
Surrogate: 2-Fluorophenol	4.65		mg/Kg wet	6.67		69.8	30-130			
Surrogate: Phenol-d6	4.75		mg/Kg wet	6.67		71.2	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		80.1	30-130			
Surrogate: 2,4,6-Tribromophenol	5.96		mg/Kg wet	6.67		89.4	30-130			
Surrogate: p-Terphenyl-d14	2.83		mg/Kg wet	3.33		85.0	30-130			

LCS Dup (B214109-BS1)

Prepared: 10/05/18 Analyzed: 10/08/18

Acenaphthene	1.29	0.17	mg/Kg wet	1.67		77.4	40-140	6.02	30	
Acenaphthylene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140	3.77	30	
Acetophenone	1.21	0.34	mg/Kg wet	1.67		72.3	40-140	4.21	30	
Aniline	0.839	0.34	mg/Kg wet	1.67		50.4	40-140	2.82	30	V-05
Anthracene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140	2.66	30	
Benzo(a)anthracene	1.37	0.17	mg/Kg wet	1.67		81.9	40-140	6.22	30	
Benzo(a)pyrene	1.36	0.17	mg/Kg wet	1.67		81.6	40-140	5.93	30	
Benzo(b)fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.7	40-140	5.14	30	
Benzo(g,h,i)perylene	1.32	0.17	mg/Kg wet	1.67		79.4	40-140	1.42	30	
Benzo(k)fluoranthene	1.32	0.17	mg/Kg wet	1.67		78.9	40-140	6.76	30	
Bis(2-chloroethoxy)methane	1.32	0.34	mg/Kg wet	1.67		78.9	40-140	3.19	30	
Bis(2-chloroethyl)ether	1.05	0.34	mg/Kg wet	1.67		63.3	40-140	5.16	30	
Bis(2-chloroisopropyl)ether	1.05	0.34	mg/Kg wet	1.67		63.1	40-140	2.77	30	V-05
Bis(2-Ethylhexyl)phthalate	1.32	0.34	mg/Kg wet	1.67		79.0	40-140	9.13	30	
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.8	40-140	0.100	30	
Butylbenzylphthalate	1.35	0.34	mg/Kg wet	1.67		81.0	40-140	6.66	30	
4-Chloroaniline	0.994	0.66	mg/Kg wet	1.67		59.7	15-140	1.21	30	V-34 †
2-Chloronaphthalene	1.11	0.34	mg/Kg wet	1.67		66.3	40-140	2.24	30	
2-Chlorophenol	1.19	0.34	mg/Kg wet	1.67		71.1	30-130	2.19	30	
Chrysene	1.30	0.17	mg/Kg wet	1.67		78.2	40-140	8.36	30	
Dibenz(a,h)anthracene	1.28	0.17	mg/Kg wet	1.67		77.0	40-140	3.30	30	
Dibenzofuran	1.34	0.34	mg/Kg wet	1.67		80.2	40-140	8.75	30	
Di-n-butylphthalate	1.32	0.34	mg/Kg wet	1.67		79.1	40-140	7.36	30	
1,2-Dichlorobenzene	1.13	0.34	mg/Kg wet	1.67		67.9	40-140	0.384	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
Batch B214109 - SW-846 3546										
LCS Dup (B214109-BSD1)										
					Prepared: 10/05/18 Analyzed: 10/08/18					
1,3-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.5	40-140	1.45	30	
1,4-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.3	40-140	1.27	30	
3,3-Dichlorobenzidine	1.59	0.17	mg/Kg wet	1.67		95.3	40-140	3.61	30	V-06
2,4-Dichlorophenol	1.35	0.34	mg/Kg wet	1.67		81.1	30-130	3.51	30	
Diethylphthalate	1.38	0.34	mg/Kg wet	1.67		82.7	40-140	10.0	30	
2,4-Dimethylphenol	1.22	0.34	mg/Kg wet	1.67		73.4	30-130	5.55	30	
Dimethylphthalate	1.36	0.34	mg/Kg wet	1.67		81.5	40-140	8.44	30	
2,4-Dinitrophenol	1.46	0.66	mg/Kg wet	1.67		87.9	15-140	15.8	30	V-19 †
2,4-Dinitrotoluene	1.53	0.34	mg/Kg wet	1.67		91.6	40-140	9.97	30	
2,6-Dinitrotoluene	1.52	0.34	mg/Kg wet	1.67		91.4	40-140	8.96	30	
Di-n-octylphthalate	1.31	0.34	mg/Kg wet	1.67		78.8	40-140	8.30	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.16	0.34	mg/Kg wet	1.67		69.4	40-140	1.63	30	
Fluoranthene	1.35	0.17	mg/Kg wet	1.67		81.2	40-140	5.49	30	
Fluorene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140	6.79	30	
Hexachlorobenzene	1.38	0.34	mg/Kg wet	1.67		83.1	40-140	0.384	30	
Hexachlorobutadiene	1.37	0.34	mg/Kg wet	1.67		82.4	40-140	2.75	30	V-06
Hexachloroethane	1.07	0.34	mg/Kg wet	1.67		64.5	40-140	0.248	30	
Indeno(1,2,3-cd)pyrene	1.31	0.17	mg/Kg wet	1.67		78.7	40-140	1.98	30	
Isophorone	1.25	0.34	mg/Kg wet	1.67		75.0	40-140	1.61	30	
2-Methylnaphthalene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140	0.534	30	
2-Methylphenol	1.08	0.34	mg/Kg wet	1.67		64.6	30-130	2.44	30	
3/4-Methylphenol	1.22	0.34	mg/Kg wet	1.67		73.0	30-130	8.00	30	
Naphthalene	1.22	0.17	mg/Kg wet	1.67		73.0	40-140	0.0548	30	
Nitrobenzene	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	0.637	30	
2-Nitrophenol	1.33	0.34	mg/Kg wet	1.67		79.8	30-130	0.375	30	
4-Nitrophenol	1.40	0.66	mg/Kg wet	1.67		84.0	15-140	12.6	30	†
Pentachlorophenol	1.35	0.34	mg/Kg wet	1.67		81.1	30-130	7.66	30	
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.6	40-140	2.29	30	
Phenol	1.11	0.34	mg/Kg wet	1.67		66.3	15-140	4.41	30	†
Pyrene	1.33	0.17	mg/Kg wet	1.67		79.7	40-140	5.63	30	
Pyridine	0.682	0.34	mg/Kg wet	1.67		40.9	30-140	7.07	30	V-05 †
1,2,4-Trichlorobenzene	1.30	0.34	mg/Kg wet	1.67		77.7	40-140	1.18	30	
2,4,5-Trichlorophenol	1.40	0.34	mg/Kg wet	1.67		84.2	30-130	8.03	30	
2,4,6-Trichlorophenol	1.34	0.34	mg/Kg wet	1.67		80.1	30-130	2.53	30	
Surrogate: 2-Fluorophenol	4.71		mg/Kg wet	6.67		70.6	30-130			
Surrogate: Phenol-d6	4.94		mg/Kg wet	6.67		74.1	30-130			
Surrogate: Nitrobenzene-d5	2.40		mg/Kg wet	3.33		72.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.73		mg/Kg wet	3.33		81.9	30-130			
Surrogate: 2,4,6-Tribromophenol	6.80		mg/Kg wet	6.67		102	30-130			
Surrogate: p-Terphenyl-d14	3.06		mg/Kg wet	3.33		91.7	30-130			

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QUALITY CONTROL

Organochloride Pesticides 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 B214106 - SW-846 3546

Blank (B214106-BLK1)

Prepared: 10/05/18 Analyzed: 10/08/18

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0020	mg/Kg wet							
Aldrin [2C]	ND	0.0020	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0010	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDE	ND	0.0010	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDT	ND	0.0010	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0010	mg/Kg wet							
Dieldrin	ND	0.0020	mg/Kg wet							
Dieldrin [2C]	ND	0.0020	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.148		mg/Kg wet	0.200		74.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.164		mg/Kg wet	0.200		81.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.152		mg/Kg wet	0.200		76.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.162		mg/Kg wet	0.200		81.2	30-150			

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QUALITY CONTROL

Organochloride Pesticides 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 B214106 - SW-846 3546

LCS (B214106-BS1)

Prepared: 10/05/18 Analyzed: 10/08/18

alpha-Chlordane	0.073	0.0050	mg/Kg wet	0.100		72.9	40-140			
alpha-Chlordane [2C]	0.079	0.0050	mg/Kg wet	0.100		78.8	40-140			
gamma-Chlordane	0.072	0.0050	mg/Kg wet	0.100		72.1	40-140			
gamma-Chlordane [2C]	0.079	0.0050	mg/Kg wet	0.100		78.9	40-140			
Alachlor	0.074	0.020	mg/Kg wet	0.100		74.0	40-140			
Alachlor [2C]	0.078	0.020	mg/Kg wet	0.100		77.9	40-140			
Aldrin	0.072	0.0020	mg/Kg wet	0.100		72.1	40-140			
Aldrin [2C]	0.079	0.0020	mg/Kg wet	0.100		79.2	40-140			
alpha-BHC	0.072	0.0050	mg/Kg wet	0.100		71.7	40-140			
alpha-BHC [2C]	0.075	0.0050	mg/Kg wet	0.100		75.0	40-140			
beta-BHC	0.068	0.0050	mg/Kg wet	0.100		67.5	40-140			
beta-BHC [2C]	0.071	0.0050	mg/Kg wet	0.100		71.4	40-140			
delta-BHC	0.066	0.0050	mg/Kg wet	0.100		65.8	40-140			
delta-BHC [2C]	0.072	0.0050	mg/Kg wet	0.100		72.2	40-140			
gamma-BHC (Lindane)	0.072	0.0020	mg/Kg wet	0.100		72.3	40-140			
gamma-BHC (Lindane) [2C]	0.073	0.0020	mg/Kg wet	0.100		72.8	40-140			
4,4'-DDD	0.080	0.0010	mg/Kg wet	0.100		79.7	40-140			
4,4'-DDD [2C]	0.084	0.0010	mg/Kg wet	0.100		84.2	40-140			
4,4'-DDE	0.076	0.0010	mg/Kg wet	0.100		75.8	40-140			
4,4'-DDE [2C]	0.083	0.0010	mg/Kg wet	0.100		82.8	40-140			
4,4'-DDT	0.080	0.0010	mg/Kg wet	0.100		80.3	40-140			
4,4'-DDT [2C]	0.076	0.0010	mg/Kg wet	0.100		75.9	40-140			
Dieldrin	0.075	0.0020	mg/Kg wet	0.100		75.4	40-140			
Dieldrin [2C]	0.082	0.0020	mg/Kg wet	0.100		82.4	40-140			
Endosulfan I	0.075	0.0050	mg/Kg wet	0.100		75.3	40-140			
Endosulfan I [2C]	0.081	0.0050	mg/Kg wet	0.100		81.3	40-140			
Endosulfan II	0.077	0.0080	mg/Kg wet	0.100		77.4	40-140			
Endosulfan II [2C]	0.081	0.0080	mg/Kg wet	0.100		81.0	40-140			
Endosulfan Sulfate	0.080	0.0080	mg/Kg wet	0.100		80.1	40-140			
Endosulfan Sulfate [2C]	0.080	0.0080	mg/Kg wet	0.100		79.7	40-140			
Endrin	0.076	0.0080	mg/Kg wet	0.100		75.5	40-140			
Endrin [2C]	0.079	0.0080	mg/Kg wet	0.100		79.3	40-140			
Endrin Aldehyde	0.086	0.0080	mg/Kg wet	0.100		85.5	40-140			
Endrin Aldehyde [2C]	0.084	0.0080	mg/Kg wet	0.100		84.2	40-140			
Endrin Ketone	0.080	0.0080	mg/Kg wet	0.100		80.2	40-140			
Endrin Ketone [2C]	0.079	0.0080	mg/Kg wet	0.100		79.1	40-140			
Heptachlor	0.056	0.0050	mg/Kg wet	0.100		56.4	40-140			
Heptachlor [2C]	0.077	0.0050	mg/Kg wet	0.100		77.4	40-140			
Heptachlor Epoxide	0.073	0.0050	mg/Kg wet	0.100		73.0	40-140			
Heptachlor Epoxide [2C]	0.078	0.0050	mg/Kg wet	0.100		77.9	40-140			
Hexachlorobenzene	0.071	0.0060	mg/Kg wet	0.100		71.3	40-140			
Hexachlorobenzene [2C]	0.078	0.0060	mg/Kg wet	0.100		78.2	40-140			
Methoxychlor	0.080	0.050	mg/Kg wet	0.100		79.8	40-140			
Methoxychlor [2C]	0.082	0.050	mg/Kg wet	0.100		82.5	40-140			
Surrogate: Decachlorobiphenyl	0.149		mg/Kg wet	0.200		74.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.157		mg/Kg wet	0.200		78.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.145		mg/Kg wet	0.200		72.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.165		mg/Kg wet	0.200		82.3	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B214106 - SW-846 3546										
LCS Dup (B214106-BSD1)										
					Prepared: 10/05/18 Analyzed: 10/08/18					
alpha-Chlordane	0.075	0.0050	mg/Kg wet	0.100		75.3	40-140	3.21	30	
alpha-Chlordane [2C]	0.083	0.0050	mg/Kg wet	0.100		82.8	40-140	4.96	30	
gamma-Chlordane	0.075	0.0050	mg/Kg wet	0.100		75.0	40-140	4.05	30	
gamma-Chlordane [2C]	0.084	0.0050	mg/Kg wet	0.100		83.6	40-140	5.79	30	
Alachlor	0.075	0.020	mg/Kg wet	0.100		75.2	40-140	1.68	30	
Alachlor [2C]	0.081	0.020	mg/Kg wet	0.100		81.1	40-140	4.01	30	
Aldrin	0.075	0.0020	mg/Kg wet	0.100		75.1	40-140	4.03	30	
Aldrin [2C]	0.084	0.0020	mg/Kg wet	0.100		84.4	40-140	6.40	30	
alpha-BHC	0.075	0.0050	mg/Kg wet	0.100		75.0	40-140	4.42	30	
alpha-BHC [2C]	0.080	0.0050	mg/Kg wet	0.100		80.4	40-140	6.94	30	
beta-BHC	0.071	0.0050	mg/Kg wet	0.100		71.3	40-140	5.46	30	
beta-BHC [2C]	0.076	0.0050	mg/Kg wet	0.100		76.1	40-140	6.40	30	
delta-BHC	0.067	0.0050	mg/Kg wet	0.100		67.3	40-140	2.35	30	
delta-BHC [2C]	0.076	0.0050	mg/Kg wet	0.100		76.4	40-140	5.60	30	
gamma-BHC (Lindane)	0.075	0.0020	mg/Kg wet	0.100		74.6	40-140	3.12	30	
gamma-BHC (Lindane) [2C]	0.083	0.0020	mg/Kg wet	0.100		82.7	40-140	12.8	30	
4,4'-DDD	0.082	0.0010	mg/Kg wet	0.100		81.8	40-140	2.58	30	
4,4'-DDD [2C]	0.088	0.0010	mg/Kg wet	0.100		87.6	40-140	3.89	30	
4,4'-DDE	0.079	0.0010	mg/Kg wet	0.100		78.8	40-140	3.86	30	
4,4'-DDE [2C]	0.086	0.0010	mg/Kg wet	0.100		86.5	40-140	4.36	30	
4,4'-DDT	0.082	0.0010	mg/Kg wet	0.100		81.5	40-140	1.55	30	
4,4'-DDT [2C]	0.077	0.0010	mg/Kg wet	0.100		77.2	40-140	1.72	30	
Dieldrin	0.077	0.0020	mg/Kg wet	0.100		76.7	40-140	1.66	30	
Dieldrin [2C]	0.086	0.0020	mg/Kg wet	0.100		85.7	40-140	3.95	30	
Endosulfan I	0.076	0.0050	mg/Kg wet	0.100		76.1	40-140	1.02	30	
Endosulfan I [2C]	0.083	0.0050	mg/Kg wet	0.100		83.4	40-140	2.55	30	
Endosulfan II	0.079	0.0080	mg/Kg wet	0.100		79.0	40-140	1.99	30	
Endosulfan II [2C]	0.084	0.0080	mg/Kg wet	0.100		84.1	40-140	3.73	30	
Endosulfan Sulfate	0.080	0.0080	mg/Kg wet	0.100		79.8	40-140	0.294	30	
Endosulfan Sulfate [2C]	0.082	0.0080	mg/Kg wet	0.100		81.7	40-140	2.47	30	
Endrin	0.077	0.0080	mg/Kg wet	0.100		77.0	40-140	1.93	30	
Endrin [2C]	0.082	0.0080	mg/Kg wet	0.100		81.9	40-140	3.14	30	
Endrin Aldehyde	0.088	0.0080	mg/Kg wet	0.100		87.7	40-140	2.49	30	
Endrin Aldehyde [2C]	0.088	0.0080	mg/Kg wet	0.100		87.8	40-140	4.18	30	
Endrin Ketone	0.080	0.0080	mg/Kg wet	0.100		79.6	40-140	0.732	30	
Endrin Ketone [2C]	0.080	0.0080	mg/Kg wet	0.100		80.1	40-140	1.20	30	
Heptachlor	0.058	0.0050	mg/Kg wet	0.100		57.7	40-140	2.32	30	
Heptachlor [2C]	0.081	0.0050	mg/Kg wet	0.100		81.4	40-140	5.05	30	
Heptachlor Epoxide	0.075	0.0050	mg/Kg wet	0.100		74.7	40-140	2.40	30	
Heptachlor Epoxide [2C]	0.082	0.0050	mg/Kg wet	0.100		81.9	40-140	5.03	30	
Hexachlorobenzene	0.074	0.0060	mg/Kg wet	0.100		73.6	40-140	3.11	30	
Hexachlorobenzene [2C]	0.083	0.0060	mg/Kg wet	0.100		83.0	40-140	5.96	30	
Methoxychlor	0.080	0.050	mg/Kg wet	0.100		79.6	40-140	0.244	30	
Methoxychlor [2C]	0.083	0.050	mg/Kg wet	0.100		83.5	40-140	1.23	30	
Surrogate: Decachlorobiphenyl	0.151		mg/Kg wet	0.200		75.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.160		mg/Kg wet	0.200		80.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.147		mg/Kg wet	0.200		73.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.173		mg/Kg wet	0.200		86.7	30-150			

QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B214105 - SW-846 3546										
Blank (B214105-BLK1)										
Prepared: 10/05/18 Analyzed: 10/08/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.195		mg/Kg wet	0.200		97.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.175		mg/Kg wet	0.200		87.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.165		mg/Kg wet	0.200		82.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.162		mg/Kg wet	0.200		81.2	30-150			
LCS (B214105-BS1)										
Prepared: 10/05/18 Analyzed: 10/08/18										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		83.2	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		83.9	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.2	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		87.9	40-140			
Surrogate: Decachlorobiphenyl	0.190		mg/Kg wet	0.200		95.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.170		mg/Kg wet	0.200		85.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.162		mg/Kg wet	0.200		81.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.159		mg/Kg wet	0.200		79.7	30-150			
LCS Dup (B214105-BSD1)										
Prepared: 10/05/18 Analyzed: 10/08/18										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		83.6	40-140	0.451	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		84.1	40-140	0.143	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		88.1	40-140	1.30	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		86.2	40-140	1.97	30	
Surrogate: Decachlorobiphenyl	0.187		mg/Kg wet	0.200		93.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.168		mg/Kg wet	0.200		84.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.162		mg/Kg wet	0.200		81.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.160		mg/Kg wet	0.200		80.1	30-150			

QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B213836 - SW-846 8151										
Blank (B213836-BLK1)										
Prepared: 10/03/18 Analyzed: 10/10/18										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							V-05
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							V-05
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	71.9		µg/kg wet	95.2		75.5	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	70.3		µg/kg wet	95.2		73.8	30-150			
LCS (B213836-BS1)										
Prepared: 10/03/18 Analyzed: 10/10/18										
2,4-D	96.5	25	µg/kg wet	125		77.2	40-140			
2,4-D [2C]	97.4	25	µg/kg wet	125		77.9	40-140			
2,4-DB	99.0	25	µg/kg wet	125		79.2	40-140			
2,4-DB [2C]	99.1	25	µg/kg wet	125		79.2	40-140			
2,4,5-TP (Silvex)	9.49	2.5	µg/kg wet	12.5		75.9	40-140			
2,4,5-TP (Silvex) [2C]	9.87	2.5	µg/kg wet	12.5		78.9	40-140			
2,4,5-T	9.83	2.5	µg/kg wet	12.5		78.6	40-140			
2,4,5-T [2C]	10.1	2.5	µg/kg wet	12.5		80.6	40-140			
Dalapon	153	62	µg/kg wet	312		48.9	40-140			
Dalapon [2C]	165	62	µg/kg wet	312		52.7	40-140			
Dicamba	9.38	2.5	µg/kg wet	12.5		75.0	40-140			
Dicamba [2C]	9.70	2.5	µg/kg wet	12.5		77.6	40-140			
Dichloroprop	97.2	25	µg/kg wet	125		77.7	40-140			
Dichloroprop [2C]	98.4	25	µg/kg wet	125		78.7	40-140			
Dinoseb	15.8	12	µg/kg wet	62.5		25.2	0-42.4			
Dinoseb [2C]	17.9	12	µg/kg wet	62.5		28.6	0-41.1			
MCPA	8860	2500	µg/kg wet	12500		70.9	40-140			
MCPA [2C]	8770	2500	µg/kg wet	12500		70.2	40-140			
MCPA	9300	2500	µg/kg wet	12500		74.4	40-140			
MCPA [2C]	9150	2500	µg/kg wet	12500		73.2	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	76.2		µg/kg wet	100		76.2	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	72.7		µg/kg wet	100		72.7	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B213836 - SW-846 8151										
LCS Dup (B213836-BSD1)										
					Prepared: 10/03/18 Analyzed: 10/10/18					
2,4-D	116	25	µg/kg wet	125		92.5	40-140	18.0	30	
2,4-D [2C]	120	25	µg/kg wet	125		95.8	40-140	20.6	30	
2,4-DB	122	25	µg/kg wet	125		97.5	40-140	20.7	30	
2,4-DB [2C]	120	25	µg/kg wet	125		96.2	40-140	19.3	30	V-05
2,4,5-TP (Silvex)	11.3	2.5	µg/kg wet	12.5		90.3	40-140	17.4	30	
2,4,5-TP (Silvex) [2C]	12.3	2.5	µg/kg wet	12.5		98.6	40-140	22.2	30	
2,4,5-T	11.1	2.5	µg/kg wet	12.5		89.0	40-140	12.4	30	
2,4,5-T [2C]	12.4	2.5	µg/kg wet	12.5		99.4	40-140	20.9	30	V-05
Dalapon	194	62	µg/kg wet	312		61.9	40-140	23.5	30	
Dalapon [2C]	196	62	µg/kg wet	312		62.6	40-140	17.2	30	
Dicamba	11.8	2.5	µg/kg wet	12.5		94.1	40-140	22.6	30	
Dicamba [2C]	12.1	2.5	µg/kg wet	12.5		96.9	40-140	22.1	30	
Dichloroprop	118	25	µg/kg wet	125		94.8	40-140	19.7	30	
Dichloroprop [2C]	120	25	µg/kg wet	125		96.2	40-140	20.0	30	
Dinoseb	19.9	12	µg/kg wet	62.5		31.9	0-42.4	23.5	30	
Dinoseb [2C]	20.5	12	µg/kg wet	62.5		32.8	0-41.1	13.5	30	
MCPA	11200	2500	µg/kg wet	12500		89.9	40-140	23.7	30	
MCPA [2C]	10700	2500	µg/kg wet	12500		85.5	40-140	19.6	30	
MCPP	11700	2500	µg/kg wet	12500		93.5	40-140	22.8	30	
MCPP [2C]	11300	2500	µg/kg wet	12500		90.1	40-140	20.8	30	
Surrogate: 2,4-Dichlorophenylacetic acid	94.9		µg/kg wet	100		94.9	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	89.8		µg/kg wet	100		89.8	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B214108 - SW-846 3546										
Blank (B214108-BLK1)										
					Prepared: 10/05/18 Analyzed: 10/07/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.95		mg/Kg wet	3.33		88.5	40-140			
LCS (B214108-BS1)										
					Prepared: 10/05/18 Analyzed: 10/07/18					
TPH (C9-C36)	26.9	8.3	mg/Kg wet	33.3		80.6	40-140			
Surrogate: 2-Fluorobiphenyl	2.51		mg/Kg wet	3.33		75.4	40-140			
LCS Dup (B214108-BSD1)										
					Prepared: 10/05/18 Analyzed: 10/07/18					
TPH (C9-C36)	26.1	8.3	mg/Kg wet	33.3		78.4	40-140	2.76	30	
Surrogate: 2-Fluorobiphenyl	2.33		mg/Kg wet	3.33		69.8	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
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Batch B214355 - SW-846 3050B

Blank (B214355-BLK1)

Prepared: 10/09/18 Analyzed: 10/10/18

Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							

LCS (B214355-BS1)

Prepared: 10/09/18 Analyzed: 10/10/18

Antimony	59.1	5.1	mg/Kg wet	75.5		78.3	3.8-196			
Arsenic	157	5.1	mg/Kg wet	161		97.4	83.2-116.8			
Barium	258	5.1	mg/Kg wet	260		99.3	82.7-117.3			
Beryllium	97.9	0.51	mg/Kg wet	97.6		100	83.4-116.8			
Cadmium	208	0.51	mg/Kg wet	211		98.8	83.4-116.6			
Chromium	136	1.0	mg/Kg wet	136		99.7	82.4-117.6			
Lead	105	1.5	mg/Kg wet	111		94.5	83-117.1			
Nickel	90.1	1.0	mg/Kg wet	91.9		98.1	82.9-117.5			
Selenium	179	10	mg/Kg wet	191		93.9	79.6-120.9			
Silver	44.6	1.0	mg/Kg wet	43.3		103	79.9-119.9			
Thallium	166	5.1	mg/Kg wet	156		106	81.4-119.2			
Vanadium	52.6	2.0	mg/Kg wet	56.7		92.8	79-121.2			
Zinc	194	2.0	mg/Kg wet	199		97.7	81.4-119.1			

LCS Dup (B214355-BSD1)

Prepared: 10/09/18 Analyzed: 10/10/18

Antimony	60.9	5.1	mg/Kg wet	75.5		80.7	3.8-196	2.98	30	
Arsenic	155	5.1	mg/Kg wet	161		96.2	83.2-116.8	1.18	30	
Barium	254	5.1	mg/Kg wet	260		97.7	82.7-117.3	1.67	30	
Beryllium	95.1	0.51	mg/Kg wet	97.6		97.4	83.4-116.8	2.92	30	
Cadmium	203	0.51	mg/Kg wet	211		96.0	83.4-116.6	2.88	30	
Chromium	134	1.0	mg/Kg wet	136		98.4	82.4-117.6	1.36	30	
Lead	112	1.5	mg/Kg wet	111		101	83-117.1	6.75	30	
Nickel	88.5	1.0	mg/Kg wet	91.9		96.3	82.9-117.5	1.80	30	
Selenium	176	10	mg/Kg wet	191		92.0	79.6-120.9	1.98	30	
Silver	44.2	1.0	mg/Kg wet	43.3		102	79.9-119.9	1.10	30	
Thallium	157	5.1	mg/Kg wet	156		101	81.4-119.2	5.32	30	
Vanadium	51.9	2.0	mg/Kg wet	56.7		91.6	79-121.2	1.34	30	
Zinc	193	2.0	mg/Kg wet	199		97.1	81.4-119.1	0.638	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
Batch B214355 - SW-846 3050B										
MRL Check (B214355-MRL1)					Prepared: 10/09/18 Analyzed: 10/10/18					
Lead	0.506	0.50	mg/Kg wet	0.498		101	80-120			
Batch B214378 - SW-846 7471										
Blank (B214378-BLK1)					Prepared: 10/09/18 Analyzed: 10/10/18					
Mercury	ND	0.025	mg/Kg wet							
LCS (B214378-BS1)					Prepared: 10/09/18 Analyzed: 10/10/18					
Mercury	12.6	1.9	mg/Kg wet	11.5		110	71.6-127.8			
LCS Dup (B214378-BSD1)					Prepared: 10/09/18 Analyzed: 10/10/18					
Mercury	11.6	1.9	mg/Kg wet	11.5		101	71.6-127.8	7.92	30	

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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 B213948 - SW-846 9045C										
LCS (B213948-BS1)				Prepared & Analyzed: 10/03/18						
pH	6.01		pH Units	6.00		100	90-110			
LCS (B213948-BS2)				Prepared & Analyzed: 10/03/18						
pH	6.03		pH Units	6.00		100	90-110			
Duplicate (B213948-DUP1)		Source: 18J0192-01			Prepared & Analyzed: 10/03/18					
pH	5.8		pH Units		5.8			0.758	5	H-03
Batch B214147 - SW-846 9014										
Blank (B214147-BLK1)				Prepared: 10/06/18 Analyzed: 10/08/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B214147-BS1)				Prepared: 10/06/18 Analyzed: 10/08/18						
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	83.6-111			
Batch B214197 - SW-846 9030A										
Blank (B214197-BLK1)				Prepared: 10/06/18 Analyzed: 10/08/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B214197-BS1)				Prepared: 10/06/18 Analyzed: 10/08/18						
Reactive Sulfide	12	2.0	mg/Kg	14.8		83.8	54.9-121			
Batch B214430 - SM21-22 2510B Modified										
Blank (B214430-BLK1)				Prepared & Analyzed: 10/10/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B214430-BS1)				Prepared & Analyzed: 10/10/18						
Specific conductance	190		µmhos/cm	192		99.3	90-110			
Duplicate (B214430-DUP1)		Source: 18J0192-01			Prepared & Analyzed: 10/10/18					
Specific conductance	5.7	2.0	µmhos/cm		5.7			0.175	21	

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BREAKDOWN REPORT

Lab Sample ID: S028135-PEM1 **Analyzed:** 10/08/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.52
Endrin [1] 3.06

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 0.54
Endrin [2] 3.16

BREAKDOWN REPORT

Lab Sample ID: S028135-PEM2 **Analyzed:** 10/09/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.51
Endrin [1] 3.25

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 0.52
Endrin [2] 3.22

BREAKDOWN REPORT

Lab Sample ID: S028135-PEM3 **Analyzed:** 10/09/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 1.56
Endrin [1] 2.76

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BREAKDOWN REPORT

Lab Sample ID: S028135-PEM3 Analyzed: 10/09/2018

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.66
Endrin [2]	2.65

BREAKDOWN REPORT

Lab Sample ID: S028135-PEM4 Analyzed: 10/09/2018

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.22
Endrin [1]	2.59

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.24
Endrin [2]	2.42

BREAKDOWN REPORT

Lab Sample ID: S028135-PEM5 Analyzed: 10/10/2018

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.08
Endrin [1]	1.92

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.13
Endrin [2]	1.91

BREAKDOWN REPORT

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BREAKDOWN REPORT

Lab Sample ID: S028135-PEM6 **Analyzed:** 10/10/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 1.27
Endrin [1] 1.98

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 1.25
Endrin [2] 1.88

BREAKDOWN REPORT

Lab Sample ID: S028311-PEM1 **Analyzed:** 10/12/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.47
Endrin [1] 2.11

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 0.65
Endrin [2] 0.34

BREAKDOWN REPORT

Lab Sample ID: S028311-PEM2 **Analyzed:** 10/13/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 1.66
Endrin [1] 2.68

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BREAKDOWN REPORT

Lab Sample ID: S028311-PEM2 **Analyzed:** 10/13/2018

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	2.06
Endrin [2]	0.24

BREAKDOWN REPORT

Lab Sample ID: S028311-PEM3 **Analyzed:** 10/13/2018

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	3.32
Endrin [1]	2.89

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	4.09
Endrin [2]	0.49

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8151A

Lab Sample ID: B213836-BS1 Date(s) Analyzed: 10/10/2018 10/10/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.649	0.000	0.000	9.83	
	2	13.908	0.000	0.000	10.1	3.0
2,4,5-TP (Silvex)	1	13.071	0.000	0.000	9.49	
	2	13.106	0.000	0.000	9.87	3.8
2,4-D	1	11.409	0.000	0.000	96.5	
	2	11.520	0.000	0.000	97.4	0.4
2,4-DB	1	14.767	0.000	0.000	99.0	
	2	14.974	0.000	0.000	99.1	0.1
Dalapon	1	3.672	0.000	0.000	153	
	2	3.366	0.000	0.000	165	9.5
Dicamba	1	9.576	0.000	0.000	9.38	
	2	9.558	0.000	0.000	9.70	3.1
Dichloroprop	1	10.964	0.000	0.000	97.2	
	2	10.904	0.000	0.000	98.4	1.4
Dinoseb	1	16.726	0.000	0.000	15.8	
	2	15.565	0.000	0.000	17.9	11.2
MCPA	1	10.288	0.000	0.000	8860	
	2	10.302	0.000	0.000	8770	1.5
MCPD	1	10.010	0.000	0.000	9300	
	2	9.868	0.000	0.000	9150	1.6

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8151A

LCS Dup

Lab Sample ID: B213836-BSD1 Date(s) Analyzed: 10/10/2018 10/10/2018
 Instrument ID (1): ECD 8 Instrument ID (2): ECD 8
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	13.666	0.000	0.000	11.1	
	2	13.909	0.000	0.000	12.4	12.0
2,4,5-TP (Silvex)	1	13.083	0.000	0.000	11.3	
	2	13.108	0.000	0.000	12.3	11.2
2,4-D	1	11.417	0.000	0.000	116	
	2	11.521	0.000	0.000	120	0.0
2,4-DB	1	14.776	0.000	0.000	122	
	2	14.976	0.000	0.000	120	0.0
Dalapon	1	3.678	0.000	0.000	194	
	2	3.373	0.000	0.000	196	3.1
Dicamba	1	9.582	0.000	0.000	11.8	
	2	9.561	0.000	0.000	12.1	0.8
Dichloroprop	1	10.969	0.000	0.000	118	
	2	10.905	0.000	0.000	120	0.0
Dinoseb	1	16.730	0.000	0.000	19.9	
	2	15.566	0.000	0.000	20.5	2.5
MCPA	1	10.295	0.000	0.000	11200	
	2	10.308	0.000	0.000	10700	2.8
MCPP	1	10.015	0.000	0.000	11700	
	2	9.873	0.000	0.000	11300	6.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8082A

Lab Sample ID: B214105-BS1 Date(s) Analyzed: 10/08/2018 10/08/2018

Instrument ID (1): ECD1 Instrument ID (2): ECD1

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	0.17	
	2	0.000	0.000	0.000	0.17	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.18	0.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B214105-BSD1 Date(s) Analyzed: 10/08/2018 10/08/2018

Instrument ID (1): ECD1 Instrument ID (2): ECD1

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	0.17	
	2	0.000	0.000	0.000	0.17	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.17	5.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8081B

LCS

Lab Sample ID: B214106-BS1 Date(s) Analyzed: 10/08/2018 10/08/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.975	6.945	7.005	0.080	
	2	7.074	7.044	7.104	0.084	4.9
4,4'-DDE	1	6.553	6.523	6.583	0.076	
	2	6.652	6.621	6.681	0.083	8.8
4,4'-DDT	1	7.183	7.154	7.214	0.080	
	2	7.308	7.278	7.338	0.076	5.1
Alachlor	1	6.010	5.981	6.041	0.074	
	2	5.863	5.833	5.893	0.078	5.3
Aldrin	1	5.918	5.889	5.949	0.072	
	2	5.914	5.884	5.944	0.079	9.3
alpha-BHC	1	5.254	5.225	5.285	0.072	
	2	5.249	5.219	5.279	0.075	4.1
alpha-Chlordane	1	6.492	6.463	6.523	0.073	
	2	6.522	6.492	6.552	0.079	7.9
beta-BHC	1	5.489	5.459	5.519	0.068	
	2	5.508	5.476	5.536	0.071	4.3
delta-BHC	1	5.595	5.565	5.625	0.066	
	2	5.682	5.652	5.712	0.072	8.7
Dieldrin	1	6.752	6.722	6.782	0.075	
	2	6.752	6.722	6.782	0.082	8.9
Endosulfan I	1	6.582	6.553	6.613	0.075	
	2	6.558	6.528	6.588	0.081	7.7
Endosulfan II	1	7.077	7.047	7.107	0.077	
	2	7.130	7.100	7.160	0.081	5.1
Endosulfan Sulfate	1	7.716	7.687	7.747	0.080	
	2	7.602	7.572	7.632	0.080	0.0
Endrin	1	6.916	6.886	6.946	0.076	
	2	6.970	6.939	6.999	0.079	3.9
Endrin Aldehyde	1	7.386	7.357	7.417	0.086	
	2	7.387	7.358	7.418	0.084	2.4
Endrin Ketone	1	7.928	7.898	7.958	0.080	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8081B

Lab Sample ID: B214106-BS1 Date(s) Analyzed: 10/08/2018 10/08/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.001	7.972	8.032	0.079	1.3
gamma-BHC (Lindane)	1	5.438	5.409	5.469	0.072	
	2	5.453	5.423	5.483	0.073	1.4
gamma-Chlordane	1	6.401	6.371	6.431	0.072	
	2	6.421	6.391	6.451	0.079	9.3
Heptachlor	1	5.728	5.699	5.759	0.056	
	2	5.714	5.684	5.744	0.077	31.6
Heptachlor Epoxide	1	6.315	6.285	6.345	0.073	
	2	6.292	6.262	6.322	0.078	6.6
Hexachlorobenzene	1	5.159	5.129	5.189	0.071	
	2	5.167	5.137	5.197	0.078	9.4
Methoxychlor	1	7.561	7.532	7.592	0.080	
	2	7.857	7.827	7.887	0.082	2.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B214106-BSD1 Date(s) Analyzed: 10/08/2018 10/08/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.975	6.945	7.005	0.082	
	2	7.074	7.044	7.104	0.088	7.1
4,4'-DDE	1	6.552	6.523	6.583	0.079	
	2	6.651	6.621	6.681	0.086	8.5
4,4'-DDT	1	7.183	7.154	7.214	0.082	
	2	7.308	7.278	7.338	0.077	6.3
Alachlor	1	6.010	5.981	6.041	0.075	
	2	5.863	5.833	5.893	0.081	7.7
Aldrin	1	5.919	5.889	5.949	0.075	
	2	5.913	5.884	5.944	0.084	11.3
alpha-BHC	1	5.254	5.225	5.285	0.075	
	2	5.249	5.219	5.279	0.080	6.5
alpha-Chlordane	1	6.492	6.463	6.523	0.075	
	2	6.522	6.492	6.552	0.083	10.1
beta-BHC	1	5.489	5.459	5.519	0.071	
	2	5.508	5.476	5.536	0.076	6.8
delta-BHC	1	5.595	5.565	5.625	0.067	
	2	5.682	5.652	5.712	0.076	12.6
Dieldrin	1	6.752	6.722	6.782	0.077	
	2	6.752	6.722	6.782	0.086	11.0
Endosulfan I	1	6.583	6.553	6.613	0.076	
	2	6.558	6.528	6.588	0.083	8.8
Endosulfan II	1	7.076	7.047	7.107	0.079	
	2	7.130	7.100	7.160	0.084	6.1
Endosulfan Sulfate	1	7.717	7.687	7.747	0.080	
	2	7.602	7.572	7.632	0.082	2.5
Endrin	1	6.916	6.886	6.946	0.077	
	2	6.969	6.939	6.999	0.082	6.3
Endrin Aldehyde	1	7.387	7.357	7.417	0.088	
	2	7.388	7.358	7.418	0.088	0.0
Endrin Ketone	1	7.928	7.898	7.958	0.080	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B214106-BSD1 Date(s) Analyzed: 10/08/2018 10/08/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.002	7.972	8.032	0.080	0.0
gamma-BHC (Lindane)	1	5.438	5.409	5.469	0.075	
	2	5.453	5.423	5.483	0.083	10.1
gamma-Chlordane	1	6.401	6.371	6.431	0.075	
	2	6.421	6.391	6.451	0.084	11.3
Heptachlor	1	5.729	5.699	5.759	0.058	
	2	5.714	5.684	5.744	0.081	33.1
Heptachlor Epoxide	1	6.315	6.285	6.345	0.075	
	2	6.291	6.262	6.322	0.082	8.9
Hexachlorobenzene	1	5.159	5.129	5.189	0.074	
	2	5.167	5.137	5.197	0.083	11.5
Methoxychlor	1	7.561	7.532	7.592	0.080	
	2	7.857	7.827	7.887	0.083	3.7

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.
DL-03	Elevated reporting limit due to matrix.
H-03	Sample received after recommended holding time was exceeded.
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.
O-32	A dilution was performed as part of the standard analytical procedure.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration 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-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-36	Initial calibration verification (ICV) 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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 1030 in Soil</i>	
Ignitability	NY,NH,CT,NC,ME,VA
<i>SW-846 6010D in Soil</i>	
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
<i>SW-846 7471B in Soil</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8081B in Soil</i>	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8151A in Water</i>	
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
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

CERTIFICATIONS

Certified Analyses included in this Report

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<i>SW-846 8270D in Water</i>	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
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
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY
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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

VHB
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 617-607-1885
 Sudbury-Hudson Eversource Transmission Line
 Sudbury/Hudson, MA
 12970.00
 Paul McKinlay

http://www.contestlabs.com
 CHAIN OF CUSTODY RECORD
 39 Spruce Street
 East Longmeadow, MA 01028

Page 1 of 1

Requested Turnaround Time: 7-Day 10-Day

Due Date: 1-Day 3-Day 4-Day

Rush-Approval Required: 1-Day 3-Day 4-Day

Data Delivery: PDF EXCEL

Other:

CLP Like Data Plg Required:

Email To: pcornell@vhb.com, pmckinlay@vhb.com

Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	MP-40	10/2/2018	12:12	X	X	S	U

Comments: 20X Rule for TCLP. VOCs frozen 10/2/2018 @ 1230. VOC preservatives: 1 MeOH, 2 H₂O.

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

Date for all labels for MP-40 should be 10/2/18.

Relinquished by: (signature) [Signature] Date/Time: 10/3/18 13:35

Received by: (signature) [Signature] Date/Time: 10/3/18 13:35

Relinquished by: (signature) [Signature] Date/Time: 10/3/18 13:35

Received by: (signature) [Signature] Date/Time: 10/3/18 13:35

Relinquished by: (signature) [Signature] Date/Time: 10/3/18 14:10

Received by: (signature) [Signature] Date/Time: 10/3/18 14:10

Project Entity: Government Federal City Municipality 21 J Brownfield WRTA School MBTA Other

Detection Limit Requirements: MA MA MCP Required MCP Certification Form Required CT CT RCP Required RCP Certification Form Required MA State DW Required

Special Requirements: MA MCP Required MCP Certification Form Required CT RCP Required RCP Certification Form Required

PWSID #

con-test ANALYTICAL LABORATORY
 www.contestlabs.com

10/3/18 1910

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 VHB

Received By ap Date 10/3/18 Time 19:10

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 # 577 Actual Temp - 2.2
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? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name F
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? Luke

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-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-	2	Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen: 10/3/18 1910
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:

November 9, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18J1553

Enclosed are results of analyses for samples received by the laboratory on October 31, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive style with a large, prominent 'K' and 'M'.

Kerry K. McGee
Project Manager

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/9/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J1553

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-51	18J1553-01	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
SB-50	18J1553-02	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/9/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J1553

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-37	18J1553-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
SB-38	18J1553-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J1553

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-39	18J1553-05	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
MP37	18J1553-06	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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REPORT DATE: 11/9/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J1553

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP38	18J1553-07	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
MP39	18J1553-08	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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 8151, samples were derivatized on 11/02/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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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**

18J1553-04[SB-38], B216433-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**

18J1553-04[SB-38], B216433-MS1

SW-846 8081B

Qualifications:**P-01**

Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.

Analyte & Samples(s) Qualified:**4,4'-DDT**

18J1553-05[SB-39]

SW-846 8082A

Qualifications:**O-32**

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

Analyte & Samples(s) Qualified:

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39]

V-06

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

Analyte & Samples(s) Qualified:**Aroclor-1016 [2C]**

B216139-BS1, B216139-BSD1

Aroclor-1260 [2C]

B216139-BS1, B216139-BSD1

SW-846 8260C

Qualifications:**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:**2-Butanone (MEK)**

B216165-BSD1

Acetone

B216165-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:**1,1,2,2-Tetrachloroethane**

18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216165-BLK1, B216165-BS1, B216165-BSD1

1,2-Dibromo-3-chloropropane (DB)

18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216165-BLK1, B216165-BS1, B216165-BSD1

2-Butanone (MEK)

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216161-BLK1, B216161-BS1, B216161-BSD1, B216165-BLK1, B216165-BS1, B216165-BSD1, S029100-CCV1

2-Hexanone (MBK)

18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216165-BLK1, B216165-BS1, B216165-BSD1

Acetone

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216161-BLK1, B216161-BS1, B216161-BSD1, B216165-BLK1, B216165-BS1, B216165-BSD1, S029100-CCV1

Bromomethane

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-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**

18J1553-01[SB-51]

Carbon Disulfide

18J1553-01[SB-51]

Methylene Chloride

18J1553-01[SB-51]

Naphthalene

18J1553-01[SB-51]

V-05

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

Analyte & Samples(s) Qualified:**1,2-Dibromo-3-chloropropane (DB)**

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-CCV1

1,4-Dioxane

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-CCV1

2-Butanone (MEK)

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-CCV1

2-Hexanone (MBK)

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-CCV1

Acetone

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-CCV1

tert-Amyl Methyl Ether (TAME)

18J1553-01[SB-51], B216161-BLK1, B216161-BS1, B216161-BSD1, S029100-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**

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216161-BLK1, B216161-BS1, B216161-BSD1, B216165-BLK1, B216165-BS1, B216165-BSD1, S029100-CCV1

Tetrahydrofuran

18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216165-BLK1, B216165-BS1, B216165-BSD1

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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**

18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216165-BLK1, B216165-BS1, B216165-BSD1, S028948-CCV1

V-36

Initial calibration verification (ICV) 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:**1,4-Dioxane**

B216165-BS1, B216165-BSD1, S028948-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**

B216271-BS1

V-05

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

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

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216271-BLK1, B216271-BS1, B216271-BSD1

V-06

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

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

B216271-BS1, B216271-BSD1

2,6-Dinitrotoluene

B216271-BS1, B216271-BSD1

V-20

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

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

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216271-BLK1

2,6-Dinitrotoluene

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216271-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**

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216271-BLK1, B216271-BS1, B216271-BSD1

Aniline

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39], B216271-BLK1, B216271-BS1, B216271-BSD1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

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

18J1553-01[SB-51], 18J1553-02[SB-50], 18J1553-03[SB-37], 18J1553-04[SB-38], 18J1553-05[SB-39], 18J1553-06[MP37], 18J1553-07[MP38], 18J1553-08[MP39]

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.



Tod E. Kopyscinski
Laboratory Director

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-51

Sampled: 10/24/2018 10:57

Sample ID: 18J1553-01

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	2.1	mg/Kg dry	1	V-05, R-05	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.084	mg/Kg dry	1	V-05	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Benzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Bromobenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Bromochloromethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Bromodichloromethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Bromoform	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Bromomethane	ND	0.084	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
2-Butanone (MEK)	ND	0.84	mg/Kg dry	1	V-05, R-05	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
n-Butylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
sec-Butylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
tert-Butylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Carbon Disulfide	ND	0.42	mg/Kg dry	1	RL-07	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Carbon Tetrachloride	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Chlorobenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Chlorodibromomethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Chloroethane	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Chloroform	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Chloromethane	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
2-Chlorotoluene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
4-Chlorotoluene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.17	mg/Kg dry	1	V-05	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2-Dibromoethane (EDB)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Dibromomethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2-Dichlorobenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,3-Dichlorobenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,4-Dichlorobenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1-Dichloroethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2-Dichloroethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1-Dichloroethylene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
cis-1,2-Dichloroethylene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
trans-1,2-Dichloroethylene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2-Dichloropropane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,3-Dichloropropane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
2,2-Dichloropropane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1-Dichloropropene	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
cis-1,3-Dichloropropene	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
trans-1,3-Dichloropropene	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Diethyl Ether	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Diisopropyl Ether (DIPE)	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,4-Dioxane	ND	2.1	mg/Kg dry	1	V-05, V-16	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Ethylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-51

Sampled: 10/24/2018 10:57

Sample ID: 18J1553-01

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	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
2-Hexanone (MBK)	ND	0.42	mg/Kg dry	1	V-05	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Isopropylbenzene (Cumene)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Methylene Chloride	ND	0.21	mg/Kg dry	1	RL-07	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.42	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Naphthalene	ND	0.21	mg/Kg dry	1	RL-07	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
n-Propylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Styrene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1,1,2-Tetrachloroethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1,2,2-Tetrachloroethane	ND	0.021	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Tetrachloroethylene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Tetrahydrofuran	ND	0.17	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Toluene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2,3-Trichlorobenzene	ND	0.21	mg/Kg dry	1	RL-07	SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2,4-Trichlorobenzene	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1,1-Trichloroethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,1,2-Trichloroethane	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Trichloroethylene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Trichlorofluoromethane (Freon 11)	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2,3-Trichloropropane	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,2,4-Trimethylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
1,3,5-Trimethylbenzene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
Vinyl Chloride	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
m+p Xylene	ND	0.084	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH
o-Xylene	ND	0.042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/6/18 12:24	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.5	70-130	
Toluene-d8	102	70-130	
4-Bromofluorobenzene	103	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-51

Sampled: 10/24/2018 10:57

Sample ID: 18J1553-01

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	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Aniline	ND	0.39	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
4-Chloroaniline	ND	0.76	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,4-Dinitrophenol	ND	0.76	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Fluoranthene	0.23	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/24/2018 10:57

Field Sample #: SB-51

Sample ID: 18J1553-01

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	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
4-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Pyrene	0.27	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Pyridine	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 16:53	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		68.8	30-130					11/3/18 16:53	
Phenol-d6		72.8	30-130					11/3/18 16:53	
Nitrobenzene-d5		71.0	30-130					11/3/18 16:53	
2-Fluorobiphenyl		63.0	30-130					11/3/18 16:53	
2,4,6-Tribromophenol		81.2	30-130					11/3/18 16:53	
p-Terphenyl-d14		85.7	30-130					11/3/18 16:53	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-51

Sampled: 10/24/2018 10:57

Sample ID: 18J1553-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Aldrin [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
alpha-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
beta-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
delta-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
4,4'-DDD [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
4,4'-DDE [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
4,4'-DDT [1]	0.0088	0.0046	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Dieldrin [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Endosulfan I [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Endosulfan II [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Endosulfan sulfate [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Endrin [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Endrin aldehyde [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Endrin ketone [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Heptachlor [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Heptachlor epoxide [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Hexachlorobenzene [1]	ND	0.0069	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Methoxychlor [1]	ND	0.057	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:01	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		73.1	30-150					11/3/18 14:01	
Decachlorobiphenyl [2]		73.4	30-150					11/3/18 14:01	
Tetrachloro-m-xylene [1]		78.2	30-150					11/3/18 14:01	
Tetrachloro-m-xylene [2]		66.8	30-150					11/3/18 14:01	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-51

Sampled: 10/24/2018 10:57

Sample ID: 18J1553-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 14:18	PJG
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:18	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.3	30-150					11/6/18 14:18	
Decachlorobiphenyl [2]		86.8	30-150					11/6/18 14:18	
Tetrachloro-m-xylene [1]		87.6	30-150					11/6/18 14:18	
Tetrachloro-m-xylene [2]		89.9	30-150					11/6/18 14:18	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/24/2018 10:57

Field Sample #: SB-51

Sample ID: 18J1553-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
Dalapon [1]	ND	73	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 17:49	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	75.4	30-150						11/2/18 17:49	
2,4-Dichlorophenylacetic acid [2]	81.4	30-150						11/2/18 17:49	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/24/2018 10:57

Field Sample #: SB-51

Sample ID: 18J1553-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	24	9.8	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 23:39	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		72.9	40-140					11/2/18 23:39	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/24/2018 10:57

Field Sample #: SB-51

Sample ID: 18J1553-01

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	11/5/18	11/6/18 13:28	QNW
Arsenic	18	2.0	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Barium	61	2.0	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Beryllium	0.43	0.20	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Cadmium	0.57	0.20	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Chromium	18	0.40	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Lead	13	0.60	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:37	EJB
Nickel	15	0.40	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Vanadium	26	0.80	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW
Zinc	26	0.80	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:28	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/24/2018 10:57

Field Sample #: SB-51

Sample ID: 18J1553-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @21.6°C	6.5		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	2.9	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	84.6		% Wt	1		SM 2540G	11/5/18	11/6/18 9:19	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-50

Sampled: 10/25/2018 09:14

Sample ID: 18J1553-02

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	0.085	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,4-Dioxane	ND	0.085	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-50

Sampled: 10/25/2018 09:14

Sample ID: 18J1553-02

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	11/1/18	11/1/18 8:40	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Naphthalene	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2,3-Trichlorobenzene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 8:40	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.0	70-130	11/1/18 8:40
Toluene-d8	95.6	70-130	11/1/18 8:40
4-Bromofluorobenzene	96.1	70-130	11/1/18 8:40

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-50

Sampled: 10/25/2018 09:14

Sample ID: 18J1553-02

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	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Aniline	ND	0.42	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Butylbenzylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
4-Chloroaniline	ND	0.81	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,4-Dinitrophenol	ND	0.81	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Di-n-octylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 09:14

Field Sample #: SB-50

Sample ID: 18J1553-02

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	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
4-Nitrophenol	ND	0.81	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Pentachlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Pyridine	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 18:57	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		59.2	30-130					11/3/18 18:57	
Phenol-d6		59.7	30-130					11/3/18 18:57	
Nitrobenzene-d5		59.6	30-130					11/3/18 18:57	
2-Fluorobiphenyl		50.6	30-130					11/3/18 18:57	
2,4,6-Tribromophenol		63.0	30-130					11/3/18 18:57	
p-Terphenyl-d14		69.8	30-130					11/3/18 18:57	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-50

Sampled: 10/25/2018 09:14

Sample ID: 18J1553-02

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.025	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Aldrin [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
alpha-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
beta-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
delta-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
gamma-BHC (Lindane) [1]	ND	0.0025	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Chlordane [1]	ND	0.025	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
4,4'-DDD [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
4,4'-DDE [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
4,4'-DDT [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Dieldrin [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Endosulfan I [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Endosulfan II [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Endosulfan sulfate [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Endrin [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Endrin aldehyde [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Endrin ketone [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Heptachlor [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Heptachlor epoxide [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Hexachlorobenzene [1]	ND	0.0074	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Methoxychlor [1]	ND	0.062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:29	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		86.3	30-150					11/3/18 14:29	
Decachlorobiphenyl [2]		86.7	30-150					11/3/18 14:29	
Tetrachloro-m-xylene [1]		95.2	30-150					11/3/18 14:29	
Tetrachloro-m-xylene [2]		74.8	30-150					11/3/18 14:29	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-50

Sampled: 10/25/2018 09:14

Sample ID: 18J1553-02

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 14:36	PJG
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:36	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.8	30-150					11/6/18 14:36	
Decachlorobiphenyl [2]		81.8	30-150					11/6/18 14:36	
Tetrachloro-m-xylene [1]		82.8	30-150					11/6/18 14:36	
Tetrachloro-m-xylene [2]		85.8	30-150					11/6/18 14:36	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 09:14

Field Sample #: SB-50

Sample ID: 18J1553-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
2,4-DB [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
2,4,5-TP (Silvex) [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
2,4,5-T [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
Dalapon [1]	ND	78	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
Dicamba [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
Dichloroprop [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
Dinoseb [1]	ND	16	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
MCPA [1]	ND	3100	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
MCPA [1]	ND	3100	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 18:29	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		81.5	30-150					11/2/18 18:29	
2,4-Dichlorophenylacetic acid [2]		87.6	30-150					11/2/18 18:29	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 09:14

Field Sample #: SB-50

Sample ID: 18J1553-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	12	10	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 22:09	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		71.6	40-140					11/2/18 22:09	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 09:14

Field Sample #: SB-50

Sample ID: 18J1553-02

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	11/5/18	11/6/18 13:32	QNW
Arsenic	7.2	2.1	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Barium	36	2.1	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Beryllium	0.42	0.21	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Cadmium	0.26	0.21	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Chromium	14	0.42	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Lead	9.3	0.63	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Mercury	ND	0.031	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:39	EJB
Nickel	8.2	0.42	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Selenium	ND	4.2	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Silver	ND	0.42	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Vanadium	15	0.84	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW
Zinc	21	0.84	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:32	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 09:14

Field Sample #: SB-50

Sample ID: 18J1553-02

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @21.5°C	5.6		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	3.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	79.6		% Wt	1		SM 2540G	11/5/18	11/6/18 9:19	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

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	0.082	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Bromomethane	ND	0.0082	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Chlorodibromomethane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Chloroethane	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Chloromethane	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2-Dibromoethane (EDB)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,3-Dichloropropane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
cis-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
trans-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Diethyl Ether	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Diisopropyl Ether (DIPE)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,4-Dioxane	ND	0.082	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

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	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Methylene Chloride	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Naphthalene	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1,2,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Tetrahydrofuran	ND	0.0082	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2,3-Trichlorobenzene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
Vinyl Chloride	ND	0.0082	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:07	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	99.1	70-130	
4-Bromofluorobenzene	99.8	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

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	11/2/18	11/3/18 19:23	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Acetophenone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Aniline	ND	0.37	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Benzo(b)fluoranthene	0.23	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Bis(2-chloroethoxy)methane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Bis(2-chloroethyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Bis(2-chloroisopropyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
4-Bromophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Butylbenzylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
4-Chloroaniline	ND	0.72	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2-Chloronaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2-Chlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Chrysene	0.19	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Dibenzofuran	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Di-n-butylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
1,2-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
1,3-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
1,4-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,4-Dichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Diethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,4-Dimethylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Dimethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,4-Dinitrophenol	ND	0.72	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,4-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,6-Dinitrotoluene	ND	0.37	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Di-n-octylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Fluoranthene	0.26	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Hexachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Hexachlorobutadiene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Hexachloroethane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Isophorone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

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	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
3/4-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Nitrobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2-Nitrophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
4-Nitrophenol	ND	0.72	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Pentachlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Phenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Pyrene	0.30	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Pyridine	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
1,2,4-Trichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,4,5-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
2,4,6-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:23	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		64.7	30-130					11/3/18 19:23	
Phenol-d6		66.9	30-130					11/3/18 19:23	
Nitrobenzene-d5		65.3	30-130					11/3/18 19:23	
2-Fluorobiphenyl		56.9	30-130					11/3/18 19:23	
2,4,6-Tribromophenol		72.2	30-130					11/3/18 19:23	
p-Terphenyl-d14		77.0	30-130					11/3/18 19:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Aldrin [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
alpha-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
beta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
delta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
gamma-BHC (Lindane) [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Chlordane [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
4,4'-DDD [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
4,4'-DDE [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
4,4'-DDT [1]	0.0098	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Dieldrin [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Endosulfan I [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Endosulfan II [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Endosulfan sulfate [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Endrin [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Endrin aldehyde [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Endrin ketone [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Heptachlor [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Heptachlor epoxide [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Hexachlorobenzene [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Methoxychlor [1]	ND	0.052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Toxaphene [1]	ND	0.10	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 14:56	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		90.6	30-150					11/3/18 14:56	
Decachlorobiphenyl [2]		91.8	30-150					11/3/18 14:56	
Tetrachloro-m-xylene [1]		92.5	30-150					11/3/18 14:56	
Tetrachloro-m-xylene [2]		75.1	30-150					11/3/18 14:56	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 14:54	PJG
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 14:54	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.3	30-150					11/6/18 14:54	
Decachlorobiphenyl [2]		88.7	30-150					11/6/18 14:54	
Tetrachloro-m-xylene [1]		86.5	30-150					11/6/18 14:54	
Tetrachloro-m-xylene [2]		89.2	30-150					11/6/18 14:54	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
Dalapon [1]	ND	69	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:09	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		73.0	30-150					11/2/18 19:09	
2,4-Dichlorophenylacetic acid [2]		75.1	30-150					11/2/18 19:09	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 10:20

Field Sample #: SB-37

Sample ID: 18J1553-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	32	9.1	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 23:57	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		71.0	40-140					11/2/18 23:57	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-37

Sampled: 10/25/2018 10:20

Sample ID: 18J1553-03

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	11/5/18	11/6/18 13:37	QNW
Arsenic	14	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Barium	52	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Beryllium	0.48	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Cadmium	0.43	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Chromium	17	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Lead	14	0.55	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:40	EJB
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Vanadium	21	0.73	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW
Zinc	29	0.73	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:37	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 10:20

Field Sample #: SB-37

Sample ID: 18J1553-03

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @21.3°C	4.8		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	ND	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	90.7		% Wt	1		SM 2540G	11/5/18	11/6/18 9:20	MJR

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-38

Sampled: 10/25/2018 11:05

Sample ID: 18J1553-04

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	R-05	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Bromomethane	ND	0.0091	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Chlorodibromomethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Chloroethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Chloromethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,3-Dichloropropane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
cis-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
trans-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Diethyl Ether	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Diisopropyl Ether (DIPE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,4-Dioxane	ND	0.091	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-38

Sampled: 10/25/2018 11:05

Sample ID: 18J1553-04

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	11/1/18	11/1/18 9:35	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Methylene Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Naphthalene	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Tetrahydrofuran	ND	0.0091	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2,3-Trichlorobenzene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
Vinyl Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 9:35	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.1	70-130	
Toluene-d8	95.2	70-130	
4-Bromofluorobenzene	98.2	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-38

Sampled: 10/25/2018 11:05

Sample ID: 18J1553-04

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	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Aniline	ND	0.39	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
4-Chloroaniline	ND	0.77	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,4-Dinitrophenol	ND	0.77	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-38

Sampled: 10/25/2018 11:05

Sample ID: 18J1553-04

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	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
4-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Pyridine	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 19:49	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		63.7	30-130					11/3/18 19:49	
Phenol-d6		64.8	30-130					11/3/18 19:49	
Nitrobenzene-d5		65.4	30-130					11/3/18 19:49	
2-Fluorobiphenyl		55.2	30-130					11/3/18 19:49	
2,4,6-Tribromophenol		69.9	30-130					11/3/18 19:49	
p-Terphenyl-d14		75.3	30-130					11/3/18 19:49	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-38

Sampled: 10/25/2018 11:05

Sample ID: 18J1553-04

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Aldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
alpha-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
beta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
delta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
4,4'-DDD [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
4,4'-DDE [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
4,4'-DDT [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Dieldrin [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Endosulfan I [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Endosulfan II [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Endosulfan sulfate [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Endrin [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Endrin aldehyde [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Endrin ketone [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Heptachlor [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Heptachlor epoxide [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Hexachlorobenzene [1]	ND	0.0068	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Methoxychlor [1]	ND	0.056	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:23	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		75.4	30-150					11/3/18 15:23	
Decachlorobiphenyl [2]		74.7	30-150					11/3/18 15:23	
Tetrachloro-m-xylene [1]		80.1	30-150					11/3/18 15:23	
Tetrachloro-m-xylene [2]		65.9	30-150					11/3/18 15:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-38

Sampled: 10/25/2018 11:05

Sample ID: 18J1553-04

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 15:11	PJG
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:11	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		79.2	30-150					11/6/18 15:11	
Decachlorobiphenyl [2]		79.4	30-150					11/6/18 15:11	
Tetrachloro-m-xylene [1]		79.3	30-150					11/6/18 15:11	
Tetrachloro-m-xylene [2]		81.5	30-150					11/6/18 15:11	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 11:05

Field Sample #: SB-38

Sample ID: 18J1553-04

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
Dalapon [1]	ND	72	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 19:48	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		69.7	30-150					11/2/18 19:48	
2,4-Dichlorophenylacetic acid [2]		73.9	30-150					11/2/18 19:48	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 11:05

Field Sample #: SB-38

Sample ID: 18J1553-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	12	9.6	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 22:27	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		78.4	40-140					11/2/18 22:27	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 11:05

Field Sample #: SB-38

Sample ID: 18J1553-04

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	MS-07	SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Arsenic	3.9	1.9	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Barium	26	1.9	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Beryllium	0.43	0.19	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Cadmium	ND	0.19	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Chromium	12	0.38	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Lead	13	0.57	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:42	EJB
Nickel	8.1	0.38	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Thallium	ND	1.9	mg/Kg dry	1	MS-14	SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Vanadium	15	0.77	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW
Zinc	16	0.77	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:23	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 11:05

Field Sample #: SB-38

Sample ID: 18J1553-04

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @21.6°C	4.3		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	4.4	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	86.2		% Wt	1		SM 2540G	11/5/18	11/6/18 9:20	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-39

Sampled: 10/25/2018 13:10

Sample ID: 18J1553-05

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	0.086	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Carbon Disulfide	ND	0.0052	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,4-Dioxane	ND	0.086	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-39

Sampled: 10/25/2018 13:10

Sample ID: 18J1553-05

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	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Naphthalene	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2,3-Trichlorobenzene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.5	70-130	
Toluene-d8	97.5	70-130	
4-Bromofluorobenzene	97.6	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-39

Sampled: 10/25/2018 13:10

Sample ID: 18J1553-05

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	11/2/18	11/3/18 20:15	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Aniline	ND	0.36	mg/Kg dry	1	V-34, V-05	SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Benzo(a)anthracene	0.57	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Benzo(a)pyrene	0.29	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Benzo(b)fluoranthene	0.59	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Benzo(k)fluoranthene	0.24	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
4-Chloroaniline	ND	0.71	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Chrysene	0.56	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,4-Dinitrophenol	ND	0.71	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Fluoranthene	1.0	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Indeno(1,2,3-cd)pyrene	0.20	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-39

Sampled: 10/25/2018 13:10

Sample ID: 18J1553-05

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	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
4-Nitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Pyrene	1.1	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Pyridine	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:15	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		51.6	30-130					11/3/18 20:15	
Phenol-d6		53.8	30-130					11/3/18 20:15	
Nitrobenzene-d5		53.4	30-130					11/3/18 20:15	
2-Fluorobiphenyl		46.5	30-130					11/3/18 20:15	
2,4,6-Tribromophenol		55.4	30-130					11/3/18 20:15	
p-Terphenyl-d14		60.3	30-130					11/3/18 20:15	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-39

Sampled: 10/25/2018 13:10

Sample ID: 18J1553-05

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Aldrin [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
alpha-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
beta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
delta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
4,4'-DDD [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
4,4'-DDE [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
4,4'-DDT [1]	0.0089	0.0044	mg/Kg dry	1	P-01	SW-846 8081B	11/1/18	11/3/18 15:50	TG
Dieldrin [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Endosulfan I [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Endosulfan II [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Endosulfan sulfate [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Endrin [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Endrin aldehyde [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Endrin ketone [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Heptachlor [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Heptachlor epoxide [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Hexachlorobenzene [1]	ND	0.0065	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Methoxychlor [1]	ND	0.054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 15:50	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		93.4	30-150					11/3/18 15:50	
Decachlorobiphenyl [2]		93.4	30-150					11/3/18 15:50	
Tetrachloro-m-xylene [1]		91.0	30-150					11/3/18 15:50	
Tetrachloro-m-xylene [2]		72.5	30-150					11/3/18 15:50	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: SB-39

Sampled: 10/25/2018 13:10

Sample ID: 18J1553-05

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 15:28	PJG
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:28	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.2	30-150					11/6/18 15:28	
Decachlorobiphenyl [2]		85.7	30-150					11/6/18 15:28	
Tetrachloro-m-xylene [1]		83.2	30-150					11/6/18 15:28	
Tetrachloro-m-xylene [2]		84.9	30-150					11/6/18 15:28	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 13:10

Field Sample #: SB-39

Sample ID: 18J1553-05

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
Dalalpon [1]	ND	68	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/2/18 20:28	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		74.4	30-150					11/2/18 20:28	
2,4-Dichlorophenylacetic acid [2]		76.4	30-150					11/2/18 20:28	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 13:10

Field Sample #: SB-39

Sample ID: 18J1553-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	100	9.1	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/3/18 0:33	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		82.7	40-140					11/3/18 0:33	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 13:10

Field Sample #: SB-39

Sample ID: 18J1553-05

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	11/5/18	11/6/18 13:42	QNW
Arsenic	11	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Barium	92	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Beryllium	0.48	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Cadmium	0.38	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Chromium	21	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Lead	12	0.55	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:48	EJB
Nickel	16	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Vanadium	29	0.74	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW
Zinc	40	0.74	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:42	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/25/2018 13:10

Field Sample #: SB-39

Sample ID: 18J1553-05

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @21.6°C	5.7		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	2.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	90.9		% Wt	1		SM 2540G	11/5/18	11/6/18 9:20	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

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	0.069	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Bromomethane	ND	0.0069	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Carbon Disulfide	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Chlorodibromomethane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Chloroethane	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Chloromethane	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2-Dibromoethane (EDB)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,3-Dichloropropane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
cis-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
trans-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Diethyl Ether	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Diisopropyl Ether (DIPE)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,4-Dioxane	ND	0.069	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

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	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Methylene Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Naphthalene	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Tetrahydrofuran	ND	0.0069	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2,3-Trichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
Vinyl Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.1	70-130	11/1/18 10:29
Toluene-d8	96.0	70-130	11/1/18 10:29
4-Bromofluorobenzene	95.8	70-130	11/1/18 10:29

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

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	11/2/18	11/3/18 20:41	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Acetophenone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Aniline	ND	0.37	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Bis(2-chloroethoxy)methane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Bis(2-chloroethyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Bis(2-chloroisopropyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
4-Bromophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Butylbenzylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
4-Chloroaniline	ND	0.71	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2-Chloronaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2-Chlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Dibenzofuran	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Di-n-butylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
1,2-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
1,3-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
1,4-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,4-Dichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Diethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,4-Dimethylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Dimethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,4-Dinitrophenol	ND	0.71	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,4-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,6-Dinitrotoluene	ND	0.37	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Di-n-octylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Hexachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Hexachlorobutadiene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Hexachloroethane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Isophorone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

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	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
3/4-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Nitrobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2-Nitrophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
4-Nitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Pentachlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Phenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Pyridine	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
1,2,4-Trichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,4,5-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
2,4,6-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 20:41	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		47.5	30-130					11/3/18 20:41	
Phenol-d6		48.3	30-130					11/3/18 20:41	
Nitrobenzene-d5		50.8	30-130					11/3/18 20:41	
2-Fluorobiphenyl		41.3	30-130					11/3/18 20:41	
2,4,6-Tribromophenol		50.6	30-130					11/3/18 20:41	
p-Terphenyl-d14		55.3	30-130					11/3/18 20:41	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Aldrin [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
alpha-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
beta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
delta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
gamma-BHC (Lindane) [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Chlordane [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
4,4'-DDD [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
4,4'-DDE [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
4,4'-DDT [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Dieldrin [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Endosulfan I [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Endosulfan II [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Endosulfan sulfate [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Endrin [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Endrin aldehyde [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Endrin ketone [1]	ND	0.0083	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Heptachlor [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Heptachlor epoxide [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Hexachlorobenzene [1]	ND	0.0063	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Methoxychlor [1]	ND	0.052	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Toxaphene [1]	ND	0.10	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 16:17	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.3	30-150					11/3/18 16:17	
Decachlorobiphenyl [2]		98.6	30-150					11/3/18 16:17	
Tetrachloro-m-xylene [1]		104	30-150					11/3/18 16:17	
Tetrachloro-m-xylene [2]		84.0	30-150					11/3/18 16:17	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 15:46	PJG
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 15:46	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		79.7	30-150					11/6/18 15:46	
Decachlorobiphenyl [2]		79.9	30-150					11/6/18 15:46	
Tetrachloro-m-xylene [1]		77.0	30-150					11/6/18 15:46	
Tetrachloro-m-xylene [2]		79.1	30-150					11/6/18 15:46	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP37

Sampled: 10/26/2018 08:30

Sample ID: 18J1553-06

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
Dalapon [1]	ND	68	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
MCPP [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 0:27	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		76.9	30-150					11/3/18 0:27	
2,4-Dichlorophenylacetic acid [2]		82.7	30-150					11/3/18 0:27	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

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Sampled: 10/26/2018 08:30

Field Sample #: MP37

Sample ID: 18J1553-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	26	9.1	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 22:45	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		75.3	40-140					11/2/18 22:45	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 08:30

Field Sample #: MP37

Sample ID: 18J1553-06

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	11/5/18	11/6/18 13:47	QNW
Arsenic	5.6	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Barium	26	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Beryllium	0.26	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Cadmium	0.18	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Chromium	8.6	0.36	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Lead	19	0.54	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:35	EJB
Nickel	7.2	0.36	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Vanadium	11	0.72	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW
Zinc	15	0.72	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:47	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 08:30

Field Sample #: MP37

Sample ID: 18J1553-06

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @21.6°C	4.9		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	3.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	91.3		% Wt	1		SM 2540G	11/5/18	11/6/18 9:20	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP38

Sampled: 10/26/2018 10:05

Sample ID: 18J1553-07

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	0.073	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Bromomethane	ND	0.0073	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
2-Butanone (MEK)	ND	0.029	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Carbon Disulfide	ND	0.0044	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Chlorodibromomethane	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Chloroethane	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Chloroform	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Chloromethane	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2-Dibromoethane (EDB)	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1-Dichloroethylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,3-Dichloropropane	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
cis-1,3-Dichloropropene	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
trans-1,3-Dichloropropene	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Diethyl Ether	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Diisopropyl Ether (DIPE)	ND	0.00073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,4-Dioxane	ND	0.073	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP38

Sampled: 10/26/2018 10:05

Sample ID: 18J1553-07

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	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Methylene Chloride	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Naphthalene	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1,2,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Tetrahydrofuran	ND	0.0073	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2,3-Trichlorobenzene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
Vinyl Chloride	ND	0.0073	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
m+p Xylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 10:56	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.8	70-130	11/1/18 10:56
Toluene-d8	95.4	70-130	11/1/18 10:56
4-Bromofluorobenzene	96.2	70-130	11/1/18 10:56

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP38

Sampled: 10/26/2018 10:05

Sample ID: 18J1553-07

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	11/2/18	11/3/18 21:07	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Acetophenone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Aniline	ND	0.37	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Bis(2-chloroethoxy)methane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Bis(2-chloroethyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Bis(2-chloroisopropyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
4-Bromophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Butylbenzylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
4-Chloroaniline	ND	0.71	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2-Chloronaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2-Chlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Dibenzofuran	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Di-n-butylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
1,2-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
1,3-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
1,4-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,4-Dichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Diethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,4-Dimethylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Dimethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,4-Dinitrophenol	ND	0.71	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,4-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,6-Dinitrotoluene	ND	0.37	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Di-n-octylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Hexachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Hexachlorobutadiene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Hexachloroethane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Isophorone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP38

Sampled: 10/26/2018 10:05

Sample ID: 18J1553-07

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	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
3/4-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Nitrobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2-Nitrophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
4-Nitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Pentachlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Phenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Pyridine	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
1,2,4-Trichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,4,5-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
2,4,6-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:07	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		68.7	30-130					11/3/18 21:07	
Phenol-d6		72.6	30-130					11/3/18 21:07	
Nitrobenzene-d5		70.6	30-130					11/3/18 21:07	
2-Fluorobiphenyl		60.0	30-130					11/3/18 21:07	
2,4,6-Tribromophenol		78.6	30-130					11/3/18 21:07	
p-Terphenyl-d14		82.4	30-130					11/3/18 21:07	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP38

Sampled: 10/26/2018 10:05

Sample ID: 18J1553-07

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Aldrin [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
alpha-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
beta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
delta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
4,4'-DDD [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
4,4'-DDE [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
4,4'-DDT [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Dieldrin [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Endosulfan I [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Endosulfan II [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Endosulfan sulfate [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Endrin [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Endrin aldehyde [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Endrin ketone [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Heptachlor [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Heptachlor epoxide [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Hexachlorobenzene [1]	ND	0.0065	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Methoxychlor [1]	ND	0.054	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:23	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.9	30-150					11/3/18 19:23	
Decachlorobiphenyl [2]		86.8	30-150					11/3/18 19:23	
Tetrachloro-m-xylene [1]		89.7	30-150					11/3/18 19:23	
Tetrachloro-m-xylene [2]		74.9	30-150					11/3/18 19:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP38

Sampled: 10/26/2018 10:05

Sample ID: 18J1553-07

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 16:03	PJG
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:03	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.9	30-150					11/6/18 16:03	
Decachlorobiphenyl [2]		92.9	30-150					11/6/18 16:03	
Tetrachloro-m-xylene [1]		91.0	30-150					11/6/18 16:03	
Tetrachloro-m-xylene [2]		93.8	30-150					11/6/18 16:03	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 10:05

Field Sample #: MP38

Sample ID: 18J1553-07

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
Dalapon [1]	ND	68	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:07	TG
Surrogates		% Recovery			Recovery Limits				
2,4-Dichlorophenylacetic acid [1]		101			30-150			11/3/18 1:07	
2,4-Dichlorophenylacetic acid [2]		104			30-150			11/3/18 1:07	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 10:05

Field Sample #: MP38

Sample ID: 18J1553-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	18	9.0	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 23:03	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		76.9	40-140					11/2/18 23:03	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 10:05

Field Sample #: MP38

Sample ID: 18J1553-07

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	11/5/18	11/6/18 13:52	QNW
Arsenic	11	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Barium	78	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Beryllium	0.49	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Cadmium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Chromium	21	0.36	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Lead	12	0.54	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:49	EJB
Nickel	18	0.36	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Vanadium	23	0.71	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW
Zinc	43	0.71	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:52	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 10:05

Field Sample #: MP38

Sample ID: 18J1553-07

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @22.2°C	5.6		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	3.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	91.5		% Wt	1		SM 2540G	11/5/18	11/6/18 9:20	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP39

Sampled: 10/26/2018 12:35

Sample ID: 18J1553-08

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	0.077	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Bromomethane	ND	0.0077	mg/Kg dry	1	V-34	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
2-Butanone (MEK)	ND	0.031	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Chlorodibromomethane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Chloroethane	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Chloroform	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Chloromethane	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2-Dibromoethane (EDB)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,3-Dichloropropane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
cis-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
trans-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Diethyl Ether	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Diisopropyl Ether (DIPE)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,4-Dioxane	ND	0.077	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP39

Sampled: 10/26/2018 12:35

Sample ID: 18J1553-08

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	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Methylene Chloride	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Naphthalene	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1	R-05	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Tetrahydrofuran	ND	0.0077	mg/Kg dry	1	V-16	SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2,3-Trichlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
Vinyl Chloride	ND	0.0077	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
m+p Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/1/18	11/1/18 11:30	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.8	70-130	11/1/18 11:30
Toluene-d8	96.5	70-130	11/1/18 11:30
4-Bromofluorobenzene	98.3	70-130	11/1/18 11:30

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP39

Sampled: 10/26/2018 12:35

Sample ID: 18J1553-08

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	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Aniline	ND	0.38	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Benzo(a)anthracene	0.45	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Benzo(a)pyrene	0.45	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Benzo(b)fluoranthene	0.83	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Benzo(g,h,i)perylene	0.22	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Benzo(k)fluoranthene	0.35	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
4-Chloroaniline	ND	0.73	mg/Kg dry	1	V-34	SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Chrysene	0.46	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,4-Dinitrophenol	ND	0.73	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Fluoranthene	0.45	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Indeno(1,2,3-cd)pyrene	0.30	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Isophorone	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP39

Sampled: 10/26/2018 12:35

Sample ID: 18J1553-08

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	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Nitrobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
4-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Phenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Pyrene	0.72	0.19	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Pyridine	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/2/18	11/3/18 21:33	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		72.8	30-130					11/3/18 21:33	
Phenol-d6		78.1	30-130					11/3/18 21:33	
Nitrobenzene-d5		74.5	30-130					11/3/18 21:33	
2-Fluorobiphenyl		64.9	30-130					11/3/18 21:33	
2,4,6-Tribromophenol		86.1	30-130					11/3/18 21:33	
p-Terphenyl-d14		86.4	30-130					11/3/18 21:33	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP39

Sampled: 10/26/2018 12:35

Sample ID: 18J1553-08

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Aldrin [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
alpha-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
beta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
delta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
4,4'-DDD [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
4,4'-DDE [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
4,4'-DDT [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Dieldrin [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Endosulfan I [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Endosulfan II [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Endosulfan sulfate [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Endrin [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Endrin aldehyde [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Endrin ketone [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Heptachlor [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Heptachlor epoxide [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Hexachlorobenzene [1]	ND	0.0066	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Methoxychlor [1]	ND	0.055	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/1/18	11/3/18 19:50	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		109	30-150					11/3/18 19:50	
Decachlorobiphenyl [2]		112	30-150					11/3/18 19:50	
Tetrachloro-m-xylene [1]		95.5	30-150					11/3/18 19:50	
Tetrachloro-m-xylene [2]		80.3	30-150					11/3/18 19:50	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Field Sample #: MP39

Sampled: 10/26/2018 12:35

Sample ID: 18J1553-08

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/1/18	11/6/18 16:21	PJG
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	11/1/18	11/6/18 16:21	PJG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		86.4	30-150					11/6/18 16:21	
Decachlorobiphenyl [2]		86.7	30-150					11/6/18 16:21	
Tetrachloro-m-xylene [1]		85.1	30-150					11/6/18 16:21	
Tetrachloro-m-xylene [2]		87.1	30-150					11/6/18 16:21	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 12:35

Field Sample #: MP39

Sample ID: 18J1553-08

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
Dalapon [1]	ND	69	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/1/18	11/3/18 1:47	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		72.0	30-150					11/3/18 1:47	
2,4-Dichlorophenylacetic acid [2]		78.4	30-150					11/3/18 1:47	

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 12:35

Field Sample #: MP39

Sample ID: 18J1553-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	31	9.0	mg/Kg dry	1		SW-846 8100 Modified	11/2/18	11/2/18 23:21	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		80.1	40-140					11/2/18 23:21	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 12:35

Field Sample #: MP39

Sample ID: 18J1553-08

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	11/5/18	11/6/18 13:57	QNW
Arsenic	7.3	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Barium	120	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Beryllium	0.60	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Cadmium	0.27	0.18	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Chromium	20	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Lead	8.7	0.55	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	11/6/18	11/6/18 13:51	EJB
Nickel	16	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Vanadium	22	0.73	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW
Zinc	33	0.73	mg/Kg dry	1		SW-846 6010D	11/5/18	11/6/18 13:57	QNW

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18J1553

Date Received: 10/31/2018

Sampled: 10/26/2018 12:35

Field Sample #: MP39

Sample ID: 18J1553-08

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/2/18	11/2/18 14:48	LED
pH @22.3°C	5.7		pH Units	1	H-03	SW-846 9045C	11/1/18	11/1/18 19:46	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/1/18	11/5/18 17:05	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/1/18	11/5/18 15:05	DJM
Specific conductance	2.4	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/1/18	11/1/18 15:00	EC
% Solids	90.6		% Wt	1		SM 2540G	11/5/18	11/6/18 9:20	MJR

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18J1553-01 [SB-51]	B216456	11/05/18
18J1553-02 [SB-50]	B216456	11/05/18
18J1553-03 [SB-37]	B216456	11/05/18
18J1553-04 [SB-38]	B216456	11/05/18
18J1553-05 [SB-39]	B216456	11/05/18
18J1553-06 [MP37]	B216456	11/05/18
18J1553-07 [MP38]	B216456	11/05/18
18J1553-08 [MP39]	B216456	11/05/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18J1553-01 [SB-51]	B216167	1.00	11/01/18
18J1553-02 [SB-50]	B216167	1.00	11/01/18
18J1553-03 [SB-37]	B216167	1.00	11/01/18
18J1553-04 [SB-38]	B216167	1.00	11/01/18
18J1553-05 [SB-39]	B216167	1.00	11/01/18
18J1553-06 [MP37]	B216167	1.00	11/01/18
18J1553-07 [MP38]	B216167	1.00	11/01/18
18J1553-08 [MP39]	B216167	1.00	11/01/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18J1553-01 [SB-51]	B216314	50.0	11/02/18
18J1553-02 [SB-50]	B216314	50.0	11/02/18
18J1553-03 [SB-37]	B216314	50.0	11/02/18
18J1553-04 [SB-38]	B216314	50.0	11/02/18
18J1553-05 [SB-39]	B216314	50.0	11/02/18
18J1553-06 [MP37]	B216314	50.0	11/02/18
18J1553-07 [MP38]	B216314	50.0	11/02/18
18J1553-08 [MP39]	B216314	50.0	11/02/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216433	1.48	50.0	11/05/18
18J1553-02 [SB-50]	B216433	1.50	50.0	11/05/18
18J1553-03 [SB-37]	B216433	1.51	50.0	11/05/18
18J1553-04 [SB-38]	B216433	1.52	50.0	11/05/18
18J1553-05 [SB-39]	B216433	1.49	50.0	11/05/18
18J1553-06 [MP37]	B216433	1.51	50.0	11/05/18
18J1553-07 [MP38]	B216433	1.53	50.0	11/05/18
18J1553-08 [MP39]	B216433	1.50	50.0	11/05/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216478	0.596	50.0	11/06/18
18J1553-02 [SB-50]	B216478	0.613	50.0	11/06/18

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-03 [SB-37]	B216478	0.604	50.0	11/06/18
18J1553-04 [SB-38]	B216478	0.621	50.0	11/06/18
18J1553-05 [SB-39]	B216478	0.605	50.0	11/06/18
18J1553-06 [MP37]	B216478	0.619	50.0	11/06/18
18J1553-07 [MP38]	B216478	0.612	50.0	11/06/18
18J1553-08 [MP39]	B216478	0.614	50.0	11/06/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216154	10.3	10.0	11/01/18
18J1553-02 [SB-50]	B216154	10.2	10.0	11/01/18
18J1553-03 [SB-37]	B216154	10.6	10.0	11/01/18
18J1553-04 [SB-38]	B216154	10.3	10.0	11/01/18
18J1553-05 [SB-39]	B216154	10.1	10.0	11/01/18
18J1553-06 [MP37]	B216154	10.5	10.0	11/01/18
18J1553-07 [MP38]	B216154	10.1	10.0	11/01/18
18J1553-08 [MP39]	B216154	10.1	10.0	11/01/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216139	10.5	10.0	11/01/18
18J1553-02 [SB-50]	B216139	10.1	10.0	11/01/18
18J1553-03 [SB-37]	B216139	10.9	10.0	11/01/18
18J1553-04 [SB-38]	B216139	10.4	10.0	11/01/18
18J1553-05 [SB-39]	B216139	10.3	10.0	11/01/18
18J1553-06 [MP37]	B216139	10.8	10.0	11/01/18
18J1553-07 [MP38]	B216139	10.2	10.0	11/01/18
18J1553-08 [MP39]	B216139	10.8	10.0	11/01/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216247	30.1	1.00	11/02/18
18J1553-02 [SB-50]	B216247	30.1	1.00	11/02/18
18J1553-03 [SB-37]	B216247	30.2	1.00	11/02/18
18J1553-04 [SB-38]	B216247	30.1	1.00	11/02/18
18J1553-05 [SB-39]	B216247	30.3	1.00	11/02/18
18J1553-06 [MP37]	B216247	30.1	1.00	11/02/18
18J1553-07 [MP38]	B216247	30.2	1.00	11/02/18
18J1553-08 [MP39]	B216247	30.7	1.00	11/02/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216140	20.1	5.00	11/01/18
18J1553-02 [SB-50]	B216140	20.1	5.00	11/01/18
18J1553-03 [SB-37]	B216140	20.1	5.00	11/01/18
18J1553-04 [SB-38]	B216140	20.2	5.00	11/01/18

Sample Extraction Data

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-05 [SB-39]	B216140	20.2	5.00	11/01/18
18J1553-06 [MP37]	B216140	20.0	5.00	11/01/18
18J1553-07 [MP38]	B216140	20.1	5.00	11/01/18
18J1553-08 [MP39]	B216140	20.1	5.00	11/01/18

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

Lab Number [Field ID]	Batch	Sample Amount(g)	Methanol Volume(mL)	Methanol Aliquot(mL)	Final Volume(mL)	Date
18J1553-01 [SB-51]	B216161	8.91	6.37	1	50	11/01/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-02 [SB-50]	B216165	7.35	10.0	11/01/18
18J1553-03 [SB-37]	B216165	6.69	10.0	11/01/18
18J1553-04 [SB-38]	B216165	6.39	10.0	11/01/18
18J1553-05 [SB-39]	B216165	6.39	10.0	11/01/18
18J1553-06 [MP37]	B216165	7.90	10.0	11/01/18
18J1553-07 [MP38]	B216165	7.51	10.0	11/01/18
18J1553-08 [MP39]	B216165	7.21	10.0	11/01/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216271	30.8	1.00	11/02/18
18J1553-02 [SB-50]	B216271	30.7	1.00	11/02/18
18J1553-03 [SB-37]	B216271	30.5	1.00	11/02/18
18J1553-04 [SB-38]	B216271	30.0	1.00	11/02/18
18J1553-05 [SB-39]	B216271	30.8	1.00	11/02/18
18J1553-06 [MP37]	B216271	30.5	1.00	11/02/18
18J1553-07 [MP38]	B216271	30.5	1.00	11/02/18
18J1553-08 [MP39]	B216271	30.0	1.00	11/02/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216215	25.5	250	11/01/18
18J1553-02 [SB-50]	B216215	25.1	250	11/01/18
18J1553-03 [SB-37]	B216215	25.7	250	11/01/18
18J1553-04 [SB-38]	B216215	25.2	250	11/01/18
18J1553-05 [SB-39]	B216215	25.3	250	11/01/18
18J1553-06 [MP37]	B216215	25.8	250	11/01/18
18J1553-07 [MP38]	B216215	25.2	250	11/01/18
18J1553-08 [MP39]	B216215	25.6	250	11/01/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-01 [SB-51]	B216441	25.5	250	11/01/18

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Sample Extraction Data**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J1553-02 [SB-50]	B216441	25.1	250	11/01/18
18J1553-03 [SB-37]	B216441	25.7	250	11/01/18
18J1553-04 [SB-38]	B216441	25.2	250	11/01/18
18J1553-05 [SB-39]	B216441	25.3	250	11/01/18
18J1553-06 [MP37]	B216441	25.8	250	11/01/18
18J1553-07 [MP38]	B216441	25.2	250	11/01/18
18J1553-08 [MP39]	B216441	25.6	250	11/01/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18J1553-01 [SB-51]	B216238	20.0	11/01/18
18J1553-02 [SB-50]	B216238	20.0	11/01/18
18J1553-03 [SB-37]	B216238	20.0	11/01/18
18J1553-04 [SB-38]	B216238	20.0	11/01/18
18J1553-05 [SB-39]	B216238	20.0	11/01/18
18J1553-06 [MP37]	B216238	20.0	11/01/18
18J1553-07 [MP38]	B216238	20.0	11/01/18
18J1553-08 [MP39]	B216238	20.0	11/01/18

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 B216161 - SW-846 5035

Blank (B216161-BLK1)

Prepared: 11/01/18 Analyzed: 11/06/18

Acetone	ND	2.5	mg/Kg wet							R-05, V-05
tert-Amyl Methyl Ether (TAME)	ND	0.025	mg/Kg wet							V-05
Benzene	ND	0.050	mg/Kg wet							
Bromobenzene	ND	0.050	mg/Kg wet							
Bromochloromethane	ND	0.050	mg/Kg wet							
Bromodichloromethane	ND	0.050	mg/Kg wet							
Bromoform	ND	0.050	mg/Kg wet							
Bromomethane	ND	0.10	mg/Kg wet							R-05
2-Butanone (MEK)	ND	1.0	mg/Kg wet							R-05, V-05
n-Butylbenzene	ND	0.050	mg/Kg wet							
sec-Butylbenzene	ND	0.050	mg/Kg wet							
tert-Butylbenzene	ND	0.050	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.025	mg/Kg wet							
Carbon Disulfide	ND	0.50	mg/Kg wet							
Carbon Tetrachloride	ND	0.050	mg/Kg wet							
Chlorobenzene	ND	0.050	mg/Kg wet							
Chlorodibromomethane	ND	0.025	mg/Kg wet							
Chloroethane	ND	0.10	mg/Kg wet							
Chloroform	ND	0.10	mg/Kg wet							
Chloromethane	ND	0.10	mg/Kg wet							
2-Chlorotoluene	ND	0.050	mg/Kg wet							
4-Chlorotoluene	ND	0.050	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.20	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.025	mg/Kg wet							
Dibromomethane	ND	0.050	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.050	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.050	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.050	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.10	mg/Kg wet							
1,1-Dichloroethane	ND	0.050	mg/Kg wet							
1,2-Dichloroethane	ND	0.050	mg/Kg wet							
1,1-Dichloroethylene	ND	0.050	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.050	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.050	mg/Kg wet							
1,2-Dichloropropane	ND	0.050	mg/Kg wet							
1,3-Dichloropropane	ND	0.025	mg/Kg wet							
2,2-Dichloropropane	ND	0.050	mg/Kg wet							
1,1-Dichloropropene	ND	0.10	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.025	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.025	mg/Kg wet							
Diethyl Ether	ND	0.10	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.025	mg/Kg wet							
1,4-Dioxane	ND	2.5	mg/Kg wet							V-05, V-16
Ethylbenzene	ND	0.050	mg/Kg wet							
Hexachlorobutadiene	ND	0.050	mg/Kg wet							
2-Hexanone (MBK)	ND	0.50	mg/Kg wet							V-05
Isopropylbenzene (Cumene)	ND	0.050	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
Methylene Chloride	ND	0.25	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.50	mg/Kg wet							
Naphthalene	ND	0.10	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 B216161 - SW-846 5035

Blank (B216161-BLK1)

Prepared: 11/01/18 Analyzed: 11/06/18

n-Propylbenzene	ND	0.050	mg/Kg wet							
Styrene	ND	0.050	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.025	mg/Kg wet							
Tetrachloroethylene	ND	0.050	mg/Kg wet							
Tetrahydrofuran	ND	0.20	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.20	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.050	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.050	mg/Kg wet							
Trichloroethylene	ND	0.050	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.10	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.10	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg wet							
Vinyl Chloride	ND	0.10	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
o-Xylene	ND	0.050	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0218		mg/Kg wet	0.0250		87.3	70-130			
Surrogate: Toluene-d8	0.0257		mg/Kg wet	0.0250		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.0259		mg/Kg wet	0.0250		104	70-130			

LCS (B216161-BS1)

Prepared: 11/01/18 Analyzed: 11/06/18

Acetone	0.0843	0.057	mg/Kg wet	0.113		74.4	40-160			V-05, R-05 †
tert-Amyl Methyl Ether (TAME)	0.00862	0.00057	mg/Kg wet	0.0113		76.1	70-130			V-05
Benzene	0.0110	0.0011	mg/Kg wet	0.0113		97.4	70-130			
Bromobenzene	0.0112	0.0011	mg/Kg wet	0.0113		98.8	70-130			
Bromochloromethane	0.0121	0.0011	mg/Kg wet	0.0113		106	70-130			
Bromodichloromethane	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130			
Bromoform	0.0102	0.0011	mg/Kg wet	0.0113		90.1	70-130			
Bromomethane	0.00677	0.0023	mg/Kg wet	0.0113		59.7	40-160			R-05, L-14 †
2-Butanone (MEK)	0.0800	0.023	mg/Kg wet	0.113		70.6	40-160			V-05, R-05 †
n-Butylbenzene	0.0124	0.0011	mg/Kg wet	0.0113		109	70-130			
sec-Butylbenzene	0.0125	0.0011	mg/Kg wet	0.0113		110	70-130			
tert-Butylbenzene	0.0115	0.0011	mg/Kg wet	0.0113		102	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.00954	0.00057	mg/Kg wet	0.0113		84.2	70-130			
Carbon Disulfide	0.0140	0.011	mg/Kg wet	0.0113		124	70-130			
Carbon Tetrachloride	0.0122	0.0011	mg/Kg wet	0.0113		108	70-130			
Chlorobenzene	0.0115	0.0011	mg/Kg wet	0.0113		101	70-130			
Chlorodibromomethane	0.0129	0.00057	mg/Kg wet	0.0113		114	70-130			
Chloroethane	0.0108	0.0023	mg/Kg wet	0.0113		94.9	70-130			
Chloroform	0.0115	0.0023	mg/Kg wet	0.0113		102	70-130			
Chloromethane	0.0106	0.0023	mg/Kg wet	0.0113		93.3	40-160			†
2-Chlorotoluene	0.0105	0.0011	mg/Kg wet	0.0113		93.0	70-130			
4-Chlorotoluene	0.0120	0.0011	mg/Kg wet	0.0113		106	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.00839	0.0045	mg/Kg wet	0.0113		74.0	70-130			V-05
1,2-Dibromoethane (EDB)	0.0115	0.00057	mg/Kg wet	0.0113		102	70-130			
Dibromomethane	0.0125	0.0011	mg/Kg wet	0.0113		110	70-130			
1,2-Dichlorobenzene	0.0115	0.0011	mg/Kg wet	0.0113		102	70-130			
1,3-Dichlorobenzene	0.0117	0.0011	mg/Kg wet	0.0113		103	70-130			
1,4-Dichlorobenzene	0.0113	0.0011	mg/Kg wet	0.0113		99.9	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
Batch B216161 - SW-846 5035										
LCS (B216161-BS1)										
					Prepared: 11/01/18 Analyzed: 11/06/18					
Dichlorodifluoromethane (Freon 12)	0.0120	0.0023	mg/Kg wet	0.0113		106	40-160			†
1,1-Dichloroethane	0.0121	0.0011	mg/Kg wet	0.0113		107	70-130			
1,2-Dichloroethane	0.0115	0.0011	mg/Kg wet	0.0113		102	70-130			
1,1-Dichloroethylene	0.0113	0.0011	mg/Kg wet	0.0113		99.4	70-130			
cis-1,2-Dichloroethylene	0.0117	0.0011	mg/Kg wet	0.0113		103	70-130			
trans-1,2-Dichloroethylene	0.0125	0.0011	mg/Kg wet	0.0113		111	70-130			
1,2-Dichloropropane	0.0115	0.0011	mg/Kg wet	0.0113		102	70-130			
1,3-Dichloropropane	0.0110	0.00057	mg/Kg wet	0.0113		96.7	70-130			
2,2-Dichloropropane	0.0128	0.0011	mg/Kg wet	0.0113		113	70-130			
1,1-Dichloropropene	0.0119	0.0023	mg/Kg wet	0.0113		105	70-130			
cis-1,3-Dichloropropene	0.0125	0.00057	mg/Kg wet	0.0113		111	70-130			
trans-1,3-Dichloropropene	0.0134	0.00057	mg/Kg wet	0.0113		118	70-130			
Diethyl Ether	0.0118	0.0023	mg/Kg wet	0.0113		104	70-130			
Diisopropyl Ether (DIPE)	0.0113	0.00057	mg/Kg wet	0.0113		99.3	70-130			
1,4-Dioxane	0.0826	0.057	mg/Kg wet	0.113		72.9	40-160			V-05, V-16 †
Ethylbenzene	0.0114	0.0011	mg/Kg wet	0.0113		101	70-130			
Hexachlorobutadiene	0.0130	0.0011	mg/Kg wet	0.0113		114	70-130			
2-Hexanone (MBK)	0.0914	0.011	mg/Kg wet	0.113		80.6	40-160			V-05 †
Isopropylbenzene (Cumene)	0.0117	0.0011	mg/Kg wet	0.0113		104	70-130			
p-Isopropyltoluene (p-Cymene)	0.0117	0.0011	mg/Kg wet	0.0113		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0109	0.0011	mg/Kg wet	0.0113		96.4	70-130			
Methylene Chloride	0.0113	0.0057	mg/Kg wet	0.0113		100	70-130			
4-Methyl-2-pentanone (MIBK)	0.0910	0.011	mg/Kg wet	0.113		80.3	40-160			†
Naphthalene	0.0102	0.0023	mg/Kg wet	0.0113		90.4	70-130			
n-Propylbenzene	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130			
Styrene	0.0115	0.0011	mg/Kg wet	0.0113		102	70-130			
1,1,1,2-Tetrachloroethane	0.0116	0.0011	mg/Kg wet	0.0113		102	70-130			
1,1,1,2,2-Tetrachloroethane	0.00954	0.00057	mg/Kg wet	0.0113		84.2	70-130			
Tetrachloroethylene	0.0123	0.0011	mg/Kg wet	0.0113		109	70-130			
Tetrahydrofuran	0.00916	0.0045	mg/Kg wet	0.0113		80.8	70-130			
Toluene	0.0117	0.0011	mg/Kg wet	0.0113		104	70-130			
1,2,3-Trichlorobenzene	0.0112	0.0045	mg/Kg wet	0.0113		99.1	70-130			
1,2,4-Trichlorobenzene	0.0102	0.0011	mg/Kg wet	0.0113		90.3	70-130			
1,1,1-Trichloroethane	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130			
1,1,2-Trichloroethane	0.0113	0.0011	mg/Kg wet	0.0113		100	70-130			
Trichloroethylene	0.0126	0.0011	mg/Kg wet	0.0113		111	70-130			
Trichlorofluoromethane (Freon 11)	0.0110	0.0023	mg/Kg wet	0.0113		96.9	70-130			
1,2,3-Trichloropropane	0.00920	0.0023	mg/Kg wet	0.0113		81.2	70-130			
1,2,4-Trimethylbenzene	0.0115	0.0011	mg/Kg wet	0.0113		101	70-130			
1,3,5-Trimethylbenzene	0.0117	0.0011	mg/Kg wet	0.0113		103	70-130			
Vinyl Chloride	0.0142	0.0023	mg/Kg wet	0.0113		125	70-130			
m+p Xylene	0.0232	0.0023	mg/Kg wet	0.0227		102	70-130			
o-Xylene	0.0117	0.0011	mg/Kg wet	0.0113		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0254		mg/Kg wet	0.0283		89.6	70-130			
Surrogate: Toluene-d8	0.0284		mg/Kg wet	0.0283		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0287		mg/Kg wet	0.0283		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
Batch B216161 - SW-846 5035										
LCS Dup (B216161-BSD1)										
					Prepared: 11/01/18 Analyzed: 11/06/18					
Acetone	0.139	0.057	mg/Kg wet	0.113		122	40-160	48.7 *	20	R-05, V-05 †
tert-Amyl Methyl Ether (TAME)	0.00859	0.00057	mg/Kg wet	0.0113		75.8	70-130	0.395	20	V-05
Benzene	0.0114	0.0011	mg/Kg wet	0.0113		101	70-130	3.53	20	
Bromobenzene	0.0116	0.0011	mg/Kg wet	0.0113		102	70-130	3.29	20	
Bromochloromethane	0.0129	0.0011	mg/Kg wet	0.0113		114	70-130	6.63	20	
Bromodichloromethane	0.0127	0.0011	mg/Kg wet	0.0113		112	70-130	6.65	20	
Bromoform	0.00996	0.0011	mg/Kg wet	0.0113		87.9	70-130	2.47	20	
Bromomethane	0.00884	0.0023	mg/Kg wet	0.0113		78.0	40-160	26.6 *	20	R-05 †
2-Butanone (MEK)	0.108	0.023	mg/Kg wet	0.113		95.3	40-160	29.7 *	20	R-05, V-05 †
n-Butylbenzene	0.0122	0.0011	mg/Kg wet	0.0113		108	70-130	1.20	20	
sec-Butylbenzene	0.0122	0.0011	mg/Kg wet	0.0113		108	70-130	1.84	20	
tert-Butylbenzene	0.0116	0.0011	mg/Kg wet	0.0113		102	70-130	0.393	20	
tert-Butyl Ethyl Ether (TBEE)	0.00874	0.00057	mg/Kg wet	0.0113		77.1	70-130	8.80	20	
Carbon Disulfide	0.0138	0.011	mg/Kg wet	0.0113		122	70-130	1.96	20	
Carbon Tetrachloride	0.0123	0.0011	mg/Kg wet	0.0113		109	70-130	0.833	20	
Chlorobenzene	0.0117	0.0011	mg/Kg wet	0.0113		104	70-130	2.44	20	
Chlorodibromomethane	0.0130	0.00057	mg/Kg wet	0.0113		115	70-130	0.961	20	
Chloroethane	0.0124	0.0023	mg/Kg wet	0.0113		109	70-130	14.0	20	
Chloroform	0.0119	0.0023	mg/Kg wet	0.0113		105	70-130	3.48	20	
Chloromethane	0.0128	0.0023	mg/Kg wet	0.0113		113	40-160	19.0	20	†
2-Chlorotoluene	0.0107	0.0011	mg/Kg wet	0.0113		94.3	70-130	1.39	20	
4-Chlorotoluene	0.0123	0.0011	mg/Kg wet	0.0113		108	70-130	2.24	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.00841	0.0045	mg/Kg wet	0.0113		74.2	70-130	0.270	20	V-05
1,2-Dibromoethane (EDB)	0.0123	0.00057	mg/Kg wet	0.0113		109	70-130	6.66	20	
Dibromomethane	0.0130	0.0011	mg/Kg wet	0.0113		115	70-130	3.91	20	
1,2-Dichlorobenzene	0.0114	0.0011	mg/Kg wet	0.0113		101	70-130	0.691	20	
1,3-Dichlorobenzene	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130	1.92	20	
1,4-Dichlorobenzene	0.0115	0.0011	mg/Kg wet	0.0113		102	70-130	1.59	20	
Dichlorodifluoromethane (Freon 12)	0.0122	0.0023	mg/Kg wet	0.0113		108	40-160	1.59	20	†
1,1-Dichloroethane	0.0124	0.0011	mg/Kg wet	0.0113		109	70-130	2.04	20	
1,2-Dichloroethane	0.0120	0.0011	mg/Kg wet	0.0113		106	70-130	4.14	20	
1,1-Dichloroethylene	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130	5.29	20	
cis-1,2-Dichloroethylene	0.0120	0.0011	mg/Kg wet	0.0113		106	70-130	2.49	20	
trans-1,2-Dichloroethylene	0.0126	0.0011	mg/Kg wet	0.0113		111	70-130	0.181	20	
1,2-Dichloropropane	0.0122	0.0011	mg/Kg wet	0.0113		108	70-130	5.73	20	
1,3-Dichloropropane	0.0115	0.00057	mg/Kg wet	0.0113		102	70-130	5.14	20	
2,2-Dichloropropane	0.0124	0.0011	mg/Kg wet	0.0113		110	70-130	2.79	20	
1,1-Dichloropropene	0.0119	0.0023	mg/Kg wet	0.0113		105	70-130	0.477	20	
cis-1,3-Dichloropropene	0.0132	0.00057	mg/Kg wet	0.0113		117	70-130	5.45	20	
trans-1,3-Dichloropropene	0.0139	0.00057	mg/Kg wet	0.0113		123	70-130	3.56	20	
Diethyl Ether	0.0123	0.0023	mg/Kg wet	0.0113		109	70-130	3.85	20	
Diisopropyl Ether (DIPE)	0.0117	0.00057	mg/Kg wet	0.0113		103	70-130	3.85	20	
1,4-Dioxane	0.0919	0.057	mg/Kg wet	0.113		81.1	40-160	10.7	20	V-05, V-16 †
Ethylbenzene	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130	4.57	20	
Hexachlorobutadiene	0.0134	0.0011	mg/Kg wet	0.0113		118	70-130	3.44	20	
2-Hexanone (MBK)	0.107	0.011	mg/Kg wet	0.113		94.0	40-160	15.4	20	V-05 †
Isopropylbenzene (Cumene)	0.0121	0.0011	mg/Kg wet	0.0113		106	70-130	2.76	20	
p-Isopropyltoluene (p-Cymene)	0.0115	0.0011	mg/Kg wet	0.0113		101	70-130	1.47	20	
Methyl tert-Butyl Ether (MTBE)	0.0105	0.0011	mg/Kg wet	0.0113		92.5	70-130	4.13	20	
Methylene Chloride	0.0121	0.0057	mg/Kg wet	0.0113		106	70-130	6.20	20	
4-Methyl-2-pentanone (MIBK)	0.0908	0.011	mg/Kg wet	0.113		80.1	40-160	0.187	20	†
Naphthalene	0.00963	0.0023	mg/Kg wet	0.0113		85.0	70-130	6.16	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 B216161 - SW-846 5035

LCS Dup (B216161-BSD1)

Prepared: 11/01/18 Analyzed: 11/06/18

n-Propylbenzene	0.0123	0.0011	mg/Kg wet	0.0113		108	70-130	3.19	20	
Styrene	0.0121	0.0011	mg/Kg wet	0.0113		107	70-130	4.61	20	
1,1,1,2-Tetrachloroethane	0.0118	0.0011	mg/Kg wet	0.0113		104	70-130	1.65	20	
1,1,2,2-Tetrachloroethane	0.00969	0.00057	mg/Kg wet	0.0113		85.5	70-130	1.53	20	
Tetrachloroethylene	0.0126	0.0011	mg/Kg wet	0.0113		112	70-130	2.45	20	
Tetrahydrofuran	0.00912	0.0045	mg/Kg wet	0.0113		80.5	70-130	0.372	20	
Toluene	0.0123	0.0011	mg/Kg wet	0.0113		108	70-130	4.44	20	
1,2,3-Trichlorobenzene	0.0104	0.0045	mg/Kg wet	0.0113		91.5	70-130	7.97	20	
1,2,4-Trichlorobenzene	0.00992	0.0011	mg/Kg wet	0.0113		87.5	70-130	3.15	20	
1,1,1-Trichloroethane	0.0126	0.0011	mg/Kg wet	0.0113		111	70-130	5.46	20	
1,1,2-Trichloroethane	0.0121	0.0011	mg/Kg wet	0.0113		107	70-130	6.57	20	
Trichloroethylene	0.0129	0.0011	mg/Kg wet	0.0113		114	70-130	2.76	20	
Trichlorofluoromethane (Freon 11)	0.0114	0.0023	mg/Kg wet	0.0113		101	70-130	3.85	20	
1,2,3-Trichloropropane	0.00944	0.0023	mg/Kg wet	0.0113		83.3	70-130	2.55	20	
1,2,4-Trimethylbenzene	0.0114	0.0011	mg/Kg wet	0.0113		100	70-130	1.09	20	
1,3,5-Trimethylbenzene	0.0119	0.0011	mg/Kg wet	0.0113		105	70-130	1.63	20	
Vinyl Chloride	0.0142	0.0023	mg/Kg wet	0.0113		125	70-130	0.400	20	
m+p Xylene	0.0240	0.0023	mg/Kg wet	0.0227		106	70-130	3.46	20	
o-Xylene	0.0120	0.0011	mg/Kg wet	0.0113		106	70-130	2.77	20	
Surrogate: 1,2-Dichloroethane-d4	0.0255		mg/Kg wet	0.0283		89.9	70-130			
Surrogate: Toluene-d8	0.0288		mg/Kg wet	0.0283		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0294		mg/Kg wet	0.0283		104	70-130			

Batch B216165 - SW-846 5035

Blank (B216165-BLK1)

Prepared & Analyzed: 11/01/18

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							R-05
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							R-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							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216165 - SW-846 5035										
Blank (B216165-BLK1)										
Prepared & Analyzed: 11/01/18										
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							R-05
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							R-05
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							V-16
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	0.0497		mg/Kg wet	0.0500		99.4	70-130			
Surrogate: Toluene-d8	0.0474		mg/Kg wet	0.0500		94.8	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
Batch B216165 - SW-846 5035										
LCS (B216165-BS1)										
Prepared & Analyzed: 11/01/18										
Acetone	0.256	0.10	mg/Kg wet	0.200		128	40-160			R-05 †
tert-Amyl Methyl Ether (TAME)	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130			
Benzene	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
Bromobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromochloromethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromodichloromethane	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130			
Bromoform	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromomethane	0.0103	0.010	mg/Kg wet	0.0200		51.5	40-160			L-14, V-34 †
2-Butanone (MEK)	0.230	0.040	mg/Kg wet	0.200		115	40-160			R-05 †
n-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
sec-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
tert-Butylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		93.9	70-130			
Carbon Disulfide	0.0186	0.0060	mg/Kg wet	0.0200		93.2	70-130			
Carbon Tetrachloride	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
Chlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Chlorodibromomethane	0.0231	0.0010	mg/Kg wet	0.0200		115	70-130			
Chloroethane	0.0171	0.010	mg/Kg wet	0.0200		85.4	70-130			
Chloroform	0.0187	0.0040	mg/Kg wet	0.0200		93.7	70-130			
Chloromethane	0.0193	0.010	mg/Kg wet	0.0200		96.4	40-160			†
2-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
4-Chlorotoluene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0243	0.0020	mg/Kg wet	0.0200		122	70-130			R-05
1,2-Dibromoethane (EDB)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130			
Dibromomethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
1,2-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,3-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Dichlorodifluoromethane (Freon 12)	0.0187	0.010	mg/Kg wet	0.0200		93.6	40-160			†
1,1-Dichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
1,2-Dichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1-Dichloroethylene	0.0182	0.0040	mg/Kg wet	0.0200		91.1	70-130			
cis-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130			
trans-1,2-Dichloroethylene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
1,2-Dichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
1,3-Dichloropropane	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130			
2,2-Dichloropropane	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130			
1,1-Dichloropropene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130			
cis-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130			
trans-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.0	70-130			
Diethyl Ether	0.0192	0.010	mg/Kg wet	0.0200		96.1	70-130			
Diisopropyl Ether (DIPE)	0.0190	0.0010	mg/Kg wet	0.0200		95.1	70-130			
1,4-Dioxane	0.215	0.10	mg/Kg wet	0.200		108	40-160			V-16, V-36 †
Ethylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
Hexachlorobutadiene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
2-Hexanone (MBK)	0.230	0.020	mg/Kg wet	0.200		115	40-160			R-05 †
Isopropylbenzene (Cumene)	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
p-Isopropyltoluene (p-Cymene)	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0198	0.0040	mg/Kg wet	0.0200		99.2	70-130			
Methylene Chloride	0.0213	0.010	mg/Kg wet	0.0200		106	70-130			
4-Methyl-2-pentanone (MIBK)	0.222	0.020	mg/Kg wet	0.200		111	40-160			†
Naphthalene	0.0196	0.0040	mg/Kg wet	0.0200		98.2	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 B216165 - SW-846 5035

LCS (B216165-BS1)

Prepared & Analyzed: 11/01/18

n-Propylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Styrene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,1,2-Tetrachloroethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1,2,2-Tetrachloroethane	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			R-05
Tetrachloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130			
Tetrahydrofuran	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			V-16
Toluene	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130			
1,2,3-Trichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2,4-Trichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,1-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130			
1,1,2-Trichloroethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Trichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130			
Trichlorofluoromethane (Freon 11)	0.0176	0.010	mg/Kg wet	0.0200		87.8	70-130			
1,2,3-Trichloropropane	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
1,2,4-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
1,3,5-Trimethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Vinyl Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130			
m+p Xylene	0.0376	0.0040	mg/Kg wet	0.0400		94.0	70-130			
o-Xylene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0505		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0478		mg/Kg wet	0.0500		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0493		mg/Kg wet	0.0500		98.5	70-130			

LCS Dup (B216165-BS1)

Prepared & Analyzed: 11/01/18

Acetone	0.575	0.10	mg/Kg wet	0.200		287 *	40-160	76.8 *	20	L-07A, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0187	0.0010	mg/Kg wet	0.0200		93.7	70-130	2.53	20	
Benzene	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	0.446	20	
Bromobenzene	0.0178	0.0020	mg/Kg wet	0.0200		88.8	70-130	15.5	20	
Bromochloromethane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	6.54	20	
Bromodichloromethane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130	3.10	20	
Bromoform	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130	18.0	20	
Bromomethane	0.0116	0.010	mg/Kg wet	0.0200		58.2	40-160	12.2	20	L-14, V-34 †
2-Butanone (MEK)	0.399	0.040	mg/Kg wet	0.200		200 *	40-160	54.0 *	20	L-07A, R-05 †
n-Butylbenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	11.1	20	
sec-Butylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	12.0	20	
tert-Butylbenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.6	70-130	14.9	20	
tert-Butyl Ethyl Ether (TBEE)	0.0185	0.0010	mg/Kg wet	0.0200		92.6	70-130	1.39	20	
Carbon Disulfide	0.0186	0.0060	mg/Kg wet	0.0200		93.2	70-130	0.00	20	
Carbon Tetrachloride	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	3.18	20	
Chlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	11.1	20	
Chlorodibromomethane	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	8.22	20	
Chloroethane	0.0175	0.010	mg/Kg wet	0.0200		87.6	70-130	2.54	20	
Chloroform	0.0185	0.0040	mg/Kg wet	0.0200		92.5	70-130	1.29	20	
Chloromethane	0.0180	0.010	mg/Kg wet	0.0200		90.0	40-160	6.87	20	†
2-Chlorotoluene	0.0178	0.0020	mg/Kg wet	0.0200		88.8	70-130	12.3	20	
4-Chlorotoluene	0.0184	0.0020	mg/Kg wet	0.0200		91.9	70-130	9.73	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	20.5 *	20	R-05
1,2-Dibromoethane (EDB)	0.0193	0.0010	mg/Kg wet	0.0200		96.7	70-130	4.84	20	
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.499	20	
1,2-Dichlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130	16.7	20	
1,3-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	11.8	20	
1,4-Dichlorobenzene	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130	17.6	20	

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216165 - SW-846 5035										
LCS Dup (B216165-BSD1)										
Prepared & Analyzed: 11/01/18										
Dichlorodifluoromethane (Freon 12)	0.0204	0.010	mg/Kg wet	0.0200		102	40-160	8.69	20	†
1,1-Dichloroethane	0.0182	0.0020	mg/Kg wet	0.0200		90.9	70-130	3.99	20	
1,2-Dichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130	4.89	20	
1,1-Dichloroethylene	0.0181	0.0040	mg/Kg wet	0.0200		90.3	70-130	0.882	20	
cis-1,2-Dichloroethylene	0.0177	0.0020	mg/Kg wet	0.0200		88.4	70-130	2.46	20	
trans-1,2-Dichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		91.9	70-130	2.37	20	
1,2-Dichloropropane	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	0.711	20	
1,3-Dichloropropane	0.0190	0.0010	mg/Kg wet	0.0200		94.8	70-130	9.16	20	
2,2-Dichloropropane	0.0172	0.0020	mg/Kg wet	0.0200		86.1	70-130	3.87	20	
1,1-Dichloropropene	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130	1.65	20	
cis-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.4	70-130	1.13	20	
trans-1,3-Dichloropropene	0.0191	0.0010	mg/Kg wet	0.0200		95.3	70-130	3.81	20	
Diethyl Ether	0.0186	0.010	mg/Kg wet	0.0200		93.1	70-130	3.17	20	
Diisopropyl Ether (DIPE)	0.0185	0.0010	mg/Kg wet	0.0200		92.7	70-130	2.56	20	
1,4-Dioxane	0.209	0.10	mg/Kg wet	0.200		105	40-160	2.91	20	V-16, V-36 †
Ethylbenzene	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130	11.2	20	
Hexachlorobutadiene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130	13.3	20	
2-Hexanone (MBK)	0.320	0.020	mg/Kg wet	0.200		160	40-160	32.7 *	20	L-14, R-05 †
Isopropylbenzene (Cumene)	0.0177	0.0020	mg/Kg wet	0.0200		88.6	70-130	13.4	20	
p-Isopropyltoluene (p-Cymene)	0.0171	0.0020	mg/Kg wet	0.0200		85.5	70-130	10.0	20	
Methyl tert-Butyl Ether (MTBE)	0.0199	0.0040	mg/Kg wet	0.0200		99.7	70-130	0.503	20	
Methylene Chloride	0.0204	0.010	mg/Kg wet	0.0200		102	70-130	4.13	20	
4-Methyl-2-pentanone (MIBK)	0.214	0.020	mg/Kg wet	0.200		107	40-160	3.70	20	†
Naphthalene	0.0183	0.0040	mg/Kg wet	0.0200		91.4	70-130	7.17	20	
n-Propylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	11.7	20	
Styrene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	13.4	20	
1,1,1,2-Tetrachloroethane	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	8.69	20	
1,1,2,2-Tetrachloroethane	0.0172	0.0010	mg/Kg wet	0.0200		86.0	70-130	20.1 *	20	R-05
Tetrachloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	1.91	20	
Tetrahydrofuran	0.0192	0.010	mg/Kg wet	0.0200		95.9	70-130	8.10	20	V-16
Toluene	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130	4.26	20	
1,2,3-Trichlorobenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	13.0	20	
1,2,4-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	13.4	20	
1,1,1-Trichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	1.54	20	
1,1,2-Trichloroethane	0.0181	0.0020	mg/Kg wet	0.0200		90.7	70-130	13.2	20	
Trichloroethylene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	1.63	20	
Trichlorofluoromethane (Freon 11)	0.0168	0.010	mg/Kg wet	0.0200		83.8	70-130	4.66	20	
1,2,3-Trichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	13.5	20	
1,2,4-Trimethylbenzene	0.0167	0.0020	mg/Kg wet	0.0200		83.3	70-130	14.4	20	
1,3,5-Trimethylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130	10.8	20	
Vinyl Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130	0.00	20	
m+p Xylene	0.0357	0.0040	mg/Kg wet	0.0400		89.3	70-130	5.08	20	
o-Xylene	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	8.67	20	
Surrogate: 1,2-Dichloroethane-d4	0.0516		mg/Kg wet	0.0500		103	70-130			
Surrogate: Toluene-d8	0.0479		mg/Kg wet	0.0500		95.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0501		mg/Kg wet	0.0500		100	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 B216271 - SW-846 3546

Blank (B216271-BLK1)

Prepared: 11/02/18 Analyzed: 11/03/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-05, 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							V-20
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							V-20
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216271 - SW-846 3546										
Blank (B216271-BLK1)										
Prepared: 11/02/18 Analyzed: 11/03/18										
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	5.10		mg/Kg wet	6.67		76.5	30-130			
Surrogate: Phenol-d6	4.93		mg/Kg wet	6.67		74.0	30-130			
Surrogate: Nitrobenzene-d5	2.54		mg/Kg wet	3.33		76.2	30-130			
Surrogate: 2-Fluorobiphenyl	1.97		mg/Kg wet	3.33		59.0	30-130			
Surrogate: 2,4,6-Tribromophenol	4.68		mg/Kg wet	6.67		70.2	30-130			
Surrogate: p-Terphenyl-d14	2.76		mg/Kg wet	3.33		82.9	30-130			
LCS (B216271-BS1)										
Prepared: 11/02/18 Analyzed: 11/03/18										
Acenaphthene	0.814	0.17	mg/Kg wet	1.67		48.9	40-140			
Acenaphthylene	0.875	0.17	mg/Kg wet	1.67		52.5	40-140			
Acetophenone	0.873	0.34	mg/Kg wet	1.67		52.4	40-140			
Aniline	0.625	0.34	mg/Kg wet	1.67		37.5	40-140	*		V-05, L-07, V-34
Anthracene	0.815	0.17	mg/Kg wet	1.67		48.9	40-140			
Benzo(a)anthracene	0.913	0.17	mg/Kg wet	1.67		54.8	40-140			
Benzo(a)pyrene	0.899	0.17	mg/Kg wet	1.67		53.9	40-140			
Benzo(b)fluoranthene	0.834	0.17	mg/Kg wet	1.67		50.0	40-140			
Benzo(g,h,i)perylene	1.07	0.17	mg/Kg wet	1.67		64.3	40-140			
Benzo(k)fluoranthene	0.846	0.17	mg/Kg wet	1.67		50.8	40-140			
Bis(2-chloroethoxy)methane	1.00	0.34	mg/Kg wet	1.67		60.3	40-140			
Bis(2-chloroethyl)ether	0.973	0.34	mg/Kg wet	1.67		58.4	40-140			
Bis(2-chloroisopropyl)ether	1.05	0.34	mg/Kg wet	1.67		62.9	40-140			
Bis(2-Ethylhexyl)phthalate	1.01	0.34	mg/Kg wet	1.67		60.6	40-140			
4-Bromophenylphenylether	0.805	0.34	mg/Kg wet	1.67		48.3	40-140			
Butylbenzylphthalate	1.05	0.34	mg/Kg wet	1.67		63.3	40-140			
4-Chloroaniline	0.631	0.66	mg/Kg wet	1.67		37.9	15-140			V-34 †
2-Chloronaphthalene	0.766	0.34	mg/Kg wet	1.67		46.0	40-140			
2-Chlorophenol	0.881	0.34	mg/Kg wet	1.67		52.8	30-130			
Chrysene	0.842	0.17	mg/Kg wet	1.67		50.5	40-140			
Dibenz(a,h)anthracene	0.938	0.17	mg/Kg wet	1.67		56.3	40-140			
Dibenzofuran	0.906	0.34	mg/Kg wet	1.67		54.4	40-140			
Di-n-butylphthalate	0.870	0.34	mg/Kg wet	1.67		52.2	40-140			
1,2-Dichlorobenzene	0.866	0.34	mg/Kg wet	1.67		52.0	40-140			
1,3-Dichlorobenzene	0.842	0.34	mg/Kg wet	1.67		50.5	40-140			
1,4-Dichlorobenzene	0.858	0.34	mg/Kg wet	1.67		51.5	40-140			
3,3-Dichlorobenzidine	0.701	0.17	mg/Kg wet	1.67		42.0	40-140			
2,4-Dichlorophenol	0.783	0.34	mg/Kg wet	1.67		47.0	30-130			
Diethylphthalate	0.966	0.34	mg/Kg wet	1.67		58.0	40-140			
2,4-Dimethylphenol	0.792	0.34	mg/Kg wet	1.67		47.5	30-130			
Dimethylphthalate	0.952	0.34	mg/Kg wet	1.67		57.1	40-140			
2,4-Dinitrophenol	0.606	0.66	mg/Kg wet	1.67		36.3	15-140			V-06 †
2,4-Dinitrotoluene	1.13	0.34	mg/Kg wet	1.67		67.9	40-140			
2,6-Dinitrotoluene	1.13	0.34	mg/Kg wet	1.67		67.9	40-140			V-06
Di-n-octylphthalate	1.01	0.34	mg/Kg wet	1.67		60.6	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	0.880	0.34	mg/Kg wet	1.67		52.8	40-140			
Fluoranthene	0.784	0.17	mg/Kg wet	1.67		47.1	40-140			
Fluorene	0.878	0.17	mg/Kg wet	1.67		52.7	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 B216271 - SW-846 3546

LCS (B216271-BS1)

Prepared: 11/02/18 Analyzed: 11/03/18

Hexachlorobenzene	0.784	0.34	mg/Kg wet	1.67		47.1	40-140			
Hexachlorobutadiene	0.823	0.34	mg/Kg wet	1.67		49.4	40-140			
Hexachloroethane	0.927	0.34	mg/Kg wet	1.67		55.6	40-140			
Indeno(1,2,3-cd)pyrene	0.989	0.17	mg/Kg wet	1.67		59.4	40-140			
Isophorone	0.921	0.34	mg/Kg wet	1.67		55.3	40-140			
2-Methylnaphthalene	0.888	0.17	mg/Kg wet	1.67		53.3	40-140			
2-Methylphenol	0.822	0.34	mg/Kg wet	1.67		49.3	30-130			
3/4-Methylphenol	0.844	0.34	mg/Kg wet	1.67		50.6	30-130			
Naphthalene	0.842	0.17	mg/Kg wet	1.67		50.5	40-140			
Nitrobenzene	0.920	0.34	mg/Kg wet	1.67		55.2	40-140			
2-Nitrophenol	0.981	0.34	mg/Kg wet	1.67		58.8	30-130			
4-Nitrophenol	1.08	0.66	mg/Kg wet	1.67		64.7	15-140			†
Pentachlorophenol	0.620	0.34	mg/Kg wet	1.67		37.2	30-130			
Phenanthrene	0.815	0.17	mg/Kg wet	1.67		48.9	40-140			
Phenol	0.879	0.34	mg/Kg wet	1.67		52.7	15-140			†
Pyrene	0.939	0.17	mg/Kg wet	1.67		56.3	40-140			
Pyridine	0.740	0.34	mg/Kg wet	1.67		44.4	30-140			†
1,2,4-Trichlorobenzene	0.849	0.34	mg/Kg wet	1.67		51.0	40-140			
2,4,5-Trichlorophenol	0.925	0.34	mg/Kg wet	1.67		55.5	30-130			
2,4,6-Trichlorophenol	0.921	0.34	mg/Kg wet	1.67		55.3	30-130			
Surrogate: 2-Fluorophenol	3.93		mg/Kg wet	6.67		58.9	30-130			
Surrogate: Phenol-d6	3.84		mg/Kg wet	6.67		57.6	30-130			
Surrogate: Nitrobenzene-d5	2.06		mg/Kg wet	3.33		61.7	30-130			
Surrogate: 2-Fluorobiphenyl	1.58		mg/Kg wet	3.33		47.5	30-130			
Surrogate: 2,4,6-Tribromophenol	3.97		mg/Kg wet	6.67		59.5	30-130			
Surrogate: p-Terphenyl-d14	2.00		mg/Kg wet	3.33		59.9	30-130			

LCS Dup (B216271-BS1)

Prepared: 11/02/18 Analyzed: 11/03/18

Acenaphthene	0.917	0.17	mg/Kg wet	1.67		55.0	40-140	11.8	30	
Acenaphthylene	0.971	0.17	mg/Kg wet	1.67		58.2	40-140	10.3	30	
Acetophenone	0.970	0.34	mg/Kg wet	1.67		58.2	40-140	10.6	30	
Aniline	0.715	0.34	mg/Kg wet	1.67		42.9	40-140	13.4	30	V-05, V-34
Anthracene	0.923	0.17	mg/Kg wet	1.67		55.4	40-140	12.4	30	
Benzo(a)anthracene	1.03	0.17	mg/Kg wet	1.67		61.9	40-140	12.2	30	
Benzo(a)pyrene	1.03	0.17	mg/Kg wet	1.67		61.7	40-140	13.5	30	
Benzo(b)fluoranthene	0.956	0.17	mg/Kg wet	1.67		57.4	40-140	13.7	30	
Benzo(g,h,i)perylene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140	11.0	30	
Benzo(k)fluoranthene	0.968	0.17	mg/Kg wet	1.67		58.1	40-140	13.5	30	
Bis(2-chloroethoxy)methane	1.09	0.34	mg/Kg wet	1.67		65.4	40-140	8.18	30	
Bis(2-chloroethyl)ether	1.06	0.34	mg/Kg wet	1.67		63.6	40-140	8.49	30	
Bis(2-chloroisopropyl)ether	1.15	0.34	mg/Kg wet	1.67		68.9	40-140	9.14	30	
Bis(2-Ethylhexyl)phthalate	1.14	0.34	mg/Kg wet	1.67		68.3	40-140	12.1	30	
4-Bromophenylphenylether	0.929	0.34	mg/Kg wet	1.67		55.8	40-140	14.4	30	
Butylbenzylphthalate	1.21	0.34	mg/Kg wet	1.67		72.8	40-140	14.0	30	
4-Chloroaniline	0.664	0.66	mg/Kg wet	1.67		39.9	15-140	5.15	30	V-34 †
2-Chloronaphthalene	0.860	0.34	mg/Kg wet	1.67		51.6	40-140	11.5	30	
2-Chlorophenol	0.967	0.34	mg/Kg wet	1.67		58.0	30-130	9.38	30	
Chrysene	0.959	0.17	mg/Kg wet	1.67		57.5	40-140	12.9	30	
Dibenz(a,h)anthracene	1.05	0.17	mg/Kg wet	1.67		62.8	40-140	11.0	30	
Dibenzofuran	1.02	0.34	mg/Kg wet	1.67		60.9	40-140	11.4	30	
Di-n-butylphthalate	0.979	0.34	mg/Kg wet	1.67		58.7	40-140	11.8	30	
1,2-Dichlorobenzene	0.928	0.34	mg/Kg wet	1.67		55.7	40-140	6.87	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
Batch B216271 - SW-846 3546										
LCS Dup (B216271-BSD1)										
					Prepared: 11/02/18 Analyzed: 11/03/18					
1,3-Dichlorobenzene	0.906	0.34	mg/Kg wet	1.67		54.4	40-140	7.36	30	
1,4-Dichlorobenzene	0.912	0.34	mg/Kg wet	1.67		54.7	40-140	6.14	30	
3,3-Dichlorobenzidine	0.799	0.17	mg/Kg wet	1.67		47.9	40-140	13.1	30	
2,4-Dichlorophenol	0.872	0.34	mg/Kg wet	1.67		52.3	30-130	10.8	30	
Diethylphthalate	1.06	0.34	mg/Kg wet	1.67		63.9	40-140	9.69	30	
2,4-Dimethylphenol	0.870	0.34	mg/Kg wet	1.67		52.2	30-130	9.39	30	
Dimethylphthalate	1.06	0.34	mg/Kg wet	1.67		63.4	40-140	10.5	30	
2,4-Dinitrophenol	0.705	0.66	mg/Kg wet	1.67		42.3	15-140	15.1	30	V-06 †
2,4-Dinitrotoluene	1.22	0.34	mg/Kg wet	1.67		73.5	40-140	7.95	30	
2,6-Dinitrotoluene	1.26	0.34	mg/Kg wet	1.67		75.8	40-140	10.9	30	V-06
Di-n-octylphthalate	1.15	0.34	mg/Kg wet	1.67		69.2	40-140	13.2	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.01	0.34	mg/Kg wet	1.67		60.6	40-140	13.7	30	
Fluoranthene	0.875	0.17	mg/Kg wet	1.67		52.5	40-140	11.0	30	
Fluorene	0.992	0.17	mg/Kg wet	1.67		59.5	40-140	12.2	30	
Hexachlorobenzene	0.907	0.34	mg/Kg wet	1.67		54.4	40-140	14.5	30	
Hexachlorobutadiene	0.892	0.34	mg/Kg wet	1.67		53.5	40-140	8.08	30	
Hexachloroethane	0.983	0.34	mg/Kg wet	1.67		59.0	40-140	5.90	30	
Indeno(1,2,3-cd)pyrene	1.11	0.17	mg/Kg wet	1.67		66.4	40-140	11.2	30	
Isophorone	0.996	0.34	mg/Kg wet	1.67		59.8	40-140	7.79	30	
2-Methylnaphthalene	0.985	0.17	mg/Kg wet	1.67		59.1	40-140	10.3	30	
2-Methylphenol	0.912	0.34	mg/Kg wet	1.67		54.7	30-130	10.4	30	
3/4-Methylphenol	0.936	0.34	mg/Kg wet	1.67		56.2	30-130	10.4	30	
Naphthalene	0.916	0.17	mg/Kg wet	1.67		55.0	40-140	8.42	30	
Nitrobenzene	1.00	0.34	mg/Kg wet	1.67		60.1	40-140	8.50	30	
2-Nitrophenol	1.09	0.34	mg/Kg wet	1.67		65.2	30-130	10.3	30	
4-Nitrophenol	1.15	0.66	mg/Kg wet	1.67		69.0	15-140	6.43	30	†
Pentachlorophenol	0.752	0.34	mg/Kg wet	1.67		45.1	30-130	19.2	30	
Phenanthrene	0.926	0.17	mg/Kg wet	1.67		55.6	40-140	12.8	30	
Phenol	0.986	0.34	mg/Kg wet	1.67		59.1	15-140	11.5	30	†
Pyrene	1.09	0.17	mg/Kg wet	1.67		65.3	40-140	14.7	30	
Pyridine	0.771	0.34	mg/Kg wet	1.67		46.3	30-140	4.06	30	†
1,2,4-Trichlorobenzene	0.915	0.34	mg/Kg wet	1.67		54.9	40-140	7.48	30	
2,4,5-Trichlorophenol	1.06	0.34	mg/Kg wet	1.67		63.7	30-130	13.7	30	
2,4,6-Trichlorophenol	1.04	0.34	mg/Kg wet	1.67		62.1	30-130	11.7	30	
Surrogate: 2-Fluorophenol	4.30		mg/Kg wet	6.67		64.5	30-130			
Surrogate: Phenol-d6	4.24		mg/Kg wet	6.67		63.5	30-130			
Surrogate: Nitrobenzene-d5	2.17		mg/Kg wet	3.33		65.1	30-130			
Surrogate: 2-Fluorobiphenyl	1.79		mg/Kg wet	3.33		53.6	30-130			
Surrogate: 2,4,6-Tribromophenol	4.48		mg/Kg wet	6.67		67.2	30-130			
Surrogate: p-Terphenyl-d14	2.28		mg/Kg wet	3.33		68.4	30-130			

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QUALITY CONTROL

Organochloride Pesticides 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 B216154 - SW-846 3546

Blank (B216154-BLK1)

Prepared: 11/01/18 Analyzed: 11/02/18

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0020	mg/Kg wet							
Aldrin [2C]	ND	0.0020	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0010	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDE	ND	0.0010	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDT	ND	0.0010	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0010	mg/Kg wet							
Dieldrin	ND	0.0020	mg/Kg wet							
Dieldrin [2C]	ND	0.0020	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.175		mg/Kg wet	0.200		87.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.175		mg/Kg wet	0.200		87.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.121		mg/Kg wet	0.200		60.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.118		mg/Kg wet	0.200		58.8	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216154 - SW-846 3546										
LCS (B216154-BS1)										
					Prepared: 11/01/18 Analyzed: 11/02/18					
alpha-Chlordane	0.081	0.0050	mg/Kg wet	0.100		81.5	40-140			
alpha-Chlordane [2C]	0.078	0.0050	mg/Kg wet	0.100		77.7	40-140			
gamma-Chlordane	0.079	0.0050	mg/Kg wet	0.100		79.5	40-140			
gamma-Chlordane [2C]	0.076	0.0050	mg/Kg wet	0.100		75.6	40-140			
Alachlor	0.073	0.020	mg/Kg wet	0.100		73.1	40-140			
Alachlor [2C]	0.070	0.020	mg/Kg wet	0.100		69.8	40-140			
Aldrin	0.072	0.0020	mg/Kg wet	0.100		72.3	40-140			
Aldrin [2C]	0.069	0.0020	mg/Kg wet	0.100		68.8	40-140			
alpha-BHC	0.046	0.0050	mg/Kg wet	0.100		46.5	40-140			
alpha-BHC [2C]	0.041	0.0050	mg/Kg wet	0.100		41.0	40-140			
beta-BHC	0.055	0.0050	mg/Kg wet	0.100		55.2	40-140			
beta-BHC [2C]	0.054	0.0050	mg/Kg wet	0.100		53.9	40-140			
delta-BHC	0.052	0.0050	mg/Kg wet	0.100		52.0	40-140			
delta-BHC [2C]	0.047	0.0050	mg/Kg wet	0.100		47.1	40-140			
gamma-BHC (Lindane)	0.052	0.0020	mg/Kg wet	0.100		52.4	40-140			
gamma-BHC (Lindane) [2C]	0.049	0.0020	mg/Kg wet	0.100		49.4	40-140			
4,4'-DDD	0.093	0.0010	mg/Kg wet	0.100		92.7	40-140			
4,4'-DDD [2C]	0.087	0.0010	mg/Kg wet	0.100		87.0	40-140			
4,4'-DDE	0.093	0.0010	mg/Kg wet	0.100		93.1	40-140			
4,4'-DDE [2C]	0.085	0.0010	mg/Kg wet	0.100		85.2	40-140			
4,4'-DDT	0.098	0.0010	mg/Kg wet	0.100		98.3	40-140			
4,4'-DDT [2C]	0.088	0.0010	mg/Kg wet	0.100		87.6	40-140			
Dieldrin	0.085	0.0020	mg/Kg wet	0.100		85.5	40-140			
Dieldrin [2C]	0.076	0.0020	mg/Kg wet	0.100		75.6	40-140			
Endosulfan I	0.078	0.0050	mg/Kg wet	0.100		78.1	40-140			
Endosulfan I [2C]	0.075	0.0050	mg/Kg wet	0.100		75.3	40-140			
Endosulfan II	0.084	0.0080	mg/Kg wet	0.100		84.1	40-140			
Endosulfan II [2C]	0.081	0.0080	mg/Kg wet	0.100		80.9	40-140			
Endosulfan Sulfate	0.068	0.0080	mg/Kg wet	0.100		68.0	40-140			
Endosulfan Sulfate [2C]	0.066	0.0080	mg/Kg wet	0.100		65.8	40-140			
Endrin	0.087	0.0080	mg/Kg wet	0.100		86.7	40-140			
Endrin [2C]	0.081	0.0080	mg/Kg wet	0.100		80.9	40-140			
Endrin Aldehyde	0.082	0.0080	mg/Kg wet	0.100		82.1	40-140			
Endrin Aldehyde [2C]	0.088	0.0080	mg/Kg wet	0.100		87.5	40-140			
Endrin Ketone	0.086	0.0080	mg/Kg wet	0.100		85.7	40-140			
Endrin Ketone [2C]	0.082	0.0080	mg/Kg wet	0.100		82.2	40-140			
Heptachlor	0.064	0.0050	mg/Kg wet	0.100		64.4	40-140			
Heptachlor [2C]	0.063	0.0050	mg/Kg wet	0.100		62.6	40-140			
Heptachlor Epoxide	0.078	0.0050	mg/Kg wet	0.100		78.1	40-140			
Heptachlor Epoxide [2C]	0.068	0.0050	mg/Kg wet	0.100		68.0	40-140			
Hexachlorobenzene	0.059	0.0060	mg/Kg wet	0.100		58.8	40-140			
Hexachlorobenzene [2C]	0.054	0.0060	mg/Kg wet	0.100		53.9	40-140			
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		99.7	40-140			
Methoxychlor [2C]	0.10	0.050	mg/Kg wet	0.100		102	40-140			
Surrogate: Decachlorobiphenyl	0.181		mg/Kg wet	0.200		90.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.181		mg/Kg wet	0.200		90.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.120		mg/Kg wet	0.200		60.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.117		mg/Kg wet	0.200		58.3	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216154 - SW-846 3546										
LCS Dup (B216154-BSD1)										
					Prepared: 11/01/18 Analyzed: 11/02/18					
alpha-Chlordane	0.088	0.0050	mg/Kg wet	0.100		88.2	40-140	7.89	30	
alpha-Chlordane [2C]	0.084	0.0050	mg/Kg wet	0.100		83.9	40-140	7.75	30	
gamma-Chlordane	0.087	0.0050	mg/Kg wet	0.100		87.3	40-140	9.36	30	
gamma-Chlordane [2C]	0.083	0.0050	mg/Kg wet	0.100		83.0	40-140	9.35	30	
Alachlor	0.079	0.020	mg/Kg wet	0.100		79.3	40-140	8.21	30	
Alachlor [2C]	0.076	0.020	mg/Kg wet	0.100		76.3	40-140	8.93	30	
Aldrin	0.079	0.0020	mg/Kg wet	0.100		78.6	40-140	8.41	30	
Aldrin [2C]	0.075	0.0020	mg/Kg wet	0.100		74.5	40-140	8.07	30	
alpha-BHC	0.054	0.0050	mg/Kg wet	0.100		53.6	40-140	14.4	30	
alpha-BHC [2C]	0.047	0.0050	mg/Kg wet	0.100		47.1	40-140	13.7	30	
beta-BHC	0.063	0.0050	mg/Kg wet	0.100		63.2	40-140	13.5	30	
beta-BHC [2C]	0.062	0.0050	mg/Kg wet	0.100		61.7	40-140	13.5	30	
delta-BHC	0.063	0.0050	mg/Kg wet	0.100		62.9	40-140	19.0	30	
delta-BHC [2C]	0.059	0.0050	mg/Kg wet	0.100		58.7	40-140	21.9	30	
gamma-BHC (Lindane)	0.060	0.0020	mg/Kg wet	0.100		60.0	40-140	13.4	30	
gamma-BHC (Lindane) [2C]	0.057	0.0020	mg/Kg wet	0.100		56.5	40-140	13.5	30	
4,4'-DDD	0.099	0.0010	mg/Kg wet	0.100		99.3	40-140	6.94	30	
4,4'-DDD [2C]	0.093	0.0010	mg/Kg wet	0.100		93.3	40-140	6.97	30	
4,4'-DDE	0.10	0.0010	mg/Kg wet	0.100		100	40-140	7.26	30	
4,4'-DDE [2C]	0.091	0.0010	mg/Kg wet	0.100		90.9	40-140	6.53	30	
4,4'-DDT	0.10	0.0010	mg/Kg wet	0.100		105	40-140	6.30	30	
4,4'-DDT [2C]	0.094	0.0010	mg/Kg wet	0.100		94.0	40-140	7.04	30	
Dieldrin	0.092	0.0020	mg/Kg wet	0.100		91.6	40-140	6.89	30	
Dieldrin [2C]	0.081	0.0020	mg/Kg wet	0.100		81.0	40-140	6.89	30	
Endosulfan I	0.083	0.0050	mg/Kg wet	0.100		83.1	40-140	6.20	30	
Endosulfan I [2C]	0.080	0.0050	mg/Kg wet	0.100		80.5	40-140	6.60	30	
Endosulfan II	0.090	0.0080	mg/Kg wet	0.100		90.2	40-140	7.01	30	
Endosulfan II [2C]	0.087	0.0080	mg/Kg wet	0.100		86.5	40-140	6.70	30	
Endosulfan Sulfate	0.077	0.0080	mg/Kg wet	0.100		76.9	40-140	12.4	30	
Endosulfan Sulfate [2C]	0.073	0.0080	mg/Kg wet	0.100		73.5	40-140	11.0	30	
Endrin	0.093	0.0080	mg/Kg wet	0.100		92.8	40-140	6.73	30	
Endrin [2C]	0.087	0.0080	mg/Kg wet	0.100		86.8	40-140	7.08	30	
Endrin Aldehyde	0.078	0.0080	mg/Kg wet	0.100		77.9	40-140	5.35	30	
Endrin Aldehyde [2C]	0.083	0.0080	mg/Kg wet	0.100		83.3	40-140	4.89	30	
Endrin Ketone	0.090	0.0080	mg/Kg wet	0.100		89.9	40-140	4.79	30	
Endrin Ketone [2C]	0.086	0.0080	mg/Kg wet	0.100		86.3	40-140	4.81	30	
Heptachlor	0.071	0.0050	mg/Kg wet	0.100		70.7	40-140	9.35	30	
Heptachlor [2C]	0.069	0.0050	mg/Kg wet	0.100		68.8	40-140	9.35	30	
Heptachlor Epoxide	0.084	0.0050	mg/Kg wet	0.100		84.1	40-140	7.44	30	
Heptachlor Epoxide [2C]	0.075	0.0050	mg/Kg wet	0.100		75.2	40-140	9.99	30	
Hexachlorobenzene	0.067	0.0060	mg/Kg wet	0.100		67.1	40-140	13.2	30	
Hexachlorobenzene [2C]	0.062	0.0060	mg/Kg wet	0.100		61.9	40-140	13.8	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		104	40-140	4.38	30	
Methoxychlor [2C]	0.10	0.050	mg/Kg wet	0.100		104	40-140	1.39	30	
Surrogate: Decachlorobiphenyl	0.196		mg/Kg wet	0.200		98.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.191		mg/Kg wet	0.200		95.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.141		mg/Kg wet	0.200		70.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.137		mg/Kg wet	0.200		68.3	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216139 - SW-846 3546										
Blank (B216139-BLK1)										
Prepared: 11/01/18 Analyzed: 11/02/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.184		mg/Kg wet	0.200		92.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.201		mg/Kg wet	0.200		100	30-150			
Surrogate: Tetrachloro-m-xylene	0.160		mg/Kg wet	0.200		80.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.169		mg/Kg wet	0.200		84.5	30-150			
LCS (B216139-BS1)										
Prepared: 11/01/18 Analyzed: 11/02/18										
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.8	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		82.0	40-140			V-06
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		79.4	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		83.8	40-140			V-06
Surrogate: Decachlorobiphenyl	0.160		mg/Kg wet	0.200		80.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.176		mg/Kg wet	0.200		87.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.136		mg/Kg wet	0.200		68.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.145		mg/Kg wet	0.200		72.6	30-150			
LCS Dup (B216139-BSD1)										
Prepared: 11/01/18 Analyzed: 11/02/18										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		82.0	40-140	7.93	30	
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		90.4	40-140	9.84	30	V-06
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		87.5	40-140	9.66	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		96.4	40-140	14.0	30	V-06
Surrogate: Decachlorobiphenyl	0.178		mg/Kg wet	0.200		89.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.196		mg/Kg wet	0.200		97.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.146		mg/Kg wet	0.200		72.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.157		mg/Kg wet	0.200		78.3	30-150			

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QUALITY CONTROL

Herbicides 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 B216140 - SW-846 8151

Blank (B216140-BLK1)

Prepared: 11/01/18 Analyzed: 11/02/18

2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	67.2		µg/kg wet	95.2		70.6	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	68.1		µg/kg wet	95.2		71.5	30-150			

LCS (B216140-BS1)

Prepared: 11/01/18 Analyzed: 11/02/18

2,4-D	105	25	µg/kg wet	125		84.2	40-140			
2,4-D [2C]	109	25	µg/kg wet	125		87.5	40-140			
2,4-DB	108	25	µg/kg wet	125		86.7	40-140			
2,4-DB [2C]	118	25	µg/kg wet	125		94.3	40-140			
2,4,5-TP (Silvex)	10.9	2.5	µg/kg wet	12.5		87.0	40-140			
2,4,5-TP (Silvex) [2C]	11.4	2.5	µg/kg wet	12.5		91.3	40-140			
2,4,5-T	10.6	2.5	µg/kg wet	12.5		84.6	40-140			
2,4,5-T [2C]	11.6	2.5	µg/kg wet	12.5		93.1	40-140			
Dalapon	196	62	µg/kg wet	312		62.9	40-140			
Dalapon [2C]	197	62	µg/kg wet	312		63.2	40-140			
Dicamba	10.9	2.5	µg/kg wet	12.5		87.5	40-140			
Dicamba [2C]	11.1	2.5	µg/kg wet	12.5		88.4	40-140			
Dichloroprop	118	25	µg/kg wet	125		94.1	40-140			
Dichloroprop [2C]	116	25	µg/kg wet	125		93.0	40-140			
Dinoseb	19.2	12	µg/kg wet	62.5		30.7	0-42.4			
Dinoseb [2C]	21.8	12	µg/kg wet	62.5		34.8	0-41.1			
MCPA	10300	2500	µg/kg wet	12500		82.7	40-140			
MCPA [2C]	9710	2500	µg/kg wet	12500		77.7	40-140			
MCPP	13500	2500	µg/kg wet	12500		108	40-140			
MCPP [2C]	10400	2500	µg/kg wet	12500		83.4	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	81.5		µg/kg wet	100		81.5	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	84.8		µg/kg wet	100		84.8	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216140 - SW-846 8151										
LCS Dup (B216140-BSD1)										
					Prepared: 11/01/18 Analyzed: 11/02/18					
2,4-D	110	25	µg/kg wet	125		87.8	40-140	4.18	30	
2,4-D [2C]	120	25	µg/kg wet	125		95.9	40-140	9.13	30	
2,4-DB	114	25	µg/kg wet	125		91.6	40-140	5.47	30	
2,4-DB [2C]	123	25	µg/kg wet	125		98.3	40-140	4.10	30	
2,4,5-TP (Silvex)	11.3	2.5	µg/kg wet	12.5		90.5	40-140	3.93	30	
2,4,5-TP (Silvex) [2C]	12.0	2.5	µg/kg wet	12.5		96.3	40-140	5.42	30	
2,4,5-T	10.9	2.5	µg/kg wet	12.5		87.2	40-140	3.10	30	
2,4,5-T [2C]	11.3	2.5	µg/kg wet	12.5		90.0	40-140	3.34	30	
Dalapon	203	62	µg/kg wet	312		64.9	40-140	3.10	30	
Dalapon [2C]	205	62	µg/kg wet	312		65.6	40-140	3.74	30	
Dicamba	11.4	2.5	µg/kg wet	12.5		91.0	40-140	3.96	30	
Dicamba [2C]	11.6	2.5	µg/kg wet	12.5		93.1	40-140	5.08	30	
Dichloroprop	129	25	µg/kg wet	125		103	40-140	9.04	30	
Dichloroprop [2C]	120	25	µg/kg wet	125		96.0	40-140	3.21	30	
Dinoseb	22.7	12	µg/kg wet	62.5		36.4	0-42.4	16.8	30	
Dinoseb [2C]	25.4	12	µg/kg wet	62.5		40.7	0-41.1	15.6	30	
MCPA	10900	2500	µg/kg wet	12500		87.2	40-140	5.40	30	
MCPA [2C]	10200	2500	µg/kg wet	12500		81.3	40-140	4.52	30	
MCPP	14400	2500	µg/kg wet	12500		115	40-140	6.47	30	
MCPP [2C]	10700	2500	µg/kg wet	12500		85.4	40-140	2.37	30	
Surrogate: 2,4-Dichlorophenylacetic acid	85.2		µg/kg wet	100		85.2	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	87.8		µg/kg wet	100		87.8	30-150			

Matrix Spike (B216140-MS1)										
					Source: 18J1553-06 Prepared: 11/01/18 Analyzed: 11/03/18					
2,4-D	112	27	µg/kg dry	137	ND	81.9	30-150			
2,4-D [2C]	121	27	µg/kg dry	137	ND	88.3	30-150			
2,4-DB	118	27	µg/kg dry	137	ND	86.2	30-150			
2,4-DB [2C]	137	27	µg/kg dry	137	ND	100	30-150			
2,4,5-TP (Silvex)	11.5	2.7	µg/kg dry	13.7	ND	84.3	30-150			
2,4,5-TP (Silvex) [2C]	12.2	2.7	µg/kg dry	13.7	ND	89.5	30-150			
2,4,5-T	10.9	2.7	µg/kg dry	13.7	ND	79.8	30-150			
2,4,5-T [2C]	12.0	2.7	µg/kg dry	13.7	ND	87.7	30-150			
Dalapon	223	68	µg/kg dry	342	ND	65.1	30-150			
Dalapon [2C]	227	68	µg/kg dry	342	ND	66.4	30-150			
Dicamba	11.5	2.7	µg/kg dry	13.7	ND	84.0	30-150			
Dicamba [2C]	12.0	2.7	µg/kg dry	13.7	ND	87.9	30-150			
Dichloroprop	134	27	µg/kg dry	137	ND	97.6	30-150			
Dichloroprop [2C]	124	27	µg/kg dry	137	ND	90.5	30-150			
Dinoseb	23.4	14	µg/kg dry	68.4	ND	34.2	10-150			
Dinoseb [2C]	26.4	14	µg/kg dry	68.4	ND	38.6	10-150			
MCPA	11200	2700	µg/kg dry	13700	ND	81.7	30-150			
MCPA [2C]	10200	2700	µg/kg dry	13700	ND	74.2	30-150			
MCPP	15300	2700	µg/kg dry	13700	ND	112	30-150			
MCPP [2C]	10900	2700	µg/kg dry	13700	ND	79.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	87.9		µg/kg dry	109		80.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	94.5		µg/kg dry	109		86.3	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216140 - SW-846 8151										
Matrix Spike Dup (B216140-MSD1)		Source: 18J1553-06		Prepared: 11/01/18 Analyzed: 11/03/18						
2,4-D	104	27	µg/kg dry	137	ND	75.8	30-150	7.75	30	
2,4-D [2C]	110	27	µg/kg dry	137	ND	80.5	30-150	9.17	30	
2,4-DB	111	27	µg/kg dry	137	ND	80.8	30-150	6.49	30	
2,4-DB [2C]	130	27	µg/kg dry	137	ND	95.0	30-150	5.46	30	
2,4,5-TP (Silvex)	10.5	2.7	µg/kg dry	13.7	ND	76.4	30-150	9.81	30	
2,4,5-TP (Silvex) [2C]	11.1	2.7	µg/kg dry	13.7	ND	81.2	30-150	9.72	30	
2,4,5-T	10.0	2.7	µg/kg dry	13.7	ND	73.1	30-150	8.82	30	
2,4,5-T [2C]	11.3	2.7	µg/kg dry	13.7	ND	82.3	30-150	6.33	30	
Dalapon	195	68	µg/kg dry	342	ND	56.9	30-150	13.5	30	
Dalapon [2C]	197	68	µg/kg dry	342	ND	57.7	30-150	14.0	30	
Dicamba	10.7	2.7	µg/kg dry	13.7	ND	78.4	30-150	7.01	30	
Dicamba [2C]	10.8	2.7	µg/kg dry	13.7	ND	79.1	30-150	10.5	30	
Dichloroprop	115	27	µg/kg dry	137	ND	84.1	30-150	14.8	30	
Dichloroprop [2C]	114	27	µg/kg dry	137	ND	83.1	30-150	8.50	30	
Dinoseb	24.8	14	µg/kg dry	68.4	ND	36.2	10-150	5.82	30	
Dinoseb [2C]	28.0	14	µg/kg dry	68.4	ND	40.9	10-150	5.90	30	
MCPA	10400	2700	µg/kg dry	13700	ND	75.9	30-150	7.36	30	
MCPA [2C]	9530	2700	µg/kg dry	13700	ND	69.7	30-150	6.32	30	
MCPP	13600	2700	µg/kg dry	13700	ND	99.4	30-150	11.7	30	
MCPP [2C]	10100	2700	µg/kg dry	13700	ND	73.5	30-150	8.17	30	
Surrogate: 2,4-Dichlorophenylacetic acid	84.0		µg/kg dry	109		76.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	89.1		µg/kg dry	109		81.4	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216247 - SW-846 3546										
Blank (B216247-BLK1)					Prepared: 11/02/18 Analyzed: 11/04/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.86		mg/Kg wet	3.33		85.7	40-140			
LCS (B216247-BS1)					Prepared: 11/02/18 Analyzed: 11/04/18					
TPH (C9-C36)	29.5	8.3	mg/Kg wet	33.3		88.5	40-140			
Surrogate: 2-Fluorobiphenyl	2.51		mg/Kg wet	3.33		75.3	40-140			
LCS Dup (B216247-BSD1)					Prepared: 11/02/18 Analyzed: 11/04/18					
TPH (C9-C36)	29.9	8.3	mg/Kg wet	33.3		89.6	40-140	1.21	30	
Surrogate: 2-Fluorobiphenyl	2.50		mg/Kg wet	3.33		75.0	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
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Batch B216433 - SW-846 3050B

Blank (B216433-BLK1)

Prepared: 11/05/18 Analyzed: 11/06/18

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 (B216433-BS1)

Prepared: 11/05/18 Analyzed: 11/06/18

Antimony	63.6	4.9	mg/Kg wet	75.5		84.2	3.8-196			
Arsenic	148	4.9	mg/Kg wet	161		91.7	83.2-116.8			
Barium	253	4.9	mg/Kg wet	260		97.3	82.7-117.3			
Beryllium	94.3	0.49	mg/Kg wet	97.6		96.6	83.4-116.8			
Cadmium	192	0.49	mg/Kg wet	211		91.1	83.4-116.6			
Chromium	127	0.97	mg/Kg wet	136		93.3	82.4-117.6			
Lead	100	1.5	mg/Kg wet	111		90.1	83-117.1			
Nickel	88.7	0.97	mg/Kg wet	91.9		96.5	82.9-117.5			
Selenium	169	9.7	mg/Kg wet	191		88.4	79.6-120.9			
Silver	44.4	0.97	mg/Kg wet	43.3		103	79.9-119.9			
Thallium	154	4.9	mg/Kg wet	156		98.4	81.4-119.2			
Vanadium	47.1	1.9	mg/Kg wet	56.7		83.0	79-121.2			
Zinc	183	1.9	mg/Kg wet	199		91.8	81.4-119.1			

LCS Dup (B216433-BSD1)

Prepared: 11/05/18 Analyzed: 11/06/18

Antimony	64.7	4.9	mg/Kg wet	75.5		85.6	3.8-196	1.70	30	
Arsenic	149	4.9	mg/Kg wet	161		92.7	83.2-116.8	1.12	30	
Barium	252	4.9	mg/Kg wet	260		97.1	82.7-117.3	0.200	30	
Beryllium	92.7	0.49	mg/Kg wet	97.6		95.0	83.4-116.8	1.62	30	
Cadmium	191	0.49	mg/Kg wet	211		90.4	83.4-116.6	0.868	30	
Chromium	127	0.98	mg/Kg wet	136		93.2	82.4-117.6	0.134	30	
Lead	102	1.5	mg/Kg wet	111		91.5	83-117.1	1.51	30	
Nickel	88.8	0.98	mg/Kg wet	91.9		96.7	82.9-117.5	0.121	30	
Selenium	171	9.8	mg/Kg wet	191		89.3	79.6-120.9	1.03	30	
Silver	43.8	0.98	mg/Kg wet	43.3		101	79.9-119.9	1.45	30	
Thallium	151	4.9	mg/Kg wet	156		96.5	81.4-119.2	1.97	30	
Vanadium	48.0	2.0	mg/Kg wet	56.7		84.7	79-121.2	2.06	30	
Zinc	184	2.0	mg/Kg wet	199		92.5	81.4-119.1	0.783	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 B216433 - SW-846 3050B

Duplicate (B216433-DUP1)

Source: 18J1553-04

Prepared: 11/05/18 Analyzed: 11/06/18

Antimony	ND	1.9	mg/Kg dry		ND			NC	35	
Arsenic	4.14	1.9	mg/Kg dry		3.90			6.09	35	
Barium	23.2	1.9	mg/Kg dry		25.8			10.8	35	
Beryllium	0.418	0.19	mg/Kg dry		0.427			2.08	35	
Cadmium	ND	0.19	mg/Kg dry		ND			NC	35	
Chromium	11.3	0.39	mg/Kg dry		12.3			8.31	35	
Lead	15.3	0.58	mg/Kg dry		13.3			13.6	35	
Nickel	7.24	0.39	mg/Kg dry		8.07			11.0	35	
Selenium	ND	3.9	mg/Kg dry		ND			NC	35	
Silver	ND	0.39	mg/Kg dry		ND			NC	35	
Thallium	ND	1.9	mg/Kg dry		ND			NC	35	
Vanadium	14.1	0.78	mg/Kg dry		15.0			5.91	35	
Zinc	14.2	0.78	mg/Kg dry		16.0			12.3	35	

MRL Check (B216433-MRL1)

Prepared: 11/05/18 Analyzed: 11/06/18

Lead	0.526	0.50	mg/Kg wet	0.499		105		80-120		
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Matrix Spike (B216433-MS1)

Source: 18J1553-04

Prepared: 11/05/18 Analyzed: 11/06/18

Antimony	10.3	2.0	mg/Kg dry	19.5	ND	52.7	*	75-125		MS-07
Arsenic	22.7	2.0	mg/Kg dry	19.5	3.90	96.4		75-125		
Barium	45.2	2.0	mg/Kg dry	19.5	25.8	98.8		75-125		
Beryllium	20.7	0.20	mg/Kg dry	19.5	0.427	104		75-125		
Cadmium	19.7	0.20	mg/Kg dry	19.5	0.153	100		75-125		
Chromium	31.5	0.39	mg/Kg dry	19.5	12.3	98.0		75-125		
Lead	33.4	0.59	mg/Kg dry	19.5	13.3	103		75-125		
Nickel	27.4	0.39	mg/Kg dry	19.5	8.07	98.7		75-125		
Selenium	18.1	3.9	mg/Kg dry	19.5	ND	92.8		75-125		
Silver	21.4	0.39	mg/Kg dry	19.5	ND	109		75-125		
Thallium	24.8	2.0	mg/Kg dry	19.5	ND	127	*	75-125		MS-14
Vanadium	34.3	0.78	mg/Kg dry	19.5	15.0	98.7		75-125		
Zinc	54.4	0.78	mg/Kg dry	39.1	16.0	98.2		75-125		

Batch B216478 - SW-846 7471

Blank (B216478-BLK1)

Prepared & Analyzed: 11/06/18

Mercury	ND	0.025	mg/Kg wet							
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LCS (B216478-BS1)

Prepared & Analyzed: 11/06/18

Mercury	11.0	1.9	mg/Kg wet	11.5		95.4		71.6-127.8		
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LCS Dup (B216478-BSD1)

Prepared & Analyzed: 11/06/18

Mercury	11.1	1.9	mg/Kg wet	11.5		96.9		71.6-127.8	1.59	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
Batch B216478 - SW-846 7471										
Duplicate (B216478-DUP1)		Source: 18J1553-06			Prepared & Analyzed: 11/06/18					
Mercury	ND	0.026	mg/Kg dry		ND			NC	35	
Matrix Spike (B216478-MS1)		Source: 18J1553-06			Prepared & Analyzed: 11/06/18					
Mercury	0.176	0.027	mg/Kg dry	0.179	0.0136	90.5	75-125			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216167 - SM21-22 2510B Modified										
Blank (B216167-BLK1)				Prepared & Analyzed: 11/01/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B216167-BS1)				Prepared & Analyzed: 11/01/18						
Specific conductance	200		µmhos/cm	192		103	90-110			
Batch B216215 - SW-846 9014										
Blank (B216215-BLK1)				Prepared: 11/01/18 Analyzed: 11/05/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B216215-BS1)				Prepared: 11/01/18 Analyzed: 11/05/18						
Reactive Cyanide	9.3	0.40	mg/Kg	10.0		92.9	83.6-111			
Batch B216238 - SW-846 9045C										
LCS (B216238-BS1)				Prepared & Analyzed: 11/01/18						
pH	5.97		pH Units	6.00		99.5	90-110			
LCS (B216238-BS2)				Prepared & Analyzed: 11/01/18						
pH	6.00		pH Units	6.00		100	90-110			
Duplicate (B216238-DUP1)				Source: 18J1553-08			Prepared & Analyzed: 11/01/18			
pH	5.8		pH Units		5.7			1.52	5	
Batch B216441 - SW-846 9030A										
Blank (B216441-BLK1)				Prepared: 11/01/18 Analyzed: 11/05/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B216441-BS1)				Prepared: 11/01/18 Analyzed: 11/05/18						
Reactive Sulfide	13	2.0	mg/Kg	14.8		89.2	54.9-121			
Batch B216456 - % Solids										
Duplicate (B216456-DUP2)				Source: 18J1553-01			Prepared: 11/05/18 Analyzed: 11/06/18			
% Solids	87.3		% Wt		84.6			3.11	20	

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BREAKDOWN REPORT

Lab Sample ID: S029015-PEM1 **Analyzed:** 11/03/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.93
Endrin [1] 2.65

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 1.12
Endrin [2] 3.55

BREAKDOWN REPORT

Lab Sample ID: S029015-PEM2 **Analyzed:** 11/03/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.40
Endrin [1] 2.21

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 0.96
Endrin [2] 2.37

BREAKDOWN REPORT

Lab Sample ID: S029037-PEM1 **Analyzed:** 11/02/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.31
Endrin [1] 4.21

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BREAKDOWN REPORT

Lab Sample ID: S029037-PEM1 **Analyzed:** 11/02/2018

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 0.84
Endrin [2] 4.36

BREAKDOWN REPORT

Lab Sample ID: S029037-PEM2 **Analyzed:** 11/03/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 1.23
Endrin [1] 3.40

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 1.20
Endrin [2] 3.46

BREAKDOWN REPORT

Lab Sample ID: S029037-PEM3 **Analyzed:** 11/03/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.94
Endrin [1] 3.13

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 1.35
Endrin [2] 3.21

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SB-51

SW-846 8081B

Lab Sample ID: 18J1553-01 Date(s) Analyzed: 11/03/2018 11/03/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDT	1	7.978	7.952	8.012	0.0088	
	2	7.991	7.962	8.022	0.0077	13.3

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SB-37

SW-846 8081B

Lab Sample ID: 18J1553-03 Date(s) Analyzed: 11/03/2018 11/03/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDT	1	7.978	7.952	8.012	0.0098	
	2	7.990	7.962	8.022	0.0077	24.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SB-39

SW-846 8081B

Lab Sample ID: 18J1553-05 Date(s) Analyzed: 11/03/2018 11/03/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDT	1	7.979	7.952	8.012	0.0089	
	2	7.990	7.962	8.022	0.0058	42.2

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8082A

Lab Sample ID: B216139-BS1 Date(s) Analyzed: 11/02/2018 11/02/2018

Instrument ID (1): ECD1 Instrument ID (2): ECD1

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	0.15	
	2	0.000	0.000	0.000	0.16	6.5
Aroclor-1260	1	0.000	0.000	0.000	0.16	
	2	0.000	0.000	0.000	0.17	6.1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B216139-BSD1 Date(s) Analyzed: 11/02/2018 11/02/2018

Instrument ID (1): ECD1 Instrument ID (2): ECD1

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	0.16	
	2	0.000	0.000	0.000	0.18	11.8
Aroclor-1260	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.19	5.4

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8151A

Lab Sample ID: B216140-BS1 Date(s) Analyzed: 11/02/2018 11/02/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.205	0.000	0.000	10.6	
	2	15.804	0.000	0.000	11.6	5.3
2,4,5-TP (Silvex)	1	15.578	0.000	0.000	10.9	
	2	14.959	0.000	0.000	11.4	3.6
2,4-D	1	13.726	0.000	0.000	105	
	2	13.227	0.000	0.000	109	0.9
2,4-DB	1	17.000	0.000	0.000	108	
	2	16.784	0.000	0.000	118	7.0
Dalapon	1	4.594	0.000	0.000	196	
	2	4.086	0.000	0.000	197	1.5
Dicamba	1	11.589	0.000	0.000	10.9	
	2	11.037	0.000	0.000	11.1	0.9
Dichloroprop	1	13.209	0.000	0.000	118	
	2	12.551	0.000	0.000	116	3.4
Dinoseb	1	17.645	0.000	0.000	19.2	
	2	17.042	0.000	0.000	21.8	13.7
MCPA	1	12.416	0.000	0.000	10300	
	2	11.866	0.000	0.000	9710	2.9
MCPD	1	12.082	0.000	0.000	13500	
	2	11.379	0.000	0.000	10400	29.5

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8151A

Lab Sample ID: B216140-BSD1 Date(s) Analyzed: 11/02/2018 11/02/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.201	0.000	0.000	10.9	
	2	15.800	0.000	0.000	11.3	2.7
2,4,5-TP (Silvex)	1	15.577	0.000	0.000	11.3	
	2	14.957	0.000	0.000	12.0	8.7
2,4-D	1	13.723	0.000	0.000	110	
	2	13.225	0.000	0.000	120	8.7
2,4-DB	1	16.999	0.000	0.000	114	
	2	16.782	0.000	0.000	123	11.2
Dalapon	1	4.594	0.000	0.000	203	
	2	4.087	0.000	0.000	205	2.5
Dicamba	1	11.588	0.000	0.000	11.4	
	2	11.036	0.000	0.000	11.6	5.3
Dichloroprop	1	13.207	0.000	0.000	129	
	2	12.550	0.000	0.000	120	8.0
Dinoseb	1	17.645	0.000	0.000	22.7	
	2	17.041	0.000	0.000	25.4	9.9
MCPA	1	12.415	0.000	0.000	10900	
	2	11.866	0.000	0.000	10200	7.6
MCPP	1	12.082	0.000	0.000	14400	
	2	11.379	0.000	0.000	10700	26.7

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

Matrix Spike

SW-846 8151A

Lab Sample ID: B216140-MS1 Date(s) Analyzed: 11/03/2018 11/03/2018
 Instrument ID (1): ECD 8 Instrument ID (2): ECD 8
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.187	0.000	0.000	10.9	
	2	15.782	0.000	0.000	12.0	8.7
2,4,5-TP (Silvex)	1	15.566	0.000	0.000	11.5	
	2	14.942	0.000	0.000	12.2	1.7
2,4-D	1	13.713	0.000	0.000	112	
	2	13.210	0.000	0.000	121	9.5
2,4-DB	1	16.995	0.000	0.000	118	
	2	16.774	0.000	0.000	137	13.2
Dalapon	1	4.592	0.000	0.000	223	
	2	4.084	0.000	0.000	227	3.1
Dicamba	1	11.584	0.000	0.000	11.5	
	2	11.029	0.000	0.000	12.0	0.0
Dichloroprop	1	13.202	0.000	0.000	134	
	2	12.540	0.000	0.000	124	4.7
Dinoseb	1	17.646	0.000	0.000	23.4	
	2	17.038	0.000	0.000	26.4	13.8
MCPA	1	12.411	0.000	0.000	11200	
	2	11.858	0.000	0.000	10200	7.6
MCPD	1	12.078	0.000	0.000	15300	
	2	11.371	0.000	0.000	10900	31.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

Matrix Spike Dup

SW-846 8151A

Lab Sample ID: B216140-MSD1 Date(s) Analyzed: 11/03/2018 11/03/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.188	0.000	0.000	10.0	
	2	15.782	0.000	0.000	11.3	12.2
2,4,5-TP (Silvex)	1	15.569	0.000	0.000	10.5	
	2	14.942	0.000	0.000	11.1	0.9
2,4-D	1	13.711	0.000	0.000	104	
	2	13.210	0.000	0.000	110	9.5
2,4-DB	1	16.994	0.000	0.000	111	
	2	16.774	0.000	0.000	130	16.7
Dalapon	1	4.591	0.000	0.000	195	
	2	4.082	0.000	0.000	197	1.5
Dicamba	1	11.583	0.000	0.000	10.7	
	2	11.029	0.000	0.000	10.8	1.8
Dichloroprop	1	13.200	0.000	0.000	115	
	2	12.540	0.000	0.000	114	5.1
Dinoseb	1	17.644	0.000	0.000	24.8	
	2	17.036	0.000	0.000	28.0	11.3
MCPA	1	12.408	0.000	0.000	10400	
	2	11.856	0.000	0.000	9530	4.8
MCPD	1	12.075	0.000	0.000	13600	
	2	11.369	0.000	0.000	10100	32.4

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8081B

LCS

Lab Sample ID: B216154-BS1 Date(s) Analyzed: 11/02/2018 11/03/2018
Instrument ID (1): ECD2A Instrument ID (2): ECD2B
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.731	6.701	6.761	0.093	
	2	6.559	6.529	6.589	0.087	6.7
4,4'-DDE	1	6.318	6.288	6.348	0.093	
	2	6.165	6.136	6.196	0.085	9.0
4,4'-DDT	1	6.932	6.902	6.962	0.098	
	2	6.778	6.747	6.807	0.088	10.8
Alachlor	1	5.804	5.775	5.835	0.073	
	2	5.460	5.430	5.490	0.070	4.2
Aldrin	1	5.701	5.672	5.732	0.072	
	2	5.486	5.456	5.516	0.069	4.3
alpha-BHC	1	5.079	5.049	5.109	0.046	
	2	4.917	4.888	4.948	0.041	13.6
alpha-Chlordane	1	6.254	6.224	6.284	0.081	
	2	6.035	6.006	6.066	0.078	5.0
beta-BHC	1	5.304	5.274	5.334	0.055	
	2	5.143	5.111	5.171	0.054	1.8
delta-BHC	1	5.402	5.372	5.432	0.052	
	2	5.291	5.260	5.320	0.047	10.1
Dieldrin	1	6.505	6.475	6.535	0.085	
	2	6.242	6.212	6.272	0.076	12.3
Endosulfan I	1	6.341	6.311	6.371	0.078	
	2	6.063	6.034	6.094	0.075	3.9
Endosulfan II	1	6.821	6.792	6.852	0.084	
	2	6.592	6.561	6.621	0.081	3.6
Endosulfan Sulfate	1	7.453	7.423	7.483	0.068	
	2	7.041	7.011	7.071	0.066	3.0
Endrin	1	6.663	6.633	6.693	0.087	
	2	6.440	6.410	6.470	0.081	7.1
Endrin Aldehyde	1	7.128	7.098	7.158	0.082	
	2	6.837	6.807	6.867	0.088	7.1
Endrin Ketone	1	7.659	7.629	7.689	0.086	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8081B

LCS

Lab Sample ID: B216154-BS1 Date(s) Analyzed: 11/02/2018 11/03/2018

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.422	7.392	7.452	0.082	4.8
gamma-BHC (Lindane)	1	5.253	5.223	5.283	0.052	
	2	5.091	5.062	5.122	0.049	5.9
gamma-Chlordane	1	6.165	6.136	6.196	0.079	
	2	5.942	5.913	5.973	0.076	5.1
Heptachlor	1	5.523	5.493	5.553	0.064	
	2	5.314	5.284	5.344	0.063	1.6
Heptachlor Epoxide	1	6.084	6.054	6.114	0.078	
	2	5.825	5.796	5.856	0.068	13.7
Hexachlorobenzene	1	4.986	4.956	5.016	0.059	
	2	4.843	4.814	4.874	0.054	8.9
Methoxychlor	1	7.310	7.280	7.340	0.10	
	2	7.313	7.282	7.342	0.10	0.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B216154-BSD1 Date(s) Analyzed: 11/02/2018 11/03/2018

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.731	6.701	6.761	0.099	
	2	6.559	6.529	6.589	0.093	6.3
4,4'-DDE	1	6.318	6.288	6.348	0.10	
	2	6.166	6.136	6.196	0.091	9.4
4,4'-DDT	1	6.932	6.902	6.962	0.10	
	2	6.777	6.747	6.807	0.094	15.7
Alachlor	1	5.803	5.775	5.835	0.079	
	2	5.459	5.430	5.490	0.076	3.9
Aldrin	1	5.701	5.672	5.732	0.079	
	2	5.486	5.456	5.516	0.075	5.2
alpha-BHC	1	5.078	5.049	5.109	0.054	
	2	4.917	4.888	4.948	0.047	13.9
alpha-Chlordane	1	6.253	6.224	6.284	0.088	
	2	6.034	6.006	6.066	0.084	4.7
beta-BHC	1	5.304	5.274	5.334	0.063	
	2	5.143	5.111	5.171	0.062	1.6
delta-BHC	1	5.402	5.372	5.432	0.063	
	2	5.291	5.260	5.320	0.059	6.6
Dieldrin	1	6.504	6.475	6.535	0.092	
	2	6.241	6.212	6.272	0.081	12.7
Endosulfan I	1	6.340	6.311	6.371	0.083	
	2	6.063	6.034	6.094	0.080	3.7
Endosulfan II	1	6.821	6.792	6.852	0.090	
	2	6.592	6.561	6.621	0.087	3.4
Endosulfan Sulfate	1	7.453	7.423	7.483	0.077	
	2	7.041	7.011	7.071	0.073	5.3
Endrin	1	6.662	6.633	6.693	0.093	
	2	6.440	6.410	6.470	0.087	6.7
Endrin Aldehyde	1	7.127	7.098	7.158	0.078	
	2	6.836	6.807	6.867	0.083	6.2
Endrin Ketone	1	7.660	7.629	7.689	0.090	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B216154-BSD1 Date(s) Analyzed: 11/02/2018 11/03/2018
 Instrument ID (1): ECD2A Instrument ID (2): ECD2B
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.422	7.392	7.452	0.086	4.6
gamma-BHC (Lindane)	1	5.252	5.223	5.283	0.060	
	2	5.092	5.062	5.122	0.057	5.1
gamma-Chlordane	1	6.165	6.136	6.196	0.087	
	2	5.942	5.913	5.973	0.083	4.7
Heptachlor	1	5.522	5.493	5.553	0.071	
	2	5.314	5.284	5.344	0.069	2.9
Heptachlor Epoxide	1	6.084	6.054	6.114	0.084	
	2	5.825	5.796	5.856	0.075	11.3
Hexachlorobenzene	1	4.986	4.956	5.016	0.067	
	2	4.843	4.814	4.874	0.062	7.8
Methoxychlor	1	7.310	7.280	7.340	0.10	
	2	7.312	7.282	7.342	0.10	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-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-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.
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-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.
O-32	A dilution was performed as part of the standard analytical procedure.
P-01	Result was confirmed using a dissimilar column. Relative percent difference between the two results was >40%. In accordance with the method, the higher result was reported.
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 did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration 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 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.
V-36	Initial calibration verification (ICV) 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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
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
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8151A in Water</i>	
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromo-3-chloropropane (DBCP)	NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
Dibromomethane	NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY
Methylene Chloride	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
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 (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
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
<i>SW-846 8270D in Water</i>	
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
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
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	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

185 1553

<http://www.contestlabs.com>
 CHAIN OF CUSTODY RECORD

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



Doc # 381 Rev 1_03242017
 39 Spruce Street
 East Longmeadow, MA 01028

Page 1 of 1

Company Name: VHB Address: 101 Walnut Street, Watertown, MA Phone: 617-607-1841		Requested Turnaround Time 7-Day <input checked="" type="checkbox"/> 10-Day <input type="checkbox"/> Due Date:					
Project Name: Eversource Transmission Project Project Location: Sudbury, Massachusetts Project Number: 12970.03 Project Manager: Paige Cornell Con-Test Quote Name/Number:		Rush-Approval Required 1-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> 4-Day <input type="checkbox"/> Data Delivery Format: PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> Other: Limit Check <input checked="" type="checkbox"/>					
Invoice Recipient: Sampled By: FB		CLP Like Data Pkg Required: <input type="checkbox"/> Email To: pcornell@vhb.com ; pmckinlay@vhb.com ; michaelphillips@vhb.com ; fbeavans@vhb.com Fax To #:					
Con-Test Work Order#	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code
01	SB-51	10/24/18	1057	x	x	S	U
02	SB-50	10/25/18	0914				
03	SB-37		1020				
04	SB-38		1105				
05	SB-39		1310				
06	MP37	10/26/18	0850				
07	MP38		1005				
08	MP39		1235				

ANALYSIS REQUESTED	Conductivity			Pesticide/Herbicide			SVOCs, PCBs, TPH			VOCs			MCP 14 Metals		
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Ignitability, pH, Reactivity	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
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) _DI
 H2O

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

TCLP 20x Rule

Relinquished by: (signature)	Date/Time: 10/31/18 0730
Received by: (signature)	Date/Time: 10/31/18 1430
Relinquished by: (signature)	Date/Time: 10/31/18 2030
Received by: (signature)	Date/Time: 10/31/18 2030
Relinquished by: (signature)	Date/Time: 10/31/18 2030
Received by: (signature)	Date/Time: 10/31/18 2030

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

Project Entry	Government <input type="checkbox"/>	Federal <input type="checkbox"/>	City <input type="checkbox"/>	Municipality <input type="checkbox"/>	21 J <input type="checkbox"/>	Brownfield <input type="checkbox"/>	MWRA <input type="checkbox"/>	School <input type="checkbox"/>	MBTA <input type="checkbox"/>	WRTA <input type="checkbox"/>	Other <input type="checkbox"/>
											Chromatogram <input type="checkbox"/>
											AHA-LAP, LLC <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 VHB

Received By LR Date 10-31-18 Time 2030

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 # 557 Actual Temp - 2.4
 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 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? Luke

Is there enough Volume? T

Is there Headspace where applicable? T 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-	8	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-	16	Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

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

Comments:

Received out of time for pH analysis

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 18J1553
Project Location: Sudbury, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
18J1553-01 thru 18J1553-08

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 (X)	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 A ()	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

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

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

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

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

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski

Position: Laboratory Director

Printed Name: Tod E. Kopyscinski

Date: 11/09/18

October 24, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18J0746

Enclosed are results of analyses for samples received by the laboratory on October 15, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive style with a large, prominent 'K' and 'M'.

Kerry K. McGee
Project Manager

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 10/24/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J0746

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP32	18J0746-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
MP34	18J0746-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18J0746

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB49	18J0746-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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 8151, samples were derivatized on 10/17/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 8081B

Qualifications:**DL-03**

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

18J0746-01[MP32]

P-02

Sample RPD between primary and confirmatory analysis exceeded 40%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.

Analyte & Samples(s) Qualified:**4,4'-DDE**

18J0746-02[MP34]

SW-846 8082A

Qualifications:**O-32**

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

Analyte & Samples(s) Qualified:

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49]

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)**

B215078-MS1, B215078-MSD1

SW-846 8151A

Qualifications:**V-06**

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

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

B214866-BS1, B214866-BSD1

Dinoseb [2C]

B214866-BS1, B214866-BSD1

V-20

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

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

B214866-BLK1

V-35

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

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

B214866-BLK1, B214866-BS1, B214866-BSD1

Dinoseb [2C]

B214866-BLK1, B214866-BS1, B214866-BSD1

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

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49], B215140-BLK1, B215140-BS1, B215140-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

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49], B215140-BLK1, B215140-BS1, B215140-BSD1

Tetrahydrofuran

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49], B215140-BLK1, B215140-BS1, B215140-BSD1

V-20

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

Analyte & Samples(s) Qualified:

Methylene Chloride

B215140-BS1, B215140-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

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49], B215140-BLK1, B215140-BS1, B215140-BSD1

V-36

Initial calibration verification (ICV) 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:

1,4-Dioxane

B215140-BS1, B215140-BSD1

SW-846 8270D

Qualifications:

V-05

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

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

B215149-BLK1, B215149-BS1, B215149-BSD1

Aniline

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49]

Pyridine

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49]

V-06

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

Analyte & Samples(s) Qualified:

4-Nitrophenol

B215149-BS1, B215149-BSD1

V-19

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

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49]

V-20

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

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

B215149-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**

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49], B215149-BLK1, B215149-BS1, B215149-BSD1

Aniline

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49], B215149-BLK1, B215149-BS1, B215149-BSD1

SW-846 9045C**Qualifications:****H-03**

Sample received after recommended holding time was exceeded.

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

18J0746-01[MP32], 18J0746-02[MP34], 18J0746-03[SB49]

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.



Tod E. Kopycinski
Laboratory Director

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP32

Sampled: 10/11/2018 10:15

Sample ID: 18J0746-01

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	0.049	mg/Kg dry	1	R-05	SW-846 8260C	10/18/18	10/18/18 11:53	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Benzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Bromobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Bromochloromethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Bromodichloromethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Bromoform	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Bromomethane	ND	0.0049	mg/Kg dry	1	V-34	SW-846 8260C	10/18/18	10/18/18 11:53	MFF
2-Butanone (MEK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
n-Butylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
sec-Butylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
tert-Butylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Carbon Disulfide	ND	0.0029	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Carbon Tetrachloride	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Chlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Chlorodibromomethane	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Chloroethane	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Chloroform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Chloromethane	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
2-Chlorotoluene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
4-Chlorotoluene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2-Dibromoethane (EDB)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Dibromomethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2-Dichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,3-Dichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,4-Dichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1-Dichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2-Dichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
cis-1,2-Dichloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
trans-1,2-Dichloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,3-Dichloropropane	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
2,2-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
cis-1,3-Dichloropropene	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
trans-1,3-Dichloropropene	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Diethyl Ether	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Diisopropyl Ether (DIPE)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,4-Dioxane	ND	0.049	mg/Kg dry	1	V-16	SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Ethylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP32

Sampled: 10/11/2018 10:15

Sample ID: 18J0746-01

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	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
2-Hexanone (MBK)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Isopropylbenzene (Cumene)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Methylene Chloride	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Naphthalene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
n-Propylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Styrene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1,1,2-Tetrachloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Tetrachloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Tetrahydrofuran	ND	0.0049	mg/Kg dry	1	V-16	SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Toluene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2,4-Trichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1,1-Trichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,1,2-Trichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Trichloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2,3-Trichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,2,4-Trimethylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
1,3,5-Trimethylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
Vinyl Chloride	ND	0.0049	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
m+p Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF
o-Xylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 11:53	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	10/18/18 11:53
Toluene-d8	96.3	70-130	10/18/18 11:53
4-Bromofluorobenzene	95.2	70-130	10/18/18 11:53

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP32

Sampled: 10/11/2018 10:15

Sample ID: 18J0746-01

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	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Aniline	ND	0.40	mg/Kg dry	1	V-05, V-34	SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Benzo(b)fluoranthene	0.24	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
4-Chloroaniline	ND	0.79	mg/Kg dry	1	V-34	SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,4-Dinitrophenol	ND	0.79	mg/Kg dry	1	V-19	SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Fluoranthene	0.26	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP32

Sampled: 10/11/2018 10:15

Sample ID: 18J0746-01

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	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
4-Nitrophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Pyrene	0.22	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Pyridine	ND	0.40	mg/Kg dry	1	V-05	SW-846 8270D	10/18/18	10/23/18 21:25	BGL
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:25	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		53.1	30-130					10/23/18 21:25	
Phenol-d6		57.2	30-130					10/23/18 21:25	
Nitrobenzene-d5		58.8	30-130					10/23/18 21:25	
2-Fluorobiphenyl		58.6	30-130					10/23/18 21:25	
2,4,6-Tribromophenol		59.8	30-130					10/23/18 21:25	
p-Terphenyl-d14		59.0	30-130					10/23/18 21:25	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP32

Sampled: 10/11/2018 10:15

Sample ID: 18J0746-01

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.23	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Aldrin [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
alpha-BHC [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
beta-BHC [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
delta-BHC [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
gamma-BHC (Lindane) [1]	ND	0.023	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Chlordane [1]	ND	0.23	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
4,4'-DDD [1]	ND	0.046	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
4,4'-DDE [1]	ND	0.046	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
4,4'-DDT [1]	ND	0.046	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Dieldrin [1]	ND	0.046	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Endosulfan I [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Endosulfan II [1]	ND	0.092	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Endosulfan sulfate [1]	ND	0.092	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Endrin [1]	ND	0.092	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Endrin aldehyde [1]	ND	0.092	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Endrin ketone [1]	ND	0.092	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Heptachlor [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Heptachlor epoxide [1]	ND	0.057	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Hexachlorobenzene [1]	ND	0.069	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Methoxychlor [1]	ND	0.57	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Toxaphene [1]	ND	1.1	mg/Kg dry	10		SW-846 8081B	10/17/18	10/18/18 23:02	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		71.0	30-150					10/18/18 23:02	
Decachlorobiphenyl [2]		63.9	30-150					10/18/18 23:02	
Tetrachloro-m-xylene [1]		67.9	30-150					10/18/18 23:02	
Tetrachloro-m-xylene [2]		66.2	30-150					10/18/18 23:02	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP32

Sampled: 10/11/2018 10:15

Sample ID: 18J0746-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	10/17/18	10/20/18 0:47	TG
Aroclor-1221 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1232 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1242 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1248 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1254 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1260 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1262 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Aroclor-1268 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 0:47	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		69.1	30-150					10/20/18 0:47	
Decachlorobiphenyl [2]		86.0	30-150					10/20/18 0:47	
Tetrachloro-m-xylene [1]		79.3	30-150					10/20/18 0:47	
Tetrachloro-m-xylene [2]		86.6	30-150					10/20/18 0:47	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 10:15

Field Sample #: MP32

Sample ID: 18J0746-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
Dalalpon [1]	ND	74	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 21:57	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		81.7	30-150					10/21/18 21:57	
2,4-Dichlorophenylacetic acid [2]		84.9	30-150					10/21/18 21:57	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 10:15

Field Sample #: MP32

Sample ID: 18J0746-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	330	98	mg/Kg dry	10		SW-846 8100 Modified	10/17/18	10/18/18 14:26	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		62.3	40-140					10/18/18 14:26	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 10:15

Field Sample #: MP32

Sample ID: 18J0746-01

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	10/22/18	10/23/18 11:43	QNW
Arsenic	18	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Barium	22	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Beryllium	0.26	0.20	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Cadmium	0.62	0.20	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Chromium	13	0.39	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Lead	26	0.59	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	10/22/18	10/23/18 12:27	EJB
Nickel	8.4	0.39	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Vanadium	14	0.78	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW
Zinc	28	0.78	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:43	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 10:15

Field Sample #: MP32

Sample ID: 18J0746-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	10/17/18	10/17/18 15:30	LED
pH @20.6°C	6.4		pH Units	1	H-03	SW-846 9045C	10/16/18	10/16/18 20:34	LED
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	10/20/18	10/23/18 12:30	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	10/20/18	10/23/18 12:00	DJM
Specific conductance	8.1	2.0	µmhos/cm	1		SM21-22 2510B Modified	10/23/18	10/23/18 13:00	EC
% Solids	84.0		% Wt	1		SM 2540G	10/19/18	10/21/18 9:20	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP34

Sampled: 10/11/2018 14:21

Sample ID: 18J0746-02

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	0.10	mg/Kg dry	1	R-05	SW-846 8260C	10/18/18	10/18/18 12:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	10/18/18	10/18/18 12:20	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Carbon Disulfide	ND	0.0063	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1	V-16	SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP34

Sampled: 10/11/2018 14:21

Sample ID: 18J0746-02

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	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Naphthalene	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1	V-16	SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2,3-Trichlorobenzene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	96.5	70-130	
4-Bromofluorobenzene	99.8	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP34

Sampled: 10/11/2018 14:21

Sample ID: 18J0746-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Aniline	ND	0.39	mg/Kg dry	1	V-05, V-34	SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Anthracene	2.3	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Benzo(a)anthracene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Benzo(a)pyrene	0.40	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Benzo(b)fluoranthene	1.0	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Benzo(g,h,i)perylene	0.20	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Benzo(k)fluoranthene	0.36	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
4-Chloroaniline	ND	0.77	mg/Kg dry	1	V-34	SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Chrysene	1.2	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Dibenzofuran	1.6	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,4-Dinitrophenol	ND	0.77	mg/Kg dry	1	V-19	SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Fluoranthene	6.1	0.99	mg/Kg dry	5		SW-846 8270D	10/18/18	10/24/18 12:56	BGL
Fluorene	0.65	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Indeno(1,2,3-cd)pyrene	0.24	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2-Methylnaphthalene	0.67	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP34

Sampled: 10/11/2018 14:21

Sample ID: 18J0746-02

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	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Naphthalene	0.85	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
4-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Phenanthrene	10	0.99	mg/Kg dry	5		SW-846 8270D	10/18/18	10/24/18 12:56	BGL
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Pyrene	4.2	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
Pyridine	ND	0.39	mg/Kg dry	1	V-05	SW-846 8270D	10/18/18	10/23/18 21:52	BGL
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 21:52	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	55.4	30-130	10/23/18 21:52
2-Fluorophenol	65.4	30-130	10/24/18 12:56
Phenol-d6	63.4	30-130	10/23/18 21:52
Phenol-d6	76.5	30-130	10/24/18 12:56
Nitrobenzene-d5	62.3	30-130	10/23/18 21:52
Nitrobenzene-d5	64.6	30-130	10/24/18 12:56
2-Fluorobiphenyl	67.8	30-130	10/23/18 21:52
2-Fluorobiphenyl	71.4	30-130	10/24/18 12:56
2,4,6-Tribromophenol	76.8	30-130	10/23/18 21:52
2,4,6-Tribromophenol	74.1	30-130	10/24/18 12:56
p-Terphenyl-d14	76.4	30-130	10/23/18 21:52
p-Terphenyl-d14	76.0	30-130	10/24/18 12:56

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP34

Sampled: 10/11/2018 14:21

Sample ID: 18J0746-02

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Aldrin [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
alpha-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
beta-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
delta-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
4,4'-DDD [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
4,4'-DDE [1]	0.0084	0.0046	mg/Kg dry	1	P-02	SW-846 8081B	10/17/18	10/18/18 23:29	TG
4,4'-DDT [1]	0.050	0.0046	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Dieldrin [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Endosulfan I [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Endosulfan II [1]	ND	0.0091	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Endosulfan sulfate [1]	ND	0.0091	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Endrin [1]	ND	0.0091	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Endrin aldehyde [1]	ND	0.0091	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Endrin ketone [1]	ND	0.0091	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Heptachlor [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Heptachlor epoxide [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Hexachlorobenzene [1]	ND	0.0068	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Methoxychlor [1]	ND	0.057	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:29	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		56.4	30-150					10/18/18 23:29	
Decachlorobiphenyl [2]		46.3	30-150					10/18/18 23:29	
Tetrachloro-m-xylene [1]		54.1	30-150					10/18/18 23:29	
Tetrachloro-m-xylene [2]		52.3	30-150					10/18/18 23:29	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: MP34

Sampled: 10/11/2018 14:21

Sample ID: 18J0746-02

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	10/17/18	10/20/18 1:04	TG
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:04	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		72.0	30-150					10/20/18 1:04	
Decachlorobiphenyl [2]		89.7	30-150					10/20/18 1:04	
Tetrachloro-m-xylene [1]		74.2	30-150					10/20/18 1:04	
Tetrachloro-m-xylene [2]		80.2	30-150					10/20/18 1:04	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:21

Field Sample #: MP34

Sample ID: 18J0746-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
Dalapon [1]	ND	74	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
MCPP [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 22:36	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		78.8	30-150					10/21/18 22:36	
2,4-Dichlorophenylacetic acid [2]		82.5	30-150					10/21/18 22:36	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:21

Field Sample #: MP34

Sample ID: 18J0746-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	340	96	mg/Kg dry	10		SW-846 8100 Modified	10/17/18	10/18/18 15:26	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		55.9	40-140					10/18/18 15:26	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:21

Field Sample #: MP34

Sample ID: 18J0746-02

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	10/22/18	10/23/18 11:48	QNW
Arsenic	21	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Barium	32	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Beryllium	0.42	0.20	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Cadmium	0.73	0.20	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Chromium	16	0.40	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Lead	27	0.60	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Mercury	0.039	0.031	mg/Kg dry	1		SW-846 7471B	10/22/18	10/23/18 12:33	EJB
Nickel	12	0.40	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Vanadium	24	0.80	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW
Zinc	26	0.80	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:48	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:21

Field Sample #: MP34

Sample ID: 18J0746-02

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
Ignitability	Absent		present/absent	1		SW-846 1030	10/17/18	10/17/18 15:30	LED
pH @20.9°C	6.6		pH Units	1	H-03	SW-846 9045C	10/16/18	10/16/18 20:34	LED
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	10/20/18	10/23/18 12:30	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	10/20/18	10/23/18 12:00	DJM
Specific conductance	4.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	10/23/18	10/23/18 13:00	EC
% Solids	84.5		% Wt	1		SM 2540G	10/19/18	10/21/18 9:20	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: SB49

Sampled: 10/11/2018 14:25

Sample ID: 18J0746-03

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	0.089	mg/Kg dry	1	R-05	SW-846 8260C	10/18/18	10/18/18 12:48	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	10/18/18	10/18/18 12:48	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: SB49

Sampled: 10/11/2018 14:25

Sample ID: 18J0746-03

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	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Naphthalene	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1,2,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1	V-16	SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2,3-Trichlorobenzene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	10/18/18	10/18/18 12:48	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	96.6	70-130	
4-Bromofluorobenzene	99.3	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: SB49

Sampled: 10/11/2018 14:25

Sample ID: 18J0746-03

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	10/18/18	10/23/18 22:20	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Aniline	ND	0.40	mg/Kg dry	1	V-05, V-34	SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
4-Chloroaniline	ND	0.78	mg/Kg dry	1	V-34	SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,4-Dinitrophenol	ND	0.78	mg/Kg dry	1	V-19	SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:25

Field Sample #: SB49

Sample ID: 18J0746-03

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	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
4-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Pyridine	ND	0.40	mg/Kg dry	1	V-05	SW-846 8270D	10/18/18	10/23/18 22:20	BGL
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	10/18/18	10/23/18 22:20	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		61.9	30-130					10/23/18 22:20	
Phenol-d6		72.9	30-130					10/23/18 22:20	
Nitrobenzene-d5		70.8	30-130					10/23/18 22:20	
2-Fluorobiphenyl		75.6	30-130					10/23/18 22:20	
2,4,6-Tribromophenol		87.4	30-130					10/23/18 22:20	
p-Terphenyl-d14		82.1	30-130					10/23/18 22:20	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: SB49

Sampled: 10/11/2018 14:25

Sample ID: 18J0746-03

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Aldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
alpha-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
beta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
delta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
4,4'-DDD [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
4,4'-DDE [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
4,4'-DDT [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Dieldrin [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Endosulfan I [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Endosulfan II [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Endosulfan sulfate [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Endrin [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Endrin aldehyde [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Endrin ketone [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Heptachlor [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Heptachlor epoxide [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Hexachlorobenzene [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Methoxychlor [1]	ND	0.056	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	10/17/18	10/18/18 23:56	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		56.2	30-150					10/18/18 23:56	
Decachlorobiphenyl [2]		49.7	30-150					10/18/18 23:56	
Tetrachloro-m-xylene [1]		56.3	30-150					10/18/18 23:56	
Tetrachloro-m-xylene [2]		52.6	30-150					10/18/18 23:56	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Field Sample #: SB49

Sampled: 10/11/2018 14:25

Sample ID: 18J0746-03

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	10/17/18	10/20/18 1:21	TG
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	10/17/18	10/20/18 1:21	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		60.9	30-150					10/20/18 1:21	
Decachlorobiphenyl [2]		74.8	30-150					10/20/18 1:21	
Tetrachloro-m-xylene [1]		58.4	30-150					10/20/18 1:21	
Tetrachloro-m-xylene [2]		65.7	30-150					10/20/18 1:21	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:25

Field Sample #: SB49

Sample ID: 18J0746-03

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
Dalalpon [1]	ND	75	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
Dinoseb [1]	ND	15	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
MCPP [1]	ND	3000	µg/kg dry	1		SW-846 8151A	10/16/18	10/21/18 23:16	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		74.1	30-150					10/21/18 23:16	
2,4-Dichlorophenylacetic acid [2]		103	30-150					10/21/18 23:16	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:25

Field Sample #: SB49

Sample ID: 18J0746-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	21	9.8	mg/Kg dry	1		SW-846 8100 Modified	10/17/18	10/18/18 13:06	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		62.4	40-140					10/18/18 13:06	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:25

Field Sample #: SB49

Sample ID: 18J0746-03

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	10/22/18	10/23/18 11:53	QNW
Arsenic	14	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Barium	21	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Beryllium	0.31	0.20	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Cadmium	0.47	0.20	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Chromium	11	0.39	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Lead	6.4	0.59	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	10/22/18	10/23/18 12:34	EJB
Nickel	8.3	0.39	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Vanadium	13	0.78	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW
Zinc	15	0.78	mg/Kg dry	1		SW-846 6010D	10/22/18	10/23/18 11:53	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18J0746

Date Received: 10/15/2018

Sampled: 10/11/2018 14:25

Field Sample #: SB49

Sample ID: 18J0746-03

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
Ignitability	Absent		present/absent	1		SW-846 1030	10/17/18	10/17/18 15:30	LED
pH @21.4°C	5.9		pH Units	1	H-03	SW-846 9045C	10/16/18	10/16/18 20:34	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	10/20/18	10/23/18 12:30	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	10/20/18	10/23/18 12:00	DJM
Specific conductance	5.9	2.0	µmhos/cm	1		SM21-22 2510B Modified	10/23/18	10/23/18 13:00	EC
% Solids	83.9		% Wt	1		SM 2540G	10/19/18	10/21/18 9:20	MJR

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18J0746-01 [MP32]	B215260	10/19/18
18J0746-02 [MP34]	B215260	10/19/18
18J0746-03 [SB49]	B215260	10/19/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18J0746-01 [MP32]	B215406	1.00	10/23/18
18J0746-02 [MP34]	B215406	1.00	10/23/18
18J0746-03 [SB49]	B215406	1.00	10/23/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18J0746-01 [MP32]	B215075	50.0	10/17/18
18J0746-02 [MP34]	B215075	50.0	10/17/18
18J0746-03 [SB49]	B215075	50.0	10/17/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215319	1.52	50.0	10/22/18
18J0746-02 [MP34]	B215319	1.49	50.0	10/22/18
18J0746-03 [SB49]	B215319	1.53	50.0	10/22/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215349	0.609	50.0	10/22/18
18J0746-02 [MP34]	B215349	0.578	50.0	10/22/18
18J0746-03 [SB49]	B215349	0.608	50.0	10/22/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215027	10.4	10.0	10/17/18
18J0746-02 [MP34]	B215027	10.4	10.0	10/17/18
18J0746-03 [SB49]	B215027	10.6	10.0	10/17/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215049	10.4	10.0	10/17/18
18J0746-02 [MP34]	B215049	10.4	10.0	10/17/18
18J0746-03 [SB49]	B215049	10.6	10.0	10/17/18

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215078	30.3	1.00	10/17/18
18J0746-02 [MP34]	B215078	30.8	1.00	10/17/18
18J0746-03 [SB49]	B215078	30.4	1.00	10/17/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B214866	20.0	5.00	10/16/18
18J0746-02 [MP34]	B214866	20.0	5.00	10/16/18
18J0746-03 [SB49]	B214866	20.0	5.00	10/16/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215140	12.2	10.0	10/18/18
18J0746-02 [MP34]	B215140	5.67	10.0	10/18/18
18J0746-03 [SB49]	B215140	6.68	10.0	10/18/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215149	30.0	1.00	10/18/18
18J0746-02 [MP34]	B215149	30.6	1.00	10/18/18
18J0746-02RE1 [MP34]	B215149	30.6	1.00	10/18/18
18J0746-03 [SB49]	B215149	30.4	1.00	10/18/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215274	25.3	250	10/20/18
18J0746-02 [MP34]	B215274	25.3	250	10/20/18
18J0746-03 [SB49]	B215274	25.5	250	10/20/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18J0746-01 [MP32]	B215459	25.3	250	10/20/18
18J0746-02 [MP34]	B215459	25.3	250	10/20/18
18J0746-03 [SB49]	B215459	25.5	250	10/20/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18J0746-01 [MP32]	B214965	20.0	10/16/18
18J0746-02 [MP34]	B214965	20.0	10/16/18
18J0746-03 [SB49]	B214965	20.0	10/16/18

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 B215140 - SW-846 5035

Blank (B215140-BLK1)

Prepared & Analyzed: 10/18/18

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 B215140 - SW-846 5035

Blank (B215140-BLK1)

Prepared & Analyzed: 10/18/18

n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							V-16
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	0.0498		mg/Kg wet	0.0500		99.6	70-130			
Surrogate: Toluene-d8	0.0482		mg/Kg wet	0.0500		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0476		mg/Kg wet	0.0500		95.2	70-130			

LCS (B215140-BS1)

Prepared & Analyzed: 10/18/18

Acetone	0.314	0.10	mg/Kg wet	0.200		157	40-160			L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0193	0.0010	mg/Kg wet	0.0200		96.6	70-130			
Benzene	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
Bromobenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
Bromochloromethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromodichloromethane	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Bromoform	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
Bromomethane	0.0115	0.010	mg/Kg wet	0.0200		57.7	40-160			L-14, V-34 †
2-Butanone (MEK)	0.265	0.040	mg/Kg wet	0.200		132	40-160			L-14 †
n-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
sec-Butylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
tert-Butylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0192	0.0010	mg/Kg wet	0.0200		96.0	70-130			
Carbon Disulfide	0.0191	0.0060	mg/Kg wet	0.0200		95.3	70-130			
Carbon Tetrachloride	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130			
Chlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorodibromomethane	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130			
Chloroethane	0.0172	0.010	mg/Kg wet	0.0200		86.2	70-130			
Chloroform	0.0187	0.0040	mg/Kg wet	0.0200		93.7	70-130			
Chloromethane	0.0185	0.010	mg/Kg wet	0.0200		92.3	40-160			†
2-Chlorotoluene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
4-Chlorotoluene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,2-Dibromoethane (EDB)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130			
Dibromomethane	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,2-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,3-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,4-Dichlorobenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	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
Batch B215140 - SW-846 5035										
LCS (B215140-BS1)										
Prepared & Analyzed: 10/18/18										
Dichlorodifluoromethane (Freon 12)	0.0184	0.010	mg/Kg wet	0.0200		91.9	40-160			†
1,1-Dichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
1,2-Dichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1-Dichloroethylene	0.0180	0.0040	mg/Kg wet	0.0200		89.8	70-130			
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.6	70-130			
trans-1,2-Dichloroethylene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
1,2-Dichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130			
1,3-Dichloropropane	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130			
2,2-Dichloropropane	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130			
1,1-Dichloropropene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130			
cis-1,3-Dichloropropene	0.0191	0.0010	mg/Kg wet	0.0200		95.3	70-130			
trans-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.5	70-130			
Diethyl Ether	0.0200	0.010	mg/Kg wet	0.0200		99.8	70-130			
Diisopropyl Ether (DIPE)	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130			
1,4-Dioxane	0.262	0.10	mg/Kg wet	0.200		131	40-160			L-14, V-16, V-36 †
Ethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130			
Hexachlorobutadiene	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
2-Hexanone (MBK)	0.239	0.020	mg/Kg wet	0.200		119	40-160			†
Isopropylbenzene (Cumene)	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
p-Isopropyltoluene (p-Cymene)	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0200	0.0040	mg/Kg wet	0.0200		100	70-130			
Methylene Chloride	0.0235	0.010	mg/Kg wet	0.0200		117	70-130			V-20
4-Methyl-2-pentanone (MIBK)	0.218	0.020	mg/Kg wet	0.200		109	40-160			†
Naphthalene	0.0200	0.0040	mg/Kg wet	0.0200		99.9	70-130			
n-Propylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130			
Styrene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			
1,1,1,2-Tetrachloroethane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
1,1,1,2,2-Tetrachloroethane	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130			
Tetrachloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Tetrahydrofuran	0.0190	0.010	mg/Kg wet	0.0200		95.2	70-130			V-16
Toluene	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130			
1,2,3-Trichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,4-Trichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,1-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130			
1,1,2-Trichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130			
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0179	0.010	mg/Kg wet	0.0200		89.4	70-130			
1,2,3-Trichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2,4-Trimethylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.9	70-130			
1,3,5-Trimethylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.4	70-130			
Vinyl Chloride	0.0174	0.010	mg/Kg wet	0.0200		87.2	70-130			
m+p Xylene	0.0375	0.0040	mg/Kg wet	0.0400		93.8	70-130			
o-Xylene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0509		mg/Kg wet	0.0500		102	70-130			
Surrogate: Toluene-d8	0.0479		mg/Kg wet	0.0500		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0506		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
Batch B215140 - SW-846 5035										
LCS Dup (B215140-BSD1)										
Prepared & Analyzed: 10/18/18										
Acetone	0.246	0.10	mg/Kg wet	0.200		123	40-160	24.1 *	20	R-05 †
tert-Amyl Methyl Ether (TAME)	0.0195	0.0010	mg/Kg wet	0.0200		97.7	70-130	1.13	20	
Benzene	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130	1.88	20	
Bromobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	1.14	20	
Bromochloromethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	1.55	20	
Bromodichloromethane	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130	0.531	20	
Bromoform	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	2.52	20	
Bromomethane	0.0123	0.010	mg/Kg wet	0.0200		61.4	40-160	6.21	20	L-14, V-34 †
2-Butanone (MEK)	0.226	0.040	mg/Kg wet	0.200		113	40-160	15.7	20	†
n-Butylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	1.47	20	
sec-Butylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	3.05	20	
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130	4.13	20	
tert-Butyl Ethyl Ether (TBEE)	0.0198	0.0010	mg/Kg wet	0.0200		98.9	70-130	2.98	20	
Carbon Disulfide	0.0198	0.0060	mg/Kg wet	0.0200		99.0	70-130	3.81	20	
Carbon Tetrachloride	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130	2.47	20	
Chlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	4.60	20	
Chlorodibromomethane	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	3.71	20	
Chloroethane	0.0171	0.010	mg/Kg wet	0.0200		85.4	70-130	0.932	20	
Chloroform	0.0190	0.0040	mg/Kg wet	0.0200		95.1	70-130	1.48	20	
Chloromethane	0.0188	0.010	mg/Kg wet	0.0200		94.2	40-160	2.04	20	†
2-Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	5.58	20	
4-Chlorotoluene	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130	2.06	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.88	20	
1,2-Dibromoethane (EDB)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	1.09	20	
Dibromomethane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	3.45	20	
1,2-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	4.26	20	
1,3-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.87	20	
1,4-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	0.758	20	
Dichlorodifluoromethane (Freon 12)	0.0188	0.010	mg/Kg wet	0.0200		93.8	40-160	2.05	20	†
1,1-Dichloroethane	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	1.25	20	
1,2-Dichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.596	20	
1,1-Dichloroethylene	0.0191	0.0040	mg/Kg wet	0.0200		95.3	70-130	5.94	20	
cis-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	4.29	20	
trans-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130	1.85	20	
1,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	1.26	20	
1,3-Dichloropropane	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130	4.08	20	
2,2-Dichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		89.2	70-130	0.562	20	
1,1-Dichloropropene	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130	4.35	20	
cis-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130	2.28	20	
trans-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.3	70-130	3.27	20	
Diethyl Ether	0.0195	0.010	mg/Kg wet	0.0200		97.4	70-130	2.43	20	
Diisopropyl Ether (DIPE)	0.0192	0.0010	mg/Kg wet	0.0200		95.9	70-130	1.05	20	
1,4-Dioxane	0.256	0.10	mg/Kg wet	0.200		128	40-160	2.47	20	V-16, V-36 †
Ethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130	1.81	20	
Hexachlorobutadiene	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	4.19	20	
2-Hexanone (MBK)	0.220	0.020	mg/Kg wet	0.200		110	40-160	8.03	20	†
Isopropylbenzene (Cumene)	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130	1.44	20	
p-Isopropyltoluene (p-Cymene)	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	2.71	20	
Methyl tert-Butyl Ether (MTBE)	0.0201	0.0040	mg/Kg wet	0.0200		100	70-130	0.399	20	
Methylene Chloride	0.0246	0.010	mg/Kg wet	0.0200		123	70-130	4.74	20	V-20
4-Methyl-2-pentanone (MIBK)	0.213	0.020	mg/Kg wet	0.200		107	40-160	2.02	20	†
Naphthalene	0.0195	0.0040	mg/Kg wet	0.0200		97.4	70-130	2.53	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215140 - SW-846 5035										
LCS Dup (B215140-BSD1)										
Prepared & Analyzed: 10/18/18										
n-Propylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	0.315	20	
Styrene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	3.81	20	
1,1,1,2-Tetrachloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	6.00	20	
1,1,2,2-Tetrachloroethane	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130	4.52	20	
Tetrachloroethylene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	2.72	20	
Tetrahydrofuran	0.0157	0.010	mg/Kg wet	0.0200		78.7	70-130	19.0	20	V-16
Toluene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130	0.912	20	
1,2,3-Trichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	1.09	20	
1,2,4-Trichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	1.06	20	
1,1,1-Trichloroethane	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130	1.57	20	
1,1,2-Trichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	0.949	20	
Trichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	2.03	20	
Trichlorofluoromethane (Freon 11)	0.0175	0.010	mg/Kg wet	0.0200		87.5	70-130	2.15	20	
1,2,3-Trichloropropane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	8.23	20	
1,2,4-Trimethylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130	0.329	20	
1,3,5-Trimethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	1.93	20	
Vinyl Chloride	0.0178	0.010	mg/Kg wet	0.0200		89.1	70-130	2.16	20	
m+p Xylene	0.0375	0.0040	mg/Kg wet	0.0400		93.6	70-130	0.213	20	
o-Xylene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	4.99	20	
Surrogate: 1,2-Dichloroethane-d4	0.0504		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0480		mg/Kg wet	0.0500		96.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0492		mg/Kg wet	0.0500		98.3	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 B215149 - SW-846 3546

Blank (B215149-BLK1)

Prepared: 10/18/18 Analyzed: 10/20/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							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							V-05
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 (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							V-20
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 B215149 - SW-846 3546

Blank (B215149-BLK1)

Prepared: 10/18/18 Analyzed: 10/20/18

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	3.28		mg/Kg wet	6.67		49.3	30-130			
Surrogate: Phenol-d6	3.51		mg/Kg wet	6.67		52.6	30-130			
Surrogate: Nitrobenzene-d5	1.59		mg/Kg wet	3.33		47.6	30-130			
Surrogate: 2-Fluorobiphenyl	1.77		mg/Kg wet	3.33		53.2	30-130			
Surrogate: 2,4,6-Tribromophenol	4.34		mg/Kg wet	6.67		65.1	30-130			
Surrogate: p-Terphenyl-d14	2.08		mg/Kg wet	3.33		62.3	30-130			

LCS (B215149-BS1)

Prepared: 10/18/18 Analyzed: 10/20/18

Acenaphthene	1.07	0.17	mg/Kg wet	1.67		64.4	40-140			
Acenaphthylene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140			
Acetophenone	1.08	0.34	mg/Kg wet	1.67		65.1	40-140			
Aniline	0.687	0.34	mg/Kg wet	1.67		41.2	40-140			V-34
Anthracene	1.18	0.17	mg/Kg wet	1.67		70.8	40-140			
Benzo(a)anthracene	1.20	0.17	mg/Kg wet	1.67		72.1	40-140			
Benzo(a)pyrene	1.23	0.17	mg/Kg wet	1.67		73.7	40-140			
Benzo(b)fluoranthene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140			
Benzo(g,h,i)perylene	1.07	0.17	mg/Kg wet	1.67		63.9	40-140			
Benzo(k)fluoranthene	1.20	0.17	mg/Kg wet	1.67		71.9	40-140			
Bis(2-chloroethoxy)methane	1.26	0.34	mg/Kg wet	1.67		75.3	40-140			
Bis(2-chloroethyl)ether	1.11	0.34	mg/Kg wet	1.67		66.7	40-140			
Bis(2-chloroisopropyl)ether	1.09	0.34	mg/Kg wet	1.67		65.2	40-140			
Bis(2-Ethylhexyl)phthalate	1.15	0.34	mg/Kg wet	1.67		68.8	40-140			
4-Bromophenylphenylether	1.23	0.34	mg/Kg wet	1.67		73.7	40-140			
Butylbenzylphthalate	1.18	0.34	mg/Kg wet	1.67		70.6	40-140			
4-Chloroaniline	0.668	0.66	mg/Kg wet	1.67		40.1	15-140			V-34 †
2-Chloronaphthalene	1.00	0.34	mg/Kg wet	1.67		60.1	40-140			
2-Chlorophenol	1.04	0.34	mg/Kg wet	1.67		62.6	30-130			
Chrysene	1.16	0.17	mg/Kg wet	1.67		69.7	40-140			
Dibenz(a,h)anthracene	1.09	0.17	mg/Kg wet	1.67		65.1	40-140			
Dibenzofuran	1.16	0.34	mg/Kg wet	1.67		69.9	40-140			
Di-n-butylphthalate	1.16	0.34	mg/Kg wet	1.67		69.6	40-140			
1,2-Dichlorobenzene	0.950	0.34	mg/Kg wet	1.67		57.0	40-140			
1,3-Dichlorobenzene	0.909	0.34	mg/Kg wet	1.67		54.6	40-140			
1,4-Dichlorobenzene	0.901	0.34	mg/Kg wet	1.67		54.0	40-140			
3,3-Dichlorobenzidine	0.855	0.17	mg/Kg wet	1.67		51.3	40-140			
2,4-Dichlorophenol	1.22	0.34	mg/Kg wet	1.67		73.2	30-130			
Diethylphthalate	1.22	0.34	mg/Kg wet	1.67		73.4	40-140			
2,4-Dimethylphenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130			
Dimethylphthalate	1.23	0.34	mg/Kg wet	1.67		73.5	40-140			
2,4-Dinitrophenol	0.738	0.66	mg/Kg wet	1.67		44.3	15-140			V-05 †
2,4-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		75.3	40-140			
2,6-Dinitrotoluene	1.26	0.34	mg/Kg wet	1.67		75.7	40-140			
Di-n-octylphthalate	1.16	0.34	mg/Kg wet	1.67		69.4	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	1.18	0.34	mg/Kg wet	1.67		70.8	40-140			
Fluoranthene	1.18	0.17	mg/Kg wet	1.67		70.5	40-140			
Fluorene	1.14	0.17	mg/Kg wet	1.67		68.7	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 B215149 - SW-846 3546

LCS (B215149-BS1)

Prepared: 10/18/18 Analyzed: 10/20/18

Hexachlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.5	40-140			
Hexachlorobutadiene	1.05	0.34	mg/Kg wet	1.67		63.2	40-140			
Hexachloroethane	0.940	0.34	mg/Kg wet	1.67		56.4	40-140			
Indeno(1,2,3-cd)pyrene	1.09	0.17	mg/Kg wet	1.67		65.1	40-140			
Isophorone	1.17	0.34	mg/Kg wet	1.67		70.0	40-140			
2-Methylnaphthalene	1.16	0.17	mg/Kg wet	1.67		69.6	40-140			
2-Methylphenol	1.03	0.34	mg/Kg wet	1.67		61.6	30-130			
3/4-Methylphenol	1.12	0.34	mg/Kg wet	1.67		67.1	30-130			
Naphthalene	1.05	0.17	mg/Kg wet	1.67		63.3	40-140			
Nitrobenzene	1.07	0.34	mg/Kg wet	1.67		64.4	40-140			
2-Nitrophenol	1.11	0.34	mg/Kg wet	1.67		66.5	30-130			
4-Nitrophenol	1.56	0.66	mg/Kg wet	1.67		93.6	15-140			V-06 †
Pentachlorophenol	0.964	0.34	mg/Kg wet	1.67		57.8	30-130			
Phenanthrene	1.19	0.17	mg/Kg wet	1.67		71.4	40-140			
Phenol	1.17	0.34	mg/Kg wet	1.67		70.3	15-140			†
Pyrene	1.16	0.17	mg/Kg wet	1.67		69.8	40-140			
Pyridine	0.708	0.34	mg/Kg wet	1.67		42.5	30-140			†
1,2,4-Trichlorobenzene	1.07	0.34	mg/Kg wet	1.67		64.1	40-140			
2,4,5-Trichlorophenol	1.25	0.34	mg/Kg wet	1.67		74.9	30-130			
2,4,6-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.5	30-130			
Surrogate: 2-Fluorophenol	3.67		mg/Kg wet	6.67		55.0	30-130			
Surrogate: Phenol-d6	4.07		mg/Kg wet	6.67		61.0	30-130			
Surrogate: Nitrobenzene-d5	1.97		mg/Kg wet	3.33		59.0	30-130			
Surrogate: 2-Fluorobiphenyl	2.13		mg/Kg wet	3.33		63.9	30-130			
Surrogate: 2,4,6-Tribromophenol	4.74		mg/Kg wet	6.67		71.0	30-130			
Surrogate: p-Terphenyl-d14	2.18		mg/Kg wet	3.33		65.5	30-130			

LCS Dup (B215149-BS1)

Prepared: 10/18/18 Analyzed: 10/20/18

Acenaphthene	1.06	0.17	mg/Kg wet	1.67		63.4	40-140	1.53	30	
Acenaphthylene	1.11	0.17	mg/Kg wet	1.67		66.5	40-140	3.98	30	
Acetophenone	1.02	0.34	mg/Kg wet	1.67		61.3	40-140	6.01	30	
Aniline	0.738	0.34	mg/Kg wet	1.67		44.3	40-140	7.25	30	V-34
Anthracene	1.16	0.17	mg/Kg wet	1.67		69.6	40-140	1.74	30	
Benzo(a)anthracene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140	2.59	30	
Benzo(a)pyrene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140	0.463	30	
Benzo(b)fluoranthene	1.13	0.17	mg/Kg wet	1.67		68.1	40-140	1.72	30	
Benzo(g,h,i)perylene	1.02	0.17	mg/Kg wet	1.67		61.2	40-140	4.41	30	
Benzo(k)fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.8	40-140	3.02	30	
Bis(2-chloroethoxy)methane	1.20	0.34	mg/Kg wet	1.67		71.8	40-140	4.84	30	
Bis(2-chloroethyl)ether	1.06	0.34	mg/Kg wet	1.67		63.4	40-140	5.07	30	
Bis(2-chloroisopropyl)ether	1.06	0.34	mg/Kg wet	1.67		63.5	40-140	2.61	30	
Bis(2-Ethylhexyl)phthalate	1.11	0.34	mg/Kg wet	1.67		66.7	40-140	3.22	30	
4-Bromophenylphenylether	1.15	0.34	mg/Kg wet	1.67		69.0	40-140	6.48	30	
Butylbenzylphthalate	1.14	0.34	mg/Kg wet	1.67		68.4	40-140	3.19	30	
4-Chloroaniline	0.692	0.66	mg/Kg wet	1.67		41.5	15-140	3.48	30	V-34 †
2-Chloronaphthalene	0.980	0.34	mg/Kg wet	1.67		58.8	40-140	2.19	30	
2-Chlorophenol	1.01	0.34	mg/Kg wet	1.67		60.6	30-130	3.25	30	
Chrysene	1.10	0.17	mg/Kg wet	1.67		66.3	40-140	5.03	30	
Dibenz(a,h)anthracene	1.05	0.17	mg/Kg wet	1.67		63.0	40-140	3.37	30	
Dibenzofuran	1.14	0.34	mg/Kg wet	1.67		68.4	40-140	2.14	30	
Di-n-butylphthalate	1.13	0.34	mg/Kg wet	1.67		68.1	40-140	2.21	30	
1,2-Dichlorobenzene	0.883	0.34	mg/Kg wet	1.67		53.0	40-140	7.35	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
Batch B215149 - SW-846 3546										
LCS Dup (B215149-BSD1)										
					Prepared: 10/18/18 Analyzed: 10/20/18					
1,3-Dichlorobenzene	0.862	0.34	mg/Kg wet	1.67		51.7	40-140	5.31	30	
1,4-Dichlorobenzene	0.870	0.34	mg/Kg wet	1.67		52.2	40-140	3.46	30	
3,3-Dichlorobenzidine	0.833	0.17	mg/Kg wet	1.67		50.0	40-140	2.69	30	
2,4-Dichlorophenol	1.19	0.34	mg/Kg wet	1.67		71.4	30-130	2.54	30	
Diethylphthalate	1.16	0.34	mg/Kg wet	1.67		69.6	40-140	5.32	30	
2,4-Dimethylphenol	1.21	0.34	mg/Kg wet	1.67		72.6	30-130	8.54	30	
Dimethylphthalate	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	1.42	30	
2,4-Dinitrophenol	0.660	0.66	mg/Kg wet	1.67		39.6	15-140	11.2	30	V-05 †
2,4-Dinitrotoluene	1.19	0.34	mg/Kg wet	1.67		71.3	40-140	5.35	30	
2,6-Dinitrotoluene	1.19	0.34	mg/Kg wet	1.67		71.7	40-140	5.51	30	
Di-n-octylphthalate	1.15	0.34	mg/Kg wet	1.67		69.1	40-140	0.462	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.14	0.34	mg/Kg wet	1.67		68.3	40-140	3.54	30	
Fluoranthene	1.14	0.17	mg/Kg wet	1.67		68.6	40-140	2.73	30	
Fluorene	1.12	0.17	mg/Kg wet	1.67		67.2	40-140	2.18	30	
Hexachlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.3	40-140	4.61	30	
Hexachlorobutadiene	1.00	0.34	mg/Kg wet	1.67		60.2	40-140	4.89	30	
Hexachloroethane	0.898	0.34	mg/Kg wet	1.67		53.9	40-140	4.57	30	
Indeno(1,2,3-cd)pyrene	1.02	0.17	mg/Kg wet	1.67		61.0	40-140	6.53	30	
Isophorone	1.11	0.34	mg/Kg wet	1.67		66.7	40-140	4.74	30	
2-Methylnaphthalene	1.13	0.17	mg/Kg wet	1.67		68.0	40-140	2.32	30	
2-Methylphenol	0.987	0.34	mg/Kg wet	1.67		59.2	30-130	3.84	30	
3/4-Methylphenol	1.08	0.34	mg/Kg wet	1.67		65.0	30-130	3.15	30	
Naphthalene	1.00	0.17	mg/Kg wet	1.67		60.2	40-140	4.99	30	
Nitrobenzene	1.02	0.34	mg/Kg wet	1.67		61.1	40-140	5.32	30	
2-Nitrophenol	1.05	0.34	mg/Kg wet	1.67		62.8	30-130	5.79	30	
4-Nitrophenol	1.42	0.66	mg/Kg wet	1.67		85.0	15-140	9.61	30	V-06 †
Pentachlorophenol	0.905	0.34	mg/Kg wet	1.67		54.3	30-130	6.32	30	
Phenanthrene	1.15	0.17	mg/Kg wet	1.67		69.0	40-140	3.36	30	
Phenol	1.10	0.34	mg/Kg wet	1.67		66.3	15-140	5.89	30	†
Pyrene	1.12	0.17	mg/Kg wet	1.67		67.0	40-140	4.18	30	
Pyridine	0.687	0.34	mg/Kg wet	1.67		41.2	30-140	3.06	30	†
1,2,4-Trichlorobenzene	0.991	0.34	mg/Kg wet	1.67		59.4	40-140	7.54	30	
2,4,5-Trichlorophenol	1.18	0.34	mg/Kg wet	1.67		71.1	30-130	5.18	30	
2,4,6-Trichlorophenol	1.16	0.34	mg/Kg wet	1.67		69.7	30-130	6.69	30	
Surrogate: 2-Fluorophenol	3.78		mg/Kg wet	6.67		56.7	30-130			
Surrogate: Phenol-d6	4.18		mg/Kg wet	6.67		62.7	30-130			
Surrogate: Nitrobenzene-d5	2.03		mg/Kg wet	3.33		61.0	30-130			
Surrogate: 2-Fluorobiphenyl	2.23		mg/Kg wet	3.33		67.0	30-130			
Surrogate: 2,4,6-Tribromophenol	5.14		mg/Kg wet	6.67		77.1	30-130			
Surrogate: p-Terphenyl-d14	2.26		mg/Kg wet	3.33		67.8	30-130			

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QUALITY CONTROL

Organochloride Pesticides 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 B215027 - SW-846 3546

Blank (B215027-BLK1)

Prepared: 10/17/18 Analyzed: 10/18/18

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.167		mg/Kg wet	0.200		83.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.154		mg/Kg wet	0.200		77.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.158		mg/Kg wet	0.200		78.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.153		mg/Kg wet	0.200		76.3	30-150			

QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215027 - SW-846 3546										
LCS (B215027-BS1)										
					Prepared: 10/17/18 Analyzed: 10/18/18					
alpha-Chlordane	0.087	0.0050	mg/Kg wet	0.100		86.8	40-140			
alpha-Chlordane [2C]	0.086	0.0050	mg/Kg wet	0.100		85.8	40-140			
gamma-Chlordane	0.086	0.0050	mg/Kg wet	0.100		85.8	40-140			
gamma-Chlordane [2C]	0.087	0.0050	mg/Kg wet	0.100		87.0	40-140			
Alachlor	0.091	0.020	mg/Kg wet	0.100		90.7	40-140			
Alachlor [2C]	0.085	0.020	mg/Kg wet	0.100		84.9	40-140			
Aldrin	0.087	0.0050	mg/Kg wet	0.100		87.3	40-140			
Aldrin [2C]	0.086	0.0050	mg/Kg wet	0.100		86.3	40-140			
alpha-BHC	0.099	0.0050	mg/Kg wet	0.100		99.3	40-140			
alpha-BHC [2C]	0.085	0.0050	mg/Kg wet	0.100		85.4	40-140			
beta-BHC	0.084	0.0050	mg/Kg wet	0.100		84.3	40-140			
beta-BHC [2C]	0.080	0.0050	mg/Kg wet	0.100		80.2	40-140			
delta-BHC	0.072	0.0050	mg/Kg wet	0.100		71.6	40-140			
delta-BHC [2C]	0.074	0.0050	mg/Kg wet	0.100		73.7	40-140			
gamma-BHC (Lindane)	0.087	0.0020	mg/Kg wet	0.100		86.8	40-140			
gamma-BHC (Lindane) [2C]	0.083	0.0020	mg/Kg wet	0.100		83.1	40-140			
4,4'-DDD	0.088	0.0040	mg/Kg wet	0.100		88.5	40-140			
4,4'-DDD [2C]	0.093	0.0040	mg/Kg wet	0.100		93.3	40-140			
4,4'-DDE	0.089	0.0040	mg/Kg wet	0.100		89.3	40-140			
4,4'-DDE [2C]	0.090	0.0040	mg/Kg wet	0.100		89.6	40-140			
4,4'-DDT	0.088	0.0040	mg/Kg wet	0.100		88.1	40-140			
4,4'-DDT [2C]	0.082	0.0040	mg/Kg wet	0.100		81.9	40-140			
Dieldrin	0.082	0.0040	mg/Kg wet	0.100		82.1	40-140			
Dieldrin [2C]	0.090	0.0040	mg/Kg wet	0.100		89.7	40-140			
Endosulfan I	0.085	0.0050	mg/Kg wet	0.100		85.1	40-140			
Endosulfan I [2C]	0.084	0.0050	mg/Kg wet	0.100		83.9	40-140			
Endosulfan II	0.085	0.0080	mg/Kg wet	0.100		84.6	40-140			
Endosulfan II [2C]	0.085	0.0080	mg/Kg wet	0.100		84.6	40-140			
Endosulfan Sulfate	0.076	0.0080	mg/Kg wet	0.100		76.0	40-140			
Endosulfan Sulfate [2C]	0.076	0.0080	mg/Kg wet	0.100		75.8	40-140			
Endrin	0.085	0.0080	mg/Kg wet	0.100		84.5	40-140			
Endrin [2C]	0.084	0.0080	mg/Kg wet	0.100		84.3	40-140			
Endrin Aldehyde	0.097	0.0080	mg/Kg wet	0.100		97.3	40-140			
Endrin Aldehyde [2C]	0.095	0.0080	mg/Kg wet	0.100		95.1	40-140			
Endrin Ketone	0.083	0.0080	mg/Kg wet	0.100		82.8	40-140			
Endrin Ketone [2C]	0.080	0.0080	mg/Kg wet	0.100		80.2	40-140			
Heptachlor	0.071	0.0050	mg/Kg wet	0.100		70.6	40-140			
Heptachlor [2C]	0.083	0.0050	mg/Kg wet	0.100		82.6	40-140			
Heptachlor Epoxide	0.086	0.0050	mg/Kg wet	0.100		85.5	40-140			
Heptachlor Epoxide [2C]	0.084	0.0050	mg/Kg wet	0.100		84.0	40-140			
Hexachlorobenzene	0.099	0.0060	mg/Kg wet	0.100		98.6	40-140			
Hexachlorobenzene [2C]	0.089	0.0060	mg/Kg wet	0.100		88.8	40-140			
Methoxychlor	0.086	0.050	mg/Kg wet	0.100		86.2	40-140			
Methoxychlor [2C]	0.086	0.050	mg/Kg wet	0.100		86.4	40-140			
Surrogate: Decachlorobiphenyl	0.171		mg/Kg wet	0.200		85.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.165		mg/Kg wet	0.200		82.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.170		mg/Kg wet	0.200		85.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.169		mg/Kg wet	0.200		84.5	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215027 - SW-846 3546										
LCS Dup (B215027-BSD1)										
					Prepared: 10/17/18 Analyzed: 10/18/18					
alpha-Chlordane	0.091	0.0050	mg/Kg wet	0.100		91.5	40-140	5.20	30	
alpha-Chlordane [2C]	0.091	0.0050	mg/Kg wet	0.100		90.6	40-140	5.40	30	
gamma-Chlordane	0.090	0.0050	mg/Kg wet	0.100		90.0	40-140	4.79	30	
gamma-Chlordane [2C]	0.092	0.0050	mg/Kg wet	0.100		92.1	40-140	5.69	30	
Alachlor	0.096	0.020	mg/Kg wet	0.100		95.8	40-140	5.40	30	
Alachlor [2C]	0.090	0.020	mg/Kg wet	0.100		89.6	40-140	5.33	30	
Aldrin	0.091	0.0050	mg/Kg wet	0.100		91.3	40-140	4.45	30	
Aldrin [2C]	0.091	0.0050	mg/Kg wet	0.100		90.6	40-140	4.85	30	
alpha-BHC	0.10	0.0050	mg/Kg wet	0.100		100	40-140	0.978	30	
alpha-BHC [2C]	0.089	0.0050	mg/Kg wet	0.100		88.8	40-140	3.94	30	
beta-BHC	0.088	0.0050	mg/Kg wet	0.100		88.3	40-140	4.59	30	
beta-BHC [2C]	0.085	0.0050	mg/Kg wet	0.100		84.7	40-140	5.55	30	
delta-BHC	0.054	0.0050	mg/Kg wet	0.100		53.7	40-140	28.6	30	
delta-BHC [2C]	0.056	0.0050	mg/Kg wet	0.100		56.4	40-140	26.7	30	
gamma-BHC (Lindane)	0.088	0.0020	mg/Kg wet	0.100		88.2	40-140	1.62	30	
gamma-BHC (Lindane) [2C]	0.086	0.0020	mg/Kg wet	0.100		85.7	40-140	3.17	30	
4,4'-DDD	0.091	0.0040	mg/Kg wet	0.100		91.0	40-140	2.87	30	
4,4'-DDD [2C]	0.096	0.0040	mg/Kg wet	0.100		95.5	40-140	2.40	30	
4,4'-DDE	0.096	0.0040	mg/Kg wet	0.100		95.8	40-140	6.96	30	
4,4'-DDE [2C]	0.096	0.0040	mg/Kg wet	0.100		96.1	40-140	7.07	30	
4,4'-DDT	0.091	0.0040	mg/Kg wet	0.100		91.0	40-140	3.19	30	
4,4'-DDT [2C]	0.085	0.0040	mg/Kg wet	0.100		85.0	40-140	3.73	30	
Dieldrin	0.086	0.0040	mg/Kg wet	0.100		86.1	40-140	4.85	30	
Dieldrin [2C]	0.094	0.0040	mg/Kg wet	0.100		94.1	40-140	4.78	30	
Endosulfan I	0.089	0.0050	mg/Kg wet	0.100		88.6	40-140	3.96	30	
Endosulfan I [2C]	0.087	0.0050	mg/Kg wet	0.100		87.2	40-140	3.94	30	
Endosulfan II	0.088	0.0080	mg/Kg wet	0.100		88.1	40-140	4.07	30	
Endosulfan II [2C]	0.088	0.0080	mg/Kg wet	0.100		88.1	40-140	4.01	30	
Endosulfan Sulfate	0.058	0.0080	mg/Kg wet	0.100		58.3	40-140	26.4	30	
Endosulfan Sulfate [2C]	0.059	0.0080	mg/Kg wet	0.100		58.8	40-140	25.2	30	
Endrin	0.089	0.0080	mg/Kg wet	0.100		88.9	40-140	5.05	30	
Endrin [2C]	0.088	0.0080	mg/Kg wet	0.100		88.5	40-140	4.80	30	
Endrin Aldehyde	0.097	0.0080	mg/Kg wet	0.100		96.8	40-140	0.530	30	
Endrin Aldehyde [2C]	0.095	0.0080	mg/Kg wet	0.100		95.1	40-140	0.0810	30	
Endrin Ketone	0.087	0.0080	mg/Kg wet	0.100		87.0	40-140	5.00	30	
Endrin Ketone [2C]	0.084	0.0080	mg/Kg wet	0.100		84.2	40-140	4.87	30	
Heptachlor	0.073	0.0050	mg/Kg wet	0.100		73.4	40-140	3.80	30	
Heptachlor [2C]	0.087	0.0050	mg/Kg wet	0.100		86.8	40-140	4.91	30	
Heptachlor Epoxide	0.090	0.0050	mg/Kg wet	0.100		90.1	40-140	5.16	30	
Heptachlor Epoxide [2C]	0.088	0.0050	mg/Kg wet	0.100		88.2	40-140	4.85	30	
Hexachlorobenzene	0.10	0.0060	mg/Kg wet	0.100		101	40-140	2.81	30	
Hexachlorobenzene [2C]	0.093	0.0060	mg/Kg wet	0.100		93.2	40-140	4.77	30	
Methoxychlor	0.091	0.050	mg/Kg wet	0.100		90.6	40-140	4.95	30	
Methoxychlor [2C]	0.090	0.050	mg/Kg wet	0.100		89.9	40-140	4.00	30	
Surrogate: Decachlorobiphenyl	0.179		mg/Kg wet	0.200		89.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.169		mg/Kg wet	0.200		84.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.170		mg/Kg wet	0.200		84.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.174		mg/Kg wet	0.200		86.9	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215027 - SW-846 3546										
Matrix Spike (B215027-MS1)	Source: 18J0746-01			Prepared: 10/17/18 Analyzed: 10/19/18						
Alachlor	0.12	0.23	mg/Kg dry	0.117	ND	104	30-150			
Alachlor [2C]	0.12	0.23	mg/Kg dry	0.117	ND	105	30-150			
Aldrin	0.096	0.058	mg/Kg dry	0.117	ND	82.6	30-150			
Aldrin [2C]	0.089	0.058	mg/Kg dry	0.117	ND	75.9	30-150			
alpha-BHC	0.10	0.058	mg/Kg dry	0.117	ND	89.4	30-150			
alpha-BHC [2C]	0.083	0.058	mg/Kg dry	0.117	ND	71.4	30-150			
beta-BHC	0.097	0.058	mg/Kg dry	0.117	ND	83.2	30-150			
beta-BHC [2C]	0.086	0.058	mg/Kg dry	0.117	ND	73.7	30-150			
delta-BHC	0.094	0.058	mg/Kg dry	0.117	ND	80.1	30-150			
delta-BHC [2C]	0.079	0.058	mg/Kg dry	0.117	ND	67.8	30-150			
gamma-BHC (Lindane)	0.093	0.023	mg/Kg dry	0.117	ND	79.6	30-150			
gamma-BHC (Lindane) [2C]	0.084	0.023	mg/Kg dry	0.117	ND	71.7	30-150			
4,4'-DDD	0.090	0.047	mg/Kg dry	0.117	ND	76.8	30-150			
4,4'-DDD [2C]	0.089	0.047	mg/Kg dry	0.117	ND	75.8	30-150			
4,4'-DDE	0.094	0.047	mg/Kg dry	0.117	ND	80.8	30-150			
4,4'-DDE [2C]	0.091	0.047	mg/Kg dry	0.117	ND	78.1	30-150			
4,4'-DDT	0.093	0.047	mg/Kg dry	0.117	ND	79.4	30-150			
4,4'-DDT [2C]	0.088	0.047	mg/Kg dry	0.117	ND	75.5	30-150			
Dieldrin	0.087	0.047	mg/Kg dry	0.117	ND	74.5	30-150			
Dieldrin [2C]	0.098	0.047	mg/Kg dry	0.117	ND	84.0	30-150			
Endosulfan I	0.093	0.058	mg/Kg dry	0.117	ND	80.0	30-150			
Endosulfan I [2C]	0.088	0.058	mg/Kg dry	0.117	ND	75.6	30-150			
Endosulfan II	0.090	0.093	mg/Kg dry	0.117	ND	77.2	30-150			
Endosulfan II [2C]	0.089	0.093	mg/Kg dry	0.117	ND	76.5	30-150			
Endosulfan Sulfate	0.084	0.093	mg/Kg dry	0.117	ND	71.7	30-150			
Endosulfan Sulfate [2C]	0.087	0.093	mg/Kg dry	0.117	ND	74.6	30-150			
Endrin	0.095	0.093	mg/Kg dry	0.117	ND	81.5	30-150			
Endrin [2C]	0.086	0.093	mg/Kg dry	0.117	ND	73.4	30-150			
Endrin Aldehyde	0.10	0.093	mg/Kg dry	0.117	ND	87.5	30-150			
Endrin Aldehyde [2C]	0.089	0.093	mg/Kg dry	0.117	ND	76.2	30-150			
Endrin Ketone	0.089	0.093	mg/Kg dry	0.117	ND	76.0	30-150			
Endrin Ketone [2C]	0.086	0.093	mg/Kg dry	0.117	ND	73.4	30-150			
Heptachlor	0.098	0.058	mg/Kg dry	0.117	ND	83.5	30-150			
Heptachlor [2C]	0.091	0.058	mg/Kg dry	0.117	ND	77.9	30-150			
Heptachlor Epoxide	0.093	0.058	mg/Kg dry	0.117	ND	79.9	30-150			
Heptachlor Epoxide [2C]	0.087	0.058	mg/Kg dry	0.117	ND	74.8	30-150			
Hexachlorobenzene	0.12	0.070	mg/Kg dry	0.117	ND	101	30-150			
Hexachlorobenzene [2C]	0.099	0.070	mg/Kg dry	0.117	ND	85.1	30-150			
Methoxychlor	0.099	0.58	mg/Kg dry	0.117	ND	84.9	30-150			
Methoxychlor [2C]	0.10	0.58	mg/Kg dry	0.117	ND	85.6	30-150			
Surrogate: Decachlorobiphenyl	0.210		mg/Kg dry	0.234		89.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.164		mg/Kg dry	0.234		70.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.189		mg/Kg dry	0.234		81.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.178		mg/Kg dry	0.234		76.2	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215027 - SW-846 3546										
Matrix Spike Dup (B215027-MSD1)										
		Source: 18J0746-01			Prepared: 10/17/18 Analyzed: 10/19/18					
Alachlor	0.13	0.23	mg/Kg dry	0.115	ND	115	30-150	7.80	30	
Alachlor [2C]	0.12	0.23	mg/Kg dry	0.115	ND	103	30-150	3.79	30	
Aldrin	0.093	0.057	mg/Kg dry	0.115	ND	81.1	30-150	3.75	30	
Aldrin [2C]	0.085	0.057	mg/Kg dry	0.115	ND	74.4	30-150	3.96	30	
alpha-BHC	0.097	0.057	mg/Kg dry	0.115	ND	85.1	30-150	6.97	30	
alpha-BHC [2C]	0.077	0.057	mg/Kg dry	0.115	ND	67.0	30-150	8.25	30	
beta-BHC	0.091	0.057	mg/Kg dry	0.115	ND	79.6	30-150	6.34	30	
beta-BHC [2C]	0.082	0.057	mg/Kg dry	0.115	ND	71.6	30-150	4.87	30	
delta-BHC	0.089	0.057	mg/Kg dry	0.115	ND	77.7	30-150	5.08	30	
delta-BHC [2C]	0.075	0.057	mg/Kg dry	0.115	ND	65.4	30-150	5.66	30	
gamma-BHC (Lindane)	0.087	0.023	mg/Kg dry	0.115	ND	76.2	30-150	6.27	30	
gamma-BHC (Lindane) [2C]	0.078	0.023	mg/Kg dry	0.115	ND	68.5	30-150	6.48	30	
4,4'-DDD	0.086	0.046	mg/Kg dry	0.115	ND	75.0	30-150	4.19	30	
4,4'-DDD [2C]	0.085	0.046	mg/Kg dry	0.115	ND	74.2	30-150	4.16	30	
4,4'-DDE	0.092	0.046	mg/Kg dry	0.115	ND	80.1	30-150	2.84	30	
4,4'-DDE [2C]	0.088	0.046	mg/Kg dry	0.115	ND	76.7	30-150	3.80	30	
4,4'-DDT	0.089	0.046	mg/Kg dry	0.115	ND	77.6	30-150	4.30	30	
4,4'-DDT [2C]	0.085	0.046	mg/Kg dry	0.115	ND	74.2	30-150	3.66	30	
Dieldrin	0.084	0.046	mg/Kg dry	0.115	ND	73.1	30-150	3.85	30	
Dieldrin [2C]	0.094	0.046	mg/Kg dry	0.115	ND	82.1	30-150	4.24	30	
Endosulfan I	0.090	0.057	mg/Kg dry	0.115	ND	78.8	30-150	3.41	30	
Endosulfan I [2C]	0.085	0.057	mg/Kg dry	0.115	ND	74.2	30-150	3.81	30	
Endosulfan II	0.086	0.092	mg/Kg dry	0.115	ND	75.2	30-150	4.46	30	
Endosulfan II [2C]	0.086	0.092	mg/Kg dry	0.115	ND	75.2	30-150	3.64	30	
Endosulfan Sulfate	0.081	0.092	mg/Kg dry	0.115	ND	70.5	30-150	3.67	30	
Endosulfan Sulfate [2C]	0.084	0.092	mg/Kg dry	0.115	ND	73.2	30-150	3.90	30	
Endrin	0.091	0.092	mg/Kg dry	0.115	ND	79.8	30-150	4.14	30	
Endrin [2C]	0.082	0.092	mg/Kg dry	0.115	ND	71.5	30-150	4.65	30	
Endrin Aldehyde	0.098	0.092	mg/Kg dry	0.115	ND	85.8	30-150	3.89	30	
Endrin Aldehyde [2C]	0.086	0.092	mg/Kg dry	0.115	ND	75.0	30-150	3.56	30	
Endrin Ketone	0.087	0.092	mg/Kg dry	0.115	ND	76.4	30-150	1.50	30	
Endrin Ketone [2C]	0.086	0.092	mg/Kg dry	0.115	ND	75.0	30-150	0.188	30	
Heptachlor	0.092	0.057	mg/Kg dry	0.115	ND	80.7	30-150	5.31	30	
Heptachlor [2C]	0.087	0.057	mg/Kg dry	0.115	ND	75.6	30-150	4.97	30	
Heptachlor Epoxide	0.089	0.057	mg/Kg dry	0.115	ND	77.6	30-150	4.80	30	
Heptachlor Epoxide [2C]	0.084	0.057	mg/Kg dry	0.115	ND	73.2	30-150	4.18	30	
Hexachlorobenzene	0.11	0.069	mg/Kg dry	0.115	ND	98.9	30-150	3.81	30	
Hexachlorobenzene [2C]	0.093	0.069	mg/Kg dry	0.115	ND	81.5	30-150	6.29	30	
Methoxychlor	0.094	0.57	mg/Kg dry	0.115	ND	82.5	30-150	4.87	30	
Methoxychlor [2C]	0.095	0.57	mg/Kg dry	0.115	ND	83.1	30-150	4.87	30	
Surrogate: Decachlorobiphenyl	0.209		mg/Kg dry	0.229		91.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.165		mg/Kg dry	0.229		72.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.181		mg/Kg dry	0.229		78.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.168		mg/Kg dry	0.229		73.1	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215049 - SW-846 3546										
Blank (B215049-BLK1)										
Prepared: 10/17/18 Analyzed: 10/19/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.174		mg/Kg wet	0.200		86.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene	0.159		mg/Kg wet	0.200		79.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.169		mg/Kg wet	0.200		84.7	30-150			
LCS (B215049-BS1)										
Prepared: 10/17/18 Analyzed: 10/19/18										
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		76.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		82.3	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		80.0	40-140			
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		92.9	40-140			
Surrogate: Decachlorobiphenyl	0.173		mg/Kg wet	0.200		86.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.210		mg/Kg wet	0.200		105	30-150			
Surrogate: Tetrachloro-m-xylene	0.114		mg/Kg wet	0.200		57.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.119		mg/Kg wet	0.200		59.7	30-150			
LCS Dup (B215049-BSD1)										
Prepared: 10/17/18 Analyzed: 10/19/18										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		84.5	40-140	9.79	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		92.6	40-140	11.8	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		88.6	40-140	10.3	30	
Aroclor-1260 [2C]	0.21	0.020	mg/Kg wet	0.200		105	40-140	12.6	30	
Surrogate: Decachlorobiphenyl	0.189		mg/Kg wet	0.200		94.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.230		mg/Kg wet	0.200		115	30-150			
Surrogate: Tetrachloro-m-xylene	0.123		mg/Kg wet	0.200		61.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.132		mg/Kg wet	0.200		65.9	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B214866 - SW-846 8151										
Blank (B214866-BLK1)										
Prepared: 10/16/18 Analyzed: 10/19/18										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							V-20, V-35
Dinoseb [2C]	ND	12	µg/kg wet							V-35
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	75.4		µg/kg wet	95.2		79.2	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	75.6		µg/kg wet	95.2		79.3	30-150			
LCS (B214866-BS1)										
Prepared: 10/16/18 Analyzed: 10/19/18										
2,4-D	89.3	25	µg/kg wet	125		71.4	40-140			
2,4-D [2C]	93.4	25	µg/kg wet	125		74.7	40-140			
2,4-DB	91.7	25	µg/kg wet	125		73.3	40-140			
2,4-DB [2C]	97.1	25	µg/kg wet	125		77.7	40-140			
2,4,5-TP (Silvex)	8.96	2.5	µg/kg wet	12.5		71.7	40-140			
2,4,5-TP (Silvex) [2C]	9.24	2.5	µg/kg wet	12.5		73.9	40-140			
2,4,5-T	8.70	2.5	µg/kg wet	12.5		69.6	40-140			
2,4,5-T [2C]	8.98	2.5	µg/kg wet	12.5		71.9	40-140			
Dalapon	150	62	µg/kg wet	312		47.9	40-140			
Dalapon [2C]	152	62	µg/kg wet	312		48.7	40-140			
Dicamba	8.85	2.5	µg/kg wet	12.5		70.8	40-140			
Dicamba [2C]	9.14	2.5	µg/kg wet	12.5		73.1	40-140			
Dichloroprop	92.2	25	µg/kg wet	125		73.7	40-140			
Dichloroprop [2C]	95.6	25	µg/kg wet	125		76.5	40-140			
Dinoseb	11.8	12	µg/kg wet	62.5		18.9	0-42.4			V-06, V-35
Dinoseb [2C]	11.1	12	µg/kg wet	62.5		17.7	0-41.1			V-06, V-35
MCPA	8560	2500	µg/kg wet	12500		68.5	40-140			
MCPA [2C]	7100	2500	µg/kg wet	12500		56.8	40-140			
MCPP	11600	2500	µg/kg wet	12500		92.6	40-140			
MCPP [2C]	7290	2500	µg/kg wet	12500		58.3	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	67.5		µg/kg wet	100		67.5	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	70.2		µg/kg wet	100		70.2	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B214866 - SW-846 8151										
LCS Dup (B214866-BSD1)										
					Prepared: 10/16/18 Analyzed: 10/19/18					
2,4-D	103	25	µg/kg wet	125		82.4	40-140	14.3	30	
2,4-D [2C]	108	25	µg/kg wet	125		86.6	40-140	14.7	30	
2,4-DB	107	25	µg/kg wet	125		85.7	40-140	15.6	30	
2,4-DB [2C]	114	25	µg/kg wet	125		91.2	40-140	16.0	30	
2,4,5-TP (Silvex)	10.3	2.5	µg/kg wet	12.5		82.3	40-140	13.8	30	
2,4,5-TP (Silvex) [2C]	10.7	2.5	µg/kg wet	12.5		85.2	40-140	14.2	30	
2,4,5-T	10.1	2.5	µg/kg wet	12.5		80.7	40-140	14.8	30	
2,4,5-T [2C]	10.5	2.5	µg/kg wet	12.5		84.2	40-140	15.8	30	
Dalapon	165	62	µg/kg wet	312		52.9	40-140	9.87	30	
Dalapon [2C]	169	62	µg/kg wet	312		54.1	40-140	10.6	30	
Dicamba	10.1	2.5	µg/kg wet	12.5		80.9	40-140	13.3	30	
Dicamba [2C]	10.6	2.5	µg/kg wet	12.5		84.5	40-140	14.5	30	
Dichloroprop	105	25	µg/kg wet	125		84.0	40-140	13.0	30	
Dichloroprop [2C]	110	25	µg/kg wet	125		87.6	40-140	13.6	30	
Dinoseb	8.84	12	µg/kg wet	62.5		14.2	0-42.4	28.9	30	V-06, V-35
Dinoseb [2C]	8.22	12	µg/kg wet	62.5		13.2	0-41.1	29.7	30	V-06, V-35
MCPA	9940	2500	µg/kg wet	12500		79.5	40-140	14.9	30	
MCPA [2C]	7600	2500	µg/kg wet	12500		60.8	40-140	6.80	30	
MCPP	13600	2500	µg/kg wet	12500		109	40-140	15.8	30	
MCPP [2C]	8030	2500	µg/kg wet	12500		64.2	40-140	9.67	30	
Surrogate: 2,4-Dichlorophenylacetic acid	79.0		µg/kg wet	100		79.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	81.2		µg/kg wet	100		81.2	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B215078 - SW-846 3546										
Blank (B215078-BLK1)					Prepared: 10/17/18 Analyzed: 10/18/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.91		mg/Kg wet	3.33		57.3	40-140			
LCS (B215078-BS1)					Prepared: 10/17/18 Analyzed: 10/18/18					
TPH (C9-C36)	23.4	8.3	mg/Kg wet	33.3		70.3	40-140			
Surrogate: 2-Fluorobiphenyl	2.00		mg/Kg wet	3.33		60.0	40-140			
LCS Dup (B215078-BSD1)					Prepared: 10/17/18 Analyzed: 10/18/18					
TPH (C9-C36)	24.8	8.3	mg/Kg wet	33.3		74.4	40-140	5.68	30	
Surrogate: 2-Fluorobiphenyl	2.04		mg/Kg wet	3.33		61.3	40-140			
Matrix Spike (B215078-MS1)					Source: 18J0746-01 Prepared: 10/17/18 Analyzed: 10/18/18					
TPH (C9-C36)	324	98	mg/Kg dry	39.2	331	-17.5 *	40-140			MS-19
Surrogate: 2-Fluorobiphenyl	1.96		mg/Kg dry	3.92		50.1	40-140			
Matrix Spike Dup (B215078-MSD1)					Source: 18J0746-01 Prepared: 10/17/18 Analyzed: 10/18/18					
TPH (C9-C36)	282	98	mg/Kg dry	39.2	331	-123 *	40-140	13.7	30	MS-19
Surrogate: 2-Fluorobiphenyl	1.59		mg/Kg dry	3.92		40.6	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
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Batch B215319 - SW-846 3050B

Blank (B215319-BLK1)

Prepared: 10/22/18 Analyzed: 10/23/18

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 (B215319-BS1)

Prepared: 10/22/18 Analyzed: 10/23/18

Antimony	43.0	5.0	mg/Kg wet	75.5		57.0	3.8-196			
Arsenic	158	5.0	mg/Kg wet	161		97.9	83.2-116.8			
Barium	264	5.0	mg/Kg wet	260		101	82.7-117.3			
Beryllium	98.2	0.50	mg/Kg wet	97.6		101	83.4-116.8			
Cadmium	206	0.50	mg/Kg wet	211		97.5	83.4-116.6			
Chromium	131	0.99	mg/Kg wet	136		96.6	82.4-117.6			
Lead	109	1.5	mg/Kg wet	111		98.0	83-117.1			
Nickel	93.7	0.99	mg/Kg wet	91.9		102	82.9-117.5			
Selenium	183	9.9	mg/Kg wet	191		95.9	79.6-120.9			
Silver	44.8	0.99	mg/Kg wet	43.3		104	79.9-119.9			
Thallium	160	5.0	mg/Kg wet	156		102	81.4-119.2			
Vanadium	49.1	2.0	mg/Kg wet	56.7		86.7	79-121.2			
Zinc	195	2.0	mg/Kg wet	199		98.0	81.4-119.1			

LCS Dup (B215319-BSD1)

Prepared: 10/22/18 Analyzed: 10/23/18

Antimony	40.0	4.9	mg/Kg wet	75.5		53.0	3.8-196	7.17	30	
Arsenic	152	4.9	mg/Kg wet	161		94.4	83.2-116.8	3.73	30	
Barium	259	4.9	mg/Kg wet	260		99.7	82.7-117.3	1.68	30	
Beryllium	96.4	0.49	mg/Kg wet	97.6		98.7	83.4-116.8	1.85	30	
Cadmium	204	0.49	mg/Kg wet	211		96.5	83.4-116.6	1.00	30	
Chromium	130	0.97	mg/Kg wet	136		95.8	82.4-117.6	0.833	30	
Lead	103	1.5	mg/Kg wet	111		93.2	83-117.1	5.04	30	
Nickel	91.8	0.97	mg/Kg wet	91.9		99.9	82.9-117.5	2.02	30	
Selenium	176	9.7	mg/Kg wet	191		92.0	79.6-120.9	4.07	30	
Silver	42.2	0.97	mg/Kg wet	43.3		97.5	79.9-119.9	6.02	30	
Thallium	155	4.9	mg/Kg wet	156		99.6	81.4-119.2	2.64	30	
Vanadium	48.7	1.9	mg/Kg wet	56.7		86.0	79-121.2	0.811	30	
Zinc	196	1.9	mg/Kg wet	199		98.7	81.4-119.1	0.706	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
Batch B215319 - SW-846 3050B										
MRL Check (B215319-MRL1)					Prepared: 10/22/18 Analyzed: 10/23/18					
Lead	0.568	0.50	mg/Kg wet	0.498		114	80-120			
Batch B215349 - SW-846 7471										
Blank (B215349-BLK1)					Prepared: 10/22/18 Analyzed: 10/23/18					
Mercury	ND	0.025	mg/Kg wet							
LCS (B215349-BS1)					Prepared: 10/22/18 Analyzed: 10/23/18					
Mercury	11.1	2.0	mg/Kg wet	11.5		96.7	71.6-127.8			
LCS Dup (B215349-BSD1)					Prepared: 10/22/18 Analyzed: 10/23/18					
Mercury	11.5	1.9	mg/Kg wet	11.5		100	71.6-127.8	3.67	30	

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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 B214965 - SW-846 9045C										
LCS (B214965-BS1) Prepared & Analyzed: 10/16/18										
pH	5.98		pH Units	6.00		99.7	90-110			
LCS (B214965-BS2) Prepared & Analyzed: 10/16/18										
pH	6.00		pH Units	6.00		99.9	90-110			
Batch B215260 - % Solids										
Duplicate (B215260-DUP1) Source: 18J0746-01 Prepared: 10/19/18 Analyzed: 10/21/18										
% Solids	81.2		% Wt			84.0		3.32	20	
Duplicate (B215260-DUP2) Source: 18J0746-02 Prepared: 10/19/18 Analyzed: 10/21/18										
% Solids	84.0		% Wt			84.5		0.582	20	
Duplicate (B215260-DUP3) Source: 18J0746-03 Prepared: 10/19/18 Analyzed: 10/21/18										
% Solids	84.4		% Wt			83.9		0.589	20	
Batch B215274 - SW-846 9014										
Blank (B215274-BLK1) Prepared: 10/20/18 Analyzed: 10/23/18										
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B215274-BS1) Prepared: 10/20/18 Analyzed: 10/23/18										
Reactive Cyanide	9.3	0.40	mg/Kg	10.0		92.7	83.6-111			
Batch B215406 - SM21-22 2510B Modified										
Blank (B215406-BLK1) Prepared & Analyzed: 10/23/18										
Specific conductance	ND	2.0	µmhos/cm							
LCS (B215406-BS1) Prepared & Analyzed: 10/23/18										
Specific conductance	200		µmhos/cm	192		102	90-110			
Duplicate (B215406-DUP1) Source: 18J0746-01 Prepared & Analyzed: 10/23/18										
Specific conductance	8.8	2.0	µmhos/cm			8.1		7.34	21	
Batch B215459 - SW-846 9030A										
Blank (B215459-BLK1) Prepared: 10/20/18 Analyzed: 10/23/18										
Reactive Sulfide	ND	2.0	mg/Kg							

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B215459 - SW-846 9030A

LCS (B215459-BS1)

Prepared: 10/20/18 Analyzed: 10/23/18

Reactive Sulfide	13	2.0	mg/Kg	14.8		89.2	54.9-121			
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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

MP34

SW-846 8081B

Lab Sample ID: 18J0746-02 Date(s) Analyzed: 10/18/2018 10/18/2018

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		
4,4'-DDE	1	6.425	-0.030	0.030	0.0084	
	2	6.538	-0.030	0.030	0.013	43.0
4,4'-DDT	1	7.044	-0.030	0.030	0.050	
	2	7.182	-0.030	0.030	0.047	6.2

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-03	Elevated reporting limit due to matrix.
H-03	Sample received after recommended holding time was exceeded.
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.
P-02	Sample RPD between primary and confirmatory analysis exceeded 40%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration 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-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-36	Initial calibration verification (ICV) 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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
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
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Soil</i>	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8151A in Soil</i>	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8151A in Soil	
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
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

CERTIFICATIONS

Certified Analyses included in this Report

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

1870746

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KEM

Company Name: VHB

Address: 101 Walnut Street, Watertown, MA

Phone: 617-607-1841

Project Name: Eversource Tap

Project Location: Sudbury, Mass

Project Number: 12970.03

Project Manager: Paige Cornell

Con-Test Quote Name/Number:

Invoice Recipient:

Sampled By: PEC & T.JP

Requested Turnaround Time:
 7-Day 10-Day
 Due Date: _____

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

Data Delivery:
 Format: PDF EXCEL
 Other: Limit Check

CLP Like Data Pkg Required:
 Email To: pcorneil@vhb.com; pncorley@vhb.com;
 tverphillips@vhb.com; tbevan@vhb.com
 Fax To #: _____

CHAIN OF CUSTODY RECORD

Con-Test Work Order #	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code	ANALYSIS REQUESTED							# of Containers	Preservation Code	Container Code
1	MP32	10/11/18	10:15	X	X	S	U	Ignitability, pH, Reactivity	Conductivity	Pesticide/Herbicide	SVOCs, PCBs, TPH	VOCs	MCP 14 Metals				
3	MP34	10/11/18	14:21	X	X	S	U										
3	SB49	10/11/18	14:25	X	X	S	U										

- 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) _DI
 H2O
- 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

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 Municipality MWRA Other
 Federal 21 J School Chromatogram
 City Brownfield MBTA AHA-LAP, LLC

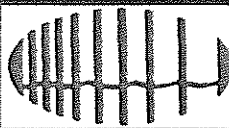
Signature: *PAI PAPA* 10-15-18 2:20

 www.contestlabs.com

TCLP 20x Rule

Date/Time	Signature
10/15/18 13:15	<i>[Signature]</i>
10/15/18 13:16	<i>[Signature]</i>
10/15/18 08:30	<i>[Signature]</i>
10/15/18 08:30	<i>[Signature]</i>
10/15/18 2:20	<i>[Signature]</i>
10/15/18 2:20	<i>[Signature]</i>

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 VHB

Received By EJD Date 10-5-18 Time 20:20

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

Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp - 3.4
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? 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? None

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? 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	9
Meoh-	3	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-	6	Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen: 10-5-18 @ 20:20	
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 #: 18J0746		
Project Location: Sudbury, MA			RTN:		
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 18J0746-01 thru 18J0746-03					
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 (X)	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 A ()	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
Affirmative response to Questions A through F is required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).				<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: <u>Tod Kopyscinski</u>			Position: Laboratory Director		
Printed Name: <u>Tod E. Kopyscinski</u>			Date: <u>10/24/18</u>		

November 27, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18K0275

Enclosed are results of analyses for samples received by the laboratory on November 6, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Kerry K. McGee". The signature is written in a cursive style with a large, prominent "K" and "M".

Kerry K. McGee
Project Manager

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/27/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0275

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B42	18K0275-01	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
MP27	18K0275-02	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
MP28	18K0275-03	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
MP29	18K0275-04	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/27/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0275

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP30	18K0275-05	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
MP31	18K0275-06	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
MP35	18K0275-07	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO

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
Project Manager

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/2/2018 13:00

Field Sample #: B42

Sample ID: 18K0275-01

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
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/15/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/2/2018 13:00

Field Sample #: B42

Sample ID: 18K0275-01

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/19/18 0:00	11/19/18 0:00	GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00	11/19/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/5/2018 11:00

Field Sample #: MP27

Sample ID: 18K0275-02

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
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/14/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/5/2018 11:00

Field Sample #: MP27

Sample ID: 18K0275-02

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/20/18 0:00		GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00		GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/5/2018 12:05

Field Sample #: MP28

Sample ID: 18K0275-03

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
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/15/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/5/2018 12:05

Field Sample #: MP28

Sample ID: 18K0275-03

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00		GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/14/18 0:00		GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/5/2018 13:15

Field Sample #: MP29

Sample ID: 18K0275-04

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
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/19/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/5/2018 13:15

Field Sample #: MP29

Sample ID: 18K0275-04

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00	0:00	GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/20/18 0:00	0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/6/2018 08:50

Field Sample #: MP30

Sample ID: 18K0275-05

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
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/14/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/6/2018 08:50

Field Sample #: MP30

Sample ID: 18K0275-05

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00	11/19/18 0:00	GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/16/18 0:00	11/16/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/6/2018 10:05

Field Sample #: MP31

Sample ID: 18K0275-06

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
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/15/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Sampled: 11/6/2018 10:05

Field Sample #: MP31

Sample ID: 18K0275-06

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/16/18 0:00		GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00		GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Field Sample #: MP35

Sample ID: 18K0275-07

Start Date/Time: 11/6/2018 10:05:00AM

Sample Matrix: Soil

Stop Date/Time: 11/6/2018 12:00:00PM

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	Attached	Attached	Attached	1		ASTM D6913		11/19/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0275

Date Received: 11/6/2018

Field Sample #: MP35

Sample ID: 18K0275-07

Start Date/Time: 11/6/2018 10:05:00AM

Sample Matrix: Soil

Stop Date/Time: 11/6/2018 12:00:00PM

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D2216	11/19/18 0:00	0:00	GTE
See Attached Report Pages	Attached	Attached	Attached	1		ASTM D1557	11/19/18 0:00	0:00	GTE

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
---------	----------------

No certified Analyses included in this Report

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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

Doc # 381 Rev 1_03242017
 39 Spruce Street
 East Longmeadow, MA 01028

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

Requested Turnaround Time: 7-Day 10-Day

Due Date: _____

Rush Approval Required: 1-Day 3-Day

2-Day 4-Day

Format: PDF EXCEL

Other: _____

CLP Like Data Pkg Required:

Email To: pcornet@vhb.com; pmckinlay@vhb.com; mlerphillips@vhb.com; fhevans@vhb.com

Fax To #: _____

Address: 101 Walnut Street, Watertown, MA
 Phone: 617-607-1841

Project Name: Eversource Transmission Project
 Project Location: Sudbury, Massachusetts

Project Number: 12970.03
 Project Manager: Paige Cornell
 Con-Test Quote Name/Number: _____

Invoice Recipient: _____
 Sampled By: _____

Con-Test Work Order#	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code
01	340	11/16/18	3:00		x	S	U
02	MP21	11/16/18	11:00				
03	MP23	11/16/18	12:05				
04	MP29	11/16/18	13:15				
05	MP30	11/16/18	13:30				
06	MP25	11/16/18	10:45				
07	MP35	11/16/18	12:00				

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: 11/16/18 10:30

Received by: (signature) _____ Date/Time: 11-6-18 13:36

Relinquished by: (signature) _____ Date/Time: 11-6-18 16:31

Received by: (signature) _____ Date/Time: 11/16/18 4:30

Relinquished by: (signature) _____ Date/Time: _____

Received by: (signature) _____ Date/Time: _____

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

Other: NELAP and AIMA-LAP, LLC Accredited

Special Requirements: MA MCP Required MA MCP Required
 MCP Certification Form Required MCP Certification Form Required
 RCP Certification Form Required RCP Certification Form Required
 MA State DW Required MA State DW Required

PWSID #: _____

con-test[®] ANALYTICAL LABORATORY
 www.contestlabs.com

of Containers: _____

2. Preservation Code: _____

3. 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) _DI
 H2O

3. Container Codes:
 A = Amber Glass
 G = Glass
 P = Plastic
 ST = Sterile
 V = Vial
 S = Summa Canister
 T = Tedlar Bag
 O = Other (please define) 5-gallon bucket

PCB ONLY
 Soxhlet
 Non Soxhlet



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	---
Sample ID:	---	Test Date:	11/19/18
Depth :	---	Test Id:	480764

Moisture Content of Soil and Rock - ASTM D2216

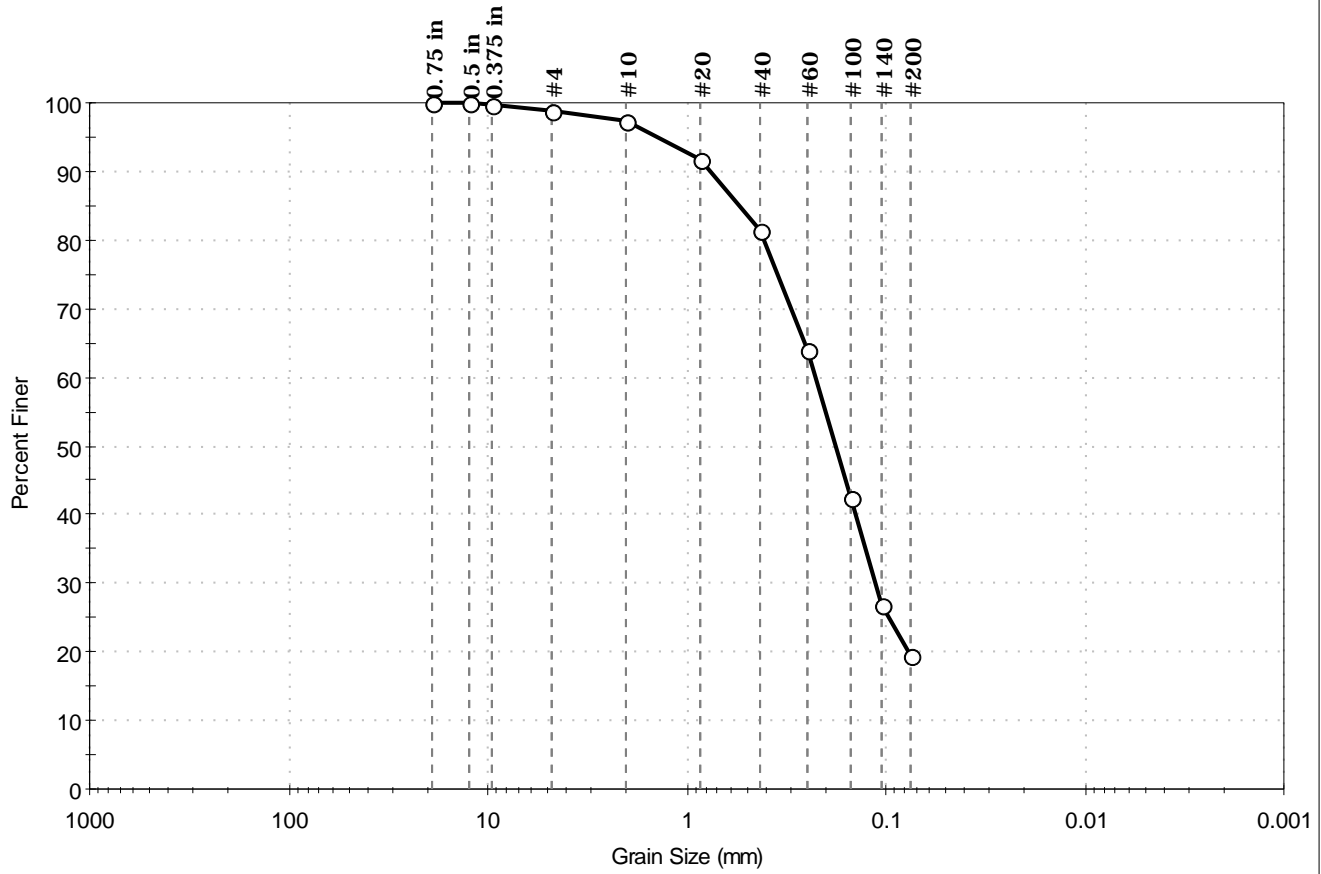
Boring ID	Sample ID	Depth	Description	Moisture Content, %
---	B42	---	Moist, olive brown silty sand	17.6
---	MP27	---	Moist, light olive brown sand with silt	15.6
---	MP28	---	Moist, olive yellow sand with silt	10.3
---	MP29	---	Moist, light olive brown silty sand	13.6
---	MP30	---	Moist, light olive brown silty sand	16.3
---	MP31	---	Moist, light olive brown silty sand	24.7
---	MP35	---	Moist, olive brown silty sand	18.9

Notes: Temperature of Drying : 110° Celsius



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	B42	Test Date:	11/15/18
Depth:	---	Test Id:	480744
Test Comment:	---		
Visual Description:	Moist, olive brown silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	1.2	79.2	19.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	100		
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	97		
#20	0.85	92		
#40	0.42	81		
#60	0.25	64		
#100	0.15	42		
#140	0.11	27		
#200	0.075	20		

Coefficients	
D ₈₅ = 0.5428 mm	D ₃₀ = 0.1135 mm
D ₆₀ = 0.2278 mm	D ₁₅ = N/A
D ₅₀ = 0.1794 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

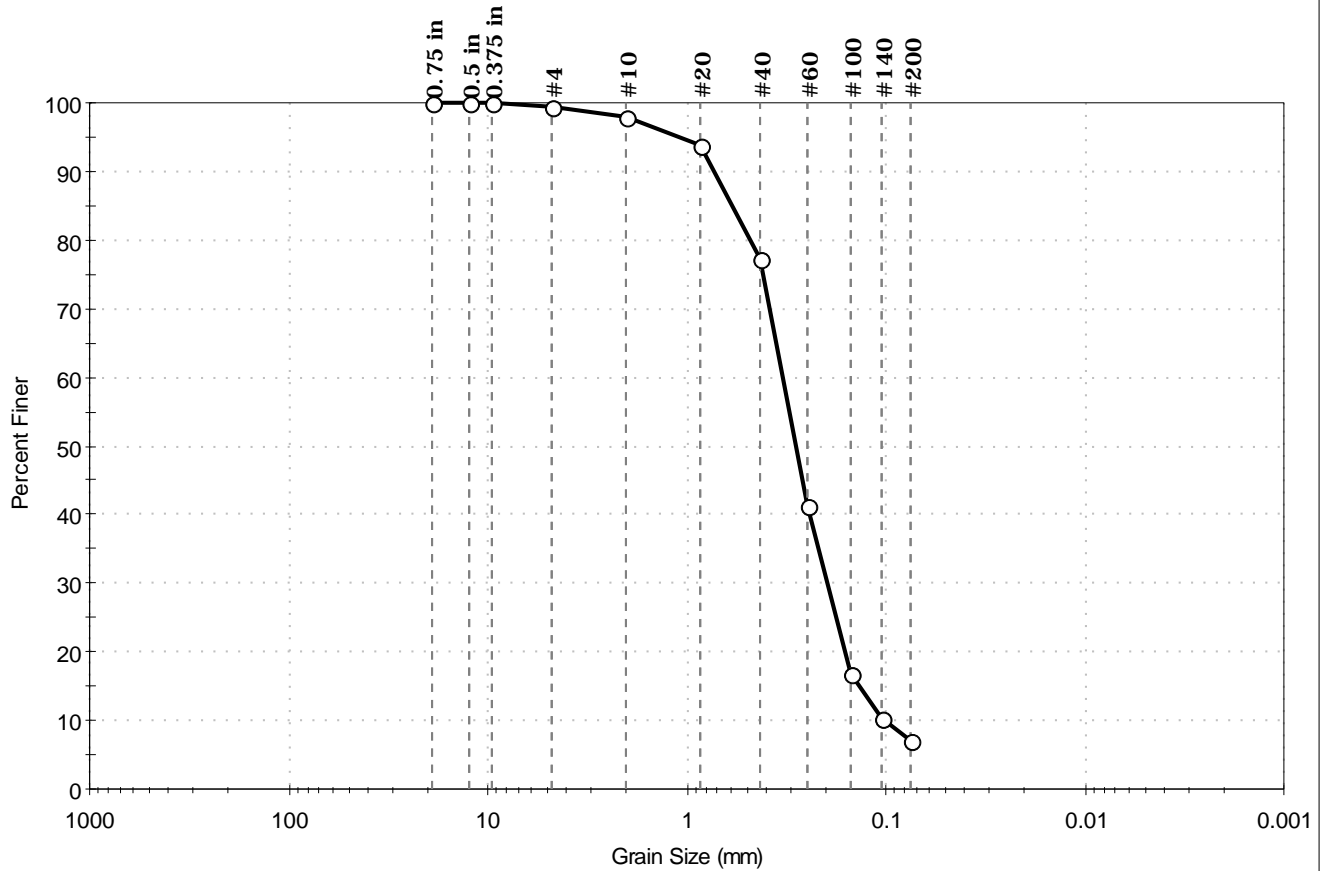
Classification	
ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description
Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP27	Test Date:	11/14/18
Depth:	---	Test Id:	480745
Test Comment:	---		
Visual Description:	Moist, light olive brown sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.7	92.2	7.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	100		
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	94		
#40	0.42	77		
#60	0.25	41		
#100	0.15	17		
#140	0.11	10		
#200	0.075	7.1		

<u>Coefficients</u>	
D ₈₅ = 0.5889 mm	D ₃₀ = 0.1974 mm
D ₆₀ = 0.3295 mm	D ₁₅ = 0.1356 mm
D ₅₀ = 0.2843 mm	D ₁₀ = 0.1019 mm
C _u = 3.234	C _c = 1.161

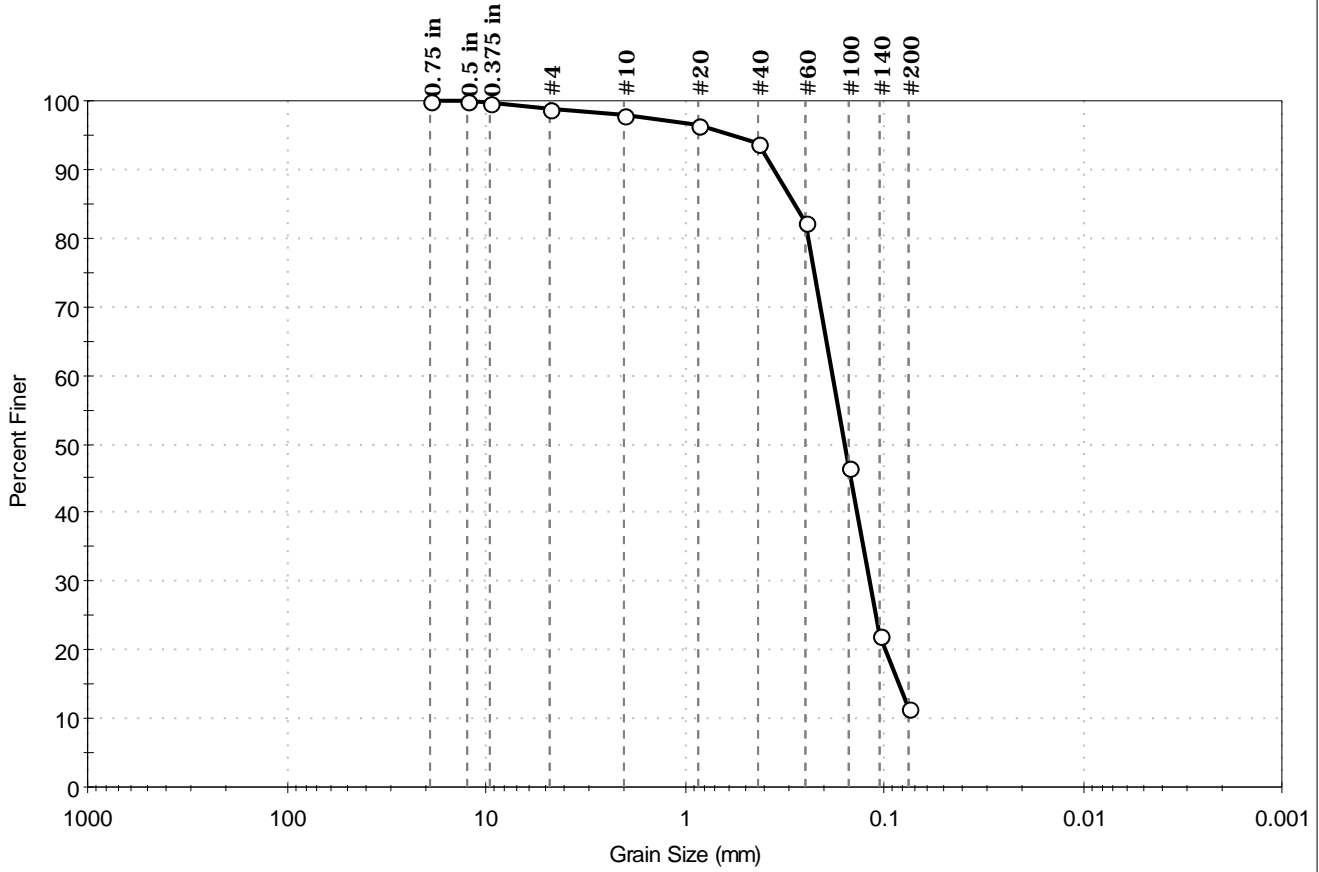
<u>Classification</u>	
ASTM	N/A
AASHTO	Fine Sand (A-3 (1))

<u>Sample/Test Description</u>	
Sand/Gravel Particle Shape :	---
Sand/Gravel Hardness :	---



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP28	Test Date:	11/15/18
Depth:	---	Test Id:	480746
Test Comment:	---		
Visual Description:	Moist, olive yellow sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	1.3	87.2	11.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	100		
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	97		
#40	0.425	94		
#60	0.25	82		
#100	0.15	47		
#140	0.11	22		
#200	0.075	11		

<u>Coefficients</u>	
D ₈₅ = 0.2839 mm	D ₃₀ = 0.1185 mm
D ₆₀ = 0.1818 mm	D ₁₅ = 0.0841 mm
D ₅₀ = 0.1575 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

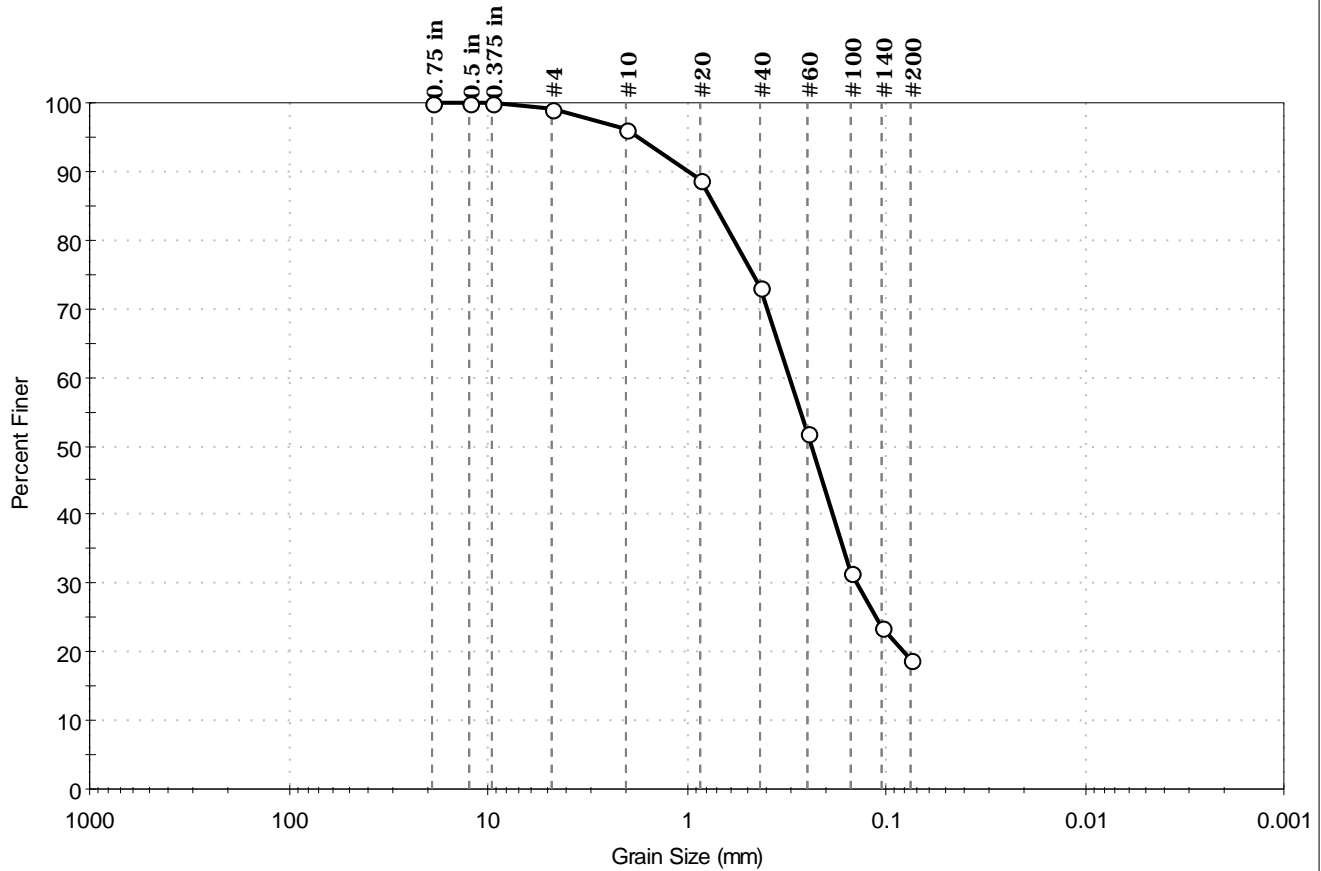
<u>Classification</u>	
ASTM	N/A
AASHTO Silty Gravel and Sand (A-2-4 (0))	

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP29	Test Date:	11/19/18
Depth :	---	Test Id:	480747
Test Comment:	---		
Visual Description:	Moist, light olive brown silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.8	80.3	18.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	100		
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	96		
#20	0.85	89		
#40	0.42	73		
#60	0.25	52		
#100	0.15	32		
#140	0.11	24		
#200	0.075	19		

Coefficients	
D ₈₅ = 0.7191 mm	D ₃₀ = 0.1402 mm
D ₆₀ = 0.3055 mm	D ₁₅ = N/A
D ₅₀ = 0.2379 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

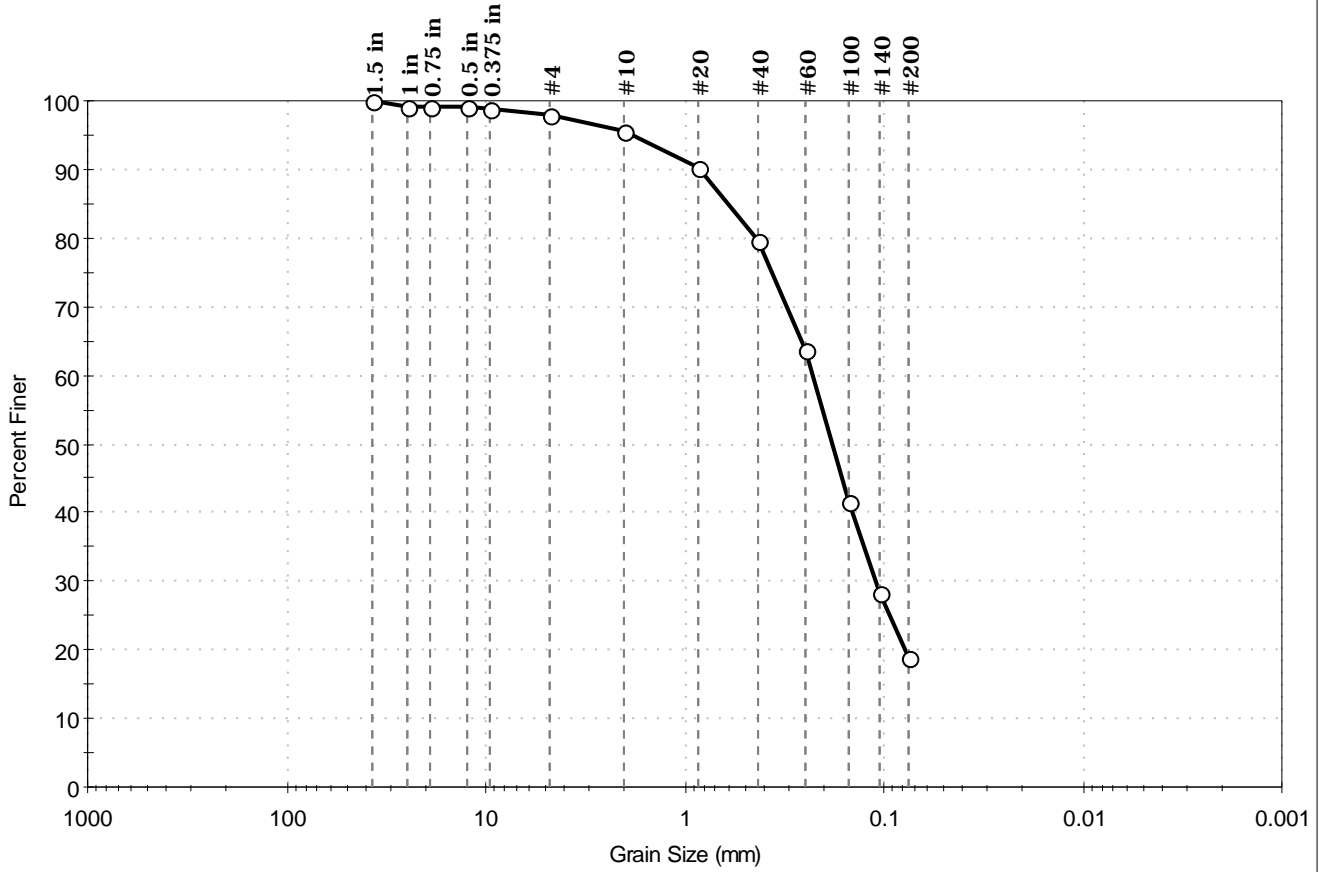
Classification	
ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description
Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP30	Test Date:	11/14/18
Depth :	---	Test Id:	480748
Test Comment:	---		
Visual Description:	Moist, light olive brown silty sand		
Sample Comment:	Sample contains organics		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	2.1	79.1	18.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	99		
0.75 in	19.00	99		
0.5 in	12.50	99		
0.375 in	9.50	99		
#4	4.75	98		
#10	2.00	95		
#20	0.85	90		
#40	0.42	80		
#60	0.25	64		
#100	0.15	41		
#140	0.11	28		
#200	0.075	19		

Coefficients	
D ₈₅ = 0.6041 mm	D ₃₀ = 0.1111 mm
D ₆₀ = 0.2289 mm	D ₁₅ = N/A
D ₅₀ = 0.1822 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

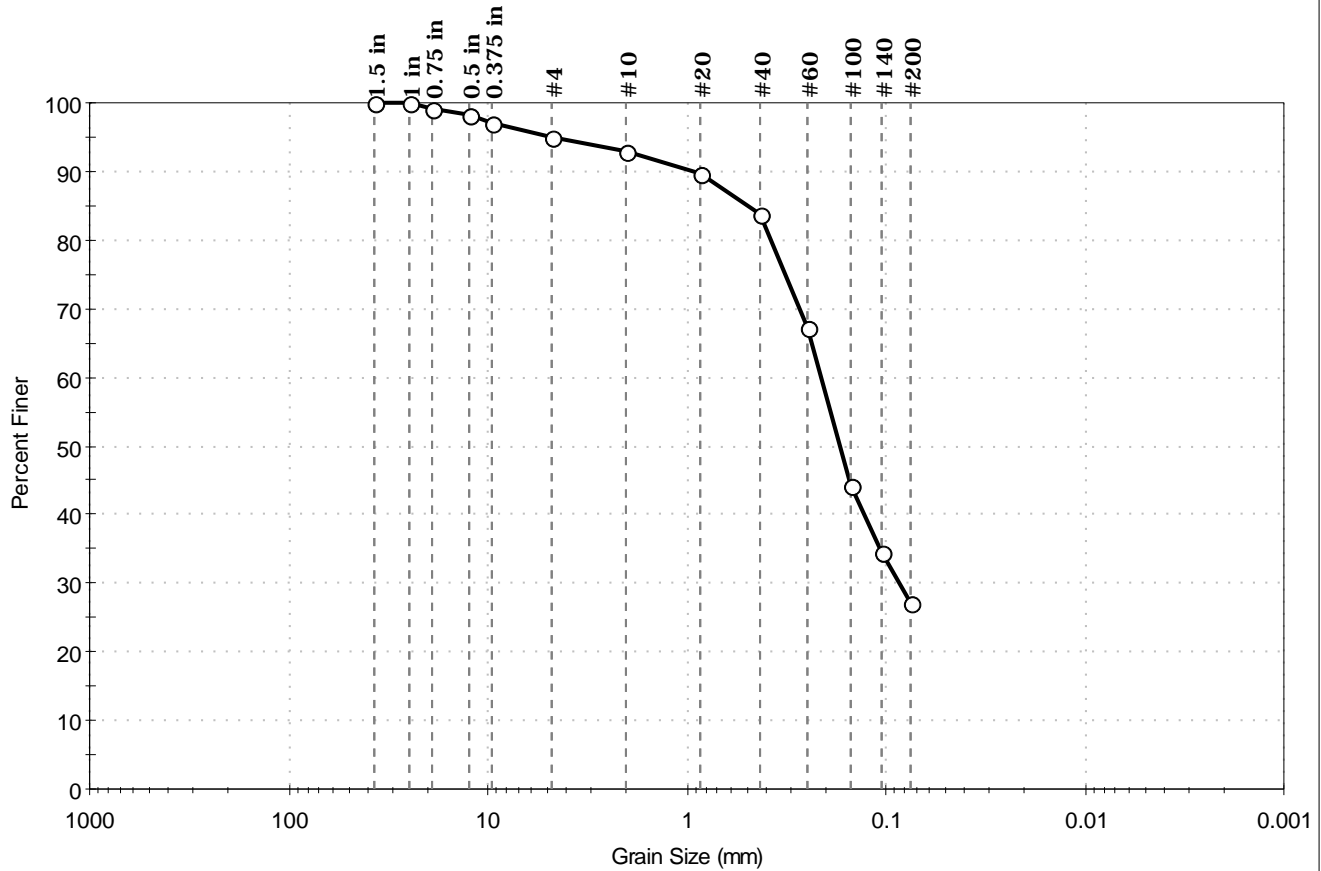
Classification	
ASTM	N/A
AASHTO Silty Gravel and Sand (A-2-4 (0))	

Sample/Test Description
Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP31	Test Date:	11/15/18
Depth:	---	Test Id:	480749
Test Comment:	---		
Visual Description:	Moist, light olive brown silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	5.0	67.9	27.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	100		
0.75 in	19.00	99		
0.5 in	12.50	98		
0.375 in	9.50	97		
#4	4.75	95		
#10	2.00	93		
#20	0.85	90		
#40	0.42	84		
#60	0.25	67		
#100	0.15	44		
#140	0.11	34		
#200	0.075	27		

<u>Coefficients</u>	
D ₈₅ = 0.4910 mm	D ₃₀ = 0.0861 mm
D ₆₀ = 0.2124 mm	D ₁₅ = N/A
D ₅₀ = 0.1699 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

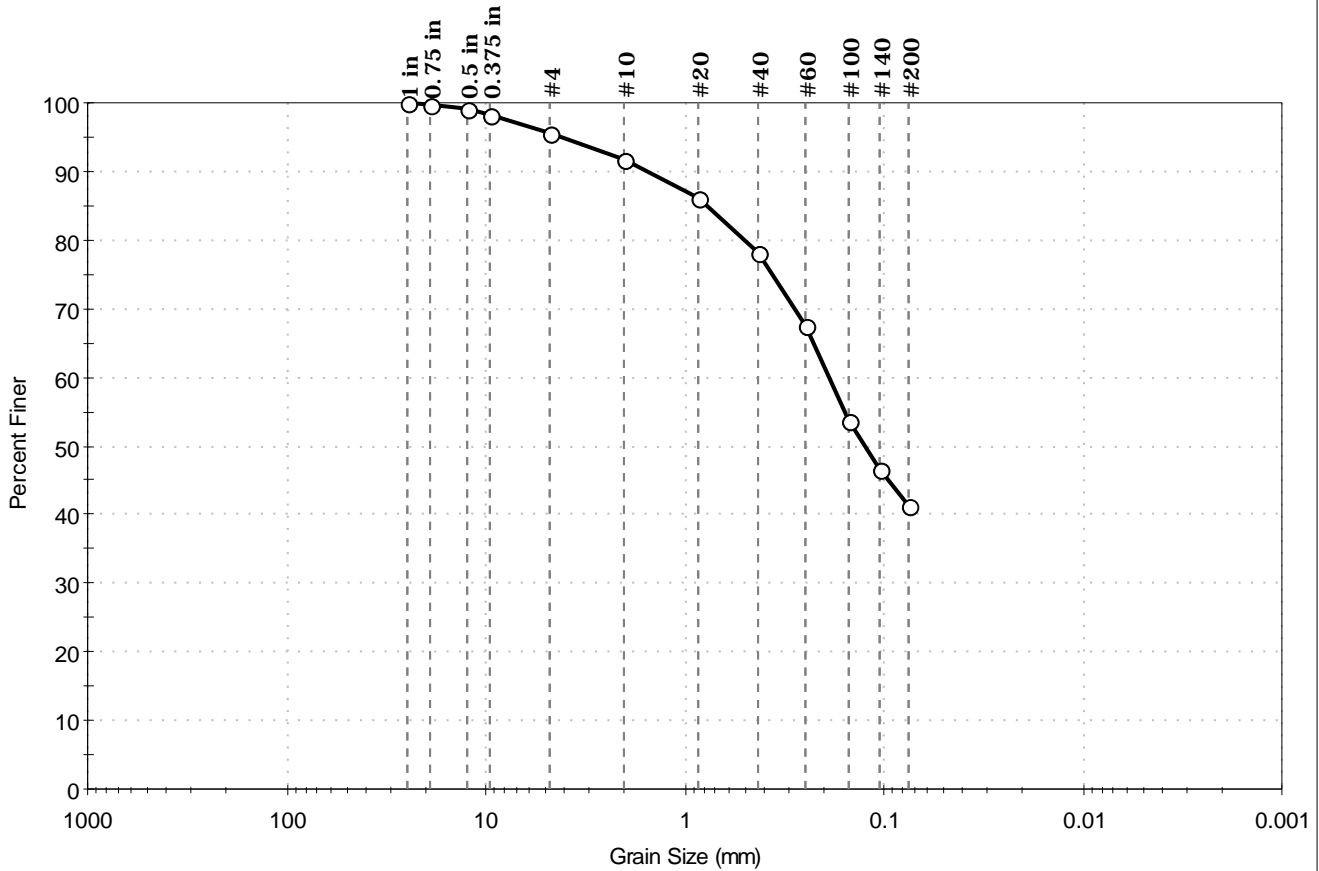
<u>Classification</u>	
ASTM	N/A
AASHTO Silty Gravel and Sand (A-2-4 (0))	

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ROUNDED
Sand/Gravel Hardness : HARD



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP35	Test Date:	11/19/18
Depth:	---	Test Id:	480750
Test Comment:	---		
Visual Description:	Moist, olive brown silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	4.5	54.1	41.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	100		
0.5 in	12.50	99		
0.375 in	9.50	98		
#4	4.75	96		
#10	2.00	92		
#20	0.85	86		
#40	0.42	78		
#60	0.25	67		
#100	0.15	54		
#140	0.11	47		
#200	0.075	41		

Coefficients

D ₈₅ = 0.7674 mm	D ₃₀ = N/A
D ₆₀ = 0.1893 mm	D ₁₅ = N/A
D ₅₀ = 0.1252 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

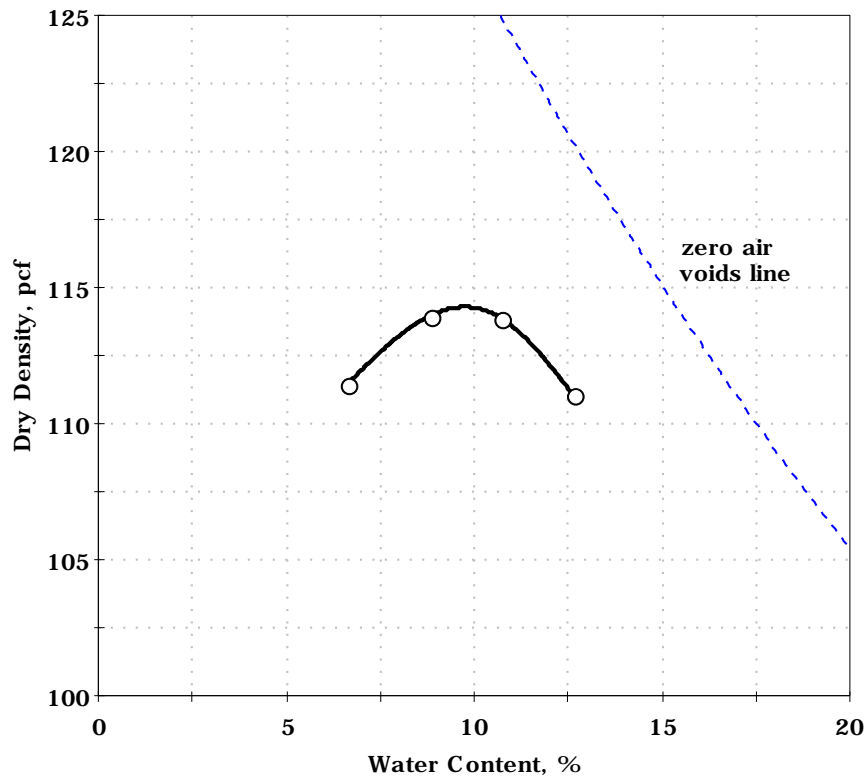
Sand/Gravel Particle Shape : **ROUNDED**

Sand/Gravel Hardness : **HARD**



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	emm
Boring ID:	---	Test Date:	11/19/18	Test Id:	480751
Sample ID:	B42	Test Comment:	---		
Depth :	---	Visual Description:	Moist, olive brown silty sand		
Sample Comment:	---				

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	111.5	114.0	113.9	111.1
Moisture Content, %	6.6	8.8	10.7	12.6

Method : A

Preparation : DRY

As received Moisture : 18 %

Rammer : Mechanical

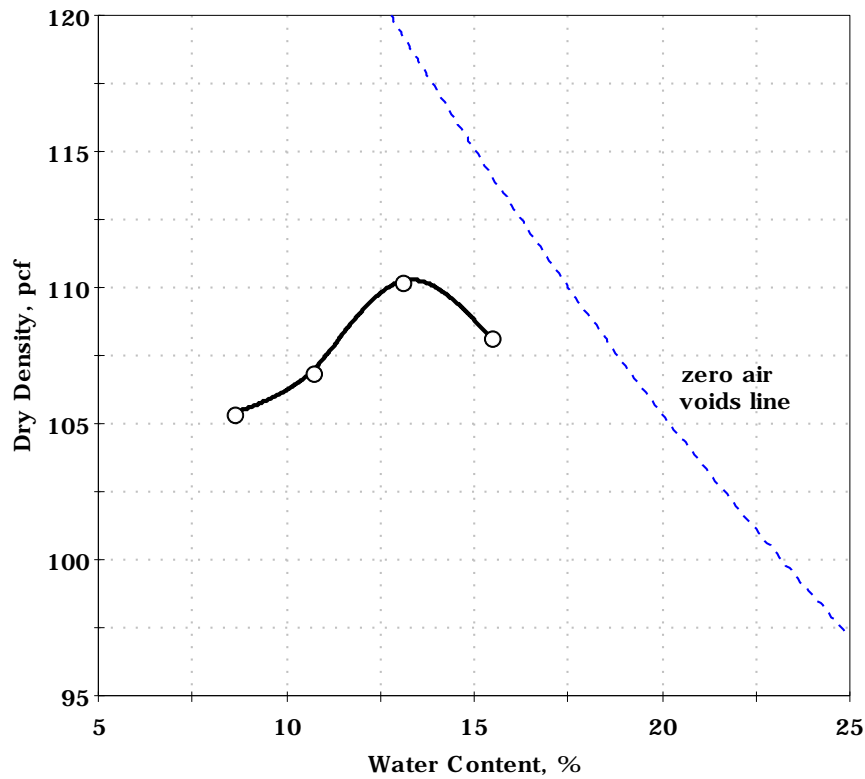
Zero voids line based on assumed specific gravity of 2.55

Maximum Dry Density= 114.3 pcf
Optimum Moisture= 9.8 %



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	cwd
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP27	Test Date:	11/20/18
Depth :	---	Test Id:	480752
Test Comment:	---		
Visual Description:	Moist, light olive brown sand with silt		
Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	105.4	106.9	110.2	108.2
Moisture Content, %	8.6	10.7	13.1	15.4

Method : A

Preparation : DRY

As received Moisture : 16 %

Rammer : Mechanical

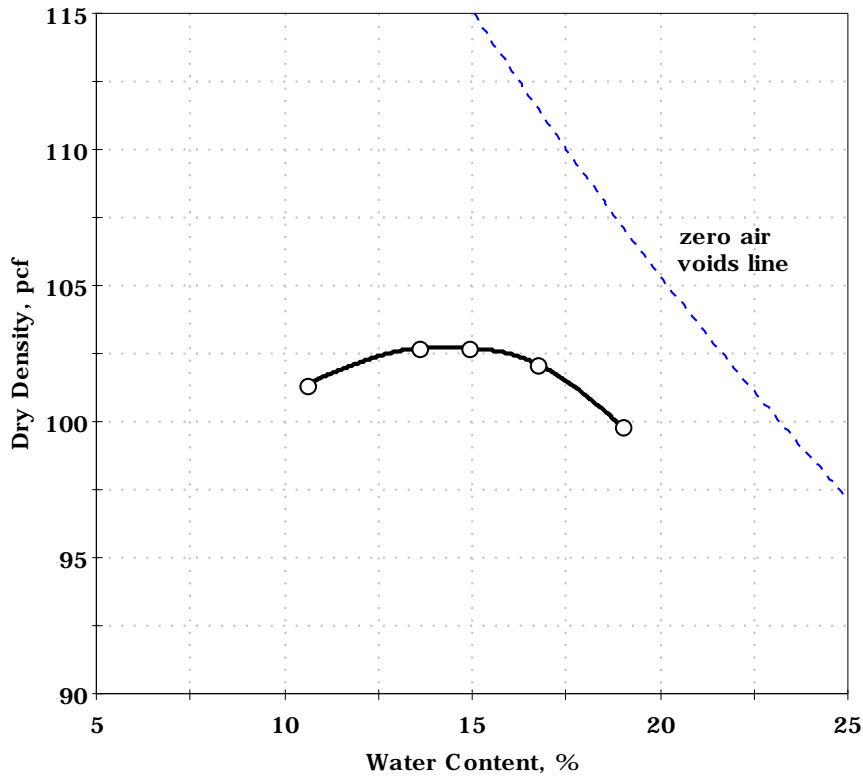
Zero voids line based on assumed specific gravity of 2.55

Maximum Dry Density= 110.3 pcf
Optimum Moisture= 13.3 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	emm
Boring ID:	---	Test Date:	11/14/18	Test Id:	480753
Sample ID:	MP28	Visual Description:	Moist, olive yellow sand with silt		
Depth:	---	Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4	Point 5
Dry density, pcf	101.4	102.7	102.7	102.2	99.9
Moisture Content, %	10.6	13.5	14.9	16.7	19.0

Method : A

Preparation : DRY

As received Moisture : 10 %

Rammer : Mechanical

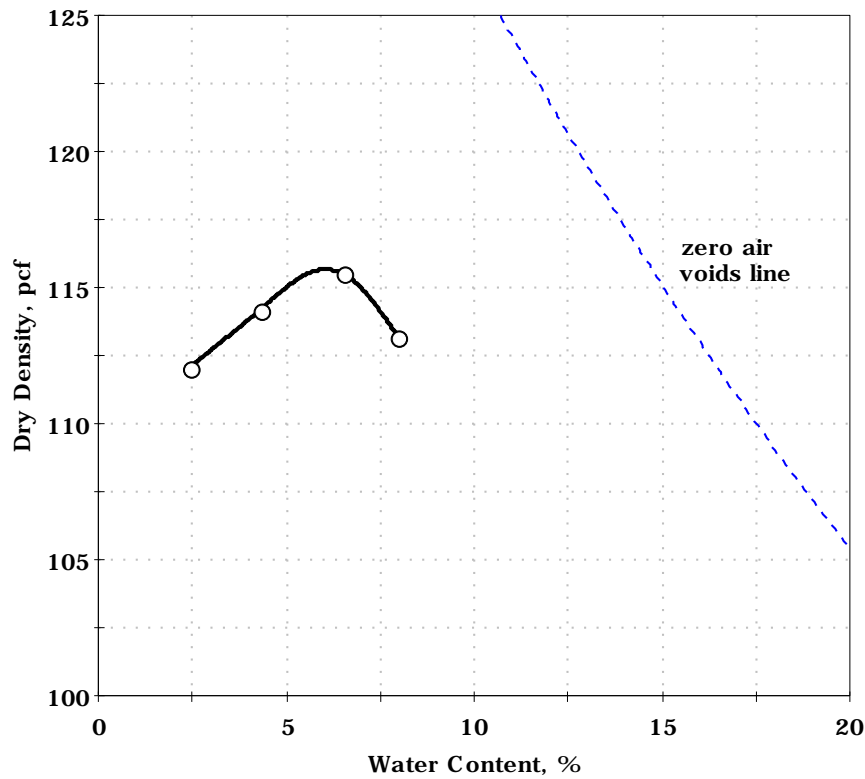
Zero voids line based on assumed specific gravity of 2.55

Maximum Dry Density= 102.8 pcf
Optimum Moisture= 14.2 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	emm
Boring ID:	---	Test Date:	11/20/18	Test Id:	480754
Sample ID:	MP29	Test Comment:	---		
Depth :	---	Visual Description:	Moist, light olive brown silty sand		
Sample Comment:	---				

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	112.0	114.1	115.5	113.2
Moisture Content, %	2.4	4.3	6.5	8.0

Method : A

Preparation : DRY

As received Moisture : 14 %

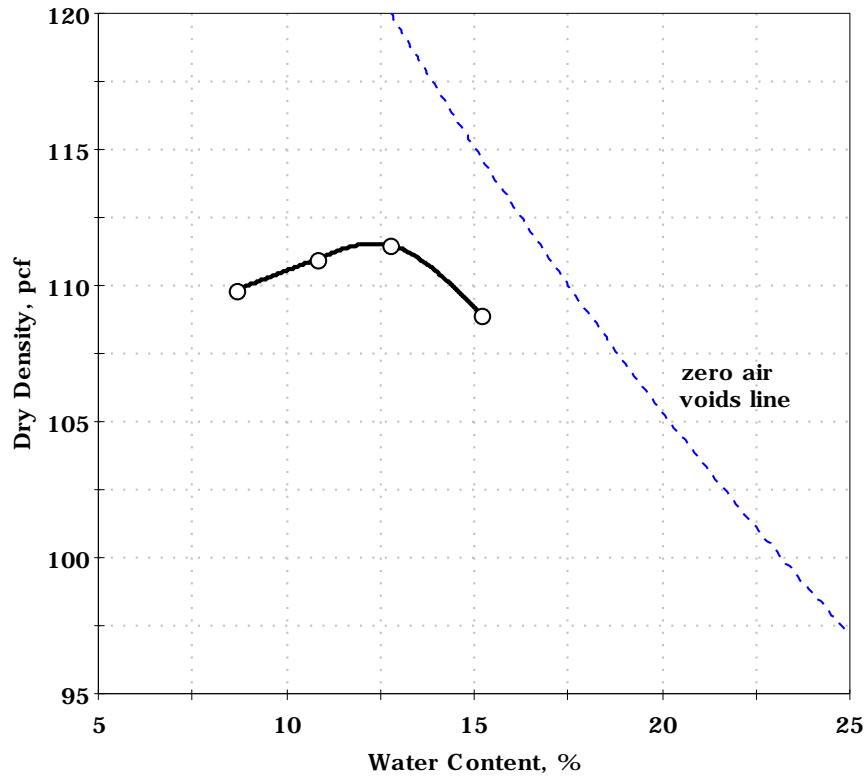
Rammer : Mechanical

Zero voids line based on assumed specific gravity of 2.55

Maximum Dry Density= 115.7 pcf
Optimum Moisture= 6.1 %

Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	cwd
Location:	Sudbury, MA	Checked By:	emm
Boring ID:	---	Sample Type:	bucket
Sample ID:	MP30	Test Date:	11/16/18
Depth :	---	Test Id:	480755
Test Comment:	---		
Visual Description:	Moist, light olive brown silty sand		
Sample Comment:	Sample contains organics		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	109.8	111.0	111.5	108.9
Moisture Content, %	8.7	10.8	12.7	15.2

Method : A

Preparation : DRY

As received Moisture : 16 %

Rammer : Mechanical

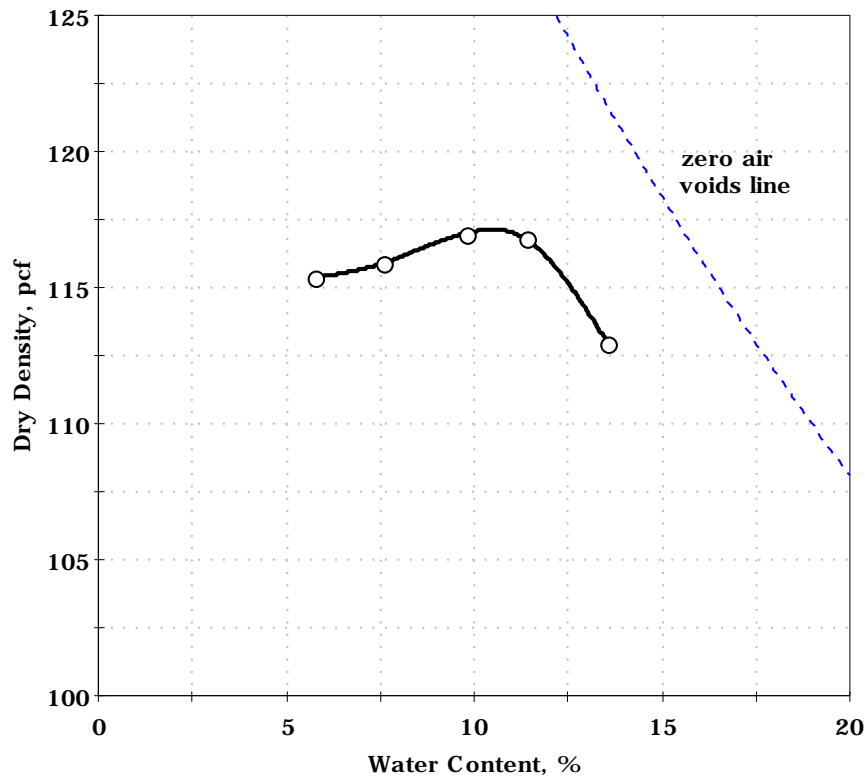
Zero voids line based on assumed specific gravity of 2.55

Maximum Dry Density= 111.6 pcf
Optimum Moisture= 12.3 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	emm
Boring ID:	---	Test Date:	11/16/18	Test Id:	480756
Sample ID:	MP31	Visual Description:	Moist, light olive brown silty sand		
Depth :	---	Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4	Point 5
Dry density, pcf	115.4	115.9	117.0	116.8	113.0
Moisture Content, %	5.7	7.6	9.8	11.4	13.6

Method : B

Preparation : DRY

As received Moisture : 25 %

Rammer : Mechanical

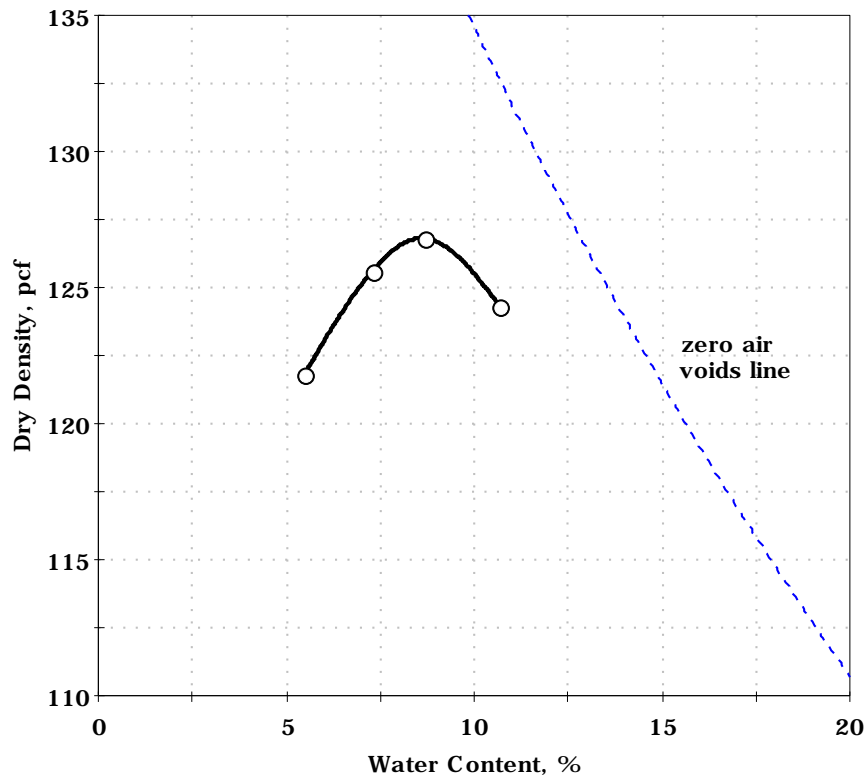
Zero voids line based on assumed specific gravity of 2.65

Maximum Dry Density= 117.1 pcf
Optimum Moisture= 10.5 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	emm
Boring ID:	---	Test Date:	11/19/18	Test Id:	480757
Sample ID:	MP35	Visual Description:	Moist, olive brown silty sand		
Depth:	---	Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	121.8	125.6	126.8	124.3
Moisture Content, %	5.5	7.3	8.7	10.7

Method : A

Preparation : DRY

As received Moisture : 19 %

Rammer : Mechanical

Zero voids line based on assumed specific gravity of 2.75

Maximum Dry Density= 126.8 pcf
Optimum Moisture= 8.6 %

November 14, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18K0278

Enclosed are results of analyses for samples received by the laboratory on November 6, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Kerry K. McGee". The signature is written in a cursive style with a large, prominent "K" and "M".

Kerry K. McGee
Project Manager

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/14/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0278

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP33	18K0278-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
MP27	18K0278-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/14/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0278

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP28	18K0278-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
MP29	18K0278-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/14/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0278

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP30	18K0278-05	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
MP31	18K0278-06	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/14/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0278

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP35	18K0278-07	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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 8151, samples were derivatized on 11/09/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 8081B

Qualifications:**DL-03**

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

18K0278-01[MP33]

SW-846 8082A

Qualifications:**O-32**

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

Analyte & Samples(s) Qualified:

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35]

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)
B216634-MS1

SW-846 8151A

Qualifications:**V-06**

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

Analyte & Samples(s) Qualified:

2,4,5-T [2C]
B216689-MS1, B216689-MSD1

2,4,5-TP (Silvex) [2C]
B216689-MS1, B216689-MSD1

2,4-D [2C]
B216689-MS1, B216689-MSD1

2,4-DB [2C]
B216689-MS1, B216689-MSD1

Dinoseb
B216689-MS1, B216689-MSD1

Dinoseb [2C]
B216689-BS1, B216689-BSD1, B216689-MS1, B216689-MSD1

V-20

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

Analyte & Samples(s) Qualified:

Dinoseb
18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35]

SW-846 8260C

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
18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216709-BLK1, B216709-BS1, B216709-BSD1

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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**

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216709-BLK1, B216709-BS1, B216709-BSD1, S029248-CCV1

SW-846 8270D

Qualifications:**E**

Reported result is estimated. Value reported over verified calibration range.

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

18K0278-01[MP33]

V-04

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

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

B216591-MS1, B216591-MSD1

V-05

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

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

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216591-BLK1, B216591-BS1, B216591-BSD1

Pyridine

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216591-BLK1, B216591-BS1, B216591-BSD1

V-06

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

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

B216591-BS1, B216591-BSD1

V-19

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

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

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216591-BLK1, B216591-BS1, B216591-BSD1

V-20

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

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

B216591-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-Bromophenylphenylether**

B216591-BSD1

4-Chloroaniline

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216591-BLK1, B216591-BS1, B216591-BSD1, B216591-MS1, B216591-MSD1

Aniline

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29], 18K0278-05[MP30], 18K0278-06[MP31], 18K0278-07[MP35], B216591-BLK1, B216591-BS1, B216591-BSD1

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SW-846 9045C

Qualifications:**H-03**

Sample received after recommended holding time was exceeded.

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

18K0278-01[MP33], 18K0278-02[MP27], 18K0278-03[MP28], 18K0278-04[MP29]

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.



Tod E. Kopyscinski
Laboratory Director

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP33

Sampled: 11/1/2018 13:30

Sample ID: 18K0278-01

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	0.049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Benzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Bromobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Bromochloromethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Bromodichloromethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Bromoform	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Bromomethane	ND	0.0049	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 13:17	MFF
2-Butanone (MEK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
n-Butylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
sec-Butylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
tert-Butylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Carbon Disulfide	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Carbon Tetrachloride	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Chlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Chlorodibromomethane	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Chloroethane	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Chloroform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Chloromethane	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
2-Chlorotoluene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
4-Chlorotoluene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2-Dibromoethane (EDB)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Dibromomethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2-Dichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,3-Dichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,4-Dichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1-Dichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2-Dichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
cis-1,2-Dichloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
trans-1,2-Dichloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,3-Dichloropropane	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
2,2-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
cis-1,3-Dichloropropene	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
trans-1,3-Dichloropropene	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Diethyl Ether	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Diisopropyl Ether (DIPE)	ND	0.00049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,4-Dioxane	ND	0.049	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Ethylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP33

Sampled: 11/1/2018 13:30

Sample ID: 18K0278-01

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	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
2-Hexanone (MBK)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Isopropylbenzene (Cumene)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Methylene Chloride	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Naphthalene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
n-Propylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Styrene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1,2,2-Tetrachloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Tetrachloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Tetrahydrofuran	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Toluene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2,3-Trichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2,4-Trichlorobenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1,1-Trichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,1,2-Trichloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Trichloroethylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2,3-Trichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,2,4-Trimethylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
1,3,5-Trimethylbenzene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
Vinyl Chloride	ND	0.0049	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
m+p Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF
o-Xylene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.4	70-130	11/8/18 13:17
Toluene-d8	99.3	70-130	11/8/18 13:17
4-Bromofluorobenzene	98.4	70-130	11/8/18 13:17

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP33

Sampled: 11/1/2018 13:30

Sample ID: 18K0278-01

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	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Acenaphthylene	0.49	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Acetophenone	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Aniline	ND	0.43	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Anthracene	0.56	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Benzo(a)anthracene	3.2	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Benzo(a)pyrene	2.0	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Benzo(b)fluoranthene	2.9	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Benzo(g,h,i)perylene	0.77	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Benzo(k)fluoranthene	1.2	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Bis(2-chloroethoxy)methane	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Bis(2-chloroethyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Bis(2-chloroisopropyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
4-Bromophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Butylbenzylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
4-Chloroaniline	ND	0.84	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2-Chloronaphthalene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2-Chlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Chrysene	2.6	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Dibenz(a,h)anthracene	0.34	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Dibenzofuran	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Di-n-butylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
1,2-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
1,3-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
1,4-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
3,3-Dichlorobenzidine	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,4-Dichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Diethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,4-Dimethylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Dimethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,4-Dinitrophenol	ND	0.84	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,4-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,6-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Di-n-octylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Fluoranthene	8.0	0.22	mg/Kg dry	1	E	SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Fluoranthene	8.3	0.43	mg/Kg dry	2		SW-846 8270D	11/7/18	11/12/18 20:39	BGL
Fluorene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Hexachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Hexachlorobutadiene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Hexachloroethane	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Indeno(1,2,3-cd)pyrene	1.1	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Isophorone	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP33

Sampled: 11/1/2018 13:30

Sample ID: 18K0278-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
3/4-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Naphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Nitrobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2-Nitrophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
4-Nitrophenol	ND	0.84	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Pentachlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Phenanthrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Phenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
Pyrene	6.4	0.43	mg/Kg dry	2		SW-846 8270D	11/7/18	11/12/18 20:39	BGL
Pyridine	ND	0.43	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 18:12	BGL
1,2,4-Trichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,4,5-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL
2,4,6-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:12	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	67.6	30-130	11/9/18 18:12
2-Fluorophenol	70.2	30-130	11/12/18 20:39
Phenol-d6	74.5	30-130	11/9/18 18:12
Phenol-d6	80.8	30-130	11/12/18 20:39
Nitrobenzene-d5	67.2	30-130	11/9/18 18:12
Nitrobenzene-d5	81.7	30-130	11/12/18 20:39
2-Fluorobiphenyl	58.8	30-130	11/9/18 18:12
2-Fluorobiphenyl	62.8	30-130	11/12/18 20:39
2,4,6-Tribromophenol	92.4	30-130	11/9/18 18:12
2,4,6-Tribromophenol	89.3	30-130	11/12/18 20:39
p-Terphenyl-d14	65.6	30-130	11/9/18 18:12
p-Terphenyl-d14	67.6	30-130	11/12/18 20:39

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP33

Sampled: 11/1/2018 13:30

Sample ID: 18K0278-01

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.24	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Aldrin [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
alpha-BHC [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
beta-BHC [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
delta-BHC [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
gamma-BHC (Lindane) [1]	ND	0.024	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Chlordane [1]	ND	0.24	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
4,4'-DDD [1]	ND	0.048	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
4,4'-DDE [1]	ND	0.048	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
4,4'-DDT [1]	ND	0.048	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Dieldrin [1]	ND	0.048	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Endosulfan I [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Endosulfan II [1]	ND	0.097	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Endosulfan sulfate [1]	ND	0.097	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Endrin [1]	ND	0.097	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Endrin aldehyde [1]	ND	0.097	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Endrin ketone [1]	ND	0.097	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Heptachlor [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Heptachlor epoxide [1]	ND	0.061	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Hexachlorobenzene [1]	ND	0.073	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Methoxychlor [1]	ND	0.61	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Toxaphene [1]	ND	1.2	mg/Kg dry	10		SW-846 8081B	11/7/18	11/10/18 0:46	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		131	30-150				11/10/18	0:46	
Decachlorobiphenyl [2]		111	30-150				11/10/18	0:46	
Tetrachloro-m-xylene [1]		88.7	30-150				11/10/18	0:46	
Tetrachloro-m-xylene [2]		81.2	30-150				11/10/18	0:46	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP33

Sampled: 11/1/2018 13:30

Sample ID: 18K0278-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 16:01	AYH
Aroclor-1221 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1232 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1242 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1248 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1254 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1260 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1262 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Aroclor-1268 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:01	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.5	30-150					11/8/18 16:01	
Decachlorobiphenyl [2]		103	30-150					11/8/18 16:01	
Tetrachloro-m-xylene [1]		98.2	30-150					11/8/18 16:01	
Tetrachloro-m-xylene [2]		87.0	30-150					11/8/18 16:01	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/1/2018 13:30

Field Sample #: MP33

Sample ID: 18K0278-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
2,4-DB [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
2,4,5-TP (Silvex) [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
2,4,5-T [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
Dalapon [1]	ND	78	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
Dicamba [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
Dichloroprop [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
Dinoseb [1]	ND	16	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 9:23	TG
MCPA [1]	ND	3100	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
MCPA [1]	ND	3100	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 9:23	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	80.3	30-150						11/10/18 9:23	
2,4-Dichlorophenylacetic acid [2]	86.0	30-150						11/10/18 9:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/1/2018 13:30

Field Sample #: MP33

Sample ID: 18K0278-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	360	100	mg/Kg dry	10		SW-846 8100 Modified	11/7/18	11/8/18 15:16	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		64.5	40-140					11/8/18 15:16	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/1/2018 13:30

Field Sample #: MP33

Sample ID: 18K0278-01

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	11/8/18	11/9/18 14:09	QNW
Arsenic	5.0	2.1	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Barium	16	2.1	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Beryllium	ND	0.21	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Cadmium	ND	0.21	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Chromium	8.2	0.42	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Lead	7.3	0.63	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:02	EJB
Nickel	4.7	0.42	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Selenium	ND	4.2	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Silver	ND	0.42	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Vanadium	9.4	0.84	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW
Zinc	9.1	0.84	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:09	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/1/2018 13:30

Field Sample #: MP33

Sample ID: 18K0278-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20.4°C	5.9		pH Units	1	H-03	SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	3.4	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	78.6		% Wt	1		SM 2540G	11/12/18	11/13/18 10:28	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

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	0.080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Bromomethane	ND	0.0080	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 13:42	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Carbon Disulfide	ND	0.0048	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Chlorodibromomethane	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Chloroethane	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Chloromethane	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2-Dibromoethane (EDB)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,3-Dichloropropane	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
cis-1,3-Dichloropropene	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
trans-1,3-Dichloropropene	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Diethyl Ether	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Diisopropyl Ether (DIPE)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,4-Dioxane	ND	0.080	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

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	11/8/18	11/8/18 13:42	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Methylene Chloride	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1,2,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Tetrahydrofuran	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
Vinyl Chloride	ND	0.0080	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 13:42	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.3	70-130	11/8/18 13:42
Toluene-d8	99.5	70-130	11/8/18 13:42
4-Bromofluorobenzene	97.5	70-130	11/8/18 13:42

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

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	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Acetophenone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Aniline	ND	0.37	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Benzo(b)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Bis(2-chloroethoxy)methane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Bis(2-chloroethyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Bis(2-chloroisopropyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
4-Bromophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Butylbenzylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
4-Chloroaniline	ND	0.73	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2-Chloronaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2-Chlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Chrysene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Dibenzofuran	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Di-n-butylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
1,2-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
1,3-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
1,4-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,4-Dichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Diethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,4-Dimethylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Dimethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,4-Dinitrophenol	ND	0.73	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,4-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,6-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Di-n-octylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Hexachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Hexachlorobutadiene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Hexachloroethane	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Isophorone	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

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	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
3/4-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Nitrobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2-Nitrophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
4-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Pentachlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Phenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
Pyridine	ND	0.37	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 18:39	BGL
1,2,4-Trichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,4,5-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL
2,4,6-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 18:39	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	64.0	30-130	
Phenol-d6	72.5	30-130	
Nitrobenzene-d5	71.6	30-130	
2-Fluorobiphenyl	68.1	30-130	
2,4,6-Tribromophenol	105	30-130	
p-Terphenyl-d14	86.4	30-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Aldrin [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
alpha-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
beta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
delta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
4,4'-DDD [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
4,4'-DDE [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
4,4'-DDT [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Dieldrin [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Endosulfan I [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Endosulfan II [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Endosulfan sulfate [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Endrin [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Endrin aldehyde [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Endrin ketone [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Heptachlor [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Heptachlor epoxide [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Hexachlorobenzene [1]	ND	0.0065	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Methoxychlor [1]	ND	0.054	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:13	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		104	30-150					11/10/18 1:13	
Decachlorobiphenyl [2]		103	30-150					11/10/18 1:13	
Tetrachloro-m-xylene [1]		113	30-150					11/10/18 1:13	
Tetrachloro-m-xylene [2]		106	30-150					11/10/18 1:13	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 16:19	AYH
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 16:19	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		103	30-150					11/8/18 16:19	
Decachlorobiphenyl [2]		99.4	30-150					11/8/18 16:19	
Tetrachloro-m-xylene [1]		100	30-150					11/8/18 16:19	
Tetrachloro-m-xylene [2]		92.5	30-150					11/8/18 16:19	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP27

Sampled: 11/5/2018 11:00

Sample ID: 18K0278-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	28	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
2,4-DB [1]	ND	28	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
2,4,5-TP (Silvex) [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
2,4,5-T [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
Dalalpon [1]	ND	70	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
Dicamba [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
Dichloroprop [1]	ND	28	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
Dinoseb [1]	ND	14	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 10:03	TG
MCPA [1]	ND	2800	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
MCPA [1]	ND	2800	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:03	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	85.6	30-150						11/10/18 10:03	
2,4-Dichlorophenylacetic acid [2]	84.1	30-150						11/10/18 10:03	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 11:00

Field Sample #: MP27

Sample ID: 18K0278-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	20	9.1	mg/Kg dry	1		SW-846 8100 Modified	11/7/18	11/8/18 13:16	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		64.9	40-140					11/8/18 13:16	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 11:00

Field Sample #: MP27

Sample ID: 18K0278-02

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	11/8/18	11/9/18 14:14	QNW
Arsenic	7.3	1.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Barium	16	1.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Beryllium	ND	0.19	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Cadmium	0.26	0.19	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Chromium	7.4	0.37	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Lead	5.2	0.56	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:04	EJB
Nickel	4.4	0.37	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Vanadium	8.9	0.75	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW
Zinc	9.5	0.75	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:14	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 11:00

Field Sample #: MP27

Sample ID: 18K0278-02

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20.2°C	5.2		pH Units	1	H-03	SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	2.2	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	89.1		% Wt	1		SM 2540G	11/12/18	11/13/18 10:29	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP28

Sampled: 11/5/2018 12:05

Sample ID: 18K0278-03

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	0.074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Bromomethane	ND	0.0074	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 14:06	MFF
2-Butanone (MEK)	ND	0.029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Carbon Disulfide	ND	0.0044	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Chlorodibromomethane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Chloroethane	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Chloroform	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Chloromethane	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2-Dibromoethane (EDB)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1-Dichloroethylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,3-Dichloropropane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
cis-1,3-Dichloropropene	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
trans-1,3-Dichloropropene	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Diethyl Ether	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Diisopropyl Ether (DIPE)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,4-Dioxane	ND	0.074	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP28

Sampled: 11/5/2018 12:05

Sample ID: 18K0278-03

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	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Methylene Chloride	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Naphthalene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Tetrahydrofuran	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
Vinyl Chloride	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
m+p Xylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.1	70-130	11/8/18 14:06
Toluene-d8	98.6	70-130	11/8/18 14:06
4-Bromofluorobenzene	96.7	70-130	11/8/18 14:06

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP28

Sampled: 11/5/2018 12:05

Sample ID: 18K0278-03

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	11/7/18	11/9/18 19:06	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Aniline	ND	0.39	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
4-Chloroaniline	ND	0.76	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,4-Dinitrophenol	ND	0.76	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP28

Sampled: 11/5/2018 12:05

Sample ID: 18K0278-03

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	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
4-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Pyridine	ND	0.39	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 19:06	BGL
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:06	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		67.0	30-130					11/9/18 19:06	
Phenol-d6		73.7	30-130					11/9/18 19:06	
Nitrobenzene-d5		67.6	30-130					11/9/18 19:06	
2-Fluorobiphenyl		70.8	30-130					11/9/18 19:06	
2,4,6-Tribromophenol		107	30-130					11/9/18 19:06	
p-Terphenyl-d14		83.9	30-130					11/9/18 19:06	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP28

Sampled: 11/5/2018 12:05

Sample ID: 18K0278-03

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Aldrin [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
alpha-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
beta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
delta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
4,4'-DDD [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
4,4'-DDE [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
4,4'-DDT [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Dieldrin [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Endosulfan I [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Endosulfan II [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Endosulfan sulfate [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Endrin [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Endrin aldehyde [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Endrin ketone [1]	ND	0.0087	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Heptachlor [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Heptachlor epoxide [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Hexachlorobenzene [1]	ND	0.0066	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Methoxychlor [1]	ND	0.055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 1:40	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.0	30-150					11/10/18 1:40	
Decachlorobiphenyl [2]		91.6	30-150					11/10/18 1:40	
Tetrachloro-m-xylene [1]		94.6	30-150					11/10/18 1:40	
Tetrachloro-m-xylene [2]		84.7	30-150					11/10/18 1:40	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP28

Sampled: 11/5/2018 12:05

Sample ID: 18K0278-03

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 17:23	AYH
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:23	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		105	30-150					11/8/18 17:23	
Decachlorobiphenyl [2]		103	30-150					11/8/18 17:23	
Tetrachloro-m-xylene [1]		101	30-150					11/8/18 17:23	
Tetrachloro-m-xylene [2]		93.2	30-150					11/8/18 17:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 12:05

Field Sample #: MP28

Sample ID: 18K0278-03

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
Dalapon [1]	ND	72	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
Dinoseb [1]	ND	14	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 10:43	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 10:43	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	85.3	30-150						11/10/18 10:43	
2,4-Dichlorophenylacetic acid [2]	83.7	30-150						11/10/18 10:43	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 12:05

Field Sample #: MP28

Sample ID: 18K0278-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	32	9.6	mg/Kg dry	1		SW-846 8100 Modified	11/7/18	11/8/18 13:36	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		64.0	40-140					11/8/18 13:36	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 12:05

Field Sample #: MP28

Sample ID: 18K0278-03

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	11/8/18	11/9/18 14:19	QNW
Arsenic	3.6	1.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Barium	21	1.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Beryllium	ND	0.19	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Cadmium	ND	0.19	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Chromium	7.0	0.38	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Lead	6.0	0.58	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:05	EJB
Nickel	4.0	0.38	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Vanadium	9.9	0.77	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW
Zinc	7.8	0.77	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:19	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 12:05

Field Sample #: MP28

Sample ID: 18K0278-03

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20.1°C	5.5		pH Units	1	H-03	SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	2.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	86.3		% Wt	1		SM 2540G	11/12/18	11/13/18 10:29	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP29

Sampled: 11/5/2018 13:15

Sample ID: 18K0278-04

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	0.072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Bromomethane	ND	0.0072	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 14:31	MFF
2-Butanone (MEK)	ND	0.029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Carbon Disulfide	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Chlorodibromomethane	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Chloroethane	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Chloroform	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Chloromethane	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2-Dibromoethane (EDB)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1-Dichloroethylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,3-Dichloropropane	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
cis-1,3-Dichloropropene	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
trans-1,3-Dichloropropene	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Diethyl Ether	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Diisopropyl Ether (DIPE)	ND	0.00072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,4-Dioxane	ND	0.072	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP29

Sampled: 11/5/2018 13:15

Sample ID: 18K0278-04

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	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Methylene Chloride	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Naphthalene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1,2,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Tetrahydrofuran	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
Vinyl Chloride	ND	0.0072	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
m+p Xylene	ND	0.0029	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:31	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.6	70-130	11/8/18 14:31
Toluene-d8	100	70-130	11/8/18 14:31
4-Bromofluorobenzene	97.8	70-130	11/8/18 14:31

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP29

Sampled: 11/5/2018 13:15

Sample ID: 18K0278-04

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	11/7/18	11/9/18 19:33	BGL
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Aniline	ND	0.36	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP29

Sampled: 11/5/2018 13:15

Sample ID: 18K0278-04

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	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Pyridine	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 19:33	BGL
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 19:33	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		73.0	30-130					11/9/18 19:33	
Phenol-d6		84.6	30-130					11/9/18 19:33	
Nitrobenzene-d5		87.3	30-130					11/9/18 19:33	
2-Fluorobiphenyl		76.7	30-130					11/9/18 19:33	
2,4,6-Tribromophenol		116	30-130					11/9/18 19:33	
p-Terphenyl-d14		92.8	30-130					11/9/18 19:33	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP29

Sampled: 11/5/2018 13:15

Sample ID: 18K0278-04

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Aldrin [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
alpha-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
beta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
delta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
gamma-BHC (Lindane) [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Chlordane [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
4,4'-DDD [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
4,4'-DDE [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
4,4'-DDT [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Dieldrin [1]	ND	0.0042	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Endosulfan I [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Endosulfan II [1]	ND	0.0084	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Endosulfan sulfate [1]	ND	0.0084	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Endrin [1]	ND	0.0084	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Endrin aldehyde [1]	ND	0.0084	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Endrin ketone [1]	ND	0.0084	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Heptachlor [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Heptachlor epoxide [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Hexachlorobenzene [1]	ND	0.0063	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Methoxychlor [1]	ND	0.052	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Toxaphene [1]	ND	0.10	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:07	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		106	30-150					11/10/18 2:07	
Decachlorobiphenyl [2]		104	30-150					11/10/18 2:07	
Tetrachloro-m-xylene [1]		113	30-150					11/10/18 2:07	
Tetrachloro-m-xylene [2]		110	30-150					11/10/18 2:07	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP29

Sampled: 11/5/2018 13:15

Sample ID: 18K0278-04

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 17:40	AYH
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:40	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		103	30-150					11/8/18 17:40	
Decachlorobiphenyl [2]		101	30-150					11/8/18 17:40	
Tetrachloro-m-xylene [1]		103	30-150					11/8/18 17:40	
Tetrachloro-m-xylene [2]		95.6	30-150					11/8/18 17:40	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 13:15

Field Sample #: MP29

Sample ID: 18K0278-04

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
2,4-DB [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
2,4,5-TP (Silvex) [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
2,4,5-T [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
Dalapon [1]	ND	67	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
Dicamba [1]	ND	2.7	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
Dichloroprop [1]	ND	27	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
Dinoseb [1]	ND	13	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 11:24	TG
MCPA [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
MCPP [1]	ND	2700	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 11:24	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	79.6	30-150						11/10/18 11:24	
2,4-Dichlorophenylacetic acid [2]	79.5	30-150						11/10/18 11:24	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 13:15

Field Sample #: MP29

Sample ID: 18K0278-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	12	9.0	mg/Kg dry	1		SW-846 8100 Modified	11/7/18	11/8/18 13:56	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		62.1	40-140					11/8/18 13:56	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 13:15

Field Sample #: MP29

Sample ID: 18K0278-04

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	11/8/18	11/9/18 14:24	QNW
Arsenic	5.0	1.8	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Barium	19	1.8	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Beryllium	ND	0.18	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Cadmium	0.20	0.18	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Chromium	11	0.36	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Lead	3.6	0.54	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:11	EJB
Nickel	6.1	0.36	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Vanadium	13	0.72	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW
Zinc	12	0.72	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:24	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/5/2018 13:15

Field Sample #: MP29

Sample ID: 18K0278-04

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20.3°C	5.1		pH Units	1	H-03	SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	2.6	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	92.6		% Wt	1		SM 2540G	11/12/18	11/13/18 10:29	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP30

Sampled: 11/6/2018 08:50

Sample ID: 18K0278-05

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	0.088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 14:55	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,4-Dioxane	ND	0.088	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP30

Sampled: 11/6/2018 08:50

Sample ID: 18K0278-05

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	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 14:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.0	70-130	11/8/18 14:55
Toluene-d8	98.1	70-130	11/8/18 14:55
4-Bromofluorobenzene	99.8	70-130	11/8/18 14:55

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP30

Sampled: 11/6/2018 08:50

Sample ID: 18K0278-05

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	11/7/18	11/9/18 20:00	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Acetophenone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Aniline	ND	0.41	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Bis(2-chloroethoxy)methane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Bis(2-chloroisopropyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
4-Bromophenylphenylether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Butylbenzylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
4-Chloroaniline	ND	0.79	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2-Chloronaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2-Chlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Dibenzofuran	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Di-n-butylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
1,2-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
1,3-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
1,4-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,4-Dichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Diethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,4-Dimethylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Dimethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,4-Dinitrophenol	ND	0.79	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,4-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,6-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Di-n-octylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Hexachlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Hexachlorobutadiene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Hexachloroethane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Isophorone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP30

Sampled: 11/6/2018 08:50

Sample ID: 18K0278-05

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	11/7/18	11/9/18 20:00	BGL
3/4-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Nitrobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2-Nitrophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
4-Nitrophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Pentachlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Phenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Pyridine	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 20:00	BGL
1,2,4-Trichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,4,5-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
2,4,6-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:00	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		73.4	30-130					11/9/18 20:00	
Phenol-d6		87.7	30-130					11/9/18 20:00	
Nitrobenzene-d5		89.7	30-130					11/9/18 20:00	
2-Fluorobiphenyl		73.7	30-130					11/9/18 20:00	
2,4,6-Tribromophenol		111	30-130					11/9/18 20:00	
p-Terphenyl-d14		86.2	30-130					11/9/18 20:00	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP30

Sampled: 11/6/2018 08:50

Sample ID: 18K0278-05

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Alachlor [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Aldrin [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
alpha-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
beta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
delta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
gamma-BHC (Lindane) [1]	ND	0.0024	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Chlordane [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
4,4'-DDD [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
4,4'-DDE [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
4,4'-DDT [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Dieldrin [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Endosulfan I [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Endosulfan II [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Endosulfan sulfate [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Endrin [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Endrin aldehyde [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Endrin ketone [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Heptachlor [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Heptachlor epoxide [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Hexachlorobenzene [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Methoxychlor [1]	ND	0.059	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 2:34	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.6	30-150				11/10/18	2:34	
Decachlorobiphenyl [2]		88.6	30-150				11/10/18	2:34	
Tetrachloro-m-xylene [1]		98.3	30-150				11/10/18	2:34	
Tetrachloro-m-xylene [2]		95.4	30-150				11/10/18	2:34	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP30

Sampled: 11/6/2018 08:50

Sample ID: 18K0278-05

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 17:57	AYH
Aroclor-1221 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1232 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1242 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1248 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1254 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1260 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1262 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Aroclor-1268 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 17:57	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.3	30-150					11/8/18 17:57	
Decachlorobiphenyl [2]		95.4	30-150					11/8/18 17:57	
Tetrachloro-m-xylene [1]		91.9	30-150					11/8/18 17:57	
Tetrachloro-m-xylene [2]		83.9	30-150					11/8/18 17:57	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 08:50

Field Sample #: MP30

Sample ID: 18K0278-05

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
Dalapon [1]	ND	75	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
Dinoseb [1]	ND	15	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 12:04	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
MCPP [1]	ND	3000	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:04	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	82.1	30-150						11/10/18 12:04	
2,4-Dichlorophenylacetic acid [2]	87.7	30-150						11/10/18 12:04	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 08:50

Field Sample #: MP30

Sample ID: 18K0278-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	26	10	mg/Kg dry	1		SW-846 8100 Modified	11/7/18	11/8/18 14:16	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		64.9	40-140					11/8/18 14:16	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 08:50

Field Sample #: MP30

Sample ID: 18K0278-05

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	11/8/18	11/9/18 14:29	QNW
Arsenic	9.3	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Barium	19	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Beryllium	0.27	0.20	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Cadmium	0.34	0.20	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Chromium	11	0.41	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Lead	7.4	0.61	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:13	EJB
Nickel	5.8	0.41	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Vanadium	15	0.81	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW
Zinc	14	0.81	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:29	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 08:50

Field Sample #: MP30

Sample ID: 18K0278-05

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20.4°C	4.6		pH Units	1		SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	3.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	82.0		% Wt	1		SM 2540G	11/12/18	11/13/18 10:29	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP31

Sampled: 11/6/2018 10:05

Sample ID: 18K0278-06

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	0.095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Bromomethane	ND	0.0095	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 15:20	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Carbon Disulfide	ND	0.0057	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Chlorodibromomethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Chloroethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Chloromethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2-Dibromoethane (EDB)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,3-Dichloropropane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
cis-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
trans-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Diethyl Ether	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Diisopropyl Ether (DIPE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,4-Dioxane	ND	0.095	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP31

Sampled: 11/6/2018 10:05

Sample ID: 18K0278-06

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	11/8/18	11/8/18 15:20	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Methylene Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Tetrahydrofuran	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
Vinyl Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	11/8/18 15:20
Toluene-d8	96.5	70-130	11/8/18 15:20
4-Bromofluorobenzene	96.2	70-130	11/8/18 15:20

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP31

Sampled: 11/6/2018 10:05

Sample ID: 18K0278-06

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	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Acetophenone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Aniline	ND	0.41	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Bis(2-chloroethoxy)methane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Bis(2-chloroisopropyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
4-Bromophenylphenylether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Butylbenzylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
4-Chloroaniline	ND	0.80	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2-Chloronaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2-Chlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Dibenzofuran	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Di-n-butylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
1,2-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
1,3-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
1,4-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,4-Dichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Diethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,4-Dimethylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Dimethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,4-Dinitrophenol	ND	0.80	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,4-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,6-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Di-n-octylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Hexachlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Hexachlorobutadiene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Hexachloroethane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Isophorone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP31

Sampled: 11/6/2018 10:05

Sample ID: 18K0278-06

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	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
3/4-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Nitrobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2-Nitrophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
4-Nitrophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Pentachlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Phenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
Pyridine	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 20:27	BGL
1,2,4-Trichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,4,5-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL
2,4,6-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:27	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	74.7	30-130	
Phenol-d6	83.0	30-130	
Nitrobenzene-d5	78.4	30-130	
2-Fluorobiphenyl	64.7	30-130	
2,4,6-Tribromophenol	97.4	30-130	
p-Terphenyl-d14	76.9	30-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP31

Sampled: 11/6/2018 10:05

Sample ID: 18K0278-06

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Aldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
alpha-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
beta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
delta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
4,4'-DDD [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
4,4'-DDE [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
4,4'-DDT [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Dieldrin [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Endosulfan I [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Endosulfan II [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Endosulfan sulfate [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Endrin [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Endrin aldehyde [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:01	TG
Endrin ketone [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Heptachlor [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Heptachlor epoxide [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Hexachlorobenzene [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Methoxychlor [1]	ND	0.056	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 9:56	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		82.0	30-150					11/10/18 9:56	
Decachlorobiphenyl [2]		79.5	30-150					11/10/18 9:56	
Tetrachloro-m-xylene [1]		80.4	30-150					11/10/18 9:56	
Tetrachloro-m-xylene [2]		70.8	30-150					11/10/18 9:56	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP31

Sampled: 11/6/2018 10:05

Sample ID: 18K0278-06

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 18:14	AYH
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:14	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		96.5	30-150					11/8/18 18:14	
Decachlorobiphenyl [2]		95.3	30-150					11/8/18 18:14	
Tetrachloro-m-xylene [1]		86.2	30-150					11/8/18 18:14	
Tetrachloro-m-xylene [2]		79.8	30-150					11/8/18 18:14	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 10:05

Field Sample #: MP31

Sample ID: 18K0278-06

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
Dalapon [1]	ND	76	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
Dinoseb [1]	ND	15	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 12:44	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
MCPP [1]	ND	3000	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 12:44	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	83.6	30-150						11/10/18 12:44	
2,4-Dichlorophenylacetic acid [2]	99.2	30-150						11/10/18 12:44	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 10:05

Field Sample #: MP31

Sample ID: 18K0278-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	18	10	mg/Kg dry	1		SW-846 8100 Modified	11/7/18	11/8/18 14:36	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		63.2	40-140					11/8/18 14:36	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 10:05

Field Sample #: MP31

Sample ID: 18K0278-06

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	11/8/18	11/9/18 14:34	QNW
Arsenic	3.2	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Barium	17	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Beryllium	ND	0.20	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Cadmium	ND	0.20	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Chromium	6.9	0.41	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Lead	13	0.61	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Mercury	ND	0.031	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:14	EJB
Nickel	5.4	0.41	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Vanadium	7.8	0.81	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW
Zinc	57	0.81	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:34	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 10:05

Field Sample #: MP31

Sample ID: 18K0278-06

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20°C	5.3		pH Units	1		SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	3.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	81.6		% Wt	1		SM 2540G	11/12/18	11/13/18 10:29	MJR

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP35

Sampled: 11/6/2018 12:00

Sample ID: 18K0278-07

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	0.071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Bromomethane	ND	0.0071	mg/Kg dry	1	V-34	SW-846 8260C	11/8/18	11/8/18 15:45	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Carbon Disulfide	ND	0.0043	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Chlorodibromomethane	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Chloroethane	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Chloromethane	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2-Dibromoethane (EDB)	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,3-Dichloropropane	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
cis-1,3-Dichloropropene	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
trans-1,3-Dichloropropene	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Diethyl Ether	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Diisopropyl Ether (DIPE)	ND	0.00071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,4-Dioxane	ND	0.071	mg/Kg dry	1	V-16	SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP35

Sampled: 11/6/2018 12:00

Sample ID: 18K0278-07

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	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Methylene Chloride	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Naphthalene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1,2,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Tetrahydrofuran	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
Vinyl Chloride	ND	0.0071	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/8/18	11/8/18 15:45	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.0	70-130	11/8/18 15:45
Toluene-d8	98.9	70-130	11/8/18 15:45
4-Bromofluorobenzene	98.8	70-130	11/8/18 15:45

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP35

Sampled: 11/6/2018 12:00

Sample ID: 18K0278-07

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	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Aniline	ND	0.40	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
4-Chloroaniline	ND	0.77	mg/Kg dry	1	V-34	SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,4-Dinitrophenol	ND	0.77	mg/Kg dry	1	V-19	SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP35

Sampled: 11/6/2018 12:00

Sample ID: 18K0278-07

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	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
4-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Pyridine	ND	0.40	mg/Kg dry	1	V-05	SW-846 8270D	11/7/18	11/9/18 20:54	BGL
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/7/18	11/9/18 20:54	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		73.2	30-130					11/9/18 20:54	
Phenol-d6		83.2	30-130					11/9/18 20:54	
Nitrobenzene-d5		84.1	30-130					11/9/18 20:54	
2-Fluorobiphenyl		69.7	30-130					11/9/18 20:54	
2,4,6-Tribromophenol		103	30-130					11/9/18 20:54	
p-Terphenyl-d14		79.8	30-130					11/9/18 20:54	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP35

Sampled: 11/6/2018 12:00

Sample ID: 18K0278-07

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Aldrin [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
alpha-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
beta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
delta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
4,4'-DDD [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
4,4'-DDE [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
4,4'-DDT [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Dieldrin [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Endosulfan I [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Endosulfan II [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Endosulfan sulfate [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Endrin [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Endrin aldehyde [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Endrin ketone [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Heptachlor [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Heptachlor epoxide [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Hexachlorobenzene [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Methoxychlor [1]	ND	0.055	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/7/18	11/10/18 3:28	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		96.5	30-150					11/10/18 3:28	
Decachlorobiphenyl [2]		95.4	30-150					11/10/18 3:28	
Tetrachloro-m-xylene [1]		97.0	30-150					11/10/18 3:28	
Tetrachloro-m-xylene [2]		85.0	30-150					11/10/18 3:28	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Field Sample #: MP35

Sampled: 11/6/2018 12:00

Sample ID: 18K0278-07

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/7/18	11/8/18 18:32	AYH
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/7/18	11/8/18 18:32	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		112	30-150					11/8/18 18:32	
Decachlorobiphenyl [2]		111	30-150					11/8/18 18:32	
Tetrachloro-m-xylene [1]		102	30-150					11/8/18 18:32	
Tetrachloro-m-xylene [2]		94.7	30-150					11/8/18 18:32	

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 12:00

Field Sample #: MP35

Sample ID: 18K0278-07

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
2,4-DB [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
2,4,5-TP (Silvex) [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
2,4,5-T [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
Dalapon [1]	ND	75	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
Dicamba [1]	ND	3.0	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
Dichloroprop [1]	ND	30	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
Dinoseb [1]	ND	15	µg/kg dry	1	V-20	SW-846 8151A	11/8/18	11/10/18 14:29	TG
MCPA [1]	ND	3000	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
MCPP [1]	ND	3000	µg/kg dry	1		SW-846 8151A	11/8/18	11/10/18 14:29	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		71.5	30-150					11/10/18 14:29	
2,4-Dichlorophenylacetic acid [2]		70.2	30-150					11/10/18 14:29	

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 12:00

Field Sample #: MP35

Sample ID: 18K0278-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	21	9.7	mg/Kg dry	1		SW-846 8100 Modified	11/7/18	11/8/18 14:56	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		62.0	40-140					11/8/18 14:56	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 12:00

Field Sample #: MP35

Sample ID: 18K0278-07

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	11/8/18	11/9/18 14:43	QNW
Arsenic	5.9	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Barium	36	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Beryllium	0.41	0.20	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Cadmium	0.26	0.20	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Chromium	16	0.39	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Lead	10	0.59	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	11/8/18	11/8/18 16:16	EJB
Nickel	12	0.39	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Vanadium	21	0.78	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW
Zinc	22	0.78	mg/Kg dry	1		SW-846 6010D	11/8/18	11/9/18 14:43	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0278

Date Received: 11/6/2018

Sampled: 11/6/2018 12:00

Field Sample #: MP35

Sample ID: 18K0278-07

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/7/18	11/7/18 14:47	LED
pH @20.4°C	5.5		pH Units	1		SW-846 9045C	11/6/18	11/6/18 22:41	LED
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/8/18	11/12/18 13:00	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/8/18	11/12/18 12:15	DJM
Specific conductance	2.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/9/18	11/9/18 15:50	EC
% Solids	83.4		% Wt	1		SM 2540G	11/12/18	11/13/18 10:30	MJR

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18K0278-01 [MP33]	B217033	11/12/18
18K0278-02 [MP27]	B217033	11/12/18
18K0278-03 [MP28]	B217033	11/12/18
18K0278-04 [MP29]	B217033	11/12/18
18K0278-05 [MP30]	B217033	11/12/18
18K0278-06 [MP31]	B217033	11/12/18
18K0278-07 [MP35]	B217033	11/12/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0278-01 [MP33]	B216817	1.00	11/09/18
18K0278-02 [MP27]	B216817	1.00	11/09/18
18K0278-03 [MP28]	B216817	1.00	11/09/18
18K0278-04 [MP29]	B216817	1.00	11/09/18
18K0278-05 [MP30]	B216817	1.00	11/09/18
18K0278-06 [MP31]	B216817	1.00	11/09/18
18K0278-07 [MP35]	B216817	1.00	11/09/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0278-01 [MP33]	B216677	50.0	11/07/18
18K0278-02 [MP27]	B216677	50.0	11/07/18
18K0278-03 [MP28]	B216677	50.0	11/07/18
18K0278-04 [MP29]	B216677	50.0	11/07/18
18K0278-05 [MP30]	B216677	50.0	11/07/18
18K0278-06 [MP31]	B216677	50.0	11/07/18
18K0278-07 [MP35]	B216677	50.0	11/07/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216743	1.51	50.0	11/08/18
18K0278-02 [MP27]	B216743	1.50	50.0	11/08/18
18K0278-03 [MP28]	B216743	1.51	50.0	11/08/18
18K0278-04 [MP29]	B216743	1.50	50.0	11/08/18
18K0278-05 [MP30]	B216743	1.50	50.0	11/08/18
18K0278-06 [MP31]	B216743	1.51	50.0	11/08/18
18K0278-07 [MP35]	B216743	1.54	50.0	11/08/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216703	0.638	50.0	11/08/18
18K0278-02 [MP27]	B216703	0.572	50.0	11/08/18
18K0278-03 [MP28]	B216703	0.606	50.0	11/08/18
18K0278-04 [MP29]	B216703	0.616	50.0	11/08/18
18K0278-05 [MP30]	B216703	0.616	50.0	11/08/18
18K0278-06 [MP31]	B216703	0.587	50.0	11/08/18

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-07 [MP35]	B216703	0.602	50.0	11/08/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216575	10.5	10.0	11/07/18
18K0278-02 [MP27]	B216575	10.4	10.0	11/07/18
18K0278-03 [MP28]	B216575	10.6	10.0	11/07/18
18K0278-04 [MP29]	B216575	10.3	10.0	11/07/18
18K0278-05 [MP30]	B216575	10.3	10.0	11/07/18
18K0278-06 [MP31]	B216575	10.9	10.0	11/07/18
18K0278-07 [MP35]	B216575	10.8	10.0	11/07/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216574	10.5	10.0	11/07/18
18K0278-02 [MP27]	B216574	10.4	10.0	11/07/18
18K0278-03 [MP28]	B216574	10.6	10.0	11/07/18
18K0278-04 [MP29]	B216574	10.3	10.0	11/07/18
18K0278-05 [MP30]	B216574	10.3	10.0	11/07/18
18K0278-06 [MP31]	B216574	10.9	10.0	11/07/18
18K0278-07 [MP35]	B216574	10.8	10.0	11/07/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216634	30.7	1.00	11/07/18
18K0278-02 [MP27]	B216634	30.9	1.00	11/07/18
18K0278-03 [MP28]	B216634	30.3	1.00	11/07/18
18K0278-04 [MP29]	B216634	30.1	1.00	11/07/18
18K0278-05 [MP30]	B216634	30.1	1.00	11/07/18
18K0278-06 [MP31]	B216634	30.2	1.00	11/07/18
18K0278-07 [MP35]	B216634	30.9	1.00	11/07/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216689	20.3	5.00	11/08/18
18K0278-02 [MP27]	B216689	20.1	5.00	11/08/18
18K0278-03 [MP28]	B216689	20.0	5.00	11/08/18
18K0278-04 [MP29]	B216689	20.0	5.00	11/08/18
18K0278-05 [MP30]	B216689	20.3	5.00	11/08/18
18K0278-06 [MP31]	B216689	20.1	5.00	11/08/18
18K0278-07 [MP35]	B216689	20.1	5.00	11/08/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216709	13.0	10.0	11/08/18
18K0278-02 [MP27]	B216709	7.00	10.0	11/08/18
18K0278-03 [MP28]	B216709	7.88	10.0	11/08/18
18K0278-04 [MP29]	B216709	7.53	10.0	11/08/18
18K0278-05 [MP30]	B216709	6.90	10.0	11/08/18
18K0278-06 [MP31]	B216709	6.45	10.0	11/08/18
18K0278-07 [MP35]	B216709	8.41	10.0	11/08/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216591	30.1	1.00	11/07/18
18K0278-01RE1 [MP33]	B216591	30.1	1.00	11/07/18
18K0278-02 [MP27]	B216591	30.6	1.00	11/07/18
18K0278-03 [MP28]	B216591	30.1	1.00	11/07/18
18K0278-04 [MP29]	B216591	30.9	1.00	11/07/18
18K0278-05 [MP30]	B216591	30.5	1.00	11/07/18
18K0278-06 [MP31]	B216591	30.3	1.00	11/07/18
18K0278-07 [MP35]	B216591	30.8	1.00	11/07/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216769	25.6	250	11/08/18
18K0278-02 [MP27]	B216769	25.8	250	11/08/18
18K0278-03 [MP28]	B216769	25.7	250	11/08/18
18K0278-04 [MP29]	B216769	25.8	250	11/08/18
18K0278-05 [MP30]	B216769	25.9	250	11/08/18
18K0278-06 [MP31]	B216769	25.5	250	11/08/18
18K0278-07 [MP35]	B216769	25.3	250	11/08/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0278-01 [MP33]	B216984	25.6	250	11/08/18
18K0278-02 [MP27]	B216984	25.8	250	11/08/18
18K0278-03 [MP28]	B216984	25.7	250	11/08/18
18K0278-04 [MP29]	B216984	25.8	250	11/08/18
18K0278-05 [MP30]	B216984	25.9	250	11/08/18
18K0278-06 [MP31]	B216984	25.5	250	11/08/18
18K0278-07 [MP35]	B216984	25.3	250	11/08/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0278-01 [MP33]	B216565	20.0	11/06/18
18K0278-02 [MP27]	B216565	20.0	11/06/18
18K0278-03 [MP28]	B216565	20.0	11/06/18
18K0278-04 [MP29]	B216565	20.0	11/06/18
18K0278-05 [MP30]	B216565	20.0	11/06/18

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Sample Extraction Data

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0278-06 [MP31]	B216565	20.0	11/06/18
18K0278-07 [MP35]	B216565	20.0	11/06/18

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 B216709 - SW-846 5035

Blank (B216709-BLK1)

Prepared & Analyzed: 11/08/18

Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
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 B216709 - SW-846 5035

Blank (B216709-BLK1)

Prepared & Analyzed: 11/08/18

n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0483		mg/Kg wet	0.0500		96.6	70-130			
Surrogate: Toluene-d8	0.0492		mg/Kg wet	0.0500		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0491		mg/Kg wet	0.0500		98.2	70-130			

LCS (B216709-BS1)

Prepared & Analyzed: 11/08/18

Acetone	0.310	0.10	mg/Kg wet	0.200		155	40-160		L-14	†
tert-Amyl Methyl Ether (TAME)	0.0198	0.0010	mg/Kg wet	0.0200		99.0	70-130			
Benzene	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130			
Bromobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
Bromochloromethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromodichloromethane	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130			
Bromoform	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130			
Bromomethane	0.0112	0.010	mg/Kg wet	0.0200		56.0	40-160		L-14, V-34	†
2-Butanone (MEK)	0.261	0.040	mg/Kg wet	0.200		130	40-160			†
n-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
tert-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0198	0.0010	mg/Kg wet	0.0200		99.0	70-130			
Carbon Disulfide	0.0208	0.0060	mg/Kg wet	0.0200		104	70-130			
Carbon Tetrachloride	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Chlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
Chlorodibromomethane	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130			
Chloroethane	0.0195	0.010	mg/Kg wet	0.0200		97.6	70-130			
Chloroform	0.0196	0.0040	mg/Kg wet	0.0200		98.2	70-130			
Chloromethane	0.0205	0.010	mg/Kg wet	0.0200		102	40-160			†
2-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
4-Chlorotoluene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
1,2-Dibromoethane (EDB)	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130			
Dibromomethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,3-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,4-Dichlorobenzene	0.0197	0.0020	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
Batch B216709 - SW-846 5035										
LCS (B216709-BS1)										
				Prepared & Analyzed: 11/08/18						
Dichlorodifluoromethane (Freon 12)	0.0192	0.010	mg/Kg wet	0.0200		95.8	40-160			†
1,1-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1-Dichloroethylene	0.0200	0.0040	mg/Kg wet	0.0200		100	70-130			
cis-1,2-Dichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
trans-1,2-Dichloroethylene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,2-Dichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
1,3-Dichloropropane	0.0191	0.0010	mg/Kg wet	0.0200		95.3	70-130			
2,2-Dichloropropane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1-Dichloropropene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
cis-1,3-Dichloropropene	0.0203	0.0010	mg/Kg wet	0.0200		101	70-130			
trans-1,3-Dichloropropene	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130			
Diethyl Ether	0.0193	0.010	mg/Kg wet	0.0200		96.7	70-130			
Diisopropyl Ether (DIPE)	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130			
1,4-Dioxane	0.200	0.10	mg/Kg wet	0.200		100	40-160			V-16 †
Ethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Hexachlorobutadiene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
2-Hexanone (MBK)	0.231	0.020	mg/Kg wet	0.200		116	40-160			†
Isopropylbenzene (Cumene)	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
p-Isopropyltoluene (p-Cymene)	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0223	0.0040	mg/Kg wet	0.0200		111	70-130			
Methylene Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.4	70-130			
4-Methyl-2-pentanone (MIBK)	0.208	0.020	mg/Kg wet	0.200		104	40-160			†
Naphthalene	0.0179	0.0040	mg/Kg wet	0.0200		89.6	70-130			
n-Propylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Styrene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
1,1,1,2-Tetrachloroethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,1,2,2-Tetrachloroethane	0.0191	0.0010	mg/Kg wet	0.0200		95.7	70-130			
Tetrachloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
Tetrahydrofuran	0.0193	0.010	mg/Kg wet	0.0200		96.5	70-130			
Toluene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
1,2,3-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
1,2,4-Trichlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
1,1,1-Trichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,2-Trichloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Trichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
Trichlorofluoromethane (Freon 11)	0.0184	0.010	mg/Kg wet	0.0200		92.0	70-130			
1,2,3-Trichloropropane	0.0175	0.0020	mg/Kg wet	0.0200		87.6	70-130			
1,2,4-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,3,5-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
Vinyl Chloride	0.0188	0.010	mg/Kg wet	0.0200		94.0	70-130			
m+p Xylene	0.0399	0.0040	mg/Kg wet	0.0400		99.8	70-130			
o-Xylene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0520		mg/Kg wet	0.0500		104	70-130			
Surrogate: Toluene-d8	0.0501		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0503		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
Batch B216709 - SW-846 5035										
LCS Dup (B216709-BSD1)										
Prepared & Analyzed: 11/08/18										
Acetone	0.269	0.10	mg/Kg wet	0.200		134	40-160	14.1	20	L-14 †
tert-Amyl Methyl Ether (TAME)	0.0211	0.0010	mg/Kg wet	0.0200		106	70-130	6.36	20	
Benzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	5.42	20	
Bromobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	11.1	20	
Bromochloromethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	2.37	20	
Bromodichloromethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	6.45	20	
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	7.44	20	
Bromomethane	0.0128	0.010	mg/Kg wet	0.0200		63.8	40-160	13.1	20	L-14, V-34 †
2-Butanone (MEK)	0.253	0.040	mg/Kg wet	0.200		127	40-160	2.78	20	†
n-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	13.1	20	
sec-Butylbenzene	0.0237	0.0020	mg/Kg wet	0.0200		118	70-130	14.9	20	
tert-Butylbenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	14.5	20	
tert-Butyl Ethyl Ether (TBEE)	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130	5.69	20	
Carbon Disulfide	0.0208	0.0060	mg/Kg wet	0.0200		104	70-130	0.0770	20	
Carbon Tetrachloride	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	6.00	20	
Chlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	11.6	20	
Chlorodibromomethane	0.0229	0.0010	mg/Kg wet	0.0200		114	70-130	9.15	20	
Chloroethane	0.0211	0.010	mg/Kg wet	0.0200		106	70-130	7.97	20	
Chloroform	0.0209	0.0040	mg/Kg wet	0.0200		105	70-130	6.23	20	
Chloromethane	0.0198	0.010	mg/Kg wet	0.0200		99.1	40-160	3.30	20	†
2-Chlorotoluene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	11.4	20	
4-Chlorotoluene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	9.68	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	10.2	20	
1,2-Dibromoethane (EDB)	0.0230	0.0010	mg/Kg wet	0.0200		115	70-130	9.89	20	
Dibromomethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	2.89	20	
1,2-Dichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	14.6	20	
1,3-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	13.8	20	
1,4-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	11.4	20	
Dichlorodifluoromethane (Freon 12)	0.0201	0.010	mg/Kg wet	0.0200		101	40-160	4.96	20	†
1,1-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	7.26	20	
1,2-Dichloroethane	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	5.70	20	
1,1-Dichloroethylene	0.0211	0.0040	mg/Kg wet	0.0200		105	70-130	5.09	20	
cis-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	4.70	20	
trans-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	4.91	20	
1,2-Dichloropropane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	8.14	20	
1,3-Dichloropropane	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	5.26	20	
2,2-Dichloropropane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	8.32	20	
1,1-Dichloropropene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	4.53	20	
cis-1,3-Dichloropropene	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130	7.04	20	
trans-1,3-Dichloropropene	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130	8.91	20	
Diethyl Ether	0.0198	0.010	mg/Kg wet	0.0200		99.2	70-130	2.59	20	
Diisopropyl Ether (DIPE)	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	5.82	20	
1,4-Dioxane	0.187	0.10	mg/Kg wet	0.200		93.4	40-160	6.84	20	V-16 †
Ethylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	9.76	20	
Hexachlorobutadiene	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130	17.5	20	
2-Hexanone (MBK)	0.241	0.020	mg/Kg wet	0.200		121	40-160	4.08	20	†
Isopropylbenzene (Cumene)	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130	10.7	20	
p-Isopropyltoluene (p-Cymene)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	12.0	20	
Methyl tert-Butyl Ether (MTBE)	0.0232	0.0040	mg/Kg wet	0.0200		116	70-130	4.23	20	
Methylene Chloride	0.0187	0.010	mg/Kg wet	0.0200		93.6	70-130	8.00	20	
4-Methyl-2-pentanone (MIBK)	0.224	0.020	mg/Kg wet	0.200		112	40-160	7.33	20	†
Naphthalene	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130	17.0	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216709 - SW-846 5035										
LCS Dup (B216709-BSD1)										
Prepared & Analyzed: 11/08/18										
n-Propylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	10.9	20	
Styrene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	12.7	20	
1,1,1,2-Tetrachloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	7.88	20	
1,1,2,2-Tetrachloroethane	0.0224	0.0010	mg/Kg wet	0.0200		112	70-130	15.5	20	
Tetrachloroethylene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	6.86	20	
Tetrahydrofuran	0.0190	0.010	mg/Kg wet	0.0200		95.0	70-130	1.57	20	
Toluene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	7.08	20	
1,2,3-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	14.3	20	
1,2,4-Trichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	18.9	20	
1,1,1-Trichloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	7.28	20	
1,1,2-Trichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	6.31	20	
Trichloroethylene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	6.35	20	
Trichlorofluoromethane (Freon 11)	0.0186	0.010	mg/Kg wet	0.0200		92.9	70-130	0.995	20	
1,2,3-Trichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	14.2	20	
1,2,4-Trimethylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	14.4	20	
1,3,5-Trimethylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	11.7	20	
Vinyl Chloride	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	4.76	20	
m+p Xylene	0.0439	0.0040	mg/Kg wet	0.0400		110	70-130	9.46	20	
o-Xylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	10.4	20	
Surrogate: 1,2-Dichloroethane-d4	0.0495		mg/Kg wet	0.0500		98.9	70-130			
Surrogate: Toluene-d8	0.0498		mg/Kg wet	0.0500		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.0504		mg/Kg wet	0.0500		101	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 B216591 - SW-846 3546

Blank (B216591-BLK1)

Prepared: 11/07/18 Analyzed: 11/08/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-05, 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							V-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							V-20
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
Batch B216591 - SW-846 3546										
Blank (B216591-BLK1)										
Prepared: 11/07/18 Analyzed: 11/08/18										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	5.23		mg/Kg wet	6.67		78.4	30-130			
Surrogate: Phenol-d6	5.95		mg/Kg wet	6.67		89.2	30-130			
Surrogate: Nitrobenzene-d5	2.83		mg/Kg wet	3.33		84.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.51		mg/Kg wet	3.33		75.4	30-130			
Surrogate: 2,4,6-Tribromophenol	7.41		mg/Kg wet	6.67		111	30-130			
Surrogate: p-Terphenyl-d14	3.00		mg/Kg wet	3.33		90.0	30-130			
LCS (B216591-BS1)										
Prepared: 11/07/18 Analyzed: 11/08/18										
Acenaphthene	1.30	0.17	mg/Kg wet	1.67		77.9	40-140			
Acenaphthylene	1.40	0.17	mg/Kg wet	1.67		83.8	40-140			
Acetophenone	1.31	0.34	mg/Kg wet	1.67		78.9	40-140			
Aniline	1.14	0.34	mg/Kg wet	1.67		68.4	40-140			V-34, V-05
Anthracene	1.31	0.17	mg/Kg wet	1.67		78.7	40-140			
Benzo(a)anthracene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140			
Benzo(a)pyrene	1.35	0.17	mg/Kg wet	1.67		81.2	40-140			
Benzo(b)fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.1	40-140			
Benzo(g,h,i)perylene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140			
Benzo(k)fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.7	40-140			
Bis(2-chloroethoxy)methane	1.42	0.34	mg/Kg wet	1.67		85.4	40-140			
Bis(2-chloroethyl)ether	1.34	0.34	mg/Kg wet	1.67		80.4	40-140			
Bis(2-chloroisopropyl)ether	1.56	0.34	mg/Kg wet	1.67		93.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.42	0.34	mg/Kg wet	1.67		85.0	40-140			
4-Bromophenylphenylether	1.32	0.34	mg/Kg wet	1.67		79.2	40-140			
Butylbenzylphthalate	1.38	0.34	mg/Kg wet	1.67		83.0	40-140			
4-Chloroaniline	1.17	0.66	mg/Kg wet	1.67		70.1	15-140			V-34 †
2-Chloronaphthalene	1.31	0.34	mg/Kg wet	1.67		78.6	40-140			
2-Chlorophenol	1.21	0.34	mg/Kg wet	1.67		72.6	30-130			
Chrysene	1.21	0.17	mg/Kg wet	1.67		72.6	40-140			
Dibenz(a,h)anthracene	1.38	0.17	mg/Kg wet	1.67		83.0	40-140			
Dibenzofuran	1.44	0.34	mg/Kg wet	1.67		86.3	40-140			
Di-n-butylphthalate	1.33	0.34	mg/Kg wet	1.67		79.9	40-140			
1,2-Dichlorobenzene	1.01	0.34	mg/Kg wet	1.67		60.6	40-140			
1,3-Dichlorobenzene	0.940	0.34	mg/Kg wet	1.67		56.4	40-140			
1,4-Dichlorobenzene	0.956	0.34	mg/Kg wet	1.67		57.4	40-140			
3,3-Dichlorobenzidine	1.57	0.17	mg/Kg wet	1.67		94.0	40-140			
2,4-Dichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.5	30-130			
Diethylphthalate	1.45	0.34	mg/Kg wet	1.67		87.2	40-140			
2,4-Dimethylphenol	1.21	0.34	mg/Kg wet	1.67		72.5	30-130			
Dimethylphthalate	1.50	0.34	mg/Kg wet	1.67		89.8	40-140			
2,4-Dinitrophenol	1.28	0.66	mg/Kg wet	1.67		76.9	15-140			V-19 †
2,4-Dinitrotoluene	1.55	0.34	mg/Kg wet	1.67		92.8	40-140			
2,6-Dinitrotoluene	1.61	0.34	mg/Kg wet	1.67		96.9	40-140			
Di-n-octylphthalate	1.33	0.34	mg/Kg wet	1.67		79.5	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.40	0.34	mg/Kg wet	1.67		84.2	40-140			
Fluoranthene	1.34	0.17	mg/Kg wet	1.67		80.3	40-140			
Fluorene	1.42	0.17	mg/Kg wet	1.67		85.1	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 B216591 - SW-846 3546

LCS (B216591-BS1)

Prepared: 11/07/18 Analyzed: 11/08/18

Hexachlorobenzene	1.32	0.34	mg/Kg wet	1.67		79.2	40-140			
Hexachlorobutadiene	1.18	0.34	mg/Kg wet	1.67		70.6	40-140			
Hexachloroethane	1.04	0.34	mg/Kg wet	1.67		62.4	40-140			
Indeno(1,2,3-cd)pyrene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140			
Isophorone	1.38	0.34	mg/Kg wet	1.67		82.7	40-140			
2-Methylnaphthalene	1.32	0.17	mg/Kg wet	1.67		79.3	40-140			
2-Methylphenol	1.26	0.34	mg/Kg wet	1.67		75.5	30-130			
3/4-Methylphenol	1.39	0.34	mg/Kg wet	1.67		83.4	30-130			
Naphthalene	1.20	0.17	mg/Kg wet	1.67		72.3	40-140			
Nitrobenzene	1.31	0.34	mg/Kg wet	1.67		78.6	40-140			
2-Nitrophenol	1.37	0.34	mg/Kg wet	1.67		82.1	30-130			
4-Nitrophenol	1.81	0.66	mg/Kg wet	1.67		108	15-140			V-06 †
Pentachlorophenol	0.965	0.34	mg/Kg wet	1.67		57.9	30-130			
Phenanthrene	1.30	0.17	mg/Kg wet	1.67		78.3	40-140			
Phenol	1.31	0.34	mg/Kg wet	1.67		78.4	15-140			†
Pyrene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140			
Pyridine	0.586	0.34	mg/Kg wet	1.67		35.2	30-140			V-05 †
1,2,4-Trichlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.7	40-140			
2,4,5-Trichlorophenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
2,4,6-Trichlorophenol	1.44	0.34	mg/Kg wet	1.67		86.2	30-130			
Surrogate: 2-Fluorophenol	4.83		mg/Kg wet	6.67		72.4	30-130			
Surrogate: Phenol-d6	5.74		mg/Kg wet	6.67		86.0	30-130			
Surrogate: Nitrobenzene-d5	2.78		mg/Kg wet	3.33		83.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.52		mg/Kg wet	3.33		75.7	30-130			
Surrogate: 2,4,6-Tribromophenol	7.12		mg/Kg wet	6.67		107	30-130			
Surrogate: p-Terphenyl-d14	2.69		mg/Kg wet	3.33		80.8	30-130			

LCS Dup (B216591-BS1)

Prepared: 11/07/18 Analyzed: 11/08/18

Acenaphthene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140	0.0770	30	
Acenaphthylene	1.39	0.17	mg/Kg wet	1.67		83.5	40-140	0.383	30	
Acetophenone	1.31	0.34	mg/Kg wet	1.67		78.9	40-140	0.00	30	
Aniline	1.06	0.34	mg/Kg wet	1.67		63.3	40-140	7.74	30	V-05, V-34
Anthracene	1.29	0.17	mg/Kg wet	1.67		77.6	40-140	1.41	30	
Benzo(a)anthracene	1.31	0.17	mg/Kg wet	1.67		78.4	40-140	0.839	30	
Benzo(a)pyrene	1.34	0.17	mg/Kg wet	1.67		80.1	40-140	1.29	30	
Benzo(b)fluoranthene	1.23	0.17	mg/Kg wet	1.67		74.1	40-140	2.66	30	
Benzo(g,h,i)perylene	1.38	0.17	mg/Kg wet	1.67		82.9	40-140	0.217	30	
Benzo(k)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140	1.39	30	
Bis(2-chloroethoxy)methane	1.45	0.34	mg/Kg wet	1.67		87.2	40-140	2.11	30	
Bis(2-chloroethyl)ether	1.40	0.34	mg/Kg wet	1.67		83.7	40-140	4.02	30	
Bis(2-chloroisopropyl)ether	1.64	0.34	mg/Kg wet	1.67		98.7	40-140	5.07	30	
Bis(2-Ethylhexyl)phthalate	1.35	0.34	mg/Kg wet	1.67		80.9	40-140	4.94	30	
4-Bromophenylphenylether	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	2.77	30	V-34
Butylbenzylphthalate	1.38	0.34	mg/Kg wet	1.67		82.8	40-140	0.265	30	
4-Chloroaniline	0.872	0.66	mg/Kg wet	1.67		52.3	15-140	29.0	30	V-34 †
2-Chloronaphthalene	1.32	0.34	mg/Kg wet	1.67		79.0	40-140	0.609	30	
2-Chlorophenol	1.22	0.34	mg/Kg wet	1.67		73.3	30-130	0.932	30	
Chrysene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140	0.933	30	
Dibenz(a,h)anthracene	1.37	0.17	mg/Kg wet	1.67		82.1	40-140	1.07	30	
Dibenzofuran	1.44	0.34	mg/Kg wet	1.67		86.6	40-140	0.347	30	
Di-n-butylphthalate	1.37	0.34	mg/Kg wet	1.67		82.0	40-140	2.54	30	
1,2-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.2	40-140	7.41	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 B216591 - SW-846 3546

LCS Dup (B216591-BSD1)

Prepared: 11/07/18 Analyzed: 11/08/18

1,3-Dichlorobenzene	1.04	0.34	mg/Kg wet	1.67		62.2	40-140	9.72	30	
1,4-Dichlorobenzene	1.05	0.34	mg/Kg wet	1.67		63.0	40-140	9.37	30	
3,3-Dichlorobenzidine	1.28	0.17	mg/Kg wet	1.67		76.5	40-140	20.5	30	
2,4-Dichlorophenol	1.33	0.34	mg/Kg wet	1.67		79.7	30-130	0.301	30	
Diethylphthalate	1.48	0.34	mg/Kg wet	1.67		88.5	40-140	1.43	30	
2,4-Dimethylphenol	1.22	0.34	mg/Kg wet	1.67		73.1	30-130	0.824	30	
Dimethylphthalate	1.49	0.34	mg/Kg wet	1.67		89.4	40-140	0.513	30	
2,4-Dinitrophenol	1.21	0.66	mg/Kg wet	1.67		72.6	15-140	5.70	30	V-19 †
2,4-Dinitrotoluene	1.54	0.34	mg/Kg wet	1.67		92.2	40-140	0.670	30	
2,6-Dinitrotoluene	1.64	0.34	mg/Kg wet	1.67		98.6	40-140	1.76	30	
Di-n-octylphthalate	1.32	0.34	mg/Kg wet	1.67		79.3	40-140	0.302	30	
1,2-Diphenylhydrazine/Azobenzene	1.34	0.34	mg/Kg wet	1.67		80.4	40-140	4.62	30	
Fluoranthene	1.30	0.17	mg/Kg wet	1.67		78.2	40-140	2.57	30	
Fluorene	1.41	0.17	mg/Kg wet	1.67		84.8	40-140	0.330	30	
Hexachlorobenzene	1.33	0.34	mg/Kg wet	1.67		79.7	40-140	0.604	30	
Hexachlorobutadiene	1.25	0.34	mg/Kg wet	1.67		75.1	40-140	6.29	30	
Hexachloroethane	1.13	0.34	mg/Kg wet	1.67		67.9	40-140	8.41	30	
Indeno(1,2,3-cd)pyrene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140	2.20	30	
Isophorone	1.40	0.34	mg/Kg wet	1.67		83.7	40-140	1.23	30	
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140	0.854	30	
2-Methylphenol	1.25	0.34	mg/Kg wet	1.67		75.0	30-130	0.691	30	
3/4-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.4	30-130	1.23	30	
Naphthalene	1.22	0.17	mg/Kg wet	1.67		73.1	40-140	1.10	30	
Nitrobenzene	1.34	0.34	mg/Kg wet	1.67		80.7	40-140	2.64	30	
2-Nitrophenol	1.37	0.34	mg/Kg wet	1.67		82.2	30-130	0.0974	30	
4-Nitrophenol	1.70	0.66	mg/Kg wet	1.67		102	15-140	6.00	30	V-06 †
Pentachlorophenol	0.927	0.34	mg/Kg wet	1.67		55.6	30-130	4.05	30	
Phenanthrene	1.29	0.17	mg/Kg wet	1.67		77.6	40-140	0.924	30	
Phenol	1.29	0.34	mg/Kg wet	1.67		77.2	15-140	1.54	30	†
Pyrene	1.30	0.17	mg/Kg wet	1.67		77.8	40-140	2.34	30	
Pyridine	0.681	0.34	mg/Kg wet	1.67		40.8	30-140	14.9	30	V-05 †
1,2,4-Trichlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.6	40-140	4.25	30	
2,4,5-Trichlorophenol	1.45	0.34	mg/Kg wet	1.67		87.2	30-130	0.275	30	
2,4,6-Trichlorophenol	1.42	0.34	mg/Kg wet	1.67		85.3	30-130	1.03	30	
Surrogate: 2-Fluorophenol	5.14		mg/Kg wet	6.67		77.2	30-130			
Surrogate: Phenol-d6	5.60		mg/Kg wet	6.67		84.0	30-130			
Surrogate: Nitrobenzene-d5	2.86		mg/Kg wet	3.33		85.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.51		mg/Kg wet	3.33		75.2	30-130			
Surrogate: 2,4,6-Tribromophenol	7.02		mg/Kg wet	6.67		105	30-130			
Surrogate: p-Terphenyl-d14	2.77		mg/Kg wet	3.33		83.2	30-130			

Matrix Spike (B216591-MS1)

Source: 18K0278-03

Prepared: 11/07/18 Analyzed: 11/08/18

Acenaphthene	1.27	0.20	mg/Kg dry	1.92	ND	66.1	40-140			
Acenaphthylene	1.32	0.20	mg/Kg dry	1.92	ND	68.8	40-140			
Acetophenone	1.38	0.39	mg/Kg dry	1.92	ND	71.8	40-140			
Aniline	0.945	0.39	mg/Kg dry	1.92	ND	49.2	40-140			V-04
Anthracene	1.43	0.20	mg/Kg dry	1.92	ND	74.4	40-140			
Benzo(a)anthracene	1.51	0.20	mg/Kg dry	1.92	ND	78.4	40-140			
Benzo(a)pyrene	1.52	0.20	mg/Kg dry	1.92	ND	79.1	40-140			
Benzo(b)fluoranthene	1.37	0.20	mg/Kg dry	1.92	ND	71.3	40-140			
Benzo(g,h,i)perylene	1.53	0.20	mg/Kg dry	1.92	ND	79.9	40-140			
Benzo(k)fluoranthene	1.45	0.20	mg/Kg dry	1.92	ND	75.8	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
Batch B216591 - SW-846 3546										
Matrix Spike (B216591-MS1)	Source: 18K0278-03			Prepared: 11/07/18 Analyzed: 11/08/18						
Bis(2-chloroethoxy)methane	1.66	0.39	mg/Kg dry	1.92	ND	86.5	40-140			
Bis(2-chloroethyl)ether	1.55	0.39	mg/Kg dry	1.92	ND	80.9	40-140			
Bis(2-chloroisopropyl)ether	1.76	0.39	mg/Kg dry	1.92	ND	91.5	40-140			
Bis(2-Ethylhexyl)phthalate	1.62	0.39	mg/Kg dry	1.92	ND	84.5	40-140			
4-Bromophenylphenylether	1.38	0.39	mg/Kg dry	1.92	ND	72.1	40-140			
Butylbenzylphthalate	1.63	0.39	mg/Kg dry	1.92	ND	85.2	40-140			
4-Chloroaniline	0.872	0.76	mg/Kg dry	1.92	ND	45.4	40-140			V-34
2-Chloronaphthalene	1.14	0.39	mg/Kg dry	1.92	ND	59.5	40-140			
2-Chlorophenol	1.37	0.39	mg/Kg dry	1.92	ND	71.4	30-130			
Chrysene	1.49	0.20	mg/Kg dry	1.92	ND	77.4	40-140			
Dibenz(a,h)anthracene	1.41	0.20	mg/Kg dry	1.92	ND	73.5	40-140			
Dibenzofuran	1.37	0.39	mg/Kg dry	1.92	ND	71.5	40-140			
Di-n-butylphthalate	1.56	0.39	mg/Kg dry	1.92	ND	81.1	40-140			
1,2-Dichlorobenzene	1.19	0.39	mg/Kg dry	1.92	ND	61.9	40-140			
1,3-Dichlorobenzene	1.12	0.39	mg/Kg dry	1.92	ND	58.2	40-140			
1,4-Dichlorobenzene	1.14	0.39	mg/Kg dry	1.92	ND	59.3	40-140			
3,3-Dichlorobenzidine	1.17	0.20	mg/Kg dry	1.92	ND	61.2	40-140			
2,4-Dichlorophenol	1.28	0.39	mg/Kg dry	1.92	ND	66.8	30-130			
Diethylphthalate	1.47	0.39	mg/Kg dry	1.92	ND	76.4	40-140			
2,4-Dimethylphenol	1.40	0.39	mg/Kg dry	1.92	ND	73.1	30-130			
Dimethylphthalate	1.46	0.39	mg/Kg dry	1.92	ND	76.0	40-140			
2,4-Dinitrophenol	1.28	0.76	mg/Kg dry	1.92	ND	66.7	30-130			
2,4-Dinitrotoluene	1.45	0.39	mg/Kg dry	1.92	ND	75.7	40-140			
2,6-Dinitrotoluene	1.49	0.39	mg/Kg dry	1.92	ND	77.6	40-140			
Di-n-octylphthalate	1.58	0.39	mg/Kg dry	1.92	ND	82.2	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.64	0.39	mg/Kg dry	1.92	ND	85.7	40-140			
Fluoranthene	1.53	0.20	mg/Kg dry	1.92	ND	79.6	40-140			
Fluorene	1.34	0.20	mg/Kg dry	1.92	ND	69.9	40-140			
Hexachlorobenzene	1.37	0.39	mg/Kg dry	1.92	ND	71.3	40-140			
Hexachlorobutadiene	1.16	0.39	mg/Kg dry	1.92	ND	60.2	40-140			
Hexachloroethane	1.24	0.39	mg/Kg dry	1.92	ND	64.5	40-140			
Indeno(1,2,3-cd)pyrene	1.46	0.20	mg/Kg dry	1.92	ND	75.9	40-140			
Isophorone	1.56	0.39	mg/Kg dry	1.92	ND	81.3	40-140			
2-Methylnaphthalene	1.40	0.20	mg/Kg dry	1.92	ND	72.9	40-140			
2-Methylphenol	1.50	0.39	mg/Kg dry	1.92	ND	78.2	30-130			
3/4-Methylphenol	1.40	0.39	mg/Kg dry	1.92	ND	73.1	30-130			
Naphthalene	1.30	0.20	mg/Kg dry	1.92	ND	67.9	40-140			
Nitrobenzene	1.42	0.39	mg/Kg dry	1.92	ND	74.0	40-140			
2-Nitrophenol	1.32	0.39	mg/Kg dry	1.92	ND	68.5	30-130			
4-Nitrophenol	1.59	0.76	mg/Kg dry	1.92	ND	82.7	30-130			
Pentachlorophenol	1.11	0.39	mg/Kg dry	1.92	ND	58.1	30-130			
Phenanthrene	1.44	0.20	mg/Kg dry	1.92	ND	75.3	40-140			
Phenol	1.48	0.39	mg/Kg dry	1.92	ND	76.9	30-130			
Pyrene	1.37	0.20	mg/Kg dry	1.92	ND	71.4	40-140			
Pyridine	0.827	0.39	mg/Kg dry	1.92	ND	43.1	40-140			
1,2,4-Trichlorobenzene	1.22	0.39	mg/Kg dry	1.92	ND	63.7	40-140			
2,4,5-Trichlorophenol	1.35	0.39	mg/Kg dry	1.92	ND	70.4	30-130			
2,4,6-Trichlorophenol	1.36	0.39	mg/Kg dry	1.92	ND	70.7	30-130			
Surrogate: 2-Fluorophenol	5.94		mg/Kg dry	7.68		77.3	30-130			
Surrogate: Phenol-d6	6.25		mg/Kg dry	7.68		81.4	30-130			
Surrogate: Nitrobenzene-d5	2.96		mg/Kg dry	3.84		77.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.26		mg/Kg dry	3.84		59.0	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
Batch B216591 - SW-846 3546										
Matrix Spike (B216591-MS1) Source: 18K0278-03 Prepared: 11/07/18 Analyzed: 11/08/18										
Surrogate: 2,4,6-Tribromophenol	6.06		mg/Kg dry	7.68		78.9	30-130			
Surrogate: p-Terphenyl-d14	2.89		mg/Kg dry	3.84		75.3	30-130			
Matrix Spike Dup (B216591-MSD1) Source: 18K0278-03 Prepared: 11/07/18 Analyzed: 11/08/18										
Acenaphthene	1.23	0.20	mg/Kg dry	1.91	ND	64.4	40-140	2.87	30	
Acenaphthylene	1.29	0.20	mg/Kg dry	1.91	ND	67.6	40-140	2.12	30	
Acetophenone	1.36	0.39	mg/Kg dry	1.91	ND	71.0	40-140	1.45	30	
Aniline	0.873	0.39	mg/Kg dry	1.91	ND	45.6	40-140	7.92	30	V-04
Anthracene	1.37	0.20	mg/Kg dry	1.91	ND	71.9	40-140	3.72	30	
Benzo(a)anthracene	1.45	0.20	mg/Kg dry	1.91	ND	76.0	40-140	3.52	30	
Benzo(a)pyrene	1.47	0.20	mg/Kg dry	1.91	ND	76.7	40-140	3.36	30	
Benzo(b)fluoranthene	1.31	0.20	mg/Kg dry	1.91	ND	68.6	40-140	4.13	30	
Benzo(g,h,i)perylene	1.43	0.20	mg/Kg dry	1.91	ND	74.7	40-140	7.13	30	
Benzo(k)fluoranthene	1.43	0.20	mg/Kg dry	1.91	ND	74.6	40-140	1.85	30	
Bis(2-chloroethoxy)methane	1.64	0.39	mg/Kg dry	1.91	ND	85.8	40-140	1.12	30	
Bis(2-chloroethyl)ether	1.52	0.39	mg/Kg dry	1.91	ND	79.6	40-140	1.98	30	
Bis(2-chloroisopropyl)ether	1.73	0.39	mg/Kg dry	1.91	ND	90.3	40-140	1.72	30	
Bis(2-Ethylhexyl)phthalate	1.59	0.39	mg/Kg dry	1.91	ND	82.9	40-140	2.27	30	
4-Bromophenylphenylether	1.36	0.39	mg/Kg dry	1.91	ND	70.9	40-140	1.95	30	
Butylbenzylphthalate	1.58	0.39	mg/Kg dry	1.91	ND	82.4	40-140	3.60	30	
4-Chloroaniline	0.855	0.76	mg/Kg dry	1.91	ND	44.7	40-140	1.97	30	V-34
2-Chloronaphthalene	1.14	0.39	mg/Kg dry	1.91	ND	59.7	40-140	0.0286	30	
2-Chlorophenol	1.36	0.39	mg/Kg dry	1.91	ND	71.3	30-130	0.415	30	
Chrysene	1.43	0.20	mg/Kg dry	1.91	ND	74.6	40-140	3.99	30	
Dibenz(a,h)anthracene	1.36	0.20	mg/Kg dry	1.91	ND	71.0	40-140	3.79	30	
Dibenzofuran	1.34	0.39	mg/Kg dry	1.91	ND	70.0	40-140	2.45	30	
Di-n-butylphthalate	1.52	0.39	mg/Kg dry	1.91	ND	79.4	40-140	2.35	30	
1,2-Dichlorobenzene	1.17	0.39	mg/Kg dry	1.91	ND	61.2	40-140	1.57	30	
1,3-Dichlorobenzene	1.09	0.39	mg/Kg dry	1.91	ND	57.2	40-140	1.99	30	
1,4-Dichlorobenzene	1.11	0.39	mg/Kg dry	1.91	ND	57.8	40-140	2.99	30	
3,3-Dichlorobenzidine	1.19	0.20	mg/Kg dry	1.91	ND	62.4	40-140	1.58	30	
2,4-Dichlorophenol	1.28	0.39	mg/Kg dry	1.91	ND	67.0	30-130	0.121	30	
Diethylphthalate	1.44	0.39	mg/Kg dry	1.91	ND	75.3	40-140	1.73	30	
2,4-Dimethylphenol	1.40	0.39	mg/Kg dry	1.91	ND	72.9	30-130	0.522	30	
Dimethylphthalate	1.42	0.39	mg/Kg dry	1.91	ND	74.5	40-140	2.43	30	
2,4-Dinitrophenol	1.26	0.76	mg/Kg dry	1.91	ND	65.6	30-130	1.87	30	
2,4-Dinitrotoluene	1.39	0.39	mg/Kg dry	1.91	ND	72.9	40-140	4.07	30	
2,6-Dinitrotoluene	1.45	0.39	mg/Kg dry	1.91	ND	75.8	40-140	2.76	30	
Di-n-octylphthalate	1.54	0.39	mg/Kg dry	1.91	ND	80.4	40-140	2.59	30	
1,2-Diphenylhydrazine/Azobenzene	1.59	0.39	mg/Kg dry	1.91	ND	83.3	40-140	3.22	30	
Fluoranthene	1.46	0.20	mg/Kg dry	1.91	ND	76.1	40-140	4.72	30	
Fluorene	1.33	0.20	mg/Kg dry	1.91	ND	69.3	40-140	1.13	30	
Hexachlorobenzene	1.36	0.39	mg/Kg dry	1.91	ND	70.9	40-140	0.865	30	
Hexachlorobutadiene	1.16	0.39	mg/Kg dry	1.91	ND	60.6	40-140	0.265	30	
Hexachloroethane	1.22	0.39	mg/Kg dry	1.91	ND	63.7	40-140	1.58	30	
Indeno(1,2,3-cd)pyrene	1.40	0.20	mg/Kg dry	1.91	ND	73.1	40-140	4.11	30	
Isophorone	1.53	0.39	mg/Kg dry	1.91	ND	80.2	40-140	1.74	30	
2-Methylnaphthalene	1.41	0.20	mg/Kg dry	1.91	ND	73.5	40-140	0.462	30	
2-Methylphenol	1.48	0.39	mg/Kg dry	1.91	ND	77.2	30-130	1.62	30	
3/4-Methylphenol	1.35	0.39	mg/Kg dry	1.91	ND	70.7	30-130	3.61	30	
Naphthalene	1.29	0.20	mg/Kg dry	1.91	ND	67.5	40-140	0.922	30	
Nitrobenzene	1.37	0.39	mg/Kg dry	1.91	ND	71.8	40-140	3.35	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
Batch B216591 - SW-846 3546										
Matrix Spike Dup (B216591-MSD1)	Source: 18K0278-03			Prepared: 11/07/18 Analyzed: 11/08/18						
2-Nitrophenol	1.29	0.39	mg/Kg dry	1.91	ND	67.7	30-130	1.59	30	
4-Nitrophenol	1.49	0.76	mg/Kg dry	1.91	ND	77.7	30-130	6.61	30	
Pentachlorophenol	1.12	0.39	mg/Kg dry	1.91	ND	58.5	30-130	0.356	30	
Phenanthrene	1.42	0.20	mg/Kg dry	1.91	ND	74.2	40-140	1.75	30	
Phenol	1.45	0.39	mg/Kg dry	1.91	ND	76.1	30-130	1.45	30	
Pyrene	1.38	0.20	mg/Kg dry	1.91	ND	72.2	40-140	0.783	30	
Pyridine	0.740	0.39	mg/Kg dry	1.91	ND	38.7 *	40-140	11.1	30	
1,2,4-Trichlorobenzene	1.21	0.39	mg/Kg dry	1.91	ND	63.2	40-140	1.12	30	
2,4,5-Trichlorophenol	1.35	0.39	mg/Kg dry	1.91	ND	70.4	30-130	0.274	30	
2,4,6-Trichlorophenol	1.31	0.39	mg/Kg dry	1.91	ND	68.5	30-130	3.52	30	
Surrogate: 2-Fluorophenol	5.78		mg/Kg dry	7.65		75.5	30-130			
Surrogate: Phenol-d6	6.10		mg/Kg dry	7.65		79.8	30-130			
Surrogate: Nitrobenzene-d5	2.91		mg/Kg dry	3.83		76.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.25		mg/Kg dry	3.83		58.9	30-130			
Surrogate: 2,4,6-Tribromophenol	5.88		mg/Kg dry	7.65		76.8	30-130			
Surrogate: p-Terphenyl-d14	2.84		mg/Kg dry	3.83		74.2	30-130			

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QUALITY CONTROL

Organochloride Pesticides 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 B216575 - SW-846 3546

Blank (B216575-BLK1)

Prepared: 11/07/18 Analyzed: 11/10/18

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0020	mg/Kg wet							
Aldrin [2C]	ND	0.0020	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0010	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDE	ND	0.0010	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDT	ND	0.0010	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0010	mg/Kg wet							
Dieldrin	ND	0.0010	mg/Kg wet							
Dieldrin [2C]	ND	0.0010	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.198		mg/Kg wet	0.200		99.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.191		mg/Kg wet	0.200		95.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.204		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.193		mg/Kg wet	0.200		96.3	30-150			

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QUALITY CONTROL

Organochloride Pesticides 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 B216575 - SW-846 3546

LCS (B216575-BS1)

Prepared: 11/07/18 Analyzed: 11/10/18

alpha-Chlordane	0.11	0.0050	mg/Kg wet	0.100		109	40-140			
alpha-Chlordane [2C]	0.11	0.0050	mg/Kg wet	0.100		111	40-140			
gamma-Chlordane	0.11	0.0050	mg/Kg wet	0.100		110	40-140			
gamma-Chlordane [2C]	0.11	0.0050	mg/Kg wet	0.100		108	40-140			
Alachlor	0.10	0.020	mg/Kg wet	0.100		101	40-140			
Alachlor [2C]	0.094	0.020	mg/Kg wet	0.100		94.0	40-140			
Aldrin	0.11	0.0020	mg/Kg wet	0.100		113	40-140			
Aldrin [2C]	0.11	0.0020	mg/Kg wet	0.100		105	40-140			
alpha-BHC	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
alpha-BHC [2C]	0.10	0.0050	mg/Kg wet	0.100		102	40-140			
beta-BHC	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
beta-BHC [2C]	0.10	0.0050	mg/Kg wet	0.100		100	40-140			
delta-BHC	0.098	0.0050	mg/Kg wet	0.100		98.0	40-140			
delta-BHC [2C]	0.096	0.0050	mg/Kg wet	0.100		95.5	40-140			
gamma-BHC (Lindane)	0.11	0.0020	mg/Kg wet	0.100		110	40-140			
gamma-BHC (Lindane) [2C]	0.10	0.0020	mg/Kg wet	0.100		104	40-140			
4,4'-DDD	0.11	0.0010	mg/Kg wet	0.100		114	40-140			
4,4'-DDD [2C]	0.11	0.0010	mg/Kg wet	0.100		115	40-140			
4,4'-DDE	0.11	0.0010	mg/Kg wet	0.100		115	40-140			
4,4'-DDE [2C]	0.11	0.0010	mg/Kg wet	0.100		114	40-140			
4,4'-DDT	0.11	0.0010	mg/Kg wet	0.100		112	40-140			
4,4'-DDT [2C]	0.11	0.0010	mg/Kg wet	0.100		111	40-140			
Dieldrin	0.11	0.0010	mg/Kg wet	0.100		107	40-140			
Dieldrin [2C]	0.11	0.0010	mg/Kg wet	0.100		106	40-140			
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		100	40-140			
Endosulfan I [2C]	0.080	0.0050	mg/Kg wet	0.100		80.1	40-140			
Endosulfan II	0.10	0.0080	mg/Kg wet	0.100		101	40-140			
Endosulfan II [2C]	0.10	0.0080	mg/Kg wet	0.100		100	40-140			
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		109	40-140			
Endosulfan Sulfate [2C]	0.10	0.0080	mg/Kg wet	0.100		102	40-140			
Endrin	0.11	0.0080	mg/Kg wet	0.100		107	40-140			
Endrin [2C]	0.11	0.0080	mg/Kg wet	0.100		107	40-140			
Endrin Aldehyde	0.097	0.0080	mg/Kg wet	0.100		96.8	40-140			
Endrin Aldehyde [2C]	0.097	0.0080	mg/Kg wet	0.100		97.4	40-140			
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		106	40-140			
Endrin Ketone [2C]	0.10	0.0080	mg/Kg wet	0.100		102	40-140			
Heptachlor	0.097	0.0050	mg/Kg wet	0.100		96.6	40-140			
Heptachlor [2C]	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
Heptachlor Epoxide	0.11	0.0050	mg/Kg wet	0.100		108	40-140			
Heptachlor Epoxide [2C]	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
Hexachlorobenzene	0.12	0.0060	mg/Kg wet	0.100		118	40-140			
Hexachlorobenzene [2C]	0.11	0.0060	mg/Kg wet	0.100		107	40-140			
Methoxychlor	0.12	0.050	mg/Kg wet	0.100		116	40-140			
Methoxychlor [2C]	0.12	0.050	mg/Kg wet	0.100		118	40-140			
Surrogate: Decachlorobiphenyl	0.225		mg/Kg wet	0.200		112	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.217		mg/Kg wet	0.200		109	30-150			
Surrogate: Tetrachloro-m-xylene	0.229		mg/Kg wet	0.200		114	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.219		mg/Kg wet	0.200		110	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216575 - SW-846 3546										
LCS Dup (B216575-BSD1)										
					Prepared: 11/07/18 Analyzed: 11/10/18					
alpha-Chlordane	0.10	0.0050	mg/Kg wet	0.100		102	40-140	6.24	30	
alpha-Chlordane [2C]	0.10	0.0050	mg/Kg wet	0.100		103	40-140	7.42	30	
gamma-Chlordane	0.10	0.0050	mg/Kg wet	0.100		103	40-140	6.09	30	
gamma-Chlordane [2C]	0.10	0.0050	mg/Kg wet	0.100		99.9	40-140	7.50	30	
Alachlor	0.095	0.020	mg/Kg wet	0.100		95.1	40-140	6.27	30	
Alachlor [2C]	0.087	0.020	mg/Kg wet	0.100		87.0	40-140	7.77	30	
Aldrin	0.11	0.0020	mg/Kg wet	0.100		106	40-140	5.55	30	
Aldrin [2C]	0.097	0.0020	mg/Kg wet	0.100		97.4	40-140	7.78	30	
alpha-BHC	0.10	0.0050	mg/Kg wet	0.100		101	40-140	4.45	30	
alpha-BHC [2C]	0.095	0.0050	mg/Kg wet	0.100		94.7	40-140	7.63	30	
beta-BHC	0.098	0.0050	mg/Kg wet	0.100		97.6	40-140	6.15	30	
beta-BHC [2C]	0.093	0.0050	mg/Kg wet	0.100		92.9	40-140	7.62	30	
delta-BHC	0.095	0.0050	mg/Kg wet	0.100		94.8	40-140	3.28	30	
delta-BHC [2C]	0.090	0.0050	mg/Kg wet	0.100		90.4	40-140	5.51	30	
gamma-BHC (Lindane)	0.10	0.0020	mg/Kg wet	0.100		104	40-140	5.21	30	
gamma-BHC (Lindane) [2C]	0.096	0.0020	mg/Kg wet	0.100		95.6	40-140	8.43	30	
4,4'-DDD	0.11	0.0010	mg/Kg wet	0.100		106	40-140	7.06	30	
4,4'-DDD [2C]	0.11	0.0010	mg/Kg wet	0.100		106	40-140	7.87	30	
4,4'-DDE	0.11	0.0010	mg/Kg wet	0.100		107	40-140	6.58	30	
4,4'-DDE [2C]	0.11	0.0010	mg/Kg wet	0.100		105	40-140	7.70	30	
4,4'-DDT	0.10	0.0010	mg/Kg wet	0.100		103	40-140	8.36	30	
4,4'-DDT [2C]	0.10	0.0010	mg/Kg wet	0.100		102	40-140	8.95	30	
Dieldrin	0.10	0.0010	mg/Kg wet	0.100		100	40-140	6.55	30	
Dieldrin [2C]	0.098	0.0010	mg/Kg wet	0.100		98.2	40-140	7.82	30	
Endosulfan I	0.092	0.0050	mg/Kg wet	0.100		91.7	40-140	9.04	30	
Endosulfan I [2C]	0.074	0.0050	mg/Kg wet	0.100		73.9	40-140	8.09	30	
Endosulfan II	0.093	0.0080	mg/Kg wet	0.100		93.5	40-140	8.18	30	
Endosulfan II [2C]	0.092	0.0080	mg/Kg wet	0.100		91.9	40-140	8.76	30	
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		105	40-140	3.34	30	
Endosulfan Sulfate [2C]	0.093	0.0080	mg/Kg wet	0.100		93.5	40-140	8.71	30	
Endrin	0.099	0.0080	mg/Kg wet	0.100		99.5	40-140	6.92	30	
Endrin [2C]	0.099	0.0080	mg/Kg wet	0.100		98.7	40-140	8.01	30	
Endrin Aldehyde	0.092	0.0080	mg/Kg wet	0.100		91.9	40-140	5.16	30	
Endrin Aldehyde [2C]	0.090	0.0080	mg/Kg wet	0.100		89.8	40-140	8.07	30	
Endrin Ketone	0.097	0.0080	mg/Kg wet	0.100		97.4	40-140	8.64	30	
Endrin Ketone [2C]	0.094	0.0080	mg/Kg wet	0.100		93.6	40-140	8.98	30	
Heptachlor	0.091	0.0050	mg/Kg wet	0.100		91.1	40-140	5.85	30	
Heptachlor [2C]	0.097	0.0050	mg/Kg wet	0.100		97.3	40-140	5.50	30	
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		101	40-140	5.81	30	
Heptachlor Epoxide [2C]	0.096	0.0050	mg/Kg wet	0.100		95.5	40-140	7.88	30	
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		111	40-140	5.67	30	
Hexachlorobenzene [2C]	0.099	0.0060	mg/Kg wet	0.100		99.0	40-140	8.08	30	
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		106	40-140	8.91	30	
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		112	40-140	5.12	30	
Surrogate: Decachlorobiphenyl	0.206		mg/Kg wet	0.200		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.199		mg/Kg wet	0.200		99.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.216		mg/Kg wet	0.200		108	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.198		mg/Kg wet	0.200		99.2	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216574 - SW-846 3546										
Blank (B216574-BLK1)										
Prepared: 11/07/18 Analyzed: 11/08/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.211		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.204		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		96.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.170		mg/Kg wet	0.200		85.0	30-150			
LCS (B216574-BS1)										
Prepared: 11/07/18 Analyzed: 11/08/18										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		102	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		87.3	40-140			
Aroclor-1260	0.20	0.020	mg/Kg wet	0.200		100	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		85.0	40-140			
Surrogate: Decachlorobiphenyl	0.223		mg/Kg wet	0.200		111	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.216		mg/Kg wet	0.200		108	30-150			
Surrogate: Tetrachloro-m-xylene	0.214		mg/Kg wet	0.200		107	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.189		mg/Kg wet	0.200		94.3	30-150			
LCS Dup (B216574-BSD1)										
Prepared: 11/07/18 Analyzed: 11/08/18										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.4	40-140	3.13	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		84.8	40-140	2.94	30	
Aroclor-1260	0.20	0.020	mg/Kg wet	0.200		98.2	40-140	1.73	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.6	40-140	0.466	30	
Surrogate: Decachlorobiphenyl	0.217		mg/Kg wet	0.200		109	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.211		mg/Kg wet	0.200		105	30-150			
Surrogate: Tetrachloro-m-xylene	0.198		mg/Kg wet	0.200		98.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.177		mg/Kg wet	0.200		88.3	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B216574 - SW-846 3546

Matrix Spike (B216574-MS1)

Source: 18K0278-01

Prepared: 11/07/18 Analyzed: 11/08/18

Aroclor-1016	0.29	0.10	mg/Kg dry	0.250	ND	115	40-140			
Aroclor-1016 [2C]	0.23	0.10	mg/Kg dry	0.250	ND	93.7	40-140			
Aroclor-1260	0.25	0.10	mg/Kg dry	0.250	ND	101	40-140			
Aroclor-1260 [2C]	0.22	0.10	mg/Kg dry	0.250	ND	87.7	40-140			
Surrogate: Decachlorobiphenyl	0.246		mg/Kg dry	0.250		98.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.257		mg/Kg dry	0.250		103	30-150			
Surrogate: Tetrachloro-m-xylene	0.242		mg/Kg dry	0.250		96.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.221		mg/Kg dry	0.250		88.6	30-150			

Matrix Spike Dup (B216574-MSD1)

Source: 18K0278-01

Prepared: 11/07/18 Analyzed: 11/08/18

Aroclor-1016	0.28	0.10	mg/Kg dry	0.255	ND	109	40-140	5.75	30	
Aroclor-1016 [2C]	0.25	0.10	mg/Kg dry	0.255	ND	98.8	40-140	5.32	30	
Aroclor-1260	0.24	0.10	mg/Kg dry	0.255	ND	94.5	40-140	6.78	30	
Aroclor-1260 [2C]	0.21	0.10	mg/Kg dry	0.255	ND	84.3	40-140	3.90	30	
Surrogate: Decachlorobiphenyl	0.247		mg/Kg dry	0.255		97.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.268		mg/Kg dry	0.255		105	30-150			
Surrogate: Tetrachloro-m-xylene	0.241		mg/Kg dry	0.255		94.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.221		mg/Kg dry	0.255		86.9	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216689 - SW-846 8151										
Blank (B216689-BLK1)										
Prepared: 11/08/18 Analyzed: 11/10/18										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	77.6		µg/kg wet	95.2		81.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	77.6		µg/kg wet	95.2		81.5	30-150			
LCS (B216689-BS1)										
Prepared: 11/08/18 Analyzed: 11/10/18										
2,4-D	115	25	µg/kg wet	125		91.7	40-140			
2,4-D [2C]	120	25	µg/kg wet	125		96.0	40-140			
2,4-DB	118	25	µg/kg wet	125		94.1	40-140			
2,4-DB [2C]	128	25	µg/kg wet	125		102	40-140			
2,4,5-TP (Silvex)	11.3	2.5	µg/kg wet	12.5		90.3	40-140			
2,4,5-TP (Silvex) [2C]	12.1	2.5	µg/kg wet	12.5		97.0	40-140			
2,4,5-T	11.1	2.5	µg/kg wet	12.5		88.7	40-140			
2,4,5-T [2C]	12.2	2.5	µg/kg wet	12.5		98.0	40-140			
Dalapon	182	62	µg/kg wet	312		58.3	40-140			
Dalapon [2C]	187	62	µg/kg wet	312		59.7	40-140			
Dicamba	11.0	2.5	µg/kg wet	12.5		87.8	40-140			
Dicamba [2C]	11.6	2.5	µg/kg wet	12.5		92.6	40-140			
Dichloroprop	117	25	µg/kg wet	125		93.4	40-140			
Dichloroprop [2C]	120	25	µg/kg wet	125		96.3	40-140			
Dinoseb	19.9	12	µg/kg wet	62.5		31.8	0-42.4			
Dinoseb [2C]	24.0	12	µg/kg wet	62.5		38.4	0-41.1			V-06
MCPA	10800	2500	µg/kg wet	12500		86.3	40-140			
MCPA [2C]	9900	2500	µg/kg wet	12500		79.2	40-140			
MCPP	14300	2500	µg/kg wet	12500		114	40-140			
MCPP [2C]	10700	2500	µg/kg wet	12500		85.7	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	85.0		µg/kg wet	100		85.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	88.4		µg/kg wet	100		88.4	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216689 - SW-846 8151										
LCS Dup (B216689-BSD1)										
					Prepared: 11/08/18 Analyzed: 11/10/18					
2,4-D	108	25	µg/kg wet	125		86.3	40-140	6.06	30	
2,4-D [2C]	113	25	µg/kg wet	125		90.4	40-140	6.03	30	
2,4-DB	110	25	µg/kg wet	125		88.2	40-140	6.40	30	
2,4-DB [2C]	120	25	µg/kg wet	125		95.9	40-140	6.60	30	
2,4,5-TP (Silvex)	10.6	2.5	µg/kg wet	12.5		85.1	40-140	5.99	30	
2,4,5-TP (Silvex) [2C]	11.4	2.5	µg/kg wet	12.5		91.2	40-140	6.15	30	
2,4,5-T	10.4	2.5	µg/kg wet	12.5		83.4	40-140	6.21	30	
2,4,5-T [2C]	11.4	2.5	µg/kg wet	12.5		91.5	40-140	6.88	30	
Dalapon	192	62	µg/kg wet	312		61.4	40-140	5.28	30	
Dalapon [2C]	195	62	µg/kg wet	312		62.4	40-140	4.50	30	
Dicamba	11.1	2.5	µg/kg wet	12.5		88.9	40-140	1.26	30	
Dicamba [2C]	11.0	2.5	µg/kg wet	12.5		88.4	40-140	4.73	30	
Dichloroprop	111	25	µg/kg wet	125		88.7	40-140	5.19	30	
Dichloroprop [2C]	115	25	µg/kg wet	125		91.7	40-140	4.91	30	
Dinoseb	22.1	12	µg/kg wet	62.5		35.3	0-42.4	10.5	30	
Dinoseb [2C]	26.5	12	µg/kg wet	62.5		42.4 *	0-41.1	10.0	30	V-06
MCPA	10400	2500	µg/kg wet	12500		83.5	40-140	3.34	30	
MCPA [2C]	9460	2500	µg/kg wet	12500		75.7	40-140	4.57	30	
MCPP	14400	2500	µg/kg wet	12500		116	40-140	1.26	30	
MCPP [2C]	10200	2500	µg/kg wet	12500		81.7	40-140	4.72	30	
Surrogate: 2,4-Dichlorophenylacetic acid	83.3		µg/kg wet	100		83.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	84.5		µg/kg wet	100		84.5	30-150			
Matrix Spike (B216689-MS1)										
					Source: 18K0278-03 Prepared: 11/08/18 Analyzed: 11/10/18					
2,4-D	131	29	µg/kg dry	145	ND	90.6	30-150			
2,4-D [2C]	141	29	µg/kg dry	145	ND	97.4	30-150			V-06
2,4-DB	128	29	µg/kg dry	145	ND	88.5	30-150			
2,4-DB [2C]	152	29	µg/kg dry	145	ND	105	30-150			V-06
2,4,5-TP (Silvex)	13.0	2.9	µg/kg dry	14.5	ND	90.0	30-150			
2,4,5-TP (Silvex) [2C]	13.6	2.9	µg/kg dry	14.5	ND	93.7	30-150			V-06
2,4,5-T	12.6	2.9	µg/kg dry	14.5	ND	86.7	30-150			
2,4,5-T [2C]	14.2	2.9	µg/kg dry	14.5	ND	97.7	30-150			V-06
Dalapon	270	72	µg/kg dry	362	ND	74.7	30-150			
Dalapon [2C]	277	72	µg/kg dry	362	ND	76.4	30-150			
Dicamba	13.8	2.9	µg/kg dry	14.5	ND	95.2	30-150			
Dicamba [2C]	13.7	2.9	µg/kg dry	14.5	ND	94.7	30-150			
Dichloroprop	138	29	µg/kg dry	145	ND	95.0	30-150			
Dichloroprop [2C]	140	29	µg/kg dry	145	ND	96.3	30-150			
Dinoseb	25.4	14	µg/kg dry	72.4	ND	35.1	10-150			V-06
Dinoseb [2C]	29.3	14	µg/kg dry	72.4	ND	40.4	10-150			V-06
MCPA	13100	2900	µg/kg dry	14500	ND	90.3	30-150			
MCPA [2C]	11900	2900	µg/kg dry	14500	ND	82.0	30-150			
MCPP	17900	2900	µg/kg dry	14500	ND	123	30-150			
MCPP [2C]	12500	2900	µg/kg dry	14500	ND	86.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	108		µg/kg dry	116		93.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	107		µg/kg dry	116		92.1	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216689 - SW-846 8151										
Matrix Spike Dup (B216689-MSD1)	Source: 18K0278-03			Prepared: 11/08/18 Analyzed: 11/10/18						
2,4-D	137	29	µg/kg dry	145	ND	94.4	30-150	4.13	30	
2,4-D [2C]	145	29	µg/kg dry	145	ND	100	30-150	2.76	30	V-06
2,4-DB	131	29	µg/kg dry	145	ND	90.5	30-150	2.25	30	
2,4-DB [2C]	154	29	µg/kg dry	145	ND	107	30-150	1.81	30	V-06
2,4,5-TP (Silvex)	14.4	2.9	µg/kg dry	14.5	ND	99.1	30-150	9.70	30	
2,4,5-TP (Silvex) [2C]	14.0	2.9	µg/kg dry	14.5	ND	96.5	30-150	2.91	30	V-06
2,4,5-T	14.1	2.9	µg/kg dry	14.5	ND	97.1	30-150	11.3	30	
2,4,5-T [2C]	14.7	2.9	µg/kg dry	14.5	ND	101	30-150	3.50	30	V-06
Dalapon	255	72	µg/kg dry	362	ND	70.3	30-150	6.02	30	
Dalapon [2C]	261	72	µg/kg dry	362	ND	72.1	30-150	5.69	30	
Dicamba	13.4	2.9	µg/kg dry	14.5	ND	92.1	30-150	3.21	30	
Dicamba [2C]	13.7	2.9	µg/kg dry	14.5	ND	94.7	30-150	0.0802	30	
Dichloroprop	139	29	µg/kg dry	145	ND	95.9	30-150	1.01	30	
Dichloroprop [2C]	143	29	µg/kg dry	145	ND	98.9	30-150	2.66	30	
Dinoseb	28.5	14	µg/kg dry	72.4	ND	39.4	10-150	11.4	30	V-06
Dinoseb [2C]	31.3	14	µg/kg dry	72.4	ND	43.2	10-150	6.68	30	V-06
MCPA	13200	2900	µg/kg dry	14500	ND	90.9	30-150	0.675	30	
MCPA [2C]	12000	2900	µg/kg dry	14500	ND	82.6	30-150	0.665	30	
MCPP	17900	2900	µg/kg dry	14500	ND	123	30-150	0.0862	30	
MCPP [2C]	12900	2900	µg/kg dry	14500	ND	88.9	30-150	3.29	30	
Surrogate: 2,4-Dichlorophenylacetic acid	112		µg/kg dry	116		96.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	112		µg/kg dry	116		96.5	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216634 - SW-846 3546										
Blank (B216634-BLK1)					Prepared: 11/07/18 Analyzed: 11/08/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.21		mg/Kg wet	3.33		66.2	40-140			
LCS (B216634-BS1)					Prepared: 11/07/18 Analyzed: 11/08/18					
TPH (C9-C36)	28.3	8.3	mg/Kg wet	33.3		85.0	40-140			
Surrogate: 2-Fluorobiphenyl	2.48		mg/Kg wet	3.33		74.3	40-140			
LCS Dup (B216634-BSD1)					Prepared: 11/07/18 Analyzed: 11/08/18					
TPH (C9-C36)	27.5	8.3	mg/Kg wet	33.3		82.6	40-140	2.92	30	
Surrogate: 2-Fluorobiphenyl	2.33		mg/Kg wet	3.33		70.0	40-140			
Matrix Spike (B216634-MS1)					Source: 18K0278-01 Prepared: 11/07/18 Analyzed: 11/08/18					
TPH (C9-C36)	351	100	mg/Kg dry	41.5	361	-25.1 *	40-140			MS-22
Surrogate: 2-Fluorobiphenyl	2.62		mg/Kg dry	4.15		63.3	40-140			
Matrix Spike Dup (B216634-MSD1)					Source: 18K0278-01 Prepared: 11/07/18 Analyzed: 11/08/18					
TPH (C9-C36)	385	110	mg/Kg dry	42.2	361	56.2	40-140	9.27	30	
Surrogate: 2-Fluorobiphenyl	3.03		mg/Kg dry	4.22		71.9	40-140			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216703 - SW-846 7471										
Blank (B216703-BLK1) Prepared & Analyzed: 11/08/18										
Mercury	ND	0.025	mg/Kg wet							
LCS (B216703-BS1) Prepared & Analyzed: 11/08/18										
Mercury	12.1	1.9	mg/Kg wet	11.5		105	71.6-127.8			
LCS Dup (B216703-BSD1) Prepared & Analyzed: 11/08/18										
Mercury	12.2	1.9	mg/Kg wet	11.5		106	71.6-127.8	0.246	30	
Batch B216743 - SW-846 3050B										
Blank (B216743-BLK1) Prepared: 11/08/18 Analyzed: 11/09/18										
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 (B216743-BS1) Prepared: 11/08/18 Analyzed: 11/09/18										
Antimony	55.2	5.0	mg/Kg wet	75.5		73.1	3.8-196			
Arsenic	137	5.0	mg/Kg wet	161		85.3	83.2-116.8			
Barium	235	5.0	mg/Kg wet	260		90.3	82.7-117.3			
Beryllium	88.5	0.50	mg/Kg wet	97.6		90.7	83.4-116.8			
Cadmium	181	0.50	mg/Kg wet	211		85.8	83.4-116.6			
Chromium	117	1.0	mg/Kg wet	136		86.3	82.4-117.6			
Lead	95.1	1.5	mg/Kg wet	111		85.7	83-117.1			
Nickel	83.7	1.0	mg/Kg wet	91.9		91.1	82.9-117.5			
Selenium	158	10	mg/Kg wet	191		82.9	79.6-120.9			
Silver	39.1	1.0	mg/Kg wet	43.3		90.3	79.9-119.9			
Thallium	145	5.0	mg/Kg wet	156		92.8	81.4-119.2			
Vanadium	45.9	2.0	mg/Kg wet	56.7		80.9	79-121.2			
Zinc	194	2.0	mg/Kg wet	199		97.4	81.4-119.1			
LCS Dup (B216743-BSD1) Prepared: 11/08/18 Analyzed: 11/09/18										
Antimony	52.3	5.0	mg/Kg wet	75.5		69.3	3.8-196	5.25	30	
Arsenic	138	5.0	mg/Kg wet	161		85.7	83.2-116.8	0.434	30	
Barium	237	5.0	mg/Kg wet	260		91.1	82.7-117.3	0.900	30	
Beryllium	89.5	0.50	mg/Kg wet	97.6		91.7	83.4-116.8	1.13	30	
Cadmium	188	0.50	mg/Kg wet	211		89.1	83.4-116.6	3.68	30	
Chromium	119	0.99	mg/Kg wet	136		87.3	82.4-117.6	1.11	30	
Lead	97.6	1.5	mg/Kg wet	111		88.0	83-117.1	2.65	30	
Nickel	84.8	0.99	mg/Kg wet	91.9		92.3	82.9-117.5	1.36	30	
Selenium	160	9.9	mg/Kg wet	191		83.5	79.6-120.9	0.786	30	
Silver	40.2	0.99	mg/Kg wet	43.3		92.9	79.9-119.9	2.76	30	
Thallium	146	5.0	mg/Kg wet	156		93.7	81.4-119.2	1.06	30	
Vanadium	45.7	2.0	mg/Kg wet	56.7		80.7	79-121.2	0.332	30	
Zinc	179	2.0	mg/Kg wet	199		89.9	81.4-119.1	8.07	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 B216743 - SW-846 3050B

MRL Check (B216743-MRL1)

Prepared: 11/08/18 Analyzed: 11/09/18

Lead	0.511	0.49	mg/Kg wet	0.488		105	80-120			
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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
Batch B216565 - SW-846 9045C										
LCS (B216565-BS1)				Prepared & Analyzed: 11/06/18						
pH	6.02		pH Units	6.00		100	90-110			
LCS (B216565-BS2)				Prepared & Analyzed: 11/06/18						
pH	6.04		pH Units	6.00		101	90-110			
Duplicate (B216565-DUP1)				Source: 18K0278-05			Prepared & Analyzed: 11/06/18			
pH	4.7		pH Units		4.6			0.864	5	
Duplicate (B216565-DUP2)				Source: 18K0278-07			Prepared & Analyzed: 11/06/18			
pH	5.6		pH Units		5.5			1.69	5	
Batch B216769 - SW-846 9014										
Blank (B216769-BLK1)				Prepared: 11/08/18 Analyzed: 11/12/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B216769-BS1)				Prepared: 11/08/18 Analyzed: 11/12/18						
Reactive Cyanide	10	0.40	mg/Kg	10.0		103	83.6-111			
Batch B216817 - SM21-22 2510B Modified										
Blank (B216817-BLK1)				Prepared & Analyzed: 11/09/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B216817-BS1)				Prepared & Analyzed: 11/09/18						
Specific conductance	190		µmhos/cm	192		101	90-110			
Duplicate (B216817-DUP1)				Source: 18K0278-01			Prepared & Analyzed: 11/09/18			
Specific conductance	3.5	2.0	µmhos/cm		3.4			3.77	21	
Batch B216984 - SW-846 9030A										
Blank (B216984-BLK1)				Prepared: 11/08/18 Analyzed: 11/12/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B216984-BS1)				Prepared: 11/08/18 Analyzed: 11/12/18						
Reactive Sulfide	13	2.0	mg/Kg	14.8		86.5	54.9-121			

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

BREAKDOWN REPORT

Lab Sample ID: S029208-PEM1 **Analyzed:** 11/08/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 2.34
Endrin [1] 2.69

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 2.53
Endrin [2] 2.90

BREAKDOWN REPORT

Lab Sample ID: S029208-PEM2 **Analyzed:** 11/09/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 2.07
Endrin [1] 2.77

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 2.32
Endrin [2] 3.06

BREAKDOWN REPORT

Lab Sample ID: S029208-PEM3 **Analyzed:** 11/09/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 4.41
Endrin [1] 3.20

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

BREAKDOWN REPORT

Lab Sample ID: S029208-PEM3 Analyzed: 11/09/2018

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	4.72
Endrin [2]	3.40

BREAKDOWN REPORT

Lab Sample ID: S029208-PEM4 Analyzed: 11/09/2018

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	3.67
Endrin [1]	3.46

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	4.05
Endrin [2]	3.64

BREAKDOWN REPORT

Lab Sample ID: S029208-PEM5 Analyzed: 11/09/2018

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	3.46
Endrin [1]	3.84

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	3.87
Endrin [2]	4.05

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8082A

Lab Sample ID: B216574-BS1 Date(s) Analyzed: 11/08/2018 11/08/2018

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	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.17	16.2
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.17	16.2

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B216574-BSD1 Date(s) Analyzed: 11/08/2018 11/08/2018

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	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.17	16.2
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.17	16.2

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

Matrix Spike

SW-846 8082A

Lab Sample ID: B216574-MS1 Date(s) Analyzed: 11/08/2018 11/08/2018

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	0.000	0.000	0.29	
	2	0.000	0.000	0.000	0.23	23.1
Aroclor-1260	1	0.000	0.000	0.000	0.25	
	2	0.000	0.000	0.000	0.22	12.8

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B216574-MSD1 Date(s) Analyzed: 11/08/2018 11/08/2018

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	0.000	0.000	0.28	
	2	0.000	0.000	0.000	0.25	11.3
Aroclor-1260	1	0.000	0.000	0.000	0.24	
	2	0.000	0.000	0.000	0.21	13.3

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8081B

LCS

Lab Sample ID: B216575-BS1 Date(s) Analyzed: 11/09/2018 11/10/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.733	7.705	7.765	0.11	
	2	7.730	7.702	7.762	0.11	0.0
4,4'-DDE	1	7.271	7.243	7.303	0.11	
	2	7.281	7.253	7.313	0.11	8.7
4,4'-DDT	1	7.950	7.923	7.983	0.11	
	2	7.973	7.945	8.005	0.11	0.0
Alachlor	1	6.669	6.641	6.701	0.10	
	2	6.411	6.383	6.443	0.094	6.2
Aldrin	1	6.584	6.556	6.616	0.11	
	2	6.493	6.464	6.524	0.11	0.0
alpha-BHC	1	5.806	5.779	5.839	0.11	
	2	5.720	5.691	5.751	0.10	9.5
alpha-Chlordane	1	7.224	7.197	7.257	0.11	
	2	7.157	7.129	7.189	0.11	0.0
beta-BHC	1	6.081	6.053	6.113	0.10	
	2	6.013	5.982	6.042	0.10	0.0
delta-BHC	1	6.210	6.182	6.242	0.098	
	2	6.216	6.187	6.247	0.096	2.1
Dieldrin	1	7.515	7.489	7.549	0.11	
	2	7.412	7.384	7.444	0.11	0.0
Endosulfan I	1	7.333	7.306	7.366	0.10	
	2	7.203	7.175	7.235	0.080	22.2
Endosulfan II	1	7.872	7.845	7.905	0.10	
	2	7.814	7.786	7.846	0.10	0.0
Endosulfan Sulfate	1	8.462	8.434	8.494	0.11	
	2	8.262	8.234	8.294	0.10	9.5
Endrin	1	7.699	7.672	7.732	0.11	
	2	7.649	7.621	7.681	0.11	0.0
Endrin Aldehyde	1	8.177	8.148	8.208	0.097	
	2	8.071	8.042	8.102	0.097	0.0
Endrin Ketone	1	8.638	8.610	8.670	0.11	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8081B

Lab Sample ID: B216575-BS1 Date(s) Analyzed: 11/09/2018 11/10/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.601	8.573	8.633	0.10	9.5
gamma-BHC (Lindane)	1	6.025	5.998	6.058	0.11	
	2	5.958	5.930	5.990	0.10	9.5
gamma-Chlordane	1	7.123	7.096	7.156	0.11	
	2	7.047	7.019	7.079	0.11	0.0
Heptachlor	1	6.364	6.336	6.396	0.097	
	2	6.262	6.233	6.293	0.10	3.1
Heptachlor Epoxide	1	7.031	7.003	7.063	0.11	
	2	6.908	6.880	6.940	0.10	9.5
Hexachlorobenzene	1	5.692	5.664	5.724	0.12	
	2	5.626	5.597	5.657	0.11	8.7
Methoxychlor	1	8.282	8.254	8.314	0.12	
	2	8.443	8.414	8.474	0.12	0.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8081B

LCS Dup

Lab Sample ID: B216575-BSD1 Date(s) Analyzed: 11/10/2018 11/10/2018
 Instrument ID (1): ECD6A Instrument ID (2): ECD6B
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.733	7.705	7.765	0.11	
	2	7.730	7.702	7.762	0.11	0.0
4,4'-DDE	1	7.270	7.243	7.303	0.11	
	2	7.281	7.253	7.313	0.11	0.0
4,4'-DDT	1	7.949	7.923	7.983	0.10	
	2	7.973	7.945	8.005	0.10	0.0
Alachlor	1	6.669	6.641	6.701	0.095	
	2	6.410	6.383	6.443	0.087	8.8
Aldrin	1	6.584	6.556	6.616	0.11	
	2	6.492	6.464	6.524	0.097	12.6
alpha-BHC	1	5.806	5.779	5.839	0.10	
	2	5.720	5.691	5.751	0.095	5.1
alpha-Chlordane	1	7.224	7.197	7.257	0.10	
	2	7.157	7.129	7.189	0.10	0.0
beta-BHC	1	6.081	6.053	6.113	0.098	
	2	6.013	5.982	6.042	0.093	5.2
delta-BHC	1	6.210	6.182	6.242	0.095	
	2	6.215	6.187	6.247	0.090	5.4
Dieldrin	1	7.516	7.489	7.549	0.10	
	2	7.412	7.384	7.444	0.098	2.0
Endosulfan I	1	7.332	7.306	7.366	0.092	
	2	7.203	7.175	7.235	0.074	21.7
Endosulfan II	1	7.872	7.845	7.905	0.093	
	2	7.814	7.786	7.846	0.092	2.2
Endosulfan Sulfate	1	8.462	8.434	8.494	0.11	
	2	8.262	8.234	8.294	0.093	16.7
Endrin	1	7.699	7.672	7.732	0.099	
	2	7.648	7.621	7.681	0.099	1.0
Endrin Aldehyde	1	8.177	8.148	8.208	0.092	
	2	8.070	8.042	8.102	0.090	2.2
Endrin Ketone	1	8.637	8.610	8.670	0.097	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B216575-BSD1 Date(s) Analyzed: 11/10/2018 11/10/2018

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.601	8.573	8.633	0.094	3.1
gamma-BHC (Lindane)	1	6.026	5.998	6.058	0.10	
	2	5.958	5.930	5.990	0.096	4.1
gamma-Chlordane	1	7.123	7.096	7.156	0.10	
	2	7.047	7.019	7.079	0.10	0.0
Heptachlor	1	6.364	6.336	6.396	0.091	
	2	6.262	6.233	6.293	0.097	6.4
Heptachlor Epoxide	1	7.030	7.003	7.063	0.10	
	2	6.908	6.880	6.940	0.096	4.1
Hexachlorobenzene	1	5.692	5.664	5.724	0.11	
	2	5.626	5.597	5.657	0.099	10.5
Methoxychlor	1	8.282	8.254	8.314	0.11	
	2	8.442	8.414	8.474	0.11	0.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8151A

LCS

Lab Sample ID: B216689-BS1 Date(s) Analyzed: 11/10/2018 11/10/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.049	0.000	0.000	11.1	
	2	15.633	0.000	0.000	12.2	10.3
2,4,5-TP (Silvex)	1	15.427	0.000	0.000	11.3	
	2	14.796	0.000	0.000	12.1	9.5
2,4-D	1	13.583	0.000	0.000	115	
	2	13.073	0.000	0.000	120	0.0
2,4-DB	1	16.939	0.000	0.000	118	
	2	16.690	0.000	0.000	128	6.5
Dalapon	1	4.545	0.000	0.000	182	
	2	4.035	0.000	0.000	187	3.8
Dicamba	1	11.466	0.000	0.000	11.0	
	2	10.905	0.000	0.000	11.6	5.3
Dichloroprop	1	13.073	0.000	0.000	117	
	2	12.407	0.000	0.000	120	0.0
Dinoseb	1	17.608	0.000	0.000	19.9	
	2	16.981	0.000	0.000	24.0	18.2
MCPA	1	12.288	0.000	0.000	10800	
	2	11.730	0.000	0.000	9900	10.5
MCPD	1	11.956	0.000	0.000	14300	
	2	11.248	0.000	0.000	10700	26.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8151A

Lab Sample ID: B216689-BSD1 Date(s) Analyzed: 11/10/2018 11/10/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.050	0.000	0.000	10.4	
	2	15.634	0.000	0.000	11.4	13.1
2,4,5-TP (Silvex)	1	15.427	0.000	0.000	10.6	
	2	14.796	0.000	0.000	11.4	3.6
2,4-D	1	13.584	0.000	0.000	108	
	2	13.073	0.000	0.000	113	2.7
2,4-DB	1	16.939	0.000	0.000	110	
	2	16.690	0.000	0.000	120	8.7
Dalapon	1	4.544	0.000	0.000	192	
	2	4.033	0.000	0.000	195	2.6
Dicamba	1	11.464	0.000	0.000	11.1	
	2	10.905	0.000	0.000	11.0	0.0
Dichloroprop	1	13.073	0.000	0.000	111	
	2	12.406	0.000	0.000	115	4.4
Dinoseb	1	17.608	0.000	0.000	22.1	
	2	16.981	0.000	0.000	26.5	18.6
MCPA	1	12.287	0.000	0.000	10400	
	2	11.729	0.000	0.000	9460	5.6
MCP P	1	11.955	0.000	0.000	14400	
	2	11.246	0.000	0.000	10200	31.4

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8151A

Matrix Spike

Lab Sample ID: B216689-MS1 Date(s) Analyzed: 11/10/2018 11/10/2018
 Instrument ID (1): ECD 8 Instrument ID (2): ECD 8
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.042	0.000	0.000	12.6	
	2	15.620	0.000	0.000	14.2	8.8
2,4,5-TP (Silvex)	1	15.421	0.000	0.000	13.0	
	2	14.785	0.000	0.000	13.6	4.5
2,4-D	1	13.577	0.000	0.000	131	
	2	13.063	0.000	0.000	141	8.1
2,4-DB	1	16.936	0.000	0.000	128	
	2	16.683	0.000	0.000	152	15.6
Dalapon	1	4.542	0.000	0.000	270	
	2	4.031	0.000	0.000	277	2.6
Dicamba	1	11.461	0.000	0.000	13.8	
	2	10.898	0.000	0.000	13.7	2.2
Dichloroprop	1	13.068	0.000	0.000	138	
	2	12.398	0.000	0.000	140	0.0
Dinoseb	1	17.610	0.000	0.000	25.4	
	2	16.979	0.000	0.000	29.3	15.8
MCPA	1	12.285	0.000	0.000	13100	
	2	11.723	0.000	0.000	11900	8.8
MCPD	1	11.951	0.000	0.000	17900	
	2	11.241	0.000	0.000	12500	36.1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8151A

Matrix Spike Dup

Lab Sample ID: B216689-MSD1 Date(s) Analyzed: 11/10/2018 11/10/2018
 Instrument ID (1): ECD 8 Instrument ID (2): ECD 8
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.047	0.000	0.000	14.1	
	2	15.619	0.000	0.000	14.7	4.9
2,4,5-TP (Silvex)	1	15.420	0.000	0.000	14.4	
	2	14.785	0.000	0.000	14.0	0.0
2,4-D	1	13.576	0.000	0.000	137	
	2	13.063	0.000	0.000	145	3.5
2,4-DB	1	16.934	0.000	0.000	131	
	2	16.683	0.000	0.000	154	16.9
Dalapon	1	4.543	0.000	0.000	255	
	2	4.032	0.000	0.000	261	0.4
Dicamba	1	11.461	0.000	0.000	13.4	
	2	10.899	0.000	0.000	13.7	5.2
Dichloroprop	1	13.068	0.000	0.000	139	
	2	12.398	0.000	0.000	143	2.1
Dinoseb	1	17.604	0.000	0.000	28.5	
	2	16.977	0.000	0.000	31.3	7.6
MCPA	1	12.284	0.000	0.000	13200	
	2	11.724	0.000	0.000	12000	8.0
MCPD	1	11.953	0.000	0.000	17900	
	2	11.241	0.000	0.000	12900	33.0

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.
DL-03	Elevated reporting limit due to matrix.
E	Reported result is estimated. Value reported over verified calibration range.
H-03	Sample received after recommended holding time was exceeded.
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-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.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration 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-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
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
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8151A in Water</i>	
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Soil	
p-Isopropyltoluene (p-Cymene)	NH, NY
Methyl tert-Butyl Ether (MTBE)	NH, NY
Methylene Chloride	CT, NH, NY, ME
4-Methyl-2-pentanone (MIBK)	CT, NH, NY
Naphthalene	NH, NY, ME
n-Propylbenzene	NH, NY
Styrene	CT, NH, NY, ME
1,1,1,2-Tetrachloroethane	CT, NH, NY, ME
1,1,2,2-Tetrachloroethane	CT, NH, NY, ME
Tetrachloroethylene	CT, NH, NY, ME
Toluene	CT, NH, NY, ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH, NY, ME
1,1,1-Trichloroethane	CT, NH, NY, ME
1,1,2-Trichloroethane	CT, NH, NY, ME
Trichloroethylene	CT, NH, NY, ME
Trichlorofluoromethane (Freon 11)	CT, NH, NY, ME
1,2,3-Trichloropropane	NH, NY, ME
1,2,4-Trimethylbenzene	CT, NH, NY, ME
1,3,5-Trimethylbenzene	CT, NH, NY, ME
Vinyl Chloride	CT, NH, NY, ME
m+p Xylene	CT, NH, NY, ME
o-Xylene	CT, NH, NY, ME
SW-846 8270D in Soil	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
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
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
SW-846 8270D in Water	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
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
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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

1860278

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



KLM

Company Name: VHB

Address: 101 Walnut Street, Watertown, MA
Phone: 617-607-1841

Project Name: Eversource Transmission Project

Project Location: Sudbury, Massachusetts

Project Number: 12970.03

Project Manager: Paige Cornell

Con-Test Quote Name/Number:

Invoice Recipient:

Sampled By: DP/FIB

Requested Turnaround Time
 7-Day 10-Day
 Due Date: _____

Rush-Approval Required
 1-Day 3-Day
 2-Day 4-Day
 Data Delivery
 Format: PDF EXCEL
 Other: Limit Check
 CLP Like Data Pkg Required:
 Email To: pcornell@vhb.com; pneehmay@vhb.com; bferrill@vhb.com; fbcranshaw@vhb.com
 Fax To #: _____

Con-Test Work Order#	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code
1	MP 33	11/18	13:30	x	x	S	U
2	MP 27	11/5/18	11:00			L	L
3	MP 28		12:05			L	L
4	MP 29		13:15			L	L
5	MP 30	11/6/18	08:50			L	L
6	MP 31		10:05			L	L
7	MP 35		12:00			L	L

Comments:

Vials frozen on day of generation by 16:00
 Retinquired by: (signature)
 Received by: (signature)
 Retinquired by: (signature)
 Received by: (signature)
 Retinquired by: (signature)
 Received by: (signature)

Thank you!

TCLP 20x Rule

Date/Time:	Detection Limit Requirements	Special Requirements
11/18/18 14:30	MA	<input checked="" type="checkbox"/> MA MCP Required
11-6-18 15:37	CT	<input type="checkbox"/> MCP Certification Form Required
11-6-18 17:40	Other:	<input type="checkbox"/> CT RCP Required
11/6/18 17:40		<input type="checkbox"/> RCP Certification Form Required
11/6/18 19:30		<input type="checkbox"/> MA State DW Required
11-6-18 19:30		PWSID # _____

Project Entity

Government Municipality MWRA WRTA Other

Federal 21 J School AHA-LAP, LLC

City Brownfield MBTA Chromatogram Non Soxhlet

of Containers _____

2 Preservation Code _____

3 Container Code _____

Dissolved Metals Samples

Field Filtered

Lab to Filter

Orthophosphate Samples

Field Filtered

Lab to Filter

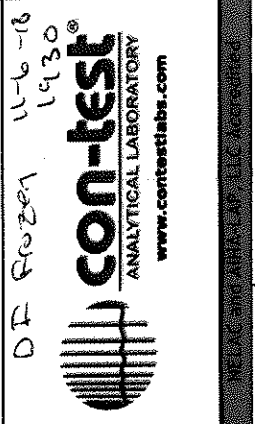
1 Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

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)_DI
 H2O

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

ANALYSIS REQUESTED

Ignitability, pH, Reactivity	Conductivity	Pesticide/Herbicide	SVOCs, PCBs, TPH	VOCs	MCP 14 Metals
x	x	x	x	x	x
x	x	x	x	x	x
x	x	x	x	x	x
x	x	x	x	x	x
x	x	x	x	x	x
x	x	x	x	x	x



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 VHS

Received By LR Date 11-6-18 Time 1930

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

Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp -2.2
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? 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

Are there Rushes? F

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

Acid _____ Base _____

Who was notified? _____

Who was notified? _____

Who was notified? Luke

MS/MSD? F

Is splitting samples required? F

On COC? F

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-	7	250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-	14	Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen: <u>DI</u> <u>11-6-18</u>
Sulfuric-		Perchlorate		Ziplock		<u>1930</u>

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:

Samples MP-33, MP27, MP28, MP29 received out of holding time for pH

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 18K0278
Project Location: Sudbury, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
18K0278-01 thru 18K0278-07

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 (X)	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 A ()	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

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

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

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

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

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski

Position: Laboratory Director

Printed Name: Tod E. Kopyscinski

Date: 11/14/18

November 29, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18K0568

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

Sincerely,

A handwritten signature in black ink, reading "Kerry K. McGee". The signature is written in a cursive style with a large, prominent "K" and "M".

Kerry K. McGee
Project Manager

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/29/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0568

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B34	18K0568-01	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
B33	18K0568-02	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
B37	18K0568-03	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO
B38	18K0568-04	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/29/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0568

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B39	18K0568-05	Soil		-	GAI-LAP-20-1996/AASH TO
				ASTM D1557	GAI-LAP-20-1996/AASH TO
				ASTM D2216	GAI-LAP-20-1996/AASH TO
				ASTM D6913	GAI-LAP-20-1996/AASH TO
				SM D 422-63	GAI-LAP-20-1996/AASH TO

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
Project Manager

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/8/2018 13:00

Field Sample #: B34

Sample ID: 18K0568-01

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
See Attached Subcontracted Report	Attached		Attached	1		ASTM D6913		11/26/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/8/2018 13:00

Field Sample #: B34

Sample ID: 18K0568-01

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached		Attached	1		ASTM D2216		11/20/18 0:00	GTE
See Attached Report Pages	Attached		Attached	1		ASTM D1557		11/27/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/8/2018 10:00

Field Sample #: B33

Sample ID: 18K0568-02

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
See Attached Subcontracted Report	Attached		Attached	1		ASTM D6913		11/28/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/8/2018 10:00

Field Sample #: B33

Sample ID: 18K0568-02

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached		Attached	1		ASTM D2216		11/20/18 0:00	GTE
See Attached Report Pages	Attached		Attached	1		ASTM D1557		11/28/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/12/2018 11:00

Field Sample #: B37

Sample ID: 18K0568-03

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
See Attached Subcontracted Report	Attached		Attached	1		ASTM D6913		11/26/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/12/2018 11:00

Field Sample #: B37

Sample ID: 18K0568-03

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached		Attached	1		ASTM D2216		11/20/18 0:00	GTE
See Attached Report Pages	Attached		Attached	1		ASTM D1557		11/28/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/12/2018 13:00

Field Sample #: B38

Sample ID: 18K0568-04

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
See Attached Subcontracted Report	Attached		Attached	1		ASTM D6913		11/26/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/12/2018 13:00

Field Sample #: B38

Sample ID: 18K0568-04

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached		Attached	1		ASTM D2216	11/20/18 0:00		GTE
See Attached Report Pages	Attached		Attached	1		ASTM D1557	11/24/18 0:00		GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/9/2018 13:00

Field Sample #: B39

Sample ID: 18K0568-05

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
See Attached Subcontracted Report	Attached		Attached	1		ASTM D6913		11/26/18 0:00	GTE

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0568

Date Received: 11/13/2018

Sampled: 11/9/2018 13:00

Field Sample #: B39

Sample ID: 18K0568-05

Sample Matrix: Soil

Miscellaneous Test

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Report Pages	Attached		Attached	1		ASTM D2216		11/20/18 0:00	GTE
See Attached Report Pages	Attached		Attached	1		ASTM D1557		11/24/18 0:00	GTE

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
---------	----------------

No certified Analyses included in this Report

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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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



 KKM

 http://www.contestlabs.com

 CHAIN OF CUSTODY RECORD

 Doc # 381 Rev 1_03242017

 39 Spruce Street

 East Longmeadow, MA 01028

 Phone: 413-525-2332

 Fax: 413-525-6405

 Email: info@contestlabs.com

Company Name: YHB

 Address: 101 Walnut Street, Watertown, MA

 Phone: 617-607-1841

 Project Name: Eversource Transmission Project

 Project Location: Sudbury, Massachusetts

 Project Number: 12970.03

 Project Manager: Paige Cornell

 Con-Test Quote Name/Number:

 Invoice Recipient:

 Sampled By:

Con-Test Work Order#	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code
1	B34	11/18/18	13:00		X	S	U
2	B33	11/18/18	10:00		X	S	U
3	B37	11/21/18	11:00		X	S	U
4	B34	11/21/18	13:00		X	S	U
5	B33	11/18/18	13:00		X	S	U

CLP Like Data Pkg Required:

 Email To: pcorneil@yhb.com; pmckinlay@yhb.com; tvernell@yhb.com; fbeane@yhb.com

 Fax To #:

Requested Turnaround Time:

 7-Day 10-Day

 Due Date:

Rush-Approval Required:

 1-Day 3-Day

 2-Day 4-Day

 Data Delivery:

 Format: PDF EXCEL

 Other:

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

 WRTA

 Other:

 Chromatogram

 AIHA-LAP, LLC

con-test ANALYTICAL LABORATORY www.contestlabs.com

# of Containers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Preservation Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Container Code	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Analysis Requested																				
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 = Tadar Bag O = Other (please define)																			
PCB ONLY	<input type="checkbox"/> Soxhlet <input type="checkbox"/> Non Soxhlet																			



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	ckg	
Location:	Sudbury, MA	Sample Type:	---	Checked By:	bfs
Boring ID:	---	Test Date:	11/20/18	Test Id:	482246
Sample ID:	---				
Depth :	---				

Moisture Content of Soil and Rock - ASTM D2216

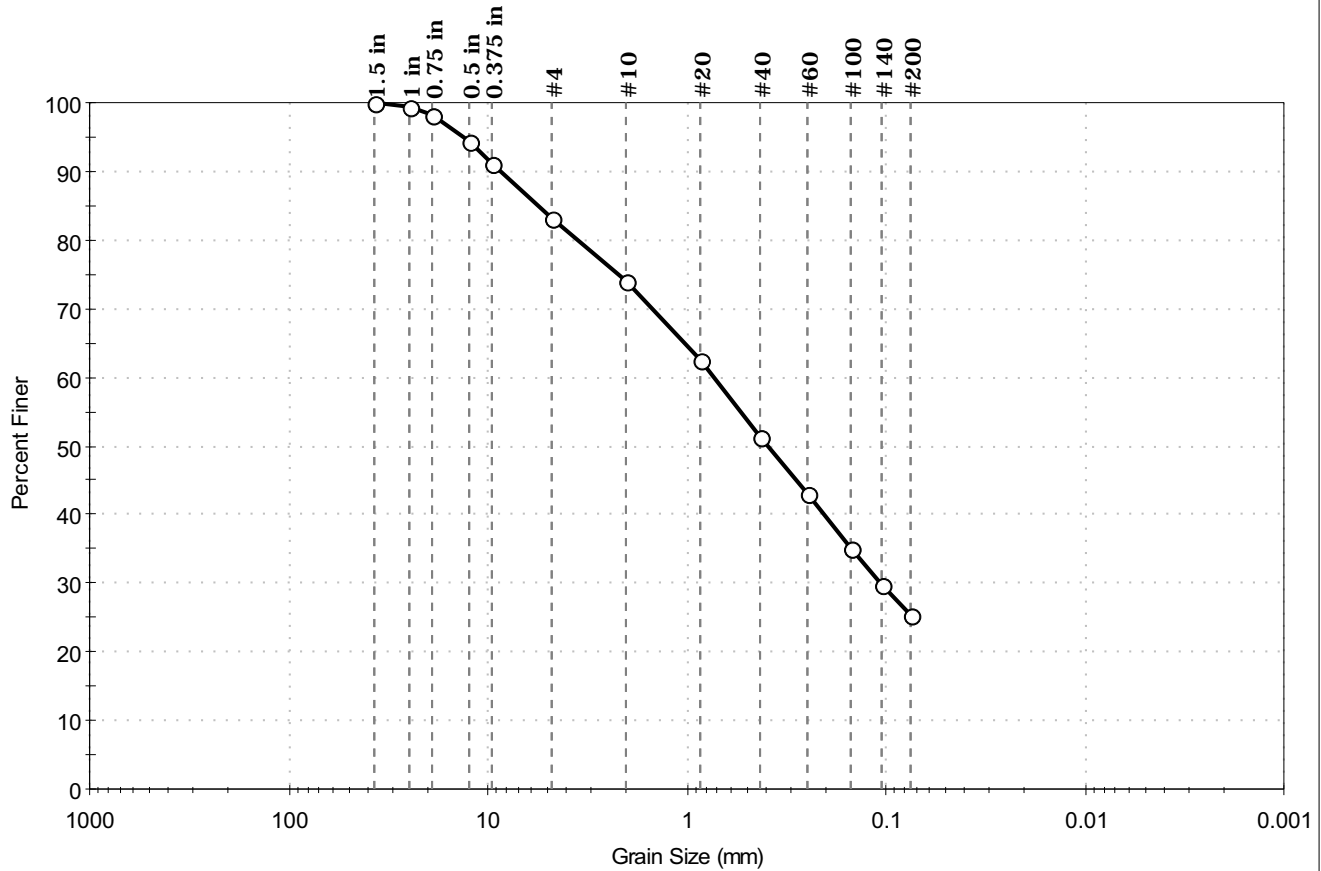
Boring ID	Sample ID	Depth	Description	Moisture Content, %
---	B33	---	Moist, olive yellow silty sand with gravel	11.0
---	B34	---	Moist, olive brown silty sand with gravel	12.0
---	B37	---	Moist, light olive brown silty sand with gravel	10.8
---	B38	---	Moist, light olive brown sand with silt	9.9
---	B39	---	Moist, light yellowish brown sand with silt	8.0

Notes: Temperature of Drying : 110° Celsius



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	bfs
Boring ID:	---	Sample Type:	bucket
Sample ID:	B33	Test Date:	11/28/18
Depth:	---	Test Id:	482233
Test Comment:	---		
Visual Description:	Moist, olive yellow silty sand with gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	16.8	57.9	25.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	99		
0.75 in	19.00	98		
0.5 in	12.50	94		
0.375 in	9.50	91		
#4	4.75	83		
#10	2.00	74		
#20	0.85	63		
#40	0.42	51		
#60	0.25	43		
#100	0.15	35		
#140	0.11	30		
#200	0.075	25		

<u>Coefficients</u>	
D ₈₅ = 5.5437 mm	D ₃₀ = 0.1082 mm
D ₆₀ = 0.7273 mm	D ₁₅ = N/A
D ₅₀ = 0.3906 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

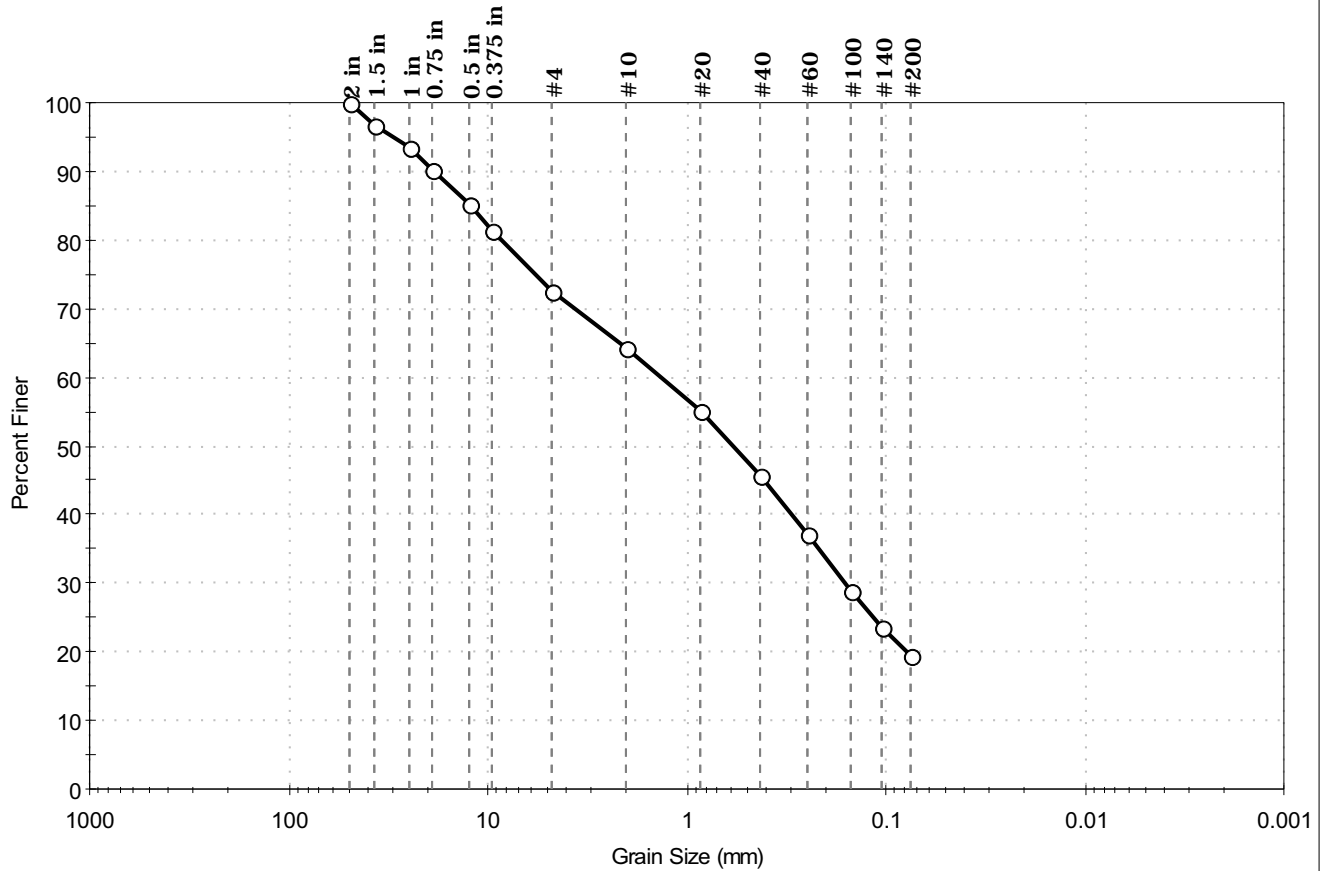
<u>Classification</u>	
ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ROUNDED
Sand/Gravel Hardness : HARD



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	bfs
Boring ID:	---	Sample Type:	bucket
Sample ID:	B34	Test Date:	11/26/18
Depth:	---	Test Id:	482232
Test Comment:	---		
Visual Description:	Moist, olive brown silty sand with gravel		
Sample Comment:	Sample contains organics		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	27.3	53.2	19.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
2 in	50.00	100		
1.5 in	37.50	97		
1 in	25.00	94		
0.75 in	19.00	90		
0.5 in	12.50	85		
0.375 in	9.50	81		
#4	4.75	73		
#10	2.00	64		
#20	0.85	55		
#40	0.42	46		
#60	0.25	37		
#100	0.15	29		
#140	0.11	24		
#200	0.075	19		

<u>Coefficients</u>	
D ₈₅ = 12.3440 mm	D ₃₀ = 0.1606 mm
D ₆₀ = 1.3238 mm	D ₁₅ = N/A
D ₅₀ = 0.5783 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

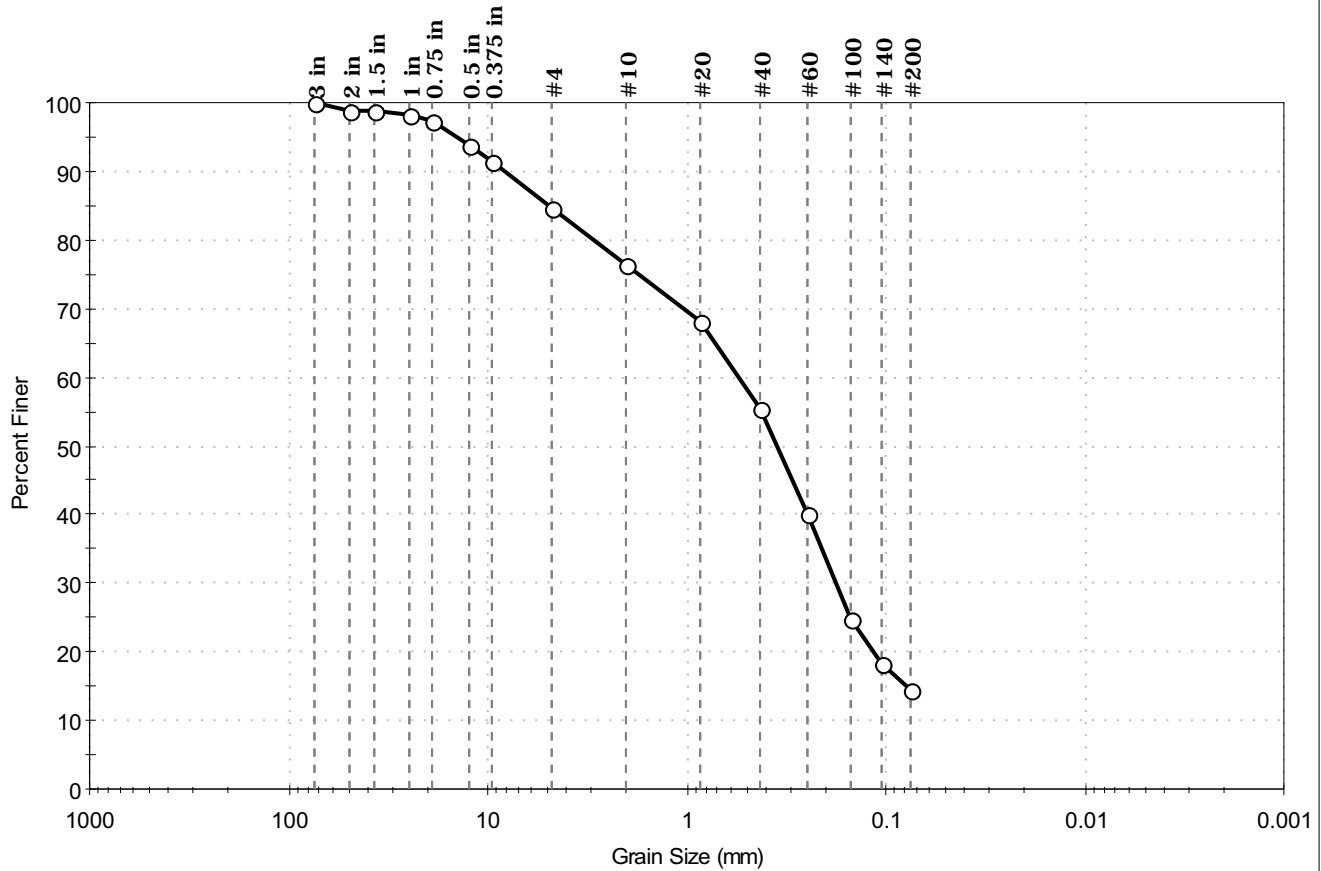
<u>Classification</u>	
<u>ASTM</u>	N/A
<u>AASHTO</u>	Stone Fragments, Gravel and Sand (A-1-b (0))

<u>Sample/Test Description</u>	
Sand/Gravel Particle Shape : ANGULAR	
Sand/Gravel Hardness : HARD	



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	bfs
Boring ID:	---	Sample Type:	bucket
Sample ID:	B37	Test Date:	11/26/18
Depth:	---	Test Id:	482234
Test Comment:	---		
Visual Description:	Moist, light olive brown silty sand with gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	15.3	70.4	14.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3 in	75.00	100		
2 in	50.00	99		
1.5 in	37.50	99		
1 in	25.00	98		
0.75 in	19.00	97		
0.5 in	12.50	94		
0.375 in	9.50	92		
#4	4.75	85		
#10	2.00	76		
#20	0.85	68		
#40	0.42	55		
#60	0.25	40		
#100	0.15	25		
#140	0.11	18		
#200	0.075	14		

<u>Coefficients</u>	
D ₈₅ = 4.8680 mm	D ₃₀ = 0.1786 mm
D ₆₀ = 0.5481 mm	D ₁₅ = 0.0796 mm
D ₅₀ = 0.3524 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

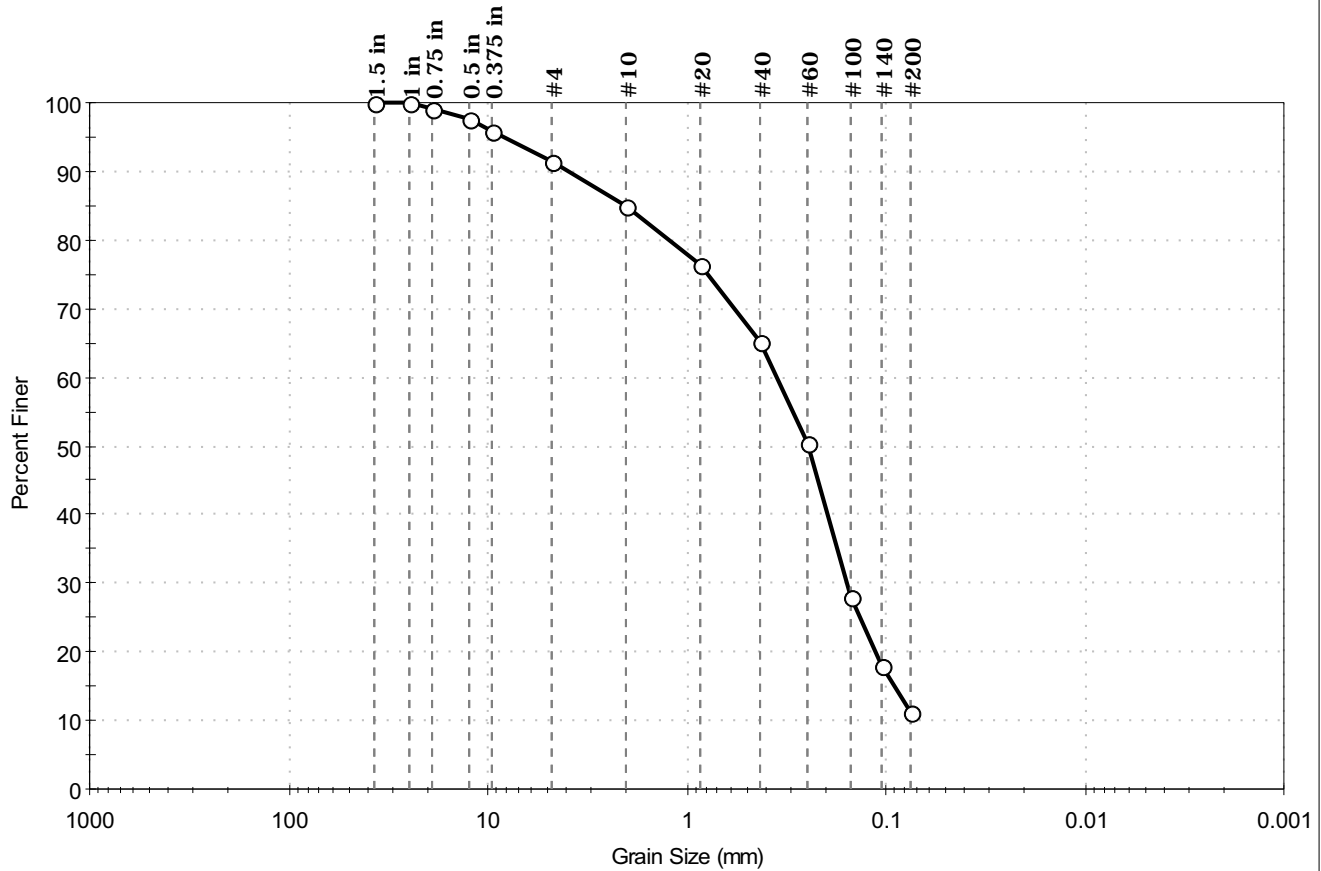
<u>Classification</u>	
ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD



Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	bfs
Boring ID:	---	Sample Type:	bucket
Sample ID:	B38	Test Date:	11/26/18
Depth:	---	Test Id:	482235
Test Comment:	---		
Visual Description:	Moist, light olive brown sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	8.5	80.4	11.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	100		
0.75 in	19.00	99		
0.5 in	12.50	98		
0.375 in	9.50	96		
#4	4.75	92		
#10	2.00	85		
#20	0.85	76		
#40	0.42	65		
#60	0.25	50		
#100	0.15	28		
#140	0.11	18		
#200	0.075	11		

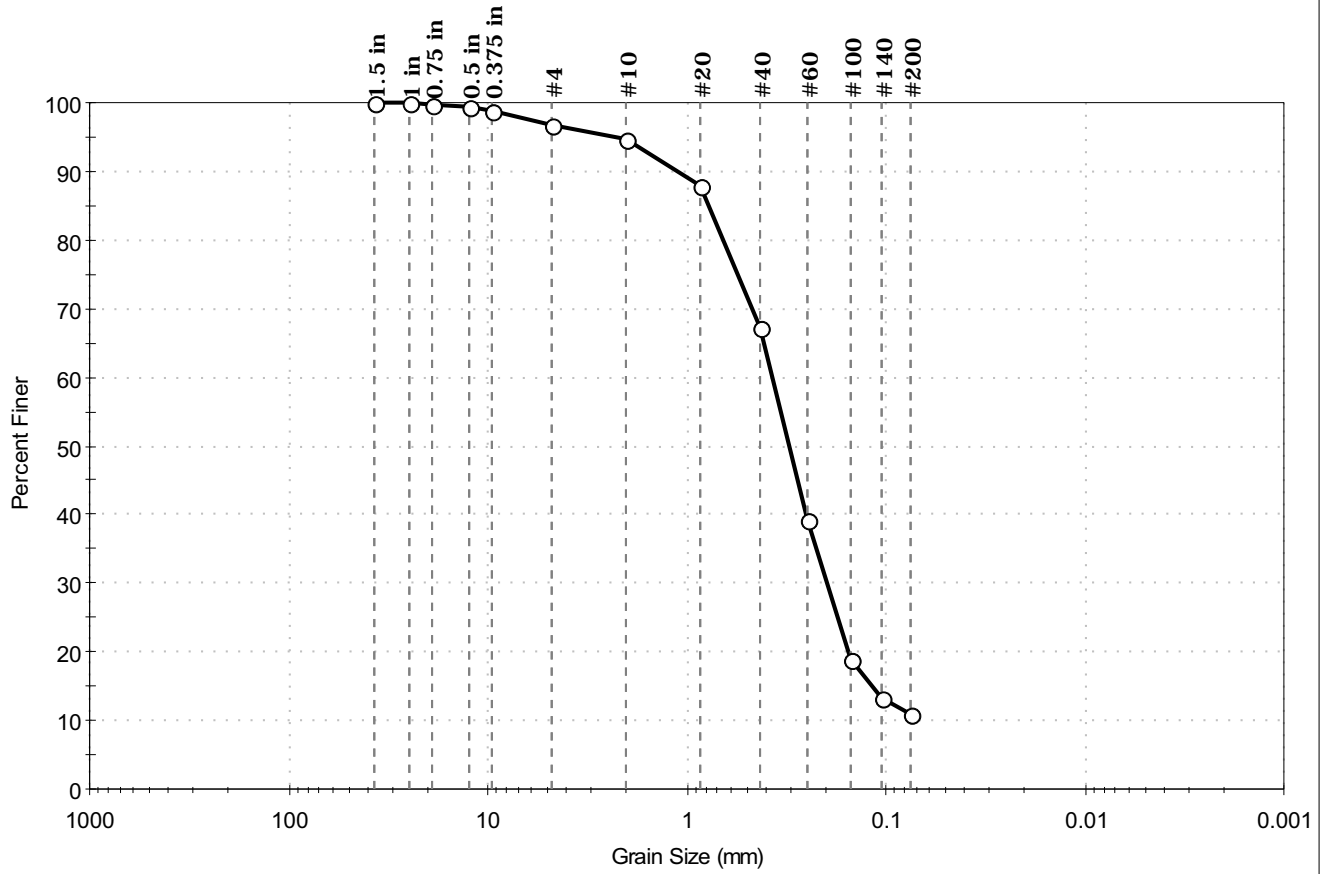
<u>Coefficients</u>	
D ₈₅ = 2.0004 mm	D ₃₀ = 0.1573 mm
D ₆₀ = 0.3523 mm	D ₁₅ = 0.0911 mm
D ₅₀ = 0.2477 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

<u>Classification</u>	
ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD

Client:	Con-Test Analytical Lab	Project No:	GTX-308988
Project:	Eversource Transmission	Tested By:	ckg
Location:	Sudbury, MA	Checked By:	bfs
Boring ID:	---	Sample Type:	bucket
Sample ID:	B39	Test Date:	11/26/18
Depth :	---	Test Id:	482236
Test Comment:	---		
Visual Description:	Moist, light yellowish brown sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.1	86.0	10.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	100		
0.75 in	19.00	100		
0.5 in	12.50	99		
0.375 in	9.50	99		
#4	4.75	97		
#10	2.00	95		
#20	0.85	88		
#40	0.42	67		
#60	0.25	39		
#100	0.15	19		
#140	0.11	13		
#200	0.075	11		

<u>Coefficients</u>	
D ₈₅ = 0.7731 mm	D ₃₀ = 0.1978 mm
D ₆₀ = 0.3695 mm	D ₁₅ = 0.1175 mm
D ₅₀ = 0.3058 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

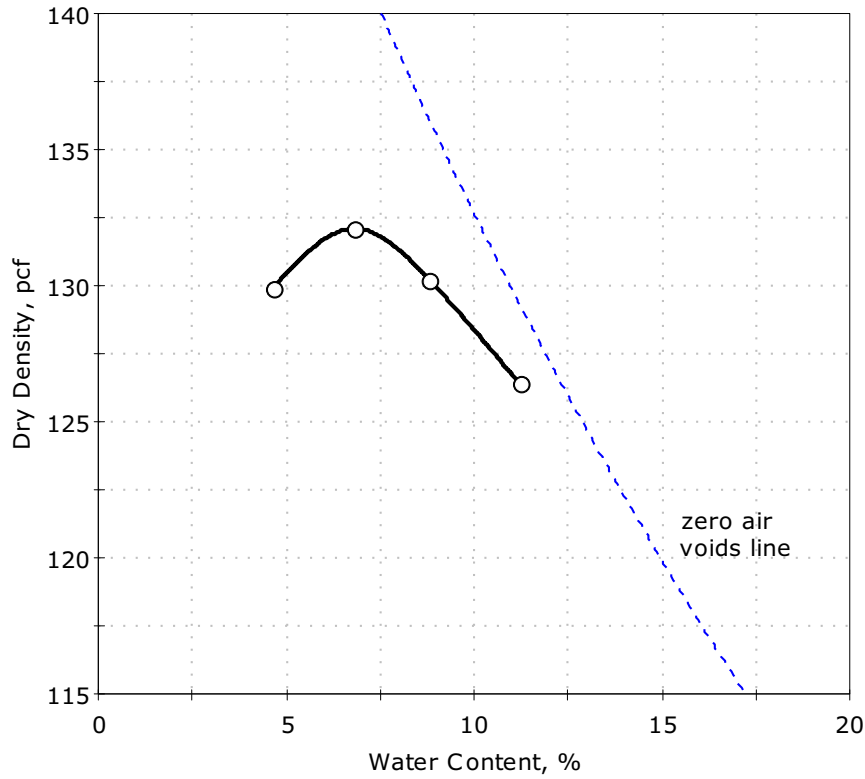
<u>Classification</u>	
ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

<u>Sample/Test Description</u>
Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	jsc
Boring ID:	---	Test Date:	11/28/18	Test Id:	482238
Sample ID:	B33	Visual Description:	Moist, olive yellow silty sand with gravel		
Depth:	---	Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	129.9	132.1	130.3	126.4
Moisture Content, %	4.7	6.8	8.8	11.2

Method : C

Preparation : DRY

As received Moisture : 11 %

Rammer : Mechanical

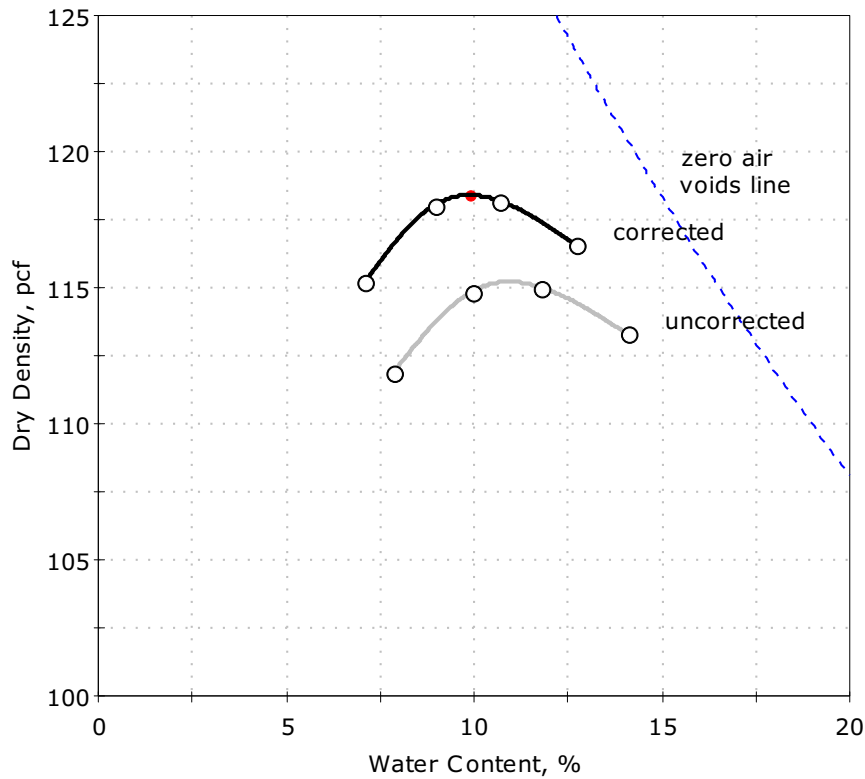
Zero voids line based on assumed specific gravity of 2.70

Maximum Dry Density= 132.1 pcf
Optimum Moisture= 6.8 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	jsc
Boring ID:	---	Test Date:	11/27/18	Test Id:	482237
Sample ID:	B34	Visual Description:	Moist, olive brown silty sand with gravel		
Depth:	---	Sample Comment:	Sample contains organics		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	111.9	114.9	115.0	113.3
Moisture Content, %	7.8	9.9	11.8	14.1

Method : C

Preparation : DRY

As received Moisture : 12 %

Rammer : Mechanical

Zero voids line based on assumed specific gravity of 2.65

Maximum Dry Density= 115.2 pcf
 Optimum Moisture= 10.9 %

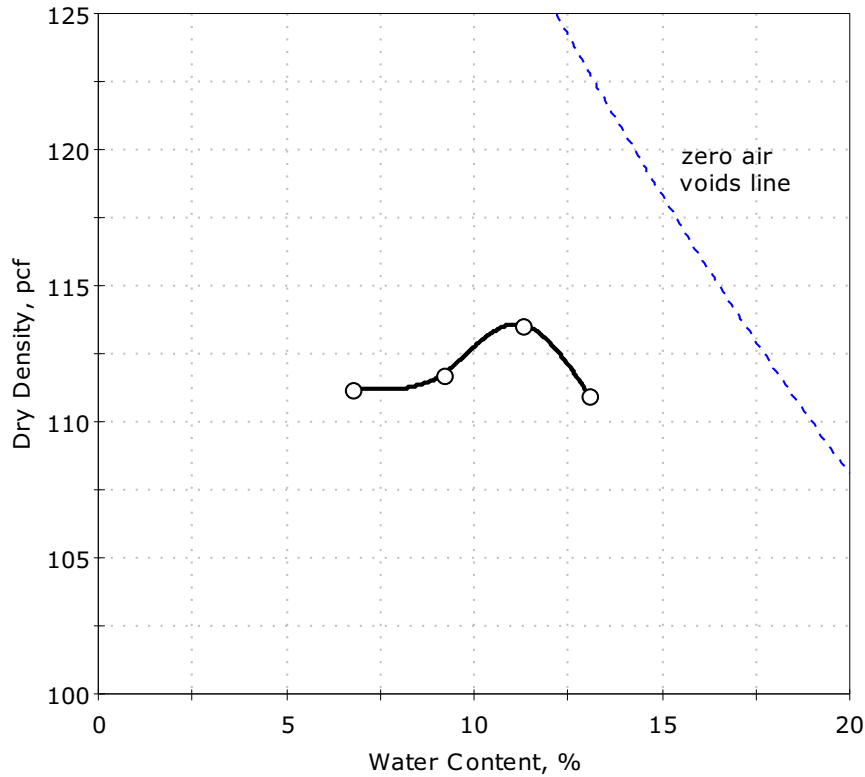
Oversize Correction (10% > 3/4 inch Sieve)

Corrected Maximum Dry Density= 118.4 pcf
 Corrected Optimum Moisture= 9.9 %
 Assumed Average Bulk Specific Gravity = 2.55



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission				
Location:	Sudbury, MA				
Boring ID:	---	Sample Type:	bucket	Tested By:	cwd
Sample ID:	B37	Test Date:	11/28/18	Checked By:	jsc
Depth :	---	Test Id:	482239		
Test Comment:	---				
Visual Description:	Moist, light olive brown silty sand with gravel				
Sample Comment:	---				

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4
Dry density, pcf	111.2	111.7	113.6	111.0
Moisture Content, %	6.8	9.2	11.2	13.1

Method : C

Preparation : DRY

As received Moisture : 11 %

Rammer : Mechanical

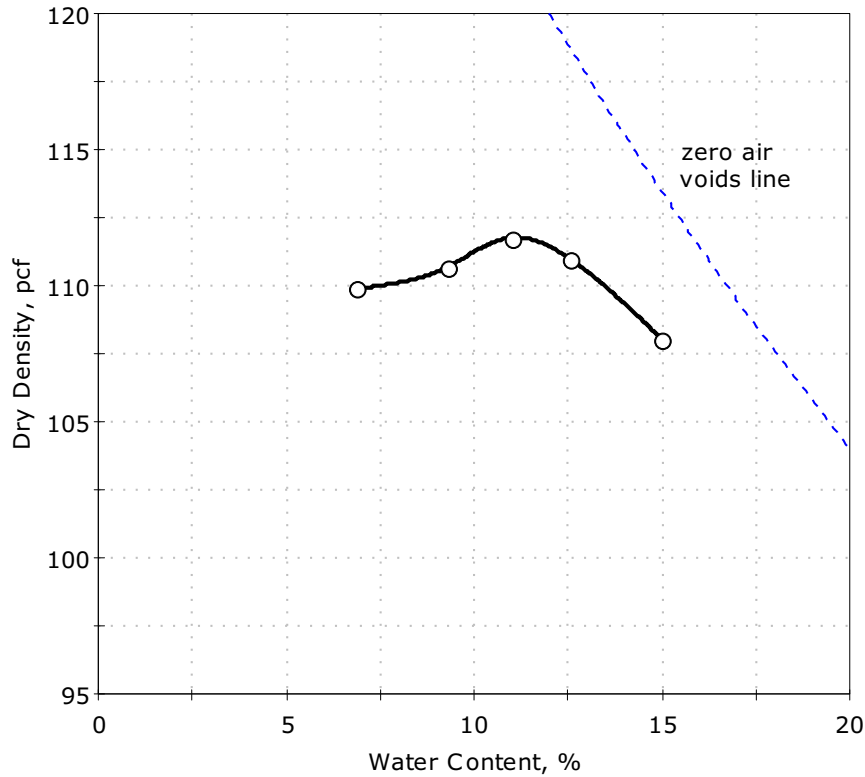
Zero voids line based on assumed specific gravity of 2.65

Maximum Dry Density= 113.6 pcf
 Optimum Moisture= 11.1 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	jsc
Boring ID:	---	Test Date:	11/24/18	Test Id:	482240
Sample ID:	B38	Visual Description:	Moist, light olive brown sand with silt		
Depth:	---	Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4	Point 5
Dry density, pcf	109.9	110.7	111.8	111.0	108.1
Moisture Content, %	6.9	9.3	11.0	12.5	15.0

Method : B

Preparation : DRY

As received Moisture : 10 %

Rammer : Mechanical

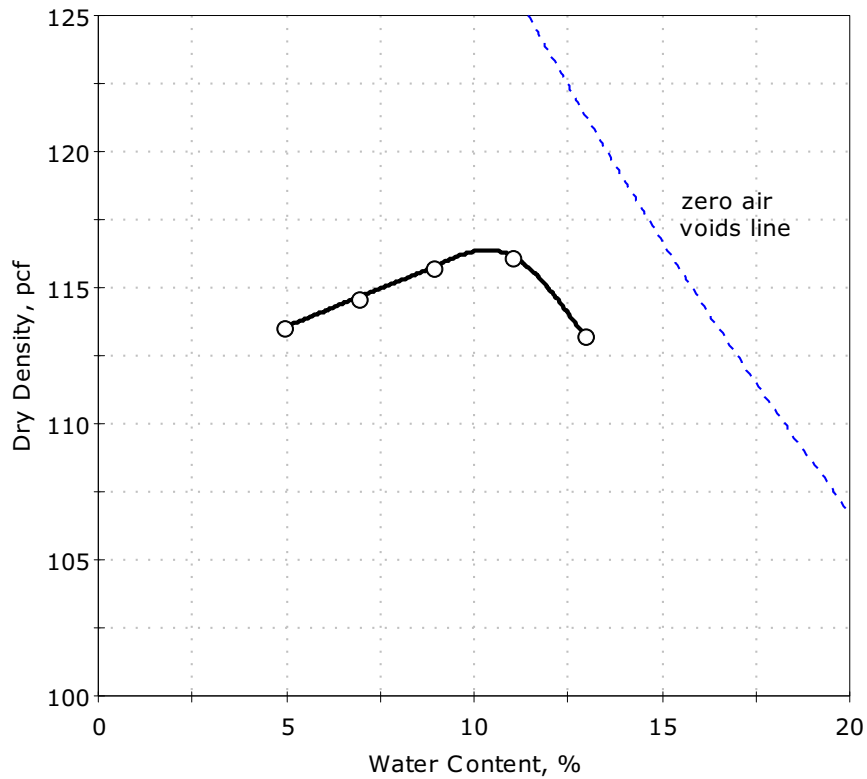
Zero voids line based on assumed specific gravity of 2.5

Maximum Dry Density= 111.8 pcf
 Optimum Moisture= 11.1 %



Client:	Con-Test Analytical Lab		Project No:	GTX-308988	
Project:	Eversource Transmission		Tested By:	cwd	
Location:	Sudbury, MA	Sample Type:	bucket	Checked By:	jsc
Boring ID:	---	Test Date:	11/24/18	Test Id:	482241
Sample ID:	B39	Visual Description:	Moist, light yellowish brown sand with silt		
Depth:	---	Sample Comment:	---		

Compaction Report - ASTM D1557



Data Points	Point 1	Point 2	Point 3	Point 4	Point 5
Dry density, pcf	113.5	114.7	115.7	116.2	113.2
Moisture Content, %	4.9	6.9	8.9	11.0	12.9

Method : A

Preparation : DRY

As received Moisture : 8 %

Rammer : Mechanical

Zero voids line based on assumed specific gravity of 2.6

Maximum Dry Density= 116.4 pcf
 Optimum Moisture= 10.4 %

November 21, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18K0569

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

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive style with a large, prominent "K" at the beginning.

Kerry K. McGee
Project Manager

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/21/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0569

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB33	18K0569-01	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
SB36	18K0569-02	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	

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

Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 11/21/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0569

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB35	18K0569-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
SB34	18K0569-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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 8151, samples were derivatized on 11/16/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332
SW-846 8082A

Qualifications:**O-32**

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

Analyte & Samples(s) Qualified:

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34]

SW-846 8151A

Qualifications:**DL-03**

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

18K0569-03[SB35], 18K0569-04[SB34]

V-05

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

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

B217251-BS1, B217251-BSD1

V-06

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

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

B217251-MS1, B217251-MSD1

Dinoseb [2C]

B217251-MS1, B217251-MSD1

V-20

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

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

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217251-MS1, B217251-MSD1

Dinoseb [2C]

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217251-MS1, B217251-MSD1

SW-846 8260C

Qualifications:**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:**Bromomethane**

B217293-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:**1,4-Dioxane**

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217293-BLK1, B217293-BS1, B217293-BSD1

Bromomethane

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217293-BLK1, B217293-BS1, B217293-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**

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217293-BLK1, B217293-BS1, B217293-BSD1

Tetrahydrofuran

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217293-BLK1, B217293-BS1, B217293-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**

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217293-BLK1, B217293-BS1, B217293-BSD1

V-36

Initial calibration verification (ICV) 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:**1,4-Dioxane**

B217293-BS1, B217293-BSD1

SW-846 8270D**Qualifications:****V-05**

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

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

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-BSD1

Aniline

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-BSD1

Benzo(g,h,i)perylene

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-BSD1

Pyridine

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-BSD1

V-19

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

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

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-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:**4-Chloroaniline**

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-BSD1

Aniline

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217204-BLK1, B217204-BS1, B217204-BSD1

SW-846 9045C**Qualifications:****H-03**

Sample received after recommended holding time was exceeded.

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

18K0569-01[SB33], 18K0569-02[SB36], 18K0569-03[SB35], 18K0569-04[SB34], B217354-DUP1

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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, 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: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB33

Sampled: 11/7/2018 14:36

Sample ID: 18K0569-01

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	11/15/18	11/15/18 9:42	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	R-05, V-34	SW-846 8260C	11/15/18	11/15/18 9:42	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1	R-05, V-16	SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,4-Dioxane (SIM)	ND	0.030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB33

Sampled: 11/7/2018 14:36

Sample ID: 18K0569-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Naphthalene	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1,2,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1	V-16	SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2,3-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 9:42	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		99.6	70-130				11/15/18	9:42	
Toluene-d8		97.2	70-130				11/15/18	9:42	
4-Bromofluorobenzene		97.6	70-130				11/15/18	9:42	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB33

Sampled: 11/7/2018 14:36

Sample ID: 18K0569-01

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	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Aniline	ND	0.42	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Butylbenzylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
4-Chloroaniline	ND	0.82	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,4-Dinitrophenol	ND	0.82	mg/Kg dry	1	V-19	SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Di-n-octylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:36

Field Sample #: SB33

Sample ID: 18K0569-01

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	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
4-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Pentachlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Pyridine	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 13:26	BGL
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:26	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		52.4	30-130					11/15/18 13:26	
Phenol-d6		56.1	30-130					11/15/18 13:26	
Nitrobenzene-d5		58.2	30-130					11/15/18 13:26	
2-Fluorobiphenyl		50.6	30-130					11/15/18 13:26	
2,4,6-Tribromophenol		73.6	30-130					11/15/18 13:26	
p-Terphenyl-d14		62.5	30-130					11/15/18 13:26	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB33

Sampled: 11/7/2018 14:36

Sample ID: 18K0569-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Aldrin [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
alpha-BHC [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
beta-BHC [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
delta-BHC [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
4,4'-DDD [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
4,4'-DDE [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
4,4'-DDT [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Dieldrin [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Endosulfan I [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Endosulfan II [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Endosulfan sulfate [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Endrin [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Endrin aldehyde [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Endrin ketone [1]	ND	0.0094	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Heptachlor [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Heptachlor epoxide [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Hexachlorobenzene [1]	ND	0.0070	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Methoxychlor [1]	ND	0.058	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:22	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.7	30-150					11/15/18 20:22	
Decachlorobiphenyl [2]		84.7	30-150					11/15/18 20:22	
Tetrachloro-m-xylene [1]		74.1	30-150					11/15/18 20:22	
Tetrachloro-m-xylene [2]		71.1	30-150					11/15/18 20:22	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB33

Sampled: 11/7/2018 14:36

Sample ID: 18K0569-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/15/18	11/16/18 17:01	JMB
Aroclor-1221 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1232 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1242 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1248 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1254 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1260 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1262 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Aroclor-1268 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:01	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.5	30-150					11/16/18 17:01	
Decachlorobiphenyl [2]		91.7	30-150					11/16/18 17:01	
Tetrachloro-m-xylene [1]		84.5	30-150					11/16/18 17:01	
Tetrachloro-m-xylene [2]		87.2	30-150					11/16/18 17:01	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:36

Field Sample #: SB33

Sample ID: 18K0569-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
2,4-DB [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
2,4,5-TP (Silvex) [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
2,4,5-T [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
Dalapon [1]	ND	78	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
Dicamba [1]	ND	3.1	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
Dichloroprop [1]	ND	31	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
Dinoseb [1]	ND	16	µg/kg dry	1	V-20	SW-846 8151A	11/15/18	11/17/18 18:44	JMB
MCPA [1]	ND	3100	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
MCPP [1]	ND	3100	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 18:44	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		86.3	30-150					11/17/18 18:44	
2,4-Dichlorophenylacetic acid [2]		87.0	30-150					11/17/18 18:44	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:36

Field Sample #: SB33

Sample ID: 18K0569-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	12	10	mg/Kg dry	1		SW-846 8100 Modified	11/14/18	11/17/18 17:51	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		45.8	40-140					11/17/18 17:51	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:36

Field Sample #: SB33

Sample ID: 18K0569-01

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	11/16/18	11/19/18 17:25	QNW
Arsenic	4.4	2.1	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Barium	19	2.1	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Beryllium	0.21	0.21	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Cadmium	ND	0.21	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Chromium	9.3	0.41	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Lead	3.3	0.62	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Mercury	ND	0.031	mg/Kg dry	1		SW-846 7471B	11/20/18	11/21/18 10:09	AJL
Nickel	5.1	0.41	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	11/16/18	11/20/18 14:44	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Vanadium	12	0.83	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW
Zinc	10	0.83	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:25	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:36

Field Sample #: SB33

Sample ID: 18K0569-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/15/18	11/15/18 16:50	DJM
pH @19.6°C	5.9		pH Units	1	H-03	SW-846 9045C	11/15/18	11/15/18 20:32	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/14/18	11/15/18 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/15/18	11/15/18 13:30	DJM
Specific conductance	2.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/21/18	11/21/18 13:23	MMH
% Solids	80.6		% Wt	1		SM 2540G	11/19/18	11/20/18 8:41	KMG

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB36

Sampled: 11/7/2018 14:45

Sample ID: 18K0569-02

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	0.083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Bromomethane	ND	0.0083	mg/Kg dry	1	R-05, V-34	SW-846 8260C	11/15/18	11/15/18 10:09	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Carbon Disulfide	ND	0.0050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Chlorodibromomethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Chloroethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Chloromethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2-Dibromoethane (EDB)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,3-Dichloropropane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
cis-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
trans-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Diethyl Ether	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Diisopropyl Ether (DIPE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,4-Dioxane	ND	0.083	mg/Kg dry	1	R-05, V-16	SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,4-Dioxane (SIM)	ND	0.033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB36

Sampled: 11/7/2018 14:45

Sample ID: 18K0569-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Methylene Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Naphthalene	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1,2,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Tetrahydrofuran	ND	0.0083	mg/Kg dry	1	V-16	SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2,3-Trichlorobenzene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Vinyl Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:09	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		98.3	70-130					11/15/18 10:09	
Toluene-d8		96.4	70-130					11/15/18 10:09	
4-Bromofluorobenzene		97.6	70-130					11/15/18 10:09	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB36

Sampled: 11/7/2018 14:45

Sample ID: 18K0569-02

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	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Aniline	ND	0.38	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Benzo(b)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
4-Chloroaniline	ND	0.73	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Chrysene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,4-Dinitrophenol	ND	0.73	mg/Kg dry	1	V-19	SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Isophorone	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:45

Field Sample #: SB36

Sample ID: 18K0569-02

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	11/14/18	11/15/18 13:52	BGL
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Nitrobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
4-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Phenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Pyridine	ND	0.38	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 13:52	BGL
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 13:52	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		65.9	30-130					11/15/18 13:52	
Phenol-d6		70.4	30-130					11/15/18 13:52	
Nitrobenzene-d5		70.6	30-130					11/15/18 13:52	
2-Fluorobiphenyl		57.4	30-130					11/15/18 13:52	
2,4,6-Tribromophenol		84.0	30-130					11/15/18 13:52	
p-Terphenyl-d14		71.7	30-130					11/15/18 13:52	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB36

Sampled: 11/7/2018 14:45

Sample ID: 18K0569-02

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Aldrin [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
alpha-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
beta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
delta-BHC [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
4,4'-DDD [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
4,4'-DDE [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
4,4'-DDT [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Dieldrin [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Endosulfan I [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Endosulfan II [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Endosulfan sulfate [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Endrin [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Endrin aldehyde [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Endrin ketone [1]	ND	0.0086	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Heptachlor [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Heptachlor epoxide [1]	ND	0.0054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Hexachlorobenzene [1]	ND	0.0065	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Methoxychlor [1]	ND	0.054	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 20:49	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.4	30-150					11/15/18 20:49	
Decachlorobiphenyl [2]		87.4	30-150					11/15/18 20:49	
Tetrachloro-m-xylene [1]		79.2	30-150					11/15/18 20:49	
Tetrachloro-m-xylene [2]		75.2	30-150					11/15/18 20:49	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB36

Sampled: 11/7/2018 14:45

Sample ID: 18K0569-02

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/15/18	11/16/18 17:14	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:14	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.3	30-150					11/16/18 17:14	
Decachlorobiphenyl [2]		90.6	30-150					11/16/18 17:14	
Tetrachloro-m-xylene [1]		84.8	30-150					11/16/18 17:14	
Tetrachloro-m-xylene [2]		86.6	30-150					11/16/18 17:14	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:45

Field Sample #: SB36

Sample ID: 18K0569-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	28	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
2,4-DB [1]	ND	28	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
2,4,5-TP (Silvex) [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
2,4,5-T [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
Dalapon [1]	ND	70	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
Dicamba [1]	ND	2.8	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
Dichloroprop [1]	ND	28	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
Dinoseb [1]	ND	14	µg/kg dry	1	V-20	SW-846 8151A	11/15/18	11/17/18 19:23	JMB
MCPA [1]	ND	2800	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
MCPP [1]	ND	2800	µg/kg dry	1		SW-846 8151A	11/15/18	11/17/18 19:23	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		77.7	30-150					11/17/18 19:23	
2,4-Dichlorophenylacetic acid [2]		74.2	30-150					11/17/18 19:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:45

Field Sample #: SB36

Sample ID: 18K0569-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	18	9.2	mg/Kg dry	1		SW-846 8100 Modified	11/14/18	11/17/18 18:31	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		53.2	40-140					11/17/18 18:31	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:45

Field Sample #: SB36

Sample ID: 18K0569-02

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	11/16/18	11/19/18 17:31	QNW
Arsenic	21	1.9	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Barium	19	1.9	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Beryllium	0.21	0.19	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Cadmium	0.41	0.19	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Chromium	8.8	0.37	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Lead	7.9	0.56	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	11/20/18	11/21/18 10:11	AJL
Nickel	4.7	0.37	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	11/16/18	11/20/18 14:49	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Vanadium	11	0.74	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW
Zinc	10	0.74	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:31	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:45

Field Sample #: SB36

Sample ID: 18K0569-02

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/15/18	11/15/18 16:50	DJM
pH @19.7°C	5.4		pH Units	1	H-03	SW-846 9045C	11/15/18	11/15/18 20:32	LED
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/14/18	11/15/18 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/15/18	11/15/18 13:30	DJM
Specific conductance	2.2	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/21/18	11/21/18 13:23	MMH
% Solids	89.0		% Wt	1		SM 2540G	11/19/18	11/20/18 8:42	KMG

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB35

Sampled: 11/7/2018 14:50

Sample ID: 18K0569-03

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	0.12	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Benzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Bromobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Bromochloromethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Bromodichloromethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Bromoform	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	R-05, V-34	SW-846 8260C	11/15/18	11/15/18 10:39	MFF
2-Butanone (MEK)	ND	0.050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
n-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
sec-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
tert-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Carbon Disulfide	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Carbon Tetrachloride	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Chlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Chloroform	ND	0.0050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
2-Chlorotoluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
4-Chlorotoluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Dibromomethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,3-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,4-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1-Dichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2-Dichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1-Dichloroethylene	ND	0.0050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
cis-1,2-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
trans-1,2-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2-Dichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
2,2-Dichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1-Dichloropropene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	R-05, V-16	SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,4-Dioxane (SIM)	ND	0.050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB35

Sampled: 11/7/2018 14:50

Sample ID: 18K0569-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Hexachlorobutadiene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
2-Hexanone (MBK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Isopropylbenzene (Cumene)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Naphthalene	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
n-Propylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Styrene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1,1,2-Tetrachloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1,2,2-Tetrachloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Tetrachloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1	V-16	SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Toluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2,3-Trichlorobenzene	ND	0.0050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2,4-Trichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1,1-Trichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,1,2-Trichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Trichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2,3-Trichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,2,4-Trimethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
1,3,5-Trimethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
m+p Xylene	ND	0.0050	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
o-Xylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 10:39	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		99.3	70-130					11/15/18 10:39	
Toluene-d8		97.3	70-130					11/15/18 10:39	
4-Bromofluorobenzene		97.3	70-130					11/15/18 10:39	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB35

Sampled: 11/7/2018 14:50

Sample ID: 18K0569-03

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	11/14/18	11/15/18 14:19	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Aniline	ND	0.40	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Anthracene	0.35	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Benzo(a)anthracene	0.45	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Benzo(a)pyrene	0.29	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Benzo(b)fluoranthene	0.68	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Benzo(g,h,i)perylene	0.20	0.20	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Benzo(k)fluoranthene	0.23	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
4-Chloroaniline	ND	0.78	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Chrysene	0.51	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,4-Dinitrophenol	ND	0.78	mg/Kg dry	1	V-19	SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Fluoranthene	1.4	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Indeno(1,2,3-cd)pyrene	0.23	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:50

Field Sample #: SB35

Sample ID: 18K0569-03

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	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Naphthalene	0.25	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
4-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Phenanthrene	1.3	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Pyrene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Pyridine	ND	0.40	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 14:19	BGL
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:19	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	73.7		30-130			11/15/18 14:19			
Phenol-d6	77.2		30-130			11/15/18 14:19			
Nitrobenzene-d5	74.7		30-130			11/15/18 14:19			
2-Fluorobiphenyl	63.9		30-130			11/15/18 14:19			
2,4,6-Tribromophenol	84.9		30-130			11/15/18 14:19			
p-Terphenyl-d14	73.8		30-130			11/15/18 14:19			

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB35

Sampled: 11/7/2018 14:50

Sample ID: 18K0569-03

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Aldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
alpha-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
beta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
delta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
4,4'-DDD [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
4,4'-DDE [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
4,4'-DDT [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Dieldrin [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Endosulfan I [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Endosulfan II [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Endosulfan sulfate [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Endrin [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Endrin aldehyde [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Endrin ketone [1]	ND	0.0090	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Heptachlor [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Heptachlor epoxide [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Hexachlorobenzene [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Methoxychlor [1]	ND	0.056	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:16	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		88.2	30-150					11/15/18 21:16	
Decachlorobiphenyl [2]		91.8	30-150					11/15/18 21:16	
Tetrachloro-m-xylene [1]		72.5	30-150					11/15/18 21:16	
Tetrachloro-m-xylene [2]		67.9	30-150					11/15/18 21:16	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB35

Sampled: 11/7/2018 14:50

Sample ID: 18K0569-03

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/15/18	11/16/18 17:26	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:26	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		83.0	30-150					11/16/18 17:26	
Decachlorobiphenyl [2]		86.3	30-150					11/16/18 17:26	
Tetrachloro-m-xylene [1]		81.2	30-150					11/16/18 17:26	
Tetrachloro-m-xylene [2]		82.8	30-150					11/16/18 17:26	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB35

Sampled: 11/7/2018 14:50

Sample ID: 18K0569-03

Sample Matrix: Soil

Sample Flags: DL-03

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
2,4-DB [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
2,4,5-TP (Silvex) [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
2,4,5-T [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
Dalalpon [1]	ND	380	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
Dicamba [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
Dichloroprop [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
Dinoseb [1]	ND	75	µg/kg dry	5	V-20	SW-846 8151A	11/15/18	11/17/18 20:02	JMB
MCPA [1]	ND	15000	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
MCPP [1]	ND	15000	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:02	JMB
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	97.3	30-150						11/17/18 20:02	
2,4-Dichlorophenylacetic acid [2]	101	30-150						11/17/18 20:02	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:50

Field Sample #: SB35

Sample ID: 18K0569-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	180	9.8	mg/Kg dry	1		SW-846 8100 Modified	11/14/18	11/17/18 19:51	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		61.4	40-140					11/17/18 19:51	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:50

Field Sample #: SB35

Sample ID: 18K0569-03

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	11/16/18	11/19/18 17:37	QNW
Arsenic	2.5	2.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Barium	16	2.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Beryllium	0.23	0.20	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Cadmium	ND	0.20	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Chromium	9.2	0.40	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Lead	6.9	0.60	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	11/20/18	11/21/18 10:13	AJL
Nickel	7.7	0.40	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	11/16/18	11/20/18 14:55	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Vanadium	10	0.80	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW
Zinc	16	0.80	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:37	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:50

Field Sample #: SB35

Sample ID: 18K0569-03

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/15/18	11/15/18 16:50	DJM
pH @19.7°C	6.3		pH Units	1	H-03	SW-846 9045C	11/15/18	11/15/18 20:32	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/14/18	11/15/18 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/15/18	11/15/18 13:30	DJM
Specific conductance	3.1	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/21/18	11/21/18 13:23	MMH
% Solids	83.3		% Wt	1		SM 2540G	11/19/18	11/20/18 8:42	KMG

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB34

Sampled: 11/7/2018 14:40

Sample ID: 18K0569-04

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	0.069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Bromomethane	ND	0.0069	mg/Kg dry	1	R-05, V-34	SW-846 8260C	11/15/18	11/15/18 11:06	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Carbon Disulfide	ND	0.0042	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Chlorodibromomethane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Chloroethane	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Chloromethane	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2-Dibromoethane (EDB)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,3-Dichloropropane	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
cis-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
trans-1,3-Dichloropropene	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Diethyl Ether	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Diisopropyl Ether (DIPE)	ND	0.00069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,4-Dioxane	ND	0.069	mg/Kg dry	1	R-05, V-16	SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,4-Dioxane (SIM)	ND	0.028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB34

Sampled: 11/7/2018 14:40

Sample ID: 18K0569-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Methylene Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Naphthalene	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Tetrahydrofuran	ND	0.0069	mg/Kg dry	1	V-16	SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2,3-Trichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Vinyl Chloride	ND	0.0069	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	11/15/18	11/15/18 11:06	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		101	70-130				11/15/18	11:06	
Toluene-d8		97.4	70-130				11/15/18	11:06	
4-Bromofluorobenzene		97.7	70-130				11/15/18	11:06	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB34

Sampled: 11/7/2018 14:40

Sample ID: 18K0569-04

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	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Acetophenone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Aniline	ND	0.41	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Benzo(a)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Benzo(a)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Benzo(b)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Bis(2-chloroethoxy)methane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Bis(2-chloroisopropyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
4-Bromophenylphenylether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Butylbenzylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
4-Chloroaniline	ND	0.79	mg/Kg dry	1	V-05, V-34	SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2-Chloronaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2-Chlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Dibenzofuran	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Di-n-butylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
1,2-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
1,3-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
1,4-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,4-Dichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Diethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,4-Dimethylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Dimethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,4-Dinitrophenol	ND	0.79	mg/Kg dry	1	V-19	SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,4-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,6-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Di-n-octylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Hexachlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Hexachlorobutadiene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Hexachloroethane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Isophorone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:40

Field Sample #: SB34

Sample ID: 18K0569-04

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	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
3/4-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Nitrobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2-Nitrophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
4-Nitrophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Pentachlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Phenanthrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Phenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Pyridine	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	11/14/18	11/15/18 14:45	BGL
1,2,4-Trichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,4,5-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
2,4,6-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/14/18	11/15/18 14:45	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		58.4	30-130					11/15/18 14:45	
Phenol-d6		64.0	30-130					11/15/18 14:45	
Nitrobenzene-d5		66.8	30-130					11/15/18 14:45	
2-Fluorobiphenyl		58.0	30-130					11/15/18 14:45	
2,4,6-Tribromophenol		77.7	30-130					11/15/18 14:45	
p-Terphenyl-d14		66.1	30-130					11/15/18 14:45	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB34

Sampled: 11/7/2018 14:40

Sample ID: 18K0569-04

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Aldrin [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
alpha-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
beta-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
delta-BHC [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
4,4'-DDD [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
4,4'-DDE [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
4,4'-DDT [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Dieldrin [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Endosulfan I [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Endosulfan II [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Endosulfan sulfate [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Endrin [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Endrin aldehyde [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Endrin ketone [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Heptachlor [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Heptachlor epoxide [1]	ND	0.0057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Hexachlorobenzene [1]	ND	0.0069	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Methoxychlor [1]	ND	0.057	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/14/18	11/15/18 21:43	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.8	30-150					11/15/18 21:43	
Decachlorobiphenyl [2]		86.1	30-150					11/15/18 21:43	
Tetrachloro-m-xylene [1]		84.4	30-150					11/15/18 21:43	
Tetrachloro-m-xylene [2]		80.6	30-150					11/15/18 21:43	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB34

Sampled: 11/7/2018 14:40

Sample ID: 18K0569-04

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/15/18	11/16/18 17:39	JMB
Aroclor-1221 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1232 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1242 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1248 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1254 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1260 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1262 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Aroclor-1268 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	11/15/18	11/16/18 17:39	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.8	30-150					11/16/18 17:39	
Decachlorobiphenyl [2]		95.9	30-150					11/16/18 17:39	
Tetrachloro-m-xylene [1]		87.6	30-150					11/16/18 17:39	
Tetrachloro-m-xylene [2]		89.9	30-150					11/16/18 17:39	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Field Sample #: SB34

Sampled: 11/7/2018 14:40

Sample ID: 18K0569-04

Sample Matrix: Soil

Sample Flags: DL-03

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
2,4-DB [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
2,4,5-TP (Silvex) [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
2,4,5-T [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
Dalalpon [1]	ND	380	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
Dicamba [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
Dichloroprop [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
Dinoseb [1]	ND	76	µg/kg dry	5	V-20	SW-846 8151A	11/15/18	11/17/18 20:42	JMB
MCPA [1]	ND	15000	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
MCPP [1]	ND	15000	µg/kg dry	5		SW-846 8151A	11/15/18	11/17/18 20:42	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		89.5	30-150					11/17/18 20:42	
2,4-Dichlorophenylacetic acid [2]		101	30-150					11/17/18 20:42	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:40

Field Sample #: SB34

Sample ID: 18K0569-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	22	10	mg/Kg dry	1		SW-846 8100 Modified	11/14/18	11/17/18 18:11	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		52.9	40-140					11/17/18 18:11	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:40

Field Sample #: SB34

Sample ID: 18K0569-04

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	11/16/18	11/19/18 17:42	QNW
Arsenic	2.9	2.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Barium	16	2.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Beryllium	0.24	0.20	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Cadmium	ND	0.20	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Chromium	8.2	0.40	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Lead	6.8	0.60	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	11/20/18	11/21/18 10:14	AJL
Nickel	4.4	0.40	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	11/16/18	11/20/18 15:10	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Vanadium	10	0.80	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW
Zinc	27	0.80	mg/Kg dry	1		SW-846 6010D	11/16/18	11/19/18 17:42	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0569

Date Received: 11/13/2018

Sampled: 11/7/2018 14:40

Field Sample #: SB34

Sample ID: 18K0569-04

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/15/18	11/15/18 16:50	DJM
pH @19.8°C	4.9		pH Units	1	H-03	SW-846 9045C	11/15/18	11/15/18 20:32	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/14/18	11/15/18 14:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/15/18	11/15/18 13:30	DJM
Specific conductance	7.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/21/18	11/21/18 13:23	MMH
% Solids	82.4		% Wt	1		SM 2540G	11/19/18	11/20/18 8:42	KMG

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18K0569-01 [SB33]	B217587	11/19/18
18K0569-02 [SB36]	B217587	11/19/18
18K0569-03 [SB35]	B217587	11/19/18
18K0569-04 [SB34]	B217587	11/19/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0569-01 [SB33]	B217751	1.00	11/21/18
18K0569-02 [SB36]	B217751	1.00	11/21/18
18K0569-03 [SB35]	B217751	1.00	11/21/18
18K0569-04 [SB34]	B217751	1.00	11/21/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0569-01 [SB33]	B217341	50.0	11/15/18
18K0569-02 [SB36]	B217341	50.0	11/15/18
18K0569-03 [SB35]	B217341	50.0	11/15/18
18K0569-04 [SB34]	B217341	50.0	11/15/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217443	1.50	50.0	11/16/18
18K0569-02 [SB36]	B217443	1.52	50.0	11/16/18
18K0569-03 [SB35]	B217443	1.51	50.0	11/16/18
18K0569-04 [SB34]	B217443	1.51	50.0	11/16/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217633	0.600	50.0	11/20/18
18K0569-02 [SB36]	B217633	0.604	50.0	11/20/18
18K0569-03 [SB35]	B217633	0.615	50.0	11/20/18
18K0569-04 [SB34]	B217633	0.601	50.0	11/20/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217211	10.6	10.0	11/14/18
18K0569-02 [SB36]	B217211	10.4	10.0	11/14/18
18K0569-03 [SB35]	B217211	10.7	10.0	11/14/18
18K0569-04 [SB34]	B217211	10.6	10.0	11/14/18

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217320	10.6	10.0	11/15/18
18K0569-02 [SB36]	B217320	10.1	10.0	11/15/18
18K0569-03 [SB35]	B217320	10.8	10.0	11/15/18
18K0569-04 [SB34]	B217320	10.2	10.0	11/15/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217216	30.0	1.00	11/14/18
18K0569-02 [SB36]	B217216	30.4	1.00	11/14/18
18K0569-03 [SB35]	B217216	30.6	1.00	11/14/18
18K0569-04 [SB34]	B217216	30.3	1.00	11/14/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217251	20.0	5.00	11/15/18
18K0569-02 [SB36]	B217251	20.0	5.00	11/15/18
18K0569-03 [SB35]	B217251	20.0	5.00	11/15/18
18K0569-04 [SB34]	B217251	20.0	5.00	11/15/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217293	8.20	10.0	11/15/18
18K0569-02 [SB36]	B217293	6.78	10.0	11/15/18
18K0569-03 [SB35]	B217293	4.84	10.0	11/15/18
18K0569-04 [SB34]	B217293	8.74	10.0	11/15/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217204	30.0	1.00	11/14/18
18K0569-02 [SB36]	B217204	30.4	1.00	11/14/18
18K0569-03 [SB35]	B217204	30.6	1.00	11/14/18
18K0569-04 [SB34]	B217204	30.3	1.00	11/14/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217174	25.5	250	11/14/18
18K0569-02 [SB36]	B217174	25.1	250	11/14/18
18K0569-03 [SB35]	B217174	25.6	250	11/14/18
18K0569-04 [SB34]	B217174	25.6	250	11/14/18

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Sample Extraction Data**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0569-01 [SB33]	B217265	25.5	250	11/15/18
18K0569-02 [SB36]	B217265	25.1	250	11/15/18
18K0569-03 [SB35]	B217265	25.6	250	11/15/18
18K0569-04 [SB34]	B217265	25.6	250	11/15/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0569-01 [SB33]	B217354	20.0	11/15/18
18K0569-02 [SB36]	B217354	20.0	11/15/18
18K0569-03 [SB35]	B217354	20.0	11/15/18
18K0569-04 [SB34]	B217354	20.0	11/15/18

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B217293 - SW-846 5035

Blank (B217293-BLK1)

Prepared & Analyzed: 11/15/18

Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05, V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
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							R-05, V-16
1,4-Dioxane (SIM)	ND	0.040	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							

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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 B217293 - SW-846 5035

Blank (B217293-BLK1)

Prepared & Analyzed: 11/15/18

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							V-16
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	0.0519		mg/Kg wet	0.0500		104	70-130			
Surrogate: Toluene-d8	0.0483		mg/Kg wet	0.0500		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0505		mg/Kg wet	0.0500		101	70-130			

LCS (B217293-BS1)

Prepared & Analyzed: 11/15/18

Acetone	0.214	0.10	mg/Kg wet	0.200		107	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0191	0.0010	mg/Kg wet	0.0200		95.3	70-130			
Benzene	0.0183	0.0020	mg/Kg wet	0.0200		91.6	70-130			
Bromobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Bromochloromethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Bromodichloromethane	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130			
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromomethane	0.00716	0.010	mg/Kg wet	0.0200		35.8	40-160	*		L-07A, R-05, V-34 †
2-Butanone (MEK)	0.224	0.040	mg/Kg wet	0.200		112	40-160			†
n-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
sec-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
tert-Butylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		93.8	70-130			
Carbon Disulfide	0.0156	0.0060	mg/Kg wet	0.0200		78.2	70-130			
Carbon Tetrachloride	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
Chlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130			
Chloroethane	0.0148	0.010	mg/Kg wet	0.0200		74.2	70-130			
Chloroform	0.0191	0.0040	mg/Kg wet	0.0200		95.4	70-130			
Chloromethane	0.0166	0.010	mg/Kg wet	0.0200		83.2	40-160			†
2-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
4-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dibromoethane (EDB)	0.0196	0.0010	mg/Kg wet	0.0200		98.1	70-130			
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,3-Dichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		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
Batch B217293 - SW-846 5035										
LCS (B217293-BS1)										
Prepared & Analyzed: 11/15/18										
1,4-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Dichlorodifluoromethane (Freon 12)	0.0159	0.010	mg/Kg wet	0.0200		79.7	40-160			†
1,1-Dichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
1,2-Dichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
1,1-Dichloroethylene	0.0158	0.0040	mg/Kg wet	0.0200		78.9	70-130			
cis-1,2-Dichloroethylene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130			
trans-1,2-Dichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
1,2-Dichloropropane	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130			
1,3-Dichloropropane	0.0194	0.0010	mg/Kg wet	0.0200		97.2	70-130			
2,2-Dichloropropane	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130			
1,1-Dichloropropene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
cis-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.4	70-130			
trans-1,3-Dichloropropene	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130			
Diethyl Ether	0.0162	0.010	mg/Kg wet	0.0200		81.1	70-130			
Diisopropyl Ether (DIPE)	0.0185	0.0010	mg/Kg wet	0.0200		92.5	70-130			
1,4-Dioxane	0.249	0.10	mg/Kg wet	0.200		124	40-160			R-05, V-16, V-36 †
1,4-Dioxane (SIM)	0.207	0.040	mg/Kg wet	0.200		104	40-160			†
Ethylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
Hexachlorobutadiene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
2-Hexanone (MBK)	0.219	0.020	mg/Kg wet	0.200		109	40-160			†
Isopropylbenzene (Cumene)	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
p-Isopropyltoluene (p-Cymene)	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0199	0.0040	mg/Kg wet	0.0200		99.5	70-130			
Methylene Chloride	0.0188	0.010	mg/Kg wet	0.0200		93.8	70-130			
4-Methyl-2-pentanone (MIBK)	0.211	0.020	mg/Kg wet	0.200		106	40-160			†
Naphthalene	0.0192	0.0040	mg/Kg wet	0.0200		96.2	70-130			
n-Propylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Styrene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
1,1,1,2-Tetrachloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,1,2,2-Tetrachloroethane	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130			
Tetrachloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Tetrahydrofuran	0.0202	0.010	mg/Kg wet	0.0200		101	70-130			V-16
Toluene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130			
1,2,3-Trichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,4-Trichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1,1-Trichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.9	70-130			
1,1,2-Trichloroethane	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
Trichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
Trichlorofluoromethane (Freon 11)	0.0158	0.010	mg/Kg wet	0.0200		79.1	70-130			
1,2,3-Trichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2,4-Trimethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
1,3,5-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
Vinyl Chloride	0.0161	0.010	mg/Kg wet	0.0200		80.3	70-130			
m+p Xylene	0.0373	0.0040	mg/Kg wet	0.0400		93.3	70-130			
o-Xylene	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0515		mg/Kg wet	0.0500		103	70-130			
Surrogate: Toluene-d8	0.0490		mg/Kg wet	0.0500		97.9	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
Batch B217293 - SW-846 5035										
LCS Dup (B217293-BSD1)										
Prepared & Analyzed: 11/15/18										
Acetone	0.211	0.10	mg/Kg wet	0.200		105	40-160	1.35	20	†
tert-Amyl Methyl Ether (TAME)	0.0195	0.0010	mg/Kg wet	0.0200		97.3	70-130	2.08	20	
Benzene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	0.219	20	
Bromobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	0.514	20	
Bromochloromethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.67	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	2.02	20	
Bromoform	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	7.11	20	
Bromomethane	0.0119	0.010	mg/Kg wet	0.0200		59.7	40-160	50.1 *	20	L-14, R-05, V-34 †
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	40-160	6.73	20	†
n-Butylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130	0.513	20	
sec-Butylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130	0.602	20	
tert-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	1.16	20	
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		93.8	70-130	0.00	20	
Carbon Disulfide	0.0186	0.0060	mg/Kg wet	0.0200		92.8	70-130	17.1	20	
Carbon Tetrachloride	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130	3.40	20	
Chlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130	0.712	20	
Chlorodibromomethane	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130	1.51	20	
Chloroethane	0.0157	0.010	mg/Kg wet	0.0200		78.5	70-130	5.63	20	
Chloroform	0.0186	0.0040	mg/Kg wet	0.0200		92.9	70-130	2.66	20	
Chloromethane	0.0158	0.010	mg/Kg wet	0.0200		79.0	40-160	5.18	20	†
2-Chlorotoluene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	3.33	20	
4-Chlorotoluene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	0.716	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	13.2	20	
1,2-Dibromoethane (EDB)	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130	4.58	20	
Dibromomethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	3.51	20	
1,2-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	1.37	20	
1,3-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	2.33	20	
1,4-Dichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	6.64	20	
Dichlorodifluoromethane (Freon 12)	0.0152	0.010	mg/Kg wet	0.0200		76.1	40-160	4.62	20	†
1,1-Dichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	0.531	20	
1,2-Dichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	5.77	20	
1,1-Dichloroethylene	0.0178	0.0040	mg/Kg wet	0.0200		88.9	70-130	11.9	20	
cis-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.7	70-130	2.79	20	
trans-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	2.77	20	
1,2-Dichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130	6.53	20	
1,3-Dichloropropane	0.0189	0.0010	mg/Kg wet	0.0200		94.3	70-130	3.03	20	
2,2-Dichloropropane	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	2.84	20	
1,1-Dichloropropene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	1.52	20	
cis-1,3-Dichloropropene	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130	4.26	20	
trans-1,3-Dichloropropene	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130	3.44	20	
Diethyl Ether	0.0183	0.010	mg/Kg wet	0.0200		91.6	70-130	12.2	20	
Diisopropyl Ether (DIPE)	0.0189	0.0010	mg/Kg wet	0.0200		94.4	70-130	2.03	20	
1,4-Dioxane	0.313	0.10	mg/Kg wet	0.200		156	40-160	22.8 *	20	V-36, L-14, R-05, V-16 †
1,4-Dioxane (SIM)	0.206	0.040	mg/Kg wet	0.200		103	40-160	0.406	20	† ‡
Ethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130	3.50	20	
Hexachlorobutadiene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.993	20	
2-Hexanone (MBK)	0.212	0.020	mg/Kg wet	0.200		106	40-160	3.06	20	†
Isopropylbenzene (Cumene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	1.08	20	
p-Isopropyltoluene (p-Cymene)	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130	0.318	20	
Methyl tert-Butyl Ether (MTBE)	0.0203	0.0040	mg/Kg wet	0.0200		102	70-130	2.09	20	
Methylene Chloride	0.0194	0.010	mg/Kg wet	0.0200		96.9	70-130	3.25	20	
4-Methyl-2-pentanone (MIBK)	0.207	0.020	mg/Kg wet	0.200		103	40-160	2.17	20	†

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217293 - SW-846 5035										
LCS Dup (B217293-BSD1)										
Prepared & Analyzed: 11/15/18										
Naphthalene	0.0195	0.0040	mg/Kg wet	0.0200		97.3	70-130	1.14	20	
n-Propylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	1.24	20	
Styrene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	0.948	20	
1,1,1,2-Tetrachloroethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	8.49	20	
1,1,2,2-Tetrachloroethane	0.0197	0.0010	mg/Kg wet	0.0200		98.6	70-130	1.81	20	
Tetrachloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	3.13	20	
Tetrahydrofuran	0.0195	0.010	mg/Kg wet	0.0200		97.4	70-130	3.63	20	V-16
Toluene	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	0.213	20	
1,2,3-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	3.40	20	
1,2,4-Trichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	4.94	20	
1,1,1-Trichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130	0.115	20	
1,1,2-Trichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	1.87	20	
Trichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130	0.539	20	
Trichlorofluoromethane (Freon 11)	0.0155	0.010	mg/Kg wet	0.0200		77.3	70-130	2.30	20	
1,2,3-Trichloropropane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	4.85	20	
1,2,4-Trimethylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	3.20	20	
1,3,5-Trimethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	0.933	20	
Vinyl Chloride	0.0155	0.010	mg/Kg wet	0.0200		77.3	70-130	3.81	20	
m+p Xylene	0.0380	0.0040	mg/Kg wet	0.0400		95.1	70-130	1.91	20	
o-Xylene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	1.90	20	
Surrogate: 1,2-Dichloroethane-d4	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0492		mg/Kg wet	0.0500		98.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.0495		mg/Kg wet	0.0500		99.1	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 B217204 - SW-846 3546

Blank (B217204-BLK1)

Prepared: 11/14/18 Analyzed: 11/15/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-05, V-34
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							V-05
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							V-05, 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							V-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							

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217204 - SW-846 3546										
Blank (B217204-BLK1)										
Prepared: 11/14/18 Analyzed: 11/15/18										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							V-05
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	4.21		mg/Kg wet	6.67		63.1	30-130			
Surrogate: Phenol-d6	4.95		mg/Kg wet	6.67		74.2	30-130			
Surrogate: Nitrobenzene-d5	2.31		mg/Kg wet	3.33		69.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.22		mg/Kg wet	3.33		66.7	30-130			
Surrogate: 2,4,6-Tribromophenol	6.27		mg/Kg wet	6.67		94.0	30-130			
Surrogate: p-Terphenyl-d14	2.85		mg/Kg wet	3.33		85.5	30-130			
LCS (B217204-BS1)										
Prepared: 11/14/18 Analyzed: 11/15/18										
Acenaphthene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140			
Acenaphthylene	1.32	0.17	mg/Kg wet	1.67		78.9	40-140			
Acetophenone	1.22	0.34	mg/Kg wet	1.67		73.4	40-140			
Aniline	0.727	0.34	mg/Kg wet	1.67		43.6	40-140			V-05, V-34
Anthracene	1.23	0.17	mg/Kg wet	1.67		73.8	40-140			
Benzo(a)anthracene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140			
Benzo(a)pyrene	1.33	0.17	mg/Kg wet	1.67		79.7	40-140			
Benzo(b)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.4	40-140			
Benzo(g,h,i)perylene	1.34	0.17	mg/Kg wet	1.67		80.6	40-140			V-05
Benzo(k)fluoranthene	1.20	0.17	mg/Kg wet	1.67		72.1	40-140			
Bis(2-chloroethoxy)methane	1.36	0.34	mg/Kg wet	1.67		81.9	40-140			
Bis(2-chloroethyl)ether	1.29	0.34	mg/Kg wet	1.67		77.3	40-140			
Bis(2-chloroisopropyl)ether	1.60	0.34	mg/Kg wet	1.67		95.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.46	0.34	mg/Kg wet	1.67		87.4	40-140			
4-Bromophenylphenylether	1.32	0.34	mg/Kg wet	1.67		79.3	40-140			
Butylbenzylphthalate	1.32	0.34	mg/Kg wet	1.67		79.4	40-140			
4-Chloroaniline	0.597	0.66	mg/Kg wet	1.67		35.8	15-140			V-34, V-05 †
2-Chloronaphthalene	1.19	0.34	mg/Kg wet	1.67		71.6	40-140			
2-Chlorophenol	1.16	0.34	mg/Kg wet	1.67		69.9	30-130			
Chrysene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140			
Dibenz(a,h)anthracene	1.34	0.17	mg/Kg wet	1.67		80.3	40-140			
Dibenzofuran	1.37	0.34	mg/Kg wet	1.67		82.3	40-140			
Di-n-butylphthalate	1.28	0.34	mg/Kg wet	1.67		76.7	40-140			
1,2-Dichlorobenzene	0.972	0.34	mg/Kg wet	1.67		58.3	40-140			
1,3-Dichlorobenzene	0.929	0.34	mg/Kg wet	1.67		55.7	40-140			
1,4-Dichlorobenzene	0.936	0.34	mg/Kg wet	1.67		56.1	40-140			
3,3-Dichlorobenzidine	0.876	0.17	mg/Kg wet	1.67		52.5	40-140			
2,4-Dichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.9	30-130			
Diethylphthalate	1.40	0.34	mg/Kg wet	1.67		84.1	40-140			
2,4-Dimethylphenol	1.08	0.34	mg/Kg wet	1.67		64.5	30-130			
Dimethylphthalate	1.43	0.34	mg/Kg wet	1.67		86.1	40-140			
2,4-Dinitrophenol	0.903	0.66	mg/Kg wet	1.67		54.2	15-140			V-19 †
2,4-Dinitrotoluene	1.44	0.34	mg/Kg wet	1.67		86.4	40-140			
2,6-Dinitrotoluene	1.55	0.34	mg/Kg wet	1.67		93.0	40-140			
Di-n-octylphthalate	1.35	0.34	mg/Kg wet	1.67		81.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.37	0.34	mg/Kg wet	1.67		82.1	40-140			
Fluoranthene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
Fluorene	1.32	0.17	mg/Kg wet	1.67		79.5	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
Batch B217204 - SW-846 3546										
LCS (B217204-BS1)										
					Prepared: 11/14/18 Analyzed: 11/15/18					
Hexachlorobenzene	1.34	0.34	mg/Kg wet	1.67		80.2	40-140			
Hexachlorobutadiene	1.19	0.34	mg/Kg wet	1.67		71.5	40-140			
Hexachloroethane	1.04	0.34	mg/Kg wet	1.67		62.2	40-140			
Indeno(1,2,3-cd)pyrene	1.44	0.17	mg/Kg wet	1.67		86.6	40-140			
Isophorone	1.32	0.34	mg/Kg wet	1.67		79.5	40-140			
2-Methylnaphthalene	1.24	0.17	mg/Kg wet	1.67		74.1	40-140			
2-Methylphenol	1.20	0.34	mg/Kg wet	1.67		72.2	30-130			
3/4-Methylphenol	1.30	0.34	mg/Kg wet	1.67		77.8	30-130			
Naphthalene	1.14	0.17	mg/Kg wet	1.67		68.6	40-140			
Nitrobenzene	1.27	0.34	mg/Kg wet	1.67		75.9	40-140			
2-Nitrophenol	1.29	0.34	mg/Kg wet	1.67		77.4	30-130			
4-Nitrophenol	1.67	0.66	mg/Kg wet	1.67		100	15-140			†
Pentachlorophenol	0.800	0.34	mg/Kg wet	1.67		48.0	30-130			
Phenanthrene	1.22	0.17	mg/Kg wet	1.67		73.5	40-140			
Phenol	1.26	0.34	mg/Kg wet	1.67		75.9	15-140			†
Pyrene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140			
Pyridine	0.550	0.34	mg/Kg wet	1.67		33.0	30-140			V-05 †
1,2,4-Trichlorobenzene	1.13	0.34	mg/Kg wet	1.67		67.9	40-140			
2,4,5-Trichlorophenol	1.36	0.34	mg/Kg wet	1.67		81.7	30-130			
2,4,6-Trichlorophenol	1.37	0.34	mg/Kg wet	1.67		82.5	30-130			
Surrogate: 2-Fluorophenol	4.93		mg/Kg wet	6.67		73.9	30-130			
Surrogate: Phenol-d6	5.59		mg/Kg wet	6.67		83.8	30-130			
Surrogate: Nitrobenzene-d5	2.79		mg/Kg wet	3.33		83.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.52		mg/Kg wet	3.33		75.5	30-130			
Surrogate: 2,4,6-Tribromophenol	7.15		mg/Kg wet	6.67		107	30-130			
Surrogate: p-Terphenyl-d14	2.87		mg/Kg wet	3.33		86.2	30-130			
LCS Dup (B217204-BS1)										
					Prepared: 11/14/18 Analyzed: 11/15/18					
Acenaphthene	1.23	0.17	mg/Kg wet	1.67		73.7	40-140	0.653	30	
Acenaphthylene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140	0.203	30	
Acetophenone	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	1.18	30	
Aniline	0.686	0.34	mg/Kg wet	1.67		41.1	40-140	5.85	30	V-05, V-34
Anthracene	1.24	0.17	mg/Kg wet	1.67		74.4	40-140	0.864	30	
Benzo(a)anthracene	1.28	0.17	mg/Kg wet	1.67		77.1	40-140	1.44	30	
Benzo(a)pyrene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140	1.54	30	
Benzo(b)fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140	6.24	30	
Benzo(g,h,i)perylene	1.20	0.17	mg/Kg wet	1.67		71.7	40-140	11.7	30	V-05
Benzo(k)fluoranthene	1.24	0.17	mg/Kg wet	1.67		74.6	40-140	3.38	30	
Bis(2-chloroethoxy)methane	1.37	0.34	mg/Kg wet	1.67		82.1	40-140	0.293	30	
Bis(2-chloroethyl)ether	1.26	0.34	mg/Kg wet	1.67		75.6	40-140	2.28	30	
Bis(2-chloroisopropyl)ether	1.51	0.34	mg/Kg wet	1.67		90.6	40-140	5.62	30	
Bis(2-Ethylhexyl)phthalate	1.44	0.34	mg/Kg wet	1.67		86.2	40-140	1.36	30	
4-Bromophenylphenylether	1.30	0.34	mg/Kg wet	1.67		78.3	40-140	1.24	30	
Butylbenzylphthalate	1.36	0.34	mg/Kg wet	1.67		81.5	40-140	2.56	30	
4-Chloroaniline	0.608	0.66	mg/Kg wet	1.67		36.5	15-140	1.94	30	V-05, V-34 †
2-Chloronaphthalene	1.20	0.34	mg/Kg wet	1.67		72.0	40-140	0.585	30	
2-Chlorophenol	1.13	0.34	mg/Kg wet	1.67		67.6	30-130	3.32	30	
Chrysene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	1.81	30	
Dibenz(a,h)anthracene	1.23	0.17	mg/Kg wet	1.67		73.6	40-140	8.81	30	
Dibenzofuran	1.37	0.34	mg/Kg wet	1.67		81.9	40-140	0.438	30	
Di-n-butylphthalate	1.27	0.34	mg/Kg wet	1.67		75.9	40-140	1.05	30	
1,2-Dichlorobenzene	0.945	0.34	mg/Kg wet	1.67		56.7	40-140	2.82	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
Batch B217204 - SW-846 3546										
LCS Dup (B217204-BSD1)										
					Prepared: 11/14/18 Analyzed: 11/15/18					
1,3-Dichlorobenzene	0.903	0.34	mg/Kg wet	1.67		54.2	40-140	2.80	30	
1,4-Dichlorobenzene	0.934	0.34	mg/Kg wet	1.67		56.0	40-140	0.214	30	
3,3-Dichlorobenzidine	0.869	0.17	mg/Kg wet	1.67		52.1	40-140	0.803	30	
2,4-Dichlorophenol	1.23	0.34	mg/Kg wet	1.67		74.0	30-130	0.216	30	
Diethylphthalate	1.40	0.34	mg/Kg wet	1.67		84.2	40-140	0.119	30	
2,4-Dimethylphenol	1.10	0.34	mg/Kg wet	1.67		66.2	30-130	2.51	30	
Dimethylphthalate	1.43	0.34	mg/Kg wet	1.67		85.6	40-140	0.536	30	
2,4-Dinitrophenol	1.07	0.66	mg/Kg wet	1.67		64.1	15-140	16.8	30	V-19 †
2,4-Dinitrotoluene	1.47	0.34	mg/Kg wet	1.67		88.1	40-140	1.95	30	
2,6-Dinitrotoluene	1.55	0.34	mg/Kg wet	1.67		93.2	40-140	0.236	30	
Di-n-octylphthalate	1.39	0.34	mg/Kg wet	1.67		83.3	40-140	2.50	30	
1,2-Diphenylhydrazine/Azobenzene	1.35	0.34	mg/Kg wet	1.67		81.2	40-140	1.08	30	
Fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140	3.17	30	
Fluorene	1.33	0.17	mg/Kg wet	1.67		79.9	40-140	0.602	30	
Hexachlorobenzene	1.32	0.34	mg/Kg wet	1.67		79.3	40-140	1.13	30	
Hexachlorobutadiene	1.12	0.34	mg/Kg wet	1.67		67.4	40-140	5.96	30	
Hexachloroethane	0.977	0.34	mg/Kg wet	1.67		58.6	40-140	5.86	30	
Indeno(1,2,3-cd)pyrene	1.35	0.17	mg/Kg wet	1.67		80.7	40-140	6.96	30	
Isophorone	1.32	0.34	mg/Kg wet	1.67		79.0	40-140	0.555	30	
2-Methylnaphthalene	1.24	0.17	mg/Kg wet	1.67		74.4	40-140	0.323	30	
2-Methylphenol	1.18	0.34	mg/Kg wet	1.67		70.8	30-130	1.87	30	
3/4-Methylphenol	1.29	0.34	mg/Kg wet	1.67		77.7	30-130	0.206	30	
Naphthalene	1.13	0.17	mg/Kg wet	1.67		67.8	40-140	1.29	30	
Nitrobenzene	1.25	0.34	mg/Kg wet	1.67		75.1	40-140	1.17	30	
2-Nitrophenol	1.27	0.34	mg/Kg wet	1.67		76.3	30-130	1.46	30	
4-Nitrophenol	1.70	0.66	mg/Kg wet	1.67		102	15-140	1.96	30	†
Pentachlorophenol	0.850	0.34	mg/Kg wet	1.67		51.0	30-130	6.02	30	
Phenanthrene	1.24	0.17	mg/Kg wet	1.67		74.5	40-140	1.35	30	
Phenol	1.23	0.34	mg/Kg wet	1.67		74.0	15-140	2.51	30	†
Pyrene	1.28	0.17	mg/Kg wet	1.67		76.6	40-140	0.786	30	
Pyridine	0.530	0.34	mg/Kg wet	1.67		31.8	30-140	3.76	30	V-05 †
1,2,4-Trichlorobenzene	1.06	0.34	mg/Kg wet	1.67		63.8	40-140	6.23	30	
2,4,5-Trichlorophenol	1.39	0.34	mg/Kg wet	1.67		83.2	30-130	1.82	30	
2,4,6-Trichlorophenol	1.36	0.34	mg/Kg wet	1.67		81.5	30-130	1.20	30	
Surrogate: 2-Fluorophenol	4.66		mg/Kg wet	6.67		69.9	30-130			
Surrogate: Phenol-d6	5.45		mg/Kg wet	6.67		81.8	30-130			
Surrogate: Nitrobenzene-d5	2.67		mg/Kg wet	3.33		80.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.44		mg/Kg wet	3.33		73.3	30-130			
Surrogate: 2,4,6-Tribromophenol	7.01		mg/Kg wet	6.67		105	30-130			
Surrogate: p-Terphenyl-d14	2.83		mg/Kg wet	3.33		85.0	30-130			

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QUALITY CONTROL

Organochloride Pesticides 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 B217211 - SW-846 3546

Blank (B217211-BLK1)

Prepared: 11/14/18 Analyzed: 11/15/18

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.173		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.172		mg/Kg wet	0.200		86.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.155		mg/Kg wet	0.200		77.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.147		mg/Kg wet	0.200		73.7	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217211 - SW-846 3546										
LCS (B217211-BS1)										
					Prepared: 11/14/18 Analyzed: 11/15/18					
alpha-Chlordane	0.082	0.0050	mg/Kg wet	0.100		82.2	40-140			
alpha-Chlordane [2C]	0.078	0.0050	mg/Kg wet	0.100		78.3	40-140			
gamma-Chlordane	0.082	0.0050	mg/Kg wet	0.100		81.8	40-140			
gamma-Chlordane [2C]	0.078	0.0050	mg/Kg wet	0.100		78.5	40-140			
Alachlor	0.085	0.020	mg/Kg wet	0.100		85.4	40-140			
Alachlor [2C]	0.083	0.020	mg/Kg wet	0.100		83.2	40-140			
Aldrin	0.083	0.0050	mg/Kg wet	0.100		83.0	40-140			
Aldrin [2C]	0.077	0.0050	mg/Kg wet	0.100		77.0	40-140			
alpha-BHC	0.069	0.0050	mg/Kg wet	0.100		69.5	40-140			
alpha-BHC [2C]	0.067	0.0050	mg/Kg wet	0.100		67.3	40-140			
beta-BHC	0.073	0.0050	mg/Kg wet	0.100		73.3	40-140			
beta-BHC [2C]	0.071	0.0050	mg/Kg wet	0.100		71.1	40-140			
delta-BHC	0.077	0.0050	mg/Kg wet	0.100		77.0	40-140			
delta-BHC [2C]	0.074	0.0050	mg/Kg wet	0.100		73.9	40-140			
gamma-BHC (Lindane)	0.074	0.0020	mg/Kg wet	0.100		74.5	40-140			
gamma-BHC (Lindane) [2C]	0.070	0.0020	mg/Kg wet	0.100		69.8	40-140			
4,4'-DDD	0.085	0.0040	mg/Kg wet	0.100		85.0	40-140			
4,4'-DDD [2C]	0.080	0.0040	mg/Kg wet	0.100		80.4	40-140			
4,4'-DDE	0.088	0.0040	mg/Kg wet	0.100		88.4	40-140			
4,4'-DDE [2C]	0.080	0.0040	mg/Kg wet	0.100		80.2	40-140			
4,4'-DDT	0.082	0.0040	mg/Kg wet	0.100		81.5	40-140			
4,4'-DDT [2C]	0.075	0.0040	mg/Kg wet	0.100		75.0	40-140			
Dieldrin	0.080	0.0040	mg/Kg wet	0.100		79.9	40-140			
Dieldrin [2C]	0.074	0.0040	mg/Kg wet	0.100		73.5	40-140			
Endosulfan I	0.079	0.0050	mg/Kg wet	0.100		78.7	40-140			
Endosulfan I [2C]	0.076	0.0050	mg/Kg wet	0.100		75.9	40-140			
Endosulfan II	0.082	0.0080	mg/Kg wet	0.100		81.7	40-140			
Endosulfan II [2C]	0.079	0.0080	mg/Kg wet	0.100		78.7	40-140			
Endosulfan Sulfate	0.088	0.0080	mg/Kg wet	0.100		87.6	40-140			
Endosulfan Sulfate [2C]	0.080	0.0080	mg/Kg wet	0.100		80.4	40-140			
Endrin	0.085	0.0080	mg/Kg wet	0.100		85.1	40-140			
Endrin [2C]	0.077	0.0080	mg/Kg wet	0.100		77.1	40-140			
Endrin Aldehyde	0.080	0.0080	mg/Kg wet	0.100		80.0	40-140			
Endrin Aldehyde [2C]	0.076	0.0080	mg/Kg wet	0.100		75.8	40-140			
Endrin Ketone	0.083	0.0080	mg/Kg wet	0.100		82.6	40-140			
Endrin Ketone [2C]	0.079	0.0080	mg/Kg wet	0.100		78.8	40-140			
Heptachlor	0.077	0.0050	mg/Kg wet	0.100		77.2	40-140			
Heptachlor [2C]	0.074	0.0050	mg/Kg wet	0.100		73.8	40-140			
Heptachlor Epoxide	0.079	0.0050	mg/Kg wet	0.100		78.7	40-140			
Heptachlor Epoxide [2C]	0.076	0.0050	mg/Kg wet	0.100		75.5	40-140			
Hexachlorobenzene	0.084	0.0060	mg/Kg wet	0.100		84.1	40-140			
Hexachlorobenzene [2C]	0.081	0.0060	mg/Kg wet	0.100		80.9	40-140			
Methoxychlor	0.080	0.050	mg/Kg wet	0.100		79.5	40-140			
Methoxychlor [2C]	0.088	0.050	mg/Kg wet	0.100		88.5	40-140			
Surrogate: Decachlorobiphenyl	0.167		mg/Kg wet	0.200		83.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.165		mg/Kg wet	0.200		82.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.156		mg/Kg wet	0.200		78.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.152		mg/Kg wet	0.200		76.1	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217211 - SW-846 3546										
LCS Dup (B217211-BSD1)										
					Prepared: 11/14/18 Analyzed: 11/15/18					
alpha-Chlordane	0.088	0.0050	mg/Kg wet	0.100		87.9	40-140	6.76	30	
alpha-Chlordane [2C]	0.084	0.0050	mg/Kg wet	0.100		83.7	40-140	6.60	30	
gamma-Chlordane	0.088	0.0050	mg/Kg wet	0.100		87.7	40-140	6.95	30	
gamma-Chlordane [2C]	0.084	0.0050	mg/Kg wet	0.100		84.0	40-140	6.83	30	
Alachlor	0.090	0.020	mg/Kg wet	0.100		90.1	40-140	5.38	30	
Alachlor [2C]	0.089	0.020	mg/Kg wet	0.100		89.2	40-140	6.94	30	
Aldrin	0.089	0.0050	mg/Kg wet	0.100		89.4	40-140	7.40	30	
Aldrin [2C]	0.083	0.0050	mg/Kg wet	0.100		82.6	40-140	7.04	30	
alpha-BHC	0.075	0.0050	mg/Kg wet	0.100		75.1	40-140	7.73	30	
alpha-BHC [2C]	0.072	0.0050	mg/Kg wet	0.100		72.4	40-140	7.37	30	
beta-BHC	0.079	0.0050	mg/Kg wet	0.100		78.6	40-140	7.07	30	
beta-BHC [2C]	0.076	0.0050	mg/Kg wet	0.100		75.8	40-140	6.38	30	
delta-BHC	0.082	0.0050	mg/Kg wet	0.100		82.3	40-140	6.69	30	
delta-BHC [2C]	0.079	0.0050	mg/Kg wet	0.100		78.7	40-140	6.23	30	
gamma-BHC (Lindane)	0.080	0.0020	mg/Kg wet	0.100		80.3	40-140	7.55	30	
gamma-BHC (Lindane) [2C]	0.075	0.0020	mg/Kg wet	0.100		75.0	40-140	7.30	30	
4,4'-DDD	0.091	0.0040	mg/Kg wet	0.100		90.9	40-140	6.72	30	
4,4'-DDD [2C]	0.086	0.0040	mg/Kg wet	0.100		85.8	40-140	6.52	30	
4,4'-DDE	0.095	0.0040	mg/Kg wet	0.100		94.6	40-140	6.72	30	
4,4'-DDE [2C]	0.086	0.0040	mg/Kg wet	0.100		85.5	40-140	6.39	30	
4,4'-DDT	0.088	0.0040	mg/Kg wet	0.100		88.2	40-140	7.86	30	
4,4'-DDT [2C]	0.081	0.0040	mg/Kg wet	0.100		81.2	40-140	7.86	30	
Dieldrin	0.085	0.0040	mg/Kg wet	0.100		85.3	40-140	6.58	30	
Dieldrin [2C]	0.078	0.0040	mg/Kg wet	0.100		78.4	40-140	6.43	30	
Endosulfan I	0.084	0.0050	mg/Kg wet	0.100		84.1	40-140	6.61	30	
Endosulfan I [2C]	0.081	0.0050	mg/Kg wet	0.100		81.4	40-140	6.96	30	
Endosulfan II	0.087	0.0080	mg/Kg wet	0.100		86.8	40-140	6.08	30	
Endosulfan II [2C]	0.083	0.0080	mg/Kg wet	0.100		83.0	40-140	5.32	30	
Endosulfan Sulfate	0.093	0.0080	mg/Kg wet	0.100		92.9	40-140	5.85	30	
Endosulfan Sulfate [2C]	0.085	0.0080	mg/Kg wet	0.100		85.2	40-140	5.76	30	
Endrin	0.091	0.0080	mg/Kg wet	0.100		90.5	40-140	6.22	30	
Endrin [2C]	0.082	0.0080	mg/Kg wet	0.100		82.1	40-140	6.27	30	
Endrin Aldehyde	0.085	0.0080	mg/Kg wet	0.100		85.0	40-140	6.06	30	
Endrin Aldehyde [2C]	0.080	0.0080	mg/Kg wet	0.100		80.2	40-140	5.68	30	
Endrin Ketone	0.089	0.0080	mg/Kg wet	0.100		89.0	40-140	7.48	30	
Endrin Ketone [2C]	0.085	0.0080	mg/Kg wet	0.100		85.1	40-140	7.64	30	
Heptachlor	0.083	0.0050	mg/Kg wet	0.100		83.3	40-140	7.65	30	
Heptachlor [2C]	0.080	0.0050	mg/Kg wet	0.100		79.6	40-140	7.46	30	
Heptachlor Epoxide	0.084	0.0050	mg/Kg wet	0.100		84.1	40-140	6.71	30	
Heptachlor Epoxide [2C]	0.081	0.0050	mg/Kg wet	0.100		80.8	40-140	6.73	30	
Hexachlorobenzene	0.091	0.0060	mg/Kg wet	0.100		90.7	40-140	7.53	30	
Hexachlorobenzene [2C]	0.087	0.0060	mg/Kg wet	0.100		87.0	40-140	7.21	30	
Methoxychlor	0.087	0.050	mg/Kg wet	0.100		86.7	40-140	8.60	30	
Methoxychlor [2C]	0.096	0.050	mg/Kg wet	0.100		95.5	40-140	7.63	30	
Surrogate: Decachlorobiphenyl	0.177		mg/Kg wet	0.200		88.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.176		mg/Kg wet	0.200		87.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.168		mg/Kg wet	0.200		84.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.162		mg/Kg wet	0.200		81.1	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217320 - SW-846 3546										
Blank (B217320-BLK1)										
Prepared: 11/15/18 Analyzed: 11/16/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.184		mg/Kg wet	0.200		91.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.190		mg/Kg wet	0.200		94.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.179		mg/Kg wet	0.200		89.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.182		mg/Kg wet	0.200		91.1	30-150			
LCS (B217320-BS1)										
Prepared: 11/15/18 Analyzed: 11/16/18										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		79.4	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.4	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		79.2	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		78.3	40-140			
Surrogate: Decachlorobiphenyl	0.174		mg/Kg wet	0.200		87.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.181		mg/Kg wet	0.200		90.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.172		mg/Kg wet	0.200		85.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.172		mg/Kg wet	0.200		86.0	30-150			
LCS Dup (B217320-BSD1)										
Prepared: 11/15/18 Analyzed: 11/16/18										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		81.9	40-140	3.16	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.6	40-140	1.50	30	
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		81.4	40-140	2.73	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.6	40-140	4.02	30	
Surrogate: Decachlorobiphenyl	0.181		mg/Kg wet	0.200		90.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.188		mg/Kg wet	0.200		94.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.177		mg/Kg wet	0.200		88.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.179		mg/Kg wet	0.200		89.4	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B217320 - SW-846 3546

Matrix Spike (B217320-MS1)

Source: 18K0569-01

Prepared: 11/15/18 Analyzed: 11/16/18

Aroclor-1016	0.20	0.095	mg/Kg dry	0.238	ND	83.3	40-140			
Aroclor-1016 [2C]	0.21	0.095	mg/Kg dry	0.238	ND	86.2	40-140			
Aroclor-1260	0.19	0.095	mg/Kg dry	0.238	ND	79.5	40-140			
Aroclor-1260 [2C]	0.21	0.095	mg/Kg dry	0.238	ND	87.3	40-140			
Surrogate: Decachlorobiphenyl	0.201		mg/Kg dry	0.238		84.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.213		mg/Kg dry	0.238		89.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.203		mg/Kg dry	0.238		85.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.209		mg/Kg dry	0.238		87.4	30-150			

Matrix Spike Dup (B217320-MSD1)

Source: 18K0569-01

Prepared: 11/15/18 Analyzed: 11/16/18

Aroclor-1016	0.24	0.098	mg/Kg dry	0.246	ND	97.8	40-140	16.0	30	
Aroclor-1016 [2C]	0.25	0.098	mg/Kg dry	0.246	ND	101	40-140	15.9	30	
Aroclor-1260	0.23	0.098	mg/Kg dry	0.246	ND	93.7	40-140	16.4	30	
Aroclor-1260 [2C]	0.25	0.098	mg/Kg dry	0.246	ND	101	40-140	14.5	30	
Surrogate: Decachlorobiphenyl	0.239		mg/Kg dry	0.246		97.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.251		mg/Kg dry	0.246		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.241		mg/Kg dry	0.246		97.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.245		mg/Kg dry	0.246		100	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217251 - SW-846 8151										
Blank (B217251-BLK1)										
Prepared: 11/15/18 Analyzed: 11/17/18										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	84.0		µg/kg wet	95.2		88.2	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	85.3		µg/kg wet	95.2		89.5	30-150			
LCS (B217251-BS1)										
Prepared: 11/15/18 Analyzed: 11/17/18										
2,4-D	113	25	µg/kg wet	125		90.7	40-140			
2,4-D [2C]	125	25	µg/kg wet	125		100	40-140			
2,4-DB	114	25	µg/kg wet	125		91.3	40-140			V-05
2,4-DB [2C]	119	25	µg/kg wet	125		95.2	40-140			
2,4,5-TP (Silvex)	11.9	2.5	µg/kg wet	12.5		95.6	40-140			
2,4,5-TP (Silvex) [2C]	12.5	2.5	µg/kg wet	12.5		100	40-140			
2,4,5-T	11.4	2.5	µg/kg wet	12.5		91.5	40-140			
2,4,5-T [2C]	12.9	2.5	µg/kg wet	12.5		103	40-140			
Dalapon	196	62	µg/kg wet	312		62.7	40-140			
Dalapon [2C]	198	62	µg/kg wet	312		63.3	40-140			
Dicamba	12.0	2.5	µg/kg wet	12.5		96.2	40-140			
Dicamba [2C]	12.0	2.5	µg/kg wet	12.5		96.4	40-140			
Dichloroprop	123	25	µg/kg wet	125		98.8	40-140			
Dichloroprop [2C]	124	25	µg/kg wet	125		99.1	40-140			
Dinoseb	19.3	12	µg/kg wet	62.5		30.9	0-42.4			
Dinoseb [2C]	22.0	12	µg/kg wet	62.5		35.2	0-41.1			
MCPA	11300	2500	µg/kg wet	12500		90.7	40-140			
MCPA [2C]	10500	2500	µg/kg wet	12500		83.9	40-140			
MCPP	16700	2500	µg/kg wet	12500		134	40-140			
MCPP [2C]	11200	2500	µg/kg wet	12500		89.8	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	90.6		µg/kg wet	100		90.6	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	89.6		µg/kg wet	100		89.6	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217251 - SW-846 8151										
LCS Dup (B217251-BSD1)										
					Prepared: 11/15/18 Analyzed: 11/17/18					
2,4-D	115	25	µg/kg wet	125		92.3	40-140	1.79	30	
2,4-D [2C]	120	25	µg/kg wet	125		96.0	40-140	4.15	30	
2,4-DB	116	25	µg/kg wet	125		92.4	40-140	1.20	30	V-05
2,4-DB [2C]	121	25	µg/kg wet	125		97.2	40-140	2.04	30	
2,4,5-TP (Silvex)	12.0	2.5	µg/kg wet	12.5		96.2	40-140	0.599	30	
2,4,5-TP (Silvex) [2C]	12.6	2.5	µg/kg wet	12.5		101	40-140	0.472	30	
2,4,5-T	11.4	2.5	µg/kg wet	12.5		91.5	40-140	0.0350	30	
2,4,5-T [2C]	13.1	2.5	µg/kg wet	12.5		105	40-140	1.63	30	
Dalapon	195	62	µg/kg wet	312		62.4	40-140	0.492	30	
Dalapon [2C]	197	62	µg/kg wet	312		63.2	40-140	0.178	30	
Dicamba	12.0	2.5	µg/kg wet	12.5		95.7	40-140	0.536	30	
Dicamba [2C]	12.1	2.5	µg/kg wet	12.5		96.8	40-140	0.472	30	
Dichloroprop	123	25	µg/kg wet	125		98.5	40-140	0.300	30	
Dichloroprop [2C]	125	25	µg/kg wet	125		99.8	40-140	0.780	30	
Dinoseb	19.5	12	µg/kg wet	62.5		31.2	0-42.4	1.09	30	
Dinoseb [2C]	22.3	12	µg/kg wet	62.5		35.7	0-41.1	1.31	30	
MCPA	11300	2500	µg/kg wet	12500		90.7	40-140	0.0124	30	
MCPA [2C]	10500	2500	µg/kg wet	12500		83.8	40-140	0.0892	30	
MCPP	16800	2500	µg/kg wet	12500		134	40-140	0.290	30	
MCPP [2C]	11200	2500	µg/kg wet	12500		89.5	40-140	0.275	30	
Surrogate: 2,4-Dichlorophenylacetic acid	88.4		µg/kg wet	100		88.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	90.0		µg/kg wet	100		90.0	30-150			
Matrix Spike (B217251-MS1)										
					Source: 18K0569-01 Prepared: 11/15/18 Analyzed: 11/17/18					
2,4-D	135	31	µg/kg dry	155	ND	87.4	30-150			
2,4-D [2C]	149	31	µg/kg dry	155	ND	96.2	30-150			
2,4-DB	138	31	µg/kg dry	155	ND	89.1	30-150			
2,4-DB [2C]	149	31	µg/kg dry	155	ND	96.2	30-150			
2,4,5-TP (Silvex)	14.1	3.1	µg/kg dry	15.5	ND	91.1	30-150			
2,4,5-TP (Silvex) [2C]	14.0	3.1	µg/kg dry	15.5	ND	90.6	30-150			
2,4,5-T	13.1	3.1	µg/kg dry	15.5	ND	84.7	30-150			
2,4,5-T [2C]	14.7	3.1	µg/kg dry	15.5	ND	95.0	30-150			
Dalapon	241	78	µg/kg dry	388	ND	62.1	30-150			
Dalapon [2C]	245	78	µg/kg dry	388	ND	63.1	30-150			
Dicamba	13.5	3.1	µg/kg dry	15.5	ND	87.1	30-150			
Dicamba [2C]	14.1	3.1	µg/kg dry	15.5	ND	91.2	30-150			
Dichloroprop	144	31	µg/kg dry	155	ND	93.1	30-150			
Dichloroprop [2C]	142	31	µg/kg dry	155	ND	91.6	30-150			
Dinoseb	11.6	16	µg/kg dry	77.5	ND	15.0	10-150			V-06, V-20
Dinoseb [2C]	13.7	16	µg/kg dry	77.5	ND	17.6	10-150			V-06, V-20
MCPA	13200	3100	µg/kg dry	15500	ND	84.9	30-150			
MCPA [2C]	12200	3100	µg/kg dry	15500	ND	78.7	30-150			
MCPP	19700	3100	µg/kg dry	15500	ND	127	30-150			
MCPP [2C]	12900	3100	µg/kg dry	15500	ND	83.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	106		µg/kg dry	124		85.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	104		µg/kg dry	124		84.0	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217251 - SW-846 8151										
Matrix Spike Dup (B217251-MSD1)		Source: 18K0569-01		Prepared: 11/15/18 Analyzed: 11/17/18						
2,4-D	135	31	µg/kg dry	155	ND	87.2	30-150	0.177	30	
2,4-D [2C]	146	31	µg/kg dry	155	ND	93.9	30-150	2.36	30	
2,4-DB	138	31	µg/kg dry	155	ND	88.8	30-150	0.358	30	
2,4-DB [2C]	149	31	µg/kg dry	155	ND	96.1	30-150	0.0732	30	
2,4,5-TP (Silvex)	13.9	3.1	µg/kg dry	15.5	ND	89.5	30-150	1.70	30	
2,4,5-TP (Silvex) [2C]	13.4	3.1	µg/kg dry	15.5	ND	86.2	30-150	4.97	30	
2,4,5-T	13.2	3.1	µg/kg dry	15.5	ND	84.9	30-150	0.203	30	
2,4,5-T [2C]	14.6	3.1	µg/kg dry	15.5	ND	94.1	30-150	0.958	30	
Dalapon	225	78	µg/kg dry	388	ND	58.1	30-150	6.76	30	
Dalapon [2C]	227	78	µg/kg dry	388	ND	58.6	30-150	7.42	30	
Dicamba	13.4	3.1	µg/kg dry	15.5	ND	86.3	30-150	0.953	30	
Dicamba [2C]	13.3	3.1	µg/kg dry	15.5	ND	85.6	30-150	6.35	30	
Dichloroprop	143	31	µg/kg dry	155	ND	92.2	30-150	0.970	30	
Dichloroprop [2C]	141	31	µg/kg dry	155	ND	90.9	30-150	0.769	30	
Dinoseb	12.8	16	µg/kg dry	77.5	ND	16.5	10-150	9.51	30	V-06, V-20
Dinoseb [2C]	14.9	16	µg/kg dry	77.5	ND	19.3	10-150	8.90	30	V-06, V-20
MCPA	13100	3100	µg/kg dry	15500	ND	84.3	30-150	0.778	30	
MCPA [2C]	12200	3100	µg/kg dry	15500	ND	78.4	30-150	0.336	30	
MCPP	20200	3100	µg/kg dry	15500	ND	130	30-150	2.78	30	
MCPP [2C]	12700	3100	µg/kg dry	15500	ND	82.1	30-150	1.08	30	
Surrogate: 2,4-Dichlorophenylacetic acid	108		µg/kg dry	124		86.9	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	107		µg/kg dry	124		85.9	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217216 - SW-846 3546										
Blank (B217216-BLK1)										
Prepared: 11/14/18 Analyzed: 11/15/18										
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.99		mg/Kg wet	3.33		59.8	40-140			
LCS (B217216-BS1)										
Prepared: 11/14/18 Analyzed: 11/15/18										
TPH (C9-C36)	28.0	8.3	mg/Kg wet	33.3		84.0	40-140			
Surrogate: 2-Fluorobiphenyl	2.23		mg/Kg wet	3.33		67.0	40-140			
LCS Dup (B217216-BSD1)										
Prepared: 11/14/18 Analyzed: 11/15/18										
TPH (C9-C36)	27.8	8.3	mg/Kg wet	33.3		83.4	40-140	0.809	30	
Surrogate: 2-Fluorobiphenyl	2.15		mg/Kg wet	3.33		64.4	40-140			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B217443 - SW-846 3050B

Blank (B217443-BLK1)

Prepared: 11/16/18 Analyzed: 11/19/18

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 (B217443-BS1)

Prepared: 11/16/18 Analyzed: 11/19/18

Antimony	61.6	4.9	mg/Kg wet	75.5		81.6	3.8-196			
Arsenic	154	4.9	mg/Kg wet	161		95.8	83.2-116.8			
Barium	262	4.9	mg/Kg wet	260		101	82.7-117.3			
Beryllium	96.0	0.49	mg/Kg wet	97.6		98.4	83.4-116.8			
Cadmium	204	0.49	mg/Kg wet	211		96.8	83.4-116.6			
Chromium	134	0.98	mg/Kg wet	136		98.4	82.4-117.6			
Lead	108	1.5	mg/Kg wet	111		96.9	83-117.1			
Nickel	94.1	0.98	mg/Kg wet	91.9		102	82.9-117.5			
Selenium	177	9.8	mg/Kg wet	191		92.4	79.6-120.9			
Silver	42.6	0.98	mg/Kg wet	43.3		98.3	79.9-119.9			
Thallium	158	4.9	mg/Kg wet	156		101	81.4-119.2			
Vanadium	51.7	2.0	mg/Kg wet	56.7		91.1	79-121.2			
Zinc	198	2.0	mg/Kg wet	199		99.6	81.4-119.1			

LCS Dup (B217443-BSD1)

Prepared: 11/16/18 Analyzed: 11/19/18

Antimony	60.3	4.9	mg/Kg wet	75.5		79.9	3.8-196	2.01	30	
Arsenic	153	4.9	mg/Kg wet	161		95.0	83.2-116.8	0.861	30	
Barium	257	4.9	mg/Kg wet	260		98.7	82.7-117.3	2.20	30	
Beryllium	96.2	0.49	mg/Kg wet	97.6		98.6	83.4-116.8	0.216	30	
Cadmium	200	0.49	mg/Kg wet	211		94.8	83.4-116.6	2.07	30	
Chromium	134	0.98	mg/Kg wet	136		98.5	82.4-117.6	0.136	30	
Lead	108	1.5	mg/Kg wet	111		97.2	83-117.1	0.376	30	
Nickel	93.5	0.98	mg/Kg wet	91.9		102	82.9-117.5	0.558	30	
Selenium	177	9.8	mg/Kg wet	191		92.4	79.6-120.9	0.00113	30	
Silver	42.3	0.98	mg/Kg wet	43.3		97.6	79.9-119.9	0.721	30	
Thallium	157	4.9	mg/Kg wet	156		101	81.4-119.2	0.757	30	
Vanadium	51.2	2.0	mg/Kg wet	56.7		90.3	79-121.2	0.875	30	
Zinc	195	2.0	mg/Kg wet	199		98.1	81.4-119.1	1.52	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
Batch B217443 - SW-846 3050B										
MRL Check (B217443-MRL1)					Prepared: 11/16/18 Analyzed: 11/19/18					
Lead	0.558	0.50	mg/Kg wet	0.499		112	80-120			
Batch B217633 - SW-846 7471										
Blank (B217633-BLK1)					Prepared: 11/20/18 Analyzed: 11/21/18					
Mercury	ND	0.025	mg/Kg wet							
LCS (B217633-BS1)					Prepared: 11/20/18 Analyzed: 11/21/18					
Mercury	12.3	2.0	mg/Kg wet	11.5		107	71.6-127.8			
LCS Dup (B217633-BSD1)					Prepared: 11/20/18 Analyzed: 11/21/18					
Mercury	13.5	1.9	mg/Kg wet	11.5		117	71.6-127.8	9.31	30	

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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 B217174 - SW-846 9014										
Blank (B217174-BLK1)				Prepared: 11/14/18 Analyzed: 11/15/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B217174-BS1)				Prepared: 11/14/18 Analyzed: 11/15/18						
Reactive Cyanide	9.3	0.40	mg/Kg	10.0		92.9	83.6-111			
Batch B217265 - SW-846 9030A										
Blank (B217265-BLK1)				Prepared & Analyzed: 11/15/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B217265-BS1)				Prepared & Analyzed: 11/15/18						
Reactive Sulfide	13	2.0	mg/Kg	14.8		86.5	54.9-121			
Batch B217354 - SW-846 9045C										
LCS (B217354-BS1)				Prepared & Analyzed: 11/15/18						
pH	6.03		pH Units	6.00		101	90-110			
LCS (B217354-BS2)				Prepared & Analyzed: 11/15/18						
pH	6.02		pH Units	6.00		100	90-110			
Duplicate (B217354-DUP1)		Source: 18K0569-03			Prepared & Analyzed: 11/15/18					
pH	6.3		pH Units		6.3			0.0799	5	H-03
Batch B217587 - % Solids										
Duplicate (B217587-DUP2)		Source: 18K0569-01			Prepared: 11/19/18 Analyzed: 11/20/18					
% Solids	81.0		% Wt		80.6			0.469	20	
Batch B217751 - SM21-22 2510B Modified										
Blank (B217751-BLK1)				Prepared & Analyzed: 11/21/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B217751-BS1)				Prepared & Analyzed: 11/21/18						
Specific conductance	200		µmhos/cm	192		106	90-110			
Duplicate (B217751-DUP1)		Source: 18K0569-01			Prepared & Analyzed: 11/21/18					
Specific conductance	2.5	2.0	µmhos/cm		2.7			6.11	21	

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-03	Elevated reporting limit due to matrix.
H-03	Sample received after recommended holding time was exceeded.
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.
O-32	A dilution was performed as part of the standard analytical procedure.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration 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-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-36	Initial calibration verification (ICV) 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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
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
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8081B in Soil</i>	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8151A in Soil</i>	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8151A in Soil	
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
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

CERTIFICATIONS

Certified Analyses included in this Report

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
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
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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

Doc # 381 Rev 1_03242017

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East Longmeadow, MA 01028

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

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



Company Name: VHB
Address: 101 Walnut Street, Watertown, MA
Phone: 617-607-1841

Project Name: Eversource Transmission Project
Project Location: Sudbury, Massachusetts
Project Number: 12970.03
Project Manager: Paige Cornell

Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: PEC

Requested Turnaround Time:
7-Day 10-Day
Due Date: _____

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

Data Delivery:
Format: PDF EXCEL
Other: Limit Check

CLP Like Data Pkg Required:
Email To: pcorneil@vhb.com; pcorneil@vhb.com; pcorneil@vhb.com
Fax To #: _____

Con-Test Work Order #	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code
1	SB33	11/18	14:36	x	x	S	U
2	SB36	↓	14:45	x	x	S	U
3	SB35	↓	14:50	x	x	S	U
4	SB34	↓	14:40	x	x	S	U

ANALYSIS REQUESTED	Ignitability, pH, Reactivity			Conductivity			Pesticide/Herbicide			SVOCs, PCBs, TPH			VOCs			MCP 14 Metals		
	I	A	A	I	A	A	I	A	A	I	A	A	I	A	A	I	A	A

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:
Vials frozen on day of generation by 16:00
Relinquished by: (signature) _____
Received by: (signature) _____
Relinquished by: (signature) _____
Received by: (signature) _____
Relinquished by: (signature) _____
Received by: (signature) _____

TCLP 20x Rule

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 Federal City
Municipality 21 J Brownfield
MWRA School MBTA
WRMA
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 VHB

Received By MP Date 11/13/18 Time 19:45

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

Were samples within Temperature? 2-6°C T By Gun # 1 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 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? T Who was notified? Luke

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-	4	250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-	8	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:

Samples received out of hold for pH analysis

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 18K0569
Project Location: Sudbury, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
18K0569-01 thru 18K0569-04

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 (X)	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 A ()	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

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

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

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

¹All 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: 11/21/18

December 3, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18K0931

Enclosed are results of analyses for samples received by the laboratory on November 20, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 12/3/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0931

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
B28	18K0931-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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 8151, samples were derivatized on 11/28/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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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
18K0931-01[B28], B217937-MRL1

SW-846 8081B

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:

alpha-BHC [2C]
B217863-MSD1

SW-846 8082A

Qualifications:

O-32
A dilution was performed as part of the standard analytical procedure.

Analyte & Samples(s) Qualified:

18K0931-01[B28]

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:

Acetone
B217803-BS1, B217803-BSD1, S029731-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:

2-Butanone (MEK)
B217803-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:

2-Butanone (MEK)
18K0931-01[B28], B217803-BLK1, B217803-BS1, B217803-BSD1, S029731-CCV1

Acetone
18K0931-01[B28], B217803-BLK1, B217803-BS1, B217803-BSD1, S029731-CCV1

Tetrahydrofuran
18K0931-01[B28], B217803-BLK1, B217803-BS1, B217803-BSD1, S029731-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
18K0931-01[B28], B217803-BLK1, B217803-BS1, B217803-BSD1, S029731-CCV1

1,4-Dioxane (SIM)
18K0931-01[B28], B217803-BLK1, B217803-BS1, B217803-BSD1, S029731-CCV1

Tetrahydrofuran
18K0931-01[B28], B217803-BLK1, B217803-BS1, B217803-BSD1, S029731-CCV1

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V-20

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

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

B217803-BS1, B217803-BSD1, S029731-CCV1

Tetrahydrofuran

B217803-BS1, B217803-BSD1, S029731-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**

B217803-BS1, B217803-BSD1, S029731-CCV1

V-36

Initial calibration verification (ICV) 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:**1,4-Dioxane**

B217803-BS1, B217803-BSD1, S029731-CCV1

1,4-Dioxane (SIM)

B217803-BS1, B217803-BSD1, S029731-CCV1

SW-846 8270D

Qualifications:

V-04

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

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

18K0931-01[B28], B217777-BLK1, B217777-BS1, B217777-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:**4-Chloroaniline**

18K0931-01[B28], B217777-BLK1, B217777-BS1, B217777-BSD1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

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

18K0931-01[B28], B217703-DUP1

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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.



Tod E. Kopyscinski
Laboratory Director

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

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	0.056	mg/Kg dry	1	R-05	SW-846 8260C	11/26/18	11/26/18 9:09	BRF
tert-Amyl Methyl Ether (TAME)	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Benzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Bromobenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Bromochloromethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Bromodichloromethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Bromoform	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Bromomethane	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
2-Butanone (MEK)	ND	0.022	mg/Kg dry	1	R-05	SW-846 8260C	11/26/18	11/26/18 9:09	BRF
n-Butylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
sec-Butylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
tert-Butylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Carbon Disulfide	ND	0.0033	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Carbon Tetrachloride	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Chlorobenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Chlorodibromomethane	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Chloroethane	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Chloroform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Chloromethane	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
2-Chlorotoluene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
4-Chlorotoluene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2-Dibromoethane (EDB)	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Dibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2-Dichlorobenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,3-Dichlorobenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,4-Dichlorobenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Dichlorodifluoromethane (Freon 12)	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1-Dichloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2-Dichloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
cis-1,2-Dichloroethylene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
trans-1,2-Dichloroethylene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,3-Dichloropropane	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
2,2-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
cis-1,3-Dichloropropene	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
trans-1,3-Dichloropropene	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Diethyl Ether	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Diisopropyl Ether (DIPE)	ND	0.00056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,4-Dioxane	ND	0.056	mg/Kg dry	1	V-16	SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,4-Dioxane (SIM)	ND	0.022	mg/Kg dry	1	V-16	SW-846 8260C	11/26/18	11/26/18 9:09	BRF

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Hexachlorobutadiene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
2-Hexanone (MBK)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Isopropylbenzene (Cumene)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
p-Isopropyltoluene (p-Cymene)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Methylene Chloride	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Naphthalene	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
n-Propylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Styrene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1,1,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Tetrachloroethylene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Tetrahydrofuran	ND	0.0056	mg/Kg dry	1	R-05, V-16	SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Toluene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2,4-Trichlorobenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1,1-Trichloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,1,2-Trichloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Trichloroethylene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Trichlorofluoromethane (Freon 11)	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2,3-Trichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,2,4-Trimethylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
1,3,5-Trimethylbenzene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Vinyl Chloride	ND	0.0056	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
m+p Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
o-Xylene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	11/26/18	11/26/18 9:09	BRF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		106	70-130				11/26/18	9:09	
Toluene-d8		98.4	70-130				11/26/18	9:09	
4-Bromofluorobenzene		99.8	70-130				11/26/18	9:09	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

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	11/24/18	11/27/18 16:15	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Aniline	ND	0.39	mg/Kg dry	1	V-04	SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Benzo(b)fluoranthene	0.26	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
4-Chloroaniline	ND	0.75	mg/Kg dry	1	V-34	SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Chrysene	0.23	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,4-Dinitrophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Fluoranthene	0.31	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

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	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
4-Nitrophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Pyrene	0.25	0.19	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Pyridine	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	11/24/18	11/27/18 16:15	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		64.3	30-130					11/27/18 16:15	
Phenol-d6		67.2	30-130					11/27/18 16:15	
Nitrobenzene-d5		68.0	30-130					11/27/18 16:15	
2-Fluorobiphenyl		58.7	30-130					11/27/18 16:15	
2,4,6-Tribromophenol		66.1	30-130					11/27/18 16:15	
p-Terphenyl-d14		68.7	30-130					11/27/18 16:15	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Aldrin [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
alpha-BHC [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
beta-BHC [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
delta-BHC [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
gamma-BHC (Lindane) [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Chlordane [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
4,4'-DDD [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
4,4'-DDE [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
4,4'-DDT [1]	0.0078	0.0043	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Dieldrin [1]	ND	0.0043	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Endosulfan I [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Endosulfan II [1]	ND	0.0085	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Endosulfan sulfate [1]	ND	0.0085	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Endrin [1]	ND	0.0085	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Endrin aldehyde [1]	ND	0.0085	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 22:16	TG
Endrin ketone [1]	ND	0.0085	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Heptachlor [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Heptachlor epoxide [1]	ND	0.0053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Hexachlorobenzene [1]	ND	0.0064	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Methoxychlor [1]	ND	0.053	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Toxaphene [1]	ND	0.11	mg/Kg dry	1		SW-846 8081B	11/26/18	11/28/18 20:02	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.8	30-150					11/28/18 22:16	
Decachlorobiphenyl [2]		79.0	30-150					11/28/18 22:16	
Tetrachloro-m-xylene [1]		45.1	30-150					11/28/18 22:16	
Tetrachloro-m-xylene [2]		40.4	30-150					11/28/18 22:16	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/26/18	11/27/18 16:11	TG
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	11/26/18	11/27/18 16:11	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		80.2	30-150					11/27/18 16:11	
Decachlorobiphenyl [2]		82.2	30-150					11/27/18 16:11	
Tetrachloro-m-xylene [1]		74.1	30-150					11/27/18 16:11	
Tetrachloro-m-xylene [2]		75.4	30-150					11/27/18 16:11	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
2,4-DB [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
2,4,5-TP (Silvex) [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
2,4,5-T [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
Dalapon [1]	ND	71	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
Dicamba [1]	ND	2.9	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
Dichloroprop [1]	ND	29	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
Dinoseb [1]	ND	14	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
MCPA [1]	ND	2900	µg/kg dry	1		SW-846 8151A	11/26/18	11/30/18 5:35	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		81.2	30-150					11/30/18 5:35	
2,4-Dichlorophenylacetic acid [2]		87.3	30-150					11/30/18 5:35	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Field Sample #: B28

Sampled: 11/13/2018 14:00

Sample ID: 18K0931-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	61	9.5	mg/Kg dry	1		SW-846 8100 Modified	11/24/18	11/27/18 15:30	KLB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		57.1	40-140					11/27/18 15:30	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Sampled: 11/13/2018 14:00

Field Sample #: B28

Sample ID: 18K0931-01

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		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Arsenic	14	1.9	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Barium	46	1.9	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Beryllium	0.29	0.19	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Cadmium	0.37	0.19	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Chromium	13	0.38	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Lead	26	0.57	mg/Kg dry	1	M-10	SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	11/27/18	11/28/18 11:14	AJL
Nickel	13	0.38	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Vanadium	16	0.77	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB
Zinc	14	0.77	mg/Kg dry	1		SW-846 6010D	11/27/18	11/28/18 15:03	EJB

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K0931

Date Received: 11/20/2018

Sampled: 11/13/2018 14:00

Field Sample #: B28

Sample ID: 18K0931-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/26/18	11/26/18 14:33	LED
pH @19.8°C	4.8		pH Units	1	H-03	SW-846 9045C	11/20/18	11/20/18 18:51	LED
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	11/29/18	11/30/18 13:30	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/29/18	11/30/18 13:00	DJM
Specific conductance	6.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/26/18	11/26/18 15:21	MMH
% Solids	87.7		% Wt	1		SM 2540G	11/26/18	11/27/18 15:35	MJR

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18K0931-01 [B28]	B217892	11/26/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0931-01 [B28]	B217784	1.00	11/26/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0931-01 [B28]	B217884	50.0	11/26/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217937	1.49	50.0	11/27/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217947	0.621	50.0	11/27/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217863	10.7	10.0	11/26/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217862	10.7	10.0	11/26/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217782	30.1	1.00	11/24/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217799	20.0	5.00	11/26/18

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217803	10.2	10.0	11/26/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B217777	30.1	1.00	11/24/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B218163	25.3	250	11/29/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K0931-01 [B28]	B218234	25.3	250	11/29/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18K0931-01 [B28]	B217703	20.0	11/20/18

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 B217803 - SW-846 5035

Blank (B217803-BLK1)

Prepared & Analyzed: 11/26/18

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							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							R-05
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
1,4-Dioxane (SIM)	ND	0.040	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							

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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 B217803 - SW-846 5035

Blank (B217803-BLK1)

Prepared & Analyzed: 11/26/18

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							R-05, V-16
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	0.0547		mg/Kg wet	0.0500		109	70-130			
Surrogate: Toluene-d8	0.0486		mg/Kg wet	0.0500		97.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.0494		mg/Kg wet	0.0500		98.7	70-130			

LCS (B217803-BS1)

Prepared & Analyzed: 11/26/18

Acetone	0.568	0.10	mg/Kg wet	0.200		284 *	40-160			L-02, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0207	0.0010	mg/Kg wet	0.0200		103	70-130			
Benzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
Bromobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
Bromochloromethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Bromodichloromethane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130			
Bromoform	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
Bromomethane	0.0126	0.010	mg/Kg wet	0.0200		62.9	40-160			L-14, V-20, V-34 †
2-Butanone (MEK)	0.389	0.040	mg/Kg wet	0.200		194 *	40-160			L-07A, R-05 †
n-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		91.9	70-130			
sec-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
tert-Butylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130			
Carbon Disulfide	0.0192	0.0060	mg/Kg wet	0.0200		95.9	70-130			
Carbon Tetrachloride	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
Chlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
Chlorodibromomethane	0.0224	0.0010	mg/Kg wet	0.0200		112	70-130			
Chloroethane	0.0180	0.010	mg/Kg wet	0.0200		89.8	70-130			
Chloroform	0.0196	0.0040	mg/Kg wet	0.0200		98.2	70-130			
Chloromethane	0.0164	0.010	mg/Kg wet	0.0200		81.8	40-160			†
2-Chlorotoluene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130			
4-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dibromoethane (EDB)	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130			
Dibromomethane	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
1,2-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,3-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	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
Batch B217803 - SW-846 5035										
LCS (B217803-BS1)										
Prepared & Analyzed: 11/26/18										
1,4-Dichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
Dichlorodifluoromethane (Freon 12)	0.0128	0.010	mg/Kg wet	0.0200		63.9	40-160			L-14 †
1,1-Dichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130			
1,2-Dichloroethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1-Dichloroethylene	0.0187	0.0040	mg/Kg wet	0.0200		93.6	70-130			
cis-1,2-Dichloroethylene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
trans-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,2-Dichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,3-Dichloropropane	0.0198	0.0010	mg/Kg wet	0.0200		98.9	70-130			
2,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
1,1-Dichloropropene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
cis-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
trans-1,3-Dichloropropene	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130			
Diethyl Ether	0.0196	0.010	mg/Kg wet	0.0200		98.0	70-130			
Diisopropyl Ether (DIPE)	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130			
1,4-Dioxane	0.179	0.10	mg/Kg wet	0.200		89.7	40-160			V-16, V-36 †
1,4-Dioxane (SIM)	0.206	0.040	mg/Kg wet	0.200		103	40-160			V-16, V-36 †
Ethylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130			
Hexachlorobutadiene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
2-Hexanone (MBK)	0.314	0.020	mg/Kg wet	0.200		157	40-160			L-14 †
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
p-Isopropyltoluene (p-Cymene)	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0213	0.0040	mg/Kg wet	0.0200		106	70-130			
Methylene Chloride	0.0201	0.010	mg/Kg wet	0.0200		100	70-130			
4-Methyl-2-pentanone (MIBK)	0.214	0.020	mg/Kg wet	0.200		107	40-160			†
Naphthalene	0.0185	0.0040	mg/Kg wet	0.0200		92.3	70-130			
n-Propylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
Styrene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
1,1,1,2-Tetrachloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,2,2-Tetrachloroethane	0.0196	0.0010	mg/Kg wet	0.0200		97.8	70-130			
Tetrachloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Tetrahydrofuran	0.0175	0.010	mg/Kg wet	0.0200		87.3	70-130			R-05, V-16, V-20
Toluene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
1,2,3-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130			
1,2,4-Trichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1,1-Trichloroethane	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
1,1,2-Trichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130			
Trichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0167	0.010	mg/Kg wet	0.0200		83.3	70-130			
1,2,3-Trichloropropane	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
1,2,4-Trimethylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130			
1,3,5-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
Vinyl Chloride	0.0165	0.010	mg/Kg wet	0.0200		82.3	70-130			
m+p Xylene	0.0390	0.0040	mg/Kg wet	0.0400		97.4	70-130			
o-Xylene	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0527		mg/Kg wet	0.0500		105	70-130			
Surrogate: Toluene-d8	0.0494		mg/Kg wet	0.0500		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0511		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
Batch B217803 - SW-846 5035										
LCS Dup (B217803-BSD1)										
					Prepared & Analyzed: 11/26/18					
Acetone	0.439	0.10	mg/Kg wet	0.200		219 *	40-160	25.7 *	20	L-02, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	0.388	20	
Benzene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130	4.20	20	
Bromobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	1.11	20	
Bromochloromethane	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	2.73	20	
Bromodichloromethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	2.00	20	
Bromoform	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	5.73	20	
Bromomethane	0.0139	0.010	mg/Kg wet	0.0200		69.4	40-160	9.83	20	L-14, V-20, V-34 †
2-Butanone (MEK)	0.315	0.040	mg/Kg wet	0.200		158	40-160	20.8 *	20	L-14, R-05 †
n-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	8.64	20	
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	5.76	20	
tert-Butylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	8.62	20	
tert-Butyl Ethyl Ether (TBEE)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130	0.588	20	
Carbon Disulfide	0.0198	0.0060	mg/Kg wet	0.0200		98.8	70-130	2.98	20	
Carbon Tetrachloride	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	1.09	20	
Chlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	6.15	20	
Chlorodibromomethane	0.0223	0.0010	mg/Kg wet	0.0200		111	70-130	0.538	20	
Chloroethane	0.0188	0.010	mg/Kg wet	0.0200		93.8	70-130	4.36	20	
Chloroform	0.0210	0.0040	mg/Kg wet	0.0200		105	70-130	6.79	20	
Chloromethane	0.0176	0.010	mg/Kg wet	0.0200		88.2	40-160	7.53	20	†
2-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	4.47	20	
4-Chlorotoluene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	3.24	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	5.42	20	
1,2-Dibromoethane (EDB)	0.0217	0.0010	mg/Kg wet	0.0200		108	70-130	0.555	20	
Dibromomethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	1.48	20	
1,2-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	3.84	20	
1,3-Dichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	5.00	20	
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	2.63	20	
Dichlorodifluoromethane (Freon 12)	0.0148	0.010	mg/Kg wet	0.0200		73.8	40-160	14.4	20	†
1,1-Dichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	4.92	20	
1,2-Dichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.482	20	
1,1-Dichloroethylene	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130	8.78	20	
cis-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	2.05	20	
trans-1,2-Dichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	5.91	20	
1,2-Dichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	0.982	20	
1,3-Dichloropropane	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	5.51	20	
2,2-Dichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	5.62	20	
1,1-Dichloropropene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.17	20	
cis-1,3-Dichloropropene	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130	3.15	20	
trans-1,3-Dichloropropene	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130	4.22	20	
Diethyl Ether	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	2.22	20	
Diisopropyl Ether (DIPE)	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	1.74	20	
1,4-Dioxane	0.191	0.10	mg/Kg wet	0.200		95.7	40-160	6.49	20	V-16, V-36 †
1,4-Dioxane (SIM)	0.192	0.040	mg/Kg wet	0.200		95.9	40-160	7.15	20	V-16, V-36 † ‡
Ethylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	1.85	20	
Hexachlorobutadiene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	5.98	20	
2-Hexanone (MBK)	0.261	0.020	mg/Kg wet	0.200		131	40-160	18.4	20	L-14 †
Isopropylbenzene (Cumene)	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.49	20	
p-Isopropyltoluene (p-Cymene)	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130	6.45	20	
Methyl tert-Butyl Ether (MTBE)	0.0221	0.0040	mg/Kg wet	0.0200		110	70-130	3.60	20	
Methylene Chloride	0.0207	0.010	mg/Kg wet	0.0200		103	70-130	2.84	20	
4-Methyl-2-pentanone (MIBK)	0.212	0.020	mg/Kg wet	0.200		106	40-160	1.17	20	†

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217803 - SW-846 5035										
LCS Dup (B217803-BSD1)										
Prepared & Analyzed: 11/26/18										
Naphthalene	0.0188	0.0040	mg/Kg wet	0.0200		94.0	70-130	1.83	20	
n-Propylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	5.85	20	
Styrene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	3.42	20	
1,1,1,2-Tetrachloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.87	20	
1,1,2,2-Tetrachloroethane	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130	5.86	20	
Tetrachloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	3.90	20	
Tetrahydrofuran	0.0226	0.010	mg/Kg wet	0.0200		113	70-130	25.6	20	* V-16, V-20, R-05
Toluene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	2.52	20	
1,2,3-Trichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	5.97	20	
1,2,4-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	7.08	20	
1,1,1-Trichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	2.96	20	
1,1,2-Trichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	7.64	20	
Trichloroethylene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	1.69	20	
Trichlorofluoromethane (Freon 11)	0.0180	0.010	mg/Kg wet	0.0200		89.8	70-130	7.51	20	
1,2,3-Trichloropropane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	10.1	20	
1,2,4-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	11.7	20	
1,3,5-Trimethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	3.10	20	
Vinyl Chloride	0.0171	0.010	mg/Kg wet	0.0200		85.7	70-130	4.05	20	
m+p Xylene	0.0393	0.0040	mg/Kg wet	0.0400		98.3	70-130	0.868	20	
o-Xylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	4.79	20	
Surrogate: 1,2-Dichloroethane-d4	0.0533		mg/Kg wet	0.0500		107	70-130			
Surrogate: Toluene-d8	0.0489		mg/Kg wet	0.0500		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0510		mg/Kg wet	0.0500		102	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 B217777 - SW-846 3546

Blank (B217777-BLK1)

Prepared: 11/24/18 Analyzed: 11/27/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-04
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 B217777 - SW-846 3546

Blank (B217777-BLK1)

Prepared: 11/24/18 Analyzed: 11/27/18

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	4.91		mg/Kg wet	6.67		73.6	30-130			
Surrogate: Phenol-d6	5.09		mg/Kg wet	6.67		76.4	30-130			
Surrogate: Nitrobenzene-d5	2.51		mg/Kg wet	3.33		75.4	30-130			
Surrogate: 2-Fluorobiphenyl	2.06		mg/Kg wet	3.33		61.8	30-130			
Surrogate: 2,4,6-Tribromophenol	5.29		mg/Kg wet	6.67		79.3	30-130			
Surrogate: p-Terphenyl-d14	2.72		mg/Kg wet	3.33		81.6	30-130			

LCS (B217777-BS1)

Prepared: 11/24/18 Analyzed: 11/27/18

Acenaphthene	1.02	0.17	mg/Kg wet	1.67		61.5	40-140			
Acenaphthylene	1.10	0.17	mg/Kg wet	1.67		66.3	40-140			
Acetophenone	1.02	0.34	mg/Kg wet	1.67		61.4	40-140			
Aniline	0.676	0.34	mg/Kg wet	1.67		40.5	40-140			V-04
Anthracene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140			
Benzo(a)anthracene	1.22	0.17	mg/Kg wet	1.67		73.1	40-140			
Benzo(a)pyrene	1.24	0.17	mg/Kg wet	1.67		74.1	40-140			
Benzo(b)fluoranthene	1.12	0.17	mg/Kg wet	1.67		67.3	40-140			
Benzo(g,h,i)perylene	1.29	0.17	mg/Kg wet	1.67		77.5	40-140			
Benzo(k)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140			
Bis(2-chloroethoxy)methane	1.27	0.34	mg/Kg wet	1.67		76.2	40-140			
Bis(2-chloroethyl)ether	0.988	0.34	mg/Kg wet	1.67		59.3	40-140			
Bis(2-chloroisopropyl)ether	1.09	0.34	mg/Kg wet	1.67		65.5	40-140			
Bis(2-Ethylhexyl)phthalate	1.11	0.34	mg/Kg wet	1.67		66.8	40-140			
4-Bromophenylphenylether	1.35	0.34	mg/Kg wet	1.67		80.8	40-140			
Butylbenzylphthalate	1.13	0.34	mg/Kg wet	1.67		67.7	40-140			
4-Chloroaniline	0.645	0.66	mg/Kg wet	1.67		38.7	15-140			V-34 †
2-Chloronaphthalene	0.985	0.34	mg/Kg wet	1.67		59.1	40-140			
2-Chlorophenol	1.12	0.34	mg/Kg wet	1.67		67.1	30-130			
Chrysene	1.18	0.17	mg/Kg wet	1.67		70.7	40-140			
Dibenz(a,h)anthracene	1.17	0.17	mg/Kg wet	1.67		70.2	40-140			
Dibenzofuran	1.17	0.34	mg/Kg wet	1.67		70.3	40-140			
Di-n-butylphthalate	1.19	0.34	mg/Kg wet	1.67		71.4	40-140			
1,2-Dichlorobenzene	0.962	0.34	mg/Kg wet	1.67		57.7	40-140			
1,3-Dichlorobenzene	0.905	0.34	mg/Kg wet	1.67		54.3	40-140			
1,4-Dichlorobenzene	0.922	0.34	mg/Kg wet	1.67		55.3	40-140			
3,3-Dichlorobenzidine	0.952	0.17	mg/Kg wet	1.67		57.1	40-140			
2,4-Dichlorophenol	1.16	0.34	mg/Kg wet	1.67		69.9	30-130			
Diethylphthalate	1.15	0.34	mg/Kg wet	1.67		68.8	40-140			
2,4-Dimethylphenol	1.15	0.34	mg/Kg wet	1.67		68.7	30-130			
Dimethylphthalate	1.19	0.34	mg/Kg wet	1.67		71.5	40-140			
2,4-Dinitrophenol	0.907	0.66	mg/Kg wet	1.67		54.4	15-140			†
2,4-Dinitrotoluene	1.18	0.34	mg/Kg wet	1.67		70.7	40-140			
2,6-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		74.9	40-140			
Di-n-octylphthalate	1.06	0.34	mg/Kg wet	1.67		63.4	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.05	0.34	mg/Kg wet	1.67		62.8	40-140			
Fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.9	40-140			
Fluorene	1.14	0.17	mg/Kg wet	1.67		68.7	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 B217777 - SW-846 3546

LCS (B217777-BS1)

Prepared: 11/24/18 Analyzed: 11/27/18

Hexachlorobenzene	1.32	0.34	mg/Kg wet	1.67		79.4	40-140			
Hexachlorobutadiene	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Hexachloroethane	0.894	0.34	mg/Kg wet	1.67		53.6	40-140			
Indeno(1,2,3-cd)pyrene	1.18	0.17	mg/Kg wet	1.67		71.0	40-140			
Isophorone	1.15	0.34	mg/Kg wet	1.67		69.1	40-140			
2-Methylnaphthalene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
2-Methylphenol	1.14	0.34	mg/Kg wet	1.67		68.4	30-130			
3/4-Methylphenol	1.05	0.34	mg/Kg wet	1.67		63.0	30-130			
Naphthalene	1.07	0.17	mg/Kg wet	1.67		64.3	40-140			
Nitrobenzene	1.00	0.34	mg/Kg wet	1.67		60.2	40-140			
2-Nitrophenol	1.10	0.34	mg/Kg wet	1.67		66.1	30-130			
4-Nitrophenol	1.10	0.66	mg/Kg wet	1.67		65.8	15-140			†
Pentachlorophenol	0.914	0.34	mg/Kg wet	1.67		54.8	30-130			
Phenanthrene	1.19	0.17	mg/Kg wet	1.67		71.4	40-140			
Phenol	1.08	0.34	mg/Kg wet	1.67		64.6	15-140			†
Pyrene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140			
Pyridine	0.638	0.34	mg/Kg wet	1.67		38.3	30-140			†
1,2,4-Trichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.5	40-140			
2,4,5-Trichlorophenol	1.18	0.34	mg/Kg wet	1.67		70.7	30-130			
2,4,6-Trichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.9	30-130			
Surrogate: 2-Fluorophenol	4.41		mg/Kg wet	6.67		66.2	30-130			
Surrogate: Phenol-d6	4.70		mg/Kg wet	6.67		70.5	30-130			
Surrogate: Nitrobenzene-d5	2.25		mg/Kg wet	3.33		67.4	30-130			
Surrogate: 2-Fluorobiphenyl	2.12		mg/Kg wet	3.33		63.7	30-130			
Surrogate: 2,4,6-Tribromophenol	5.19		mg/Kg wet	6.67		77.9	30-130			
Surrogate: p-Terphenyl-d14	2.58		mg/Kg wet	3.33		77.5	30-130			

LCS Dup (B217777-BS1)

Prepared: 11/24/18 Analyzed: 11/27/18

Acenaphthene	1.05	0.17	mg/Kg wet	1.67		62.7	40-140	2.03	30	
Acenaphthylene	1.16	0.17	mg/Kg wet	1.67		69.4	40-140	4.57	30	
Acetophenone	1.07	0.34	mg/Kg wet	1.67		64.0	40-140	4.18	30	
Aniline	0.781	0.34	mg/Kg wet	1.67		46.8	40-140	14.4	30	V-04
Anthracene	1.26	0.17	mg/Kg wet	1.67		75.9	40-140	5.86	30	
Benzo(a)anthracene	1.28	0.17	mg/Kg wet	1.67		76.9	40-140	5.12	30	
Benzo(a)pyrene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140	6.63	30	
Benzo(b)fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.5	40-140	7.35	30	
Benzo(g,h,i)perylene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140	5.20	30	
Benzo(k)fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.1	40-140	6.15	30	
Bis(2-chloroethoxy)methane	1.33	0.34	mg/Kg wet	1.67		79.9	40-140	4.71	30	
Bis(2-chloroethyl)ether	1.02	0.34	mg/Kg wet	1.67		61.5	40-140	3.71	30	
Bis(2-chloroisopropyl)ether	1.11	0.34	mg/Kg wet	1.67		66.5	40-140	1.55	30	
Bis(2-Ethylhexyl)phthalate	1.17	0.34	mg/Kg wet	1.67		70.4	40-140	5.31	30	
4-Bromophenylphenylether	1.42	0.34	mg/Kg wet	1.67		85.0	40-140	5.02	30	
Butylbenzylphthalate	1.19	0.34	mg/Kg wet	1.67		71.4	40-140	5.32	30	
4-Chloroaniline	0.643	0.66	mg/Kg wet	1.67		38.6	15-140	0.362	30	V-34 †
2-Chloronaphthalene	1.10	0.34	mg/Kg wet	1.67		66.2	40-140	11.4	30	
2-Chlorophenol	1.18	0.34	mg/Kg wet	1.67		70.6	30-130	5.08	30	
Chrysene	1.25	0.17	mg/Kg wet	1.67		74.7	40-140	5.58	30	
Dibenz(a,h)anthracene	1.24	0.17	mg/Kg wet	1.67		74.3	40-140	5.70	30	
Dibenzofuran	1.23	0.34	mg/Kg wet	1.67		73.8	40-140	4.91	30	
Di-n-butylphthalate	1.27	0.34	mg/Kg wet	1.67		76.4	40-140	6.77	30	
1,2-Dichlorobenzene	0.976	0.34	mg/Kg wet	1.67		58.5	40-140	1.45	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
Batch B217777 - SW-846 3546										
LCS Dup (B217777-BSD1)										
					Prepared: 11/24/18 Analyzed: 11/27/18					
1,3-Dichlorobenzene	0.919	0.34	mg/Kg wet	1.67		55.2	40-140	1.61	30	
1,4-Dichlorobenzene	0.936	0.34	mg/Kg wet	1.67		56.2	40-140	1.58	30	
3,3-Dichlorobenzidine	0.995	0.17	mg/Kg wet	1.67		59.7	40-140	4.42	30	
2,4-Dichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.7	30-130	5.35	30	
Diethylphthalate	1.21	0.34	mg/Kg wet	1.67		72.7	40-140	5.54	30	
2,4-Dimethylphenol	1.19	0.34	mg/Kg wet	1.67		71.2	30-130	3.54	30	
Dimethylphthalate	1.24	0.34	mg/Kg wet	1.67		74.3	40-140	3.84	30	
2,4-Dinitrophenol	0.961	0.66	mg/Kg wet	1.67		57.7	15-140	5.82	30	†
2,4-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		74.8	40-140	5.55	30	
2,6-Dinitrotoluene	1.30	0.34	mg/Kg wet	1.67		77.9	40-140	3.98	30	
Di-n-octylphthalate	1.13	0.34	mg/Kg wet	1.67		67.7	40-140	6.50	30	
1,2-Diphenylhydrazine/Azobenzene	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	5.48	30	
Fluoranthene	1.35	0.17	mg/Kg wet	1.67		81.3	40-140	5.49	30	
Fluorene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140	5.03	30	
Hexachlorobenzene	1.40	0.34	mg/Kg wet	1.67		83.8	40-140	5.32	30	
Hexachlorobutadiene	1.17	0.34	mg/Kg wet	1.67		70.4	40-140	5.66	30	
Hexachloroethane	0.907	0.34	mg/Kg wet	1.67		54.4	40-140	1.41	30	
Indeno(1,2,3-cd)pyrene	1.27	0.17	mg/Kg wet	1.67		76.3	40-140	7.11	30	
Isophorone	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	6.04	30	
2-Methylnaphthalene	1.29	0.17	mg/Kg wet	1.67		77.3	40-140	5.23	30	
2-Methylphenol	1.20	0.34	mg/Kg wet	1.67		71.9	30-130	4.93	30	
3/4-Methylphenol	1.10	0.34	mg/Kg wet	1.67		65.9	30-130	4.53	30	
Naphthalene	1.13	0.17	mg/Kg wet	1.67		68.1	40-140	5.77	30	
Nitrobenzene	1.05	0.34	mg/Kg wet	1.67		62.9	40-140	4.29	30	
2-Nitrophenol	1.18	0.34	mg/Kg wet	1.67		70.5	30-130	6.53	30	
4-Nitrophenol	1.17	0.66	mg/Kg wet	1.67		70.1	15-140	6.45	30	†
Pentachlorophenol	0.959	0.34	mg/Kg wet	1.67		57.6	30-130	4.88	30	
Phenanthrene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140	5.63	30	
Phenol	1.13	0.34	mg/Kg wet	1.67		67.6	15-140	4.54	30	†
Pyrene	1.21	0.17	mg/Kg wet	1.67		72.6	40-140	5.40	30	
Pyridine	0.649	0.34	mg/Kg wet	1.67		39.0	30-140	1.81	30	†
1,2,4-Trichlorobenzene	1.17	0.34	mg/Kg wet	1.67		70.1	40-140	5.21	30	
2,4,5-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.5	30-130	5.18	30	
2,4,6-Trichlorophenol	1.28	0.34	mg/Kg wet	1.67		76.9	30-130	4.01	30	
Surrogate: 2-Fluorophenol	4.52		mg/Kg wet	6.67		67.9	30-130			
Surrogate: Phenol-d6	4.82		mg/Kg wet	6.67		72.2	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		69.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.15		mg/Kg wet	3.33		64.6	30-130			
Surrogate: 2,4,6-Tribromophenol	5.31		mg/Kg wet	6.67		79.7	30-130			
Surrogate: p-Terphenyl-d14	2.66		mg/Kg wet	3.33		79.9	30-130			

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QUALITY CONTROL

Organochloride Pesticides 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 B217863 - SW-846 3546

Blank (B217863-BLK1)

Prepared: 11/26/18 Analyzed: 11/28/18

alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.171		mg/Kg wet	0.200		85.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.159		mg/Kg wet	0.200		79.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.0773		mg/Kg wet	0.200		38.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0735		mg/Kg wet	0.200		36.8	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217863 - SW-846 3546										
LCS (B217863-BS1)										
					Prepared: 11/26/18 Analyzed: 11/28/18					
alpha-Chlordane	0.089	0.0050	mg/Kg wet	0.100		88.7	40-140			
alpha-Chlordane [2C]	0.082	0.0050	mg/Kg wet	0.100		81.6	40-140			
gamma-Chlordane	0.086	0.0050	mg/Kg wet	0.100		85.8	40-140			
gamma-Chlordane [2C]	0.081	0.0050	mg/Kg wet	0.100		80.8	40-140			
Alachlor	0.065	0.020	mg/Kg wet	0.100		64.5	40-140			
Alachlor [2C]	0.065	0.020	mg/Kg wet	0.100		64.5	40-140			
Aldrin	0.081	0.0050	mg/Kg wet	0.100		80.8	40-140			
Aldrin [2C]	0.073	0.0050	mg/Kg wet	0.100		73.1	40-140			
alpha-BHC	0.053	0.0050	mg/Kg wet	0.100		53.2	40-140			
alpha-BHC [2C]	0.052	0.0050	mg/Kg wet	0.100		51.8	40-140			
beta-BHC	0.062	0.0050	mg/Kg wet	0.100		62.3	40-140			
beta-BHC [2C]	0.059	0.0050	mg/Kg wet	0.100		59.3	40-140			
delta-BHC	0.066	0.0050	mg/Kg wet	0.100		66.0	40-140			
delta-BHC [2C]	0.064	0.0050	mg/Kg wet	0.100		63.7	40-140			
gamma-BHC (Lindane)	0.061	0.0020	mg/Kg wet	0.100		60.8	40-140			
gamma-BHC (Lindane) [2C]	0.057	0.0020	mg/Kg wet	0.100		56.6	40-140			
4,4'-DDD	0.10	0.0040	mg/Kg wet	0.100		99.6	40-140			
4,4'-DDD [2C]	0.086	0.0040	mg/Kg wet	0.100		86.3	40-140			
4,4'-DDE	0.098	0.0040	mg/Kg wet	0.100		97.6	40-140			
4,4'-DDE [2C]	0.085	0.0040	mg/Kg wet	0.100		85.2	40-140			
4,4'-DDT	0.10	0.0040	mg/Kg wet	0.100		101	40-140			
4,4'-DDT [2C]	0.090	0.0040	mg/Kg wet	0.100		89.5	40-140			
Dieldrin	0.093	0.0040	mg/Kg wet	0.100		92.6	40-140			
Dieldrin [2C]	0.079	0.0040	mg/Kg wet	0.100		79.2	40-140			
Endosulfan I	0.088	0.0050	mg/Kg wet	0.100		87.8	40-140			
Endosulfan I [2C]	0.080	0.0050	mg/Kg wet	0.100		79.9	40-140			
Endosulfan II	0.092	0.0080	mg/Kg wet	0.100		91.8	40-140			
Endosulfan II [2C]	0.084	0.0080	mg/Kg wet	0.100		84.3	40-140			
Endosulfan Sulfate	0.088	0.0080	mg/Kg wet	0.100		87.7	40-140			
Endosulfan Sulfate [2C]	0.081	0.0080	mg/Kg wet	0.100		80.9	40-140			
Endrin	0.093	0.0080	mg/Kg wet	0.100		93.1	40-140			
Endrin [2C]	0.084	0.0080	mg/Kg wet	0.100		84.2	40-140			
Endrin Aldehyde	0.092	0.0080	mg/Kg wet	0.100		91.6	40-140			
Endrin Aldehyde [2C]	0.085	0.0080	mg/Kg wet	0.100		85.3	40-140			
Endrin Ketone	0.093	0.0080	mg/Kg wet	0.100		92.9	40-140			
Endrin Ketone [2C]	0.087	0.0080	mg/Kg wet	0.100		86.6	40-140			
Heptachlor	0.059	0.0050	mg/Kg wet	0.100		59.4	40-140			
Heptachlor [2C]	0.069	0.0050	mg/Kg wet	0.100		68.8	40-140			
Heptachlor Epoxide	0.082	0.0050	mg/Kg wet	0.100		82.0	40-140			
Heptachlor Epoxide [2C]	0.076	0.0050	mg/Kg wet	0.100		75.5	40-140			
Hexachlorobenzene	0.058	0.0060	mg/Kg wet	0.100		57.8	40-140			
Hexachlorobenzene [2C]	0.055	0.0060	mg/Kg wet	0.100		54.5	40-140			
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		107	40-140			
Methoxychlor [2C]	0.10	0.050	mg/Kg wet	0.100		102	40-140			
Surrogate: Decachlorobiphenyl	0.176		mg/Kg wet	0.200		88.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.163		mg/Kg wet	0.200		81.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.106		mg/Kg wet	0.200		53.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.101		mg/Kg wet	0.200		50.7	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217863 - SW-846 3546										
LCS Dup (B217863-BSD1)										
					Prepared: 11/26/18 Analyzed: 11/28/18					
alpha-Chlordane	0.087	0.0050	mg/Kg wet	0.100		87.0	40-140	1.95	30	
alpha-Chlordane [2C]	0.079	0.0050	mg/Kg wet	0.100		79.5	40-140	2.69	30	
gamma-Chlordane	0.085	0.0050	mg/Kg wet	0.100		84.9	40-140	1.13	30	
gamma-Chlordane [2C]	0.079	0.0050	mg/Kg wet	0.100		79.3	40-140	1.85	30	
Alachlor	0.068	0.020	mg/Kg wet	0.100		68.0	40-140	5.27	30	
Alachlor [2C]	0.067	0.020	mg/Kg wet	0.100		66.8	40-140	3.45	30	
Aldrin	0.083	0.0050	mg/Kg wet	0.100		82.7	40-140	2.23	30	
Aldrin [2C]	0.074	0.0050	mg/Kg wet	0.100		73.9	40-140	1.09	30	
alpha-BHC	0.060	0.0050	mg/Kg wet	0.100		59.5	40-140	11.2	30	
alpha-BHC [2C]	0.057	0.0050	mg/Kg wet	0.100		57.3	40-140	10.1	30	
beta-BHC	0.069	0.0050	mg/Kg wet	0.100		68.8	40-140	9.90	30	
beta-BHC [2C]	0.065	0.0050	mg/Kg wet	0.100		64.6	40-140	8.59	30	
delta-BHC	0.070	0.0050	mg/Kg wet	0.100		70.0	40-140	5.85	30	
delta-BHC [2C]	0.067	0.0050	mg/Kg wet	0.100		67.0	40-140	5.08	30	
gamma-BHC (Lindane)	0.067	0.0020	mg/Kg wet	0.100		66.8	40-140	9.34	30	
gamma-BHC (Lindane) [2C]	0.062	0.0020	mg/Kg wet	0.100		61.6	40-140	8.61	30	
4,4'-DDD	0.094	0.0040	mg/Kg wet	0.100		94.2	40-140	5.57	30	
4,4'-DDD [2C]	0.082	0.0040	mg/Kg wet	0.100		81.8	40-140	5.29	30	
4,4'-DDE	0.094	0.0040	mg/Kg wet	0.100		93.5	40-140	4.32	30	
4,4'-DDE [2C]	0.081	0.0040	mg/Kg wet	0.100		81.4	40-140	4.48	30	
4,4'-DDT	0.096	0.0040	mg/Kg wet	0.100		95.7	40-140	5.61	30	
4,4'-DDT [2C]	0.084	0.0040	mg/Kg wet	0.100		84.4	40-140	5.88	30	
Dieldrin	0.090	0.0040	mg/Kg wet	0.100		89.7	40-140	3.19	30	
Dieldrin [2C]	0.076	0.0040	mg/Kg wet	0.100		76.5	40-140	3.51	30	
Endosulfan I	0.086	0.0050	mg/Kg wet	0.100		86.0	40-140	2.08	30	
Endosulfan I [2C]	0.078	0.0050	mg/Kg wet	0.100		77.8	40-140	2.66	30	
Endosulfan II	0.088	0.0080	mg/Kg wet	0.100		87.8	40-140	4.41	30	
Endosulfan II [2C]	0.081	0.0080	mg/Kg wet	0.100		80.6	40-140	4.38	30	
Endosulfan Sulfate	0.083	0.0080	mg/Kg wet	0.100		82.5	40-140	6.07	30	
Endosulfan Sulfate [2C]	0.078	0.0080	mg/Kg wet	0.100		77.6	40-140	4.21	30	
Endrin	0.090	0.0080	mg/Kg wet	0.100		89.7	40-140	3.73	30	
Endrin [2C]	0.081	0.0080	mg/Kg wet	0.100		80.8	40-140	4.01	30	
Endrin Aldehyde	0.094	0.0080	mg/Kg wet	0.100		93.8	40-140	2.39	30	
Endrin Aldehyde [2C]	0.087	0.0080	mg/Kg wet	0.100		86.6	40-140	1.52	30	
Endrin Ketone	0.088	0.0080	mg/Kg wet	0.100		88.4	40-140	4.97	30	
Endrin Ketone [2C]	0.083	0.0080	mg/Kg wet	0.100		82.9	40-140	4.27	30	
Heptachlor	0.062	0.0050	mg/Kg wet	0.100		62.0	40-140	4.27	30	
Heptachlor [2C]	0.071	0.0050	mg/Kg wet	0.100		70.7	40-140	2.76	30	
Heptachlor Epoxide	0.082	0.0050	mg/Kg wet	0.100		82.3	40-140	0.419	30	
Heptachlor Epoxide [2C]	0.075	0.0050	mg/Kg wet	0.100		75.0	40-140	0.695	30	
Hexachlorobenzene	0.063	0.0060	mg/Kg wet	0.100		63.4	40-140	9.17	30	
Hexachlorobenzene [2C]	0.059	0.0060	mg/Kg wet	0.100		59.1	40-140	8.09	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		101	40-140	5.62	30	
Methoxychlor [2C]	0.096	0.050	mg/Kg wet	0.100		96.3	40-140	6.11	30	
Surrogate: Decachlorobiphenyl	0.173		mg/Kg wet	0.200		86.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.161		mg/Kg wet	0.200		80.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.145		mg/Kg wet	0.200		72.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.134		mg/Kg wet	0.200		67.2	30-150			

QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217863 - SW-846 3546										
Matrix Spike (B217863-MS1)	Source: 18K0931-01			Prepared: 11/26/18 Analyzed: 11/29/18						
Alachlor	0.057	0.023	mg/Kg dry	0.114	ND	49.9	30-150			
Alachlor [2C]	0.054	0.023	mg/Kg dry	0.114	ND	47.5	30-150			
Aldrin	0.082	0.0057	mg/Kg dry	0.114	ND	71.7	30-150			
Aldrin [2C]	0.073	0.0057	mg/Kg dry	0.114	ND	63.8	30-150			
alpha-BHC	0.043	0.0057	mg/Kg dry	0.114	ND	37.9	30-150			
alpha-BHC [2C]	0.042	0.0057	mg/Kg dry	0.114	ND	36.5	30-150			
beta-BHC	0.062	0.0057	mg/Kg dry	0.114	ND	54.1	30-150			
beta-BHC [2C]	0.058	0.0057	mg/Kg dry	0.114	ND	50.7	30-150			
delta-BHC	0.066	0.0057	mg/Kg dry	0.114	ND	58.3	30-150			
delta-BHC [2C]	0.063	0.0057	mg/Kg dry	0.114	ND	54.9	30-150			
gamma-BHC (Lindane)	0.054	0.0023	mg/Kg dry	0.114	ND	47.2	30-150			
gamma-BHC (Lindane) [2C]	0.050	0.0023	mg/Kg dry	0.114	ND	43.4	30-150			
4,4'-DDD	0.10	0.0046	mg/Kg dry	0.114	ND	90.0	30-150			
4,4'-DDD [2C]	0.092	0.0046	mg/Kg dry	0.114	ND	81.0	30-150			
4,4'-DDE	0.10	0.0046	mg/Kg dry	0.114	ND	91.0	30-150			
4,4'-DDE [2C]	0.094	0.0046	mg/Kg dry	0.114	ND	82.6	30-150			
4,4'-DDT	0.11	0.0046	mg/Kg dry	0.114	0.0078	92.2	30-150			
4,4'-DDT [2C]	0.098	0.0046	mg/Kg dry	0.114	0.0063	80.6	30-150			
Dieldrin	0.095	0.0046	mg/Kg dry	0.114	ND	83.0	30-150			
Dieldrin [2C]	0.082	0.0046	mg/Kg dry	0.114	ND	71.6	30-150			
Endosulfan I	0.092	0.0057	mg/Kg dry	0.114	ND	80.5	30-150			
Endosulfan I [2C]	0.082	0.0057	mg/Kg dry	0.114	ND	72.1	30-150			
Endosulfan II	0.096	0.0091	mg/Kg dry	0.114	ND	84.0	30-150			
Endosulfan II [2C]	0.093	0.0091	mg/Kg dry	0.114	ND	81.1	30-150			
Endosulfan Sulfate	0.076	0.0091	mg/Kg dry	0.114	ND	66.7	30-150			
Endosulfan Sulfate [2C]	0.080	0.0091	mg/Kg dry	0.114	ND	70.2	30-150			
Endrin	0.070	0.0091	mg/Kg dry	0.114	ND	61.7	30-150			
Endrin [2C]	0.063	0.0091	mg/Kg dry	0.114	ND	55.6	30-150			
Endrin Aldehyde	0.097	0.0091	mg/Kg dry	0.114	ND	85.3	30-150			
Endrin Aldehyde [2C]	0.10	0.0091	mg/Kg dry	0.114	ND	88.1	30-150			
Endrin Ketone	0.12	0.0091	mg/Kg dry	0.114	ND	108	30-150			
Endrin Ketone [2C]	0.12	0.0091	mg/Kg dry	0.114	ND	103	30-150			
Heptachlor	0.060	0.0057	mg/Kg dry	0.114	ND	52.7	30-150			
Heptachlor [2C]	0.067	0.0057	mg/Kg dry	0.114	ND	58.5	30-150			
Heptachlor Epoxide	0.084	0.0057	mg/Kg dry	0.114	ND	73.8	30-150			
Heptachlor Epoxide [2C]	0.076	0.0057	mg/Kg dry	0.114	ND	66.8	30-150			
Hexachlorobenzene	0.051	0.0068	mg/Kg dry	0.114	ND	44.7	30-150			
Hexachlorobenzene [2C]	0.047	0.0068	mg/Kg dry	0.114	ND	41.4	30-150			
Methoxychlor	0.11	0.057	mg/Kg dry	0.114	ND	96.5	30-150			
Methoxychlor [2C]	0.11	0.057	mg/Kg dry	0.114	ND	99.3	30-150			
Surrogate: Decachlorobiphenyl	0.244		mg/Kg dry	0.228		107	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.229		mg/Kg dry	0.228		100	30-150			
Surrogate: Tetrachloro-m-xylene	0.115		mg/Kg dry	0.228		50.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.105		mg/Kg dry	0.228		46.2	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217863 - SW-846 3546										
Matrix Spike Dup (B217863-MSD1)	Source: 18K0931-01			Prepared: 11/26/18 Analyzed: 11/29/18						
Alachlor	0.059	0.023	mg/Kg dry	0.114	ND	51.5	30-150	3.19	30	
Alachlor [2C]	0.057	0.023	mg/Kg dry	0.114	ND	49.7	30-150	4.70	30	
Aldrin	0.071	0.0057	mg/Kg dry	0.114	ND	62.5	30-150	13.7	30	
Aldrin [2C]	0.064	0.0057	mg/Kg dry	0.114	ND	55.8	30-150	13.5	30	
alpha-BHC	0.035	0.0057	mg/Kg dry	0.114	ND	30.3	30-150	22.2	30	
alpha-BHC [2C]	0.034	0.0057	mg/Kg dry	0.114	ND	29.9	* 30-150	19.8	30	MS-22
beta-BHC	0.051	0.0057	mg/Kg dry	0.114	ND	45.1	30-150	18.1	30	
beta-BHC [2C]	0.048	0.0057	mg/Kg dry	0.114	ND	42.4	30-150	17.7	30	
delta-BHC	0.056	0.0057	mg/Kg dry	0.114	ND	49.5	30-150	16.4	30	
delta-BHC [2C]	0.054	0.0057	mg/Kg dry	0.114	ND	47.1	30-150	15.2	30	
gamma-BHC (Lindane)	0.044	0.0023	mg/Kg dry	0.114	ND	38.8	30-150	19.5	30	
gamma-BHC (Lindane) [2C]	0.041	0.0023	mg/Kg dry	0.114	ND	36.2	30-150	18.3	30	
4,4'-DDD	0.094	0.0046	mg/Kg dry	0.114	ND	82.2	30-150	9.08	30	
4,4'-DDD [2C]	0.085	0.0046	mg/Kg dry	0.114	ND	74.3	30-150	8.68	30	
4,4'-DDE	0.093	0.0046	mg/Kg dry	0.114	ND	81.9	30-150	10.5	30	
4,4'-DDE [2C]	0.085	0.0046	mg/Kg dry	0.114	ND	74.2	30-150	10.7	30	
4,4'-DDT	0.10	0.0046	mg/Kg dry	0.114	0.0078	81.5	30-150	11.5	30	
4,4'-DDT [2C]	0.088	0.0046	mg/Kg dry	0.114	0.0063	71.5	30-150	11.1	30	
Dieldrin	0.086	0.0046	mg/Kg dry	0.114	ND	75.6	30-150	9.30	30	
Dieldrin [2C]	0.075	0.0046	mg/Kg dry	0.114	ND	65.6	30-150	8.70	30	
Endosulfan I	0.082	0.0057	mg/Kg dry	0.114	ND	72.0	30-150	11.2	30	
Endosulfan I [2C]	0.074	0.0057	mg/Kg dry	0.114	ND	64.8	30-150	10.7	30	
Endosulfan II	0.087	0.0091	mg/Kg dry	0.114	ND	76.6	30-150	9.25	30	
Endosulfan II [2C]	0.084	0.0091	mg/Kg dry	0.114	ND	73.8	30-150	9.50	30	
Endosulfan Sulfate	0.077	0.0091	mg/Kg dry	0.114	ND	67.8	30-150	1.60	30	
Endosulfan Sulfate [2C]	0.074	0.0091	mg/Kg dry	0.114	ND	65.1	30-150	7.53	30	
Endrin	0.088	0.0091	mg/Kg dry	0.114	ND	77.5	30-150	22.8	30	
Endrin [2C]	0.080	0.0091	mg/Kg dry	0.114	ND	70.2	30-150	23.3	30	
Endrin Aldehyde	0.099	0.0091	mg/Kg dry	0.114	ND	86.7	30-150	1.59	30	
Endrin Aldehyde [2C]	0.10	0.0091	mg/Kg dry	0.114	ND	88.2	30-150	0.132	30	
Endrin Ketone	0.094	0.0091	mg/Kg dry	0.114	ND	82.0	30-150	27.6	30	
Endrin Ketone [2C]	0.091	0.0091	mg/Kg dry	0.114	ND	79.8	30-150	25.0	30	
Heptachlor	0.051	0.0057	mg/Kg dry	0.114	ND	44.9	30-150	15.9	30	
Heptachlor [2C]	0.058	0.0057	mg/Kg dry	0.114	ND	50.5	30-150	14.7	30	
Heptachlor Epoxide	0.074	0.0057	mg/Kg dry	0.114	ND	65.1	30-150	12.5	30	
Heptachlor Epoxide [2C]	0.067	0.0057	mg/Kg dry	0.114	ND	59.0	30-150	12.4	30	
Hexachlorobenzene	0.042	0.0068	mg/Kg dry	0.114	ND	37.2	30-150	18.2	30	
Hexachlorobenzene [2C]	0.040	0.0068	mg/Kg dry	0.114	ND	34.7	30-150	17.7	30	
Methoxychlor	0.10	0.057	mg/Kg dry	0.114	ND	88.0	30-150	9.23	30	
Methoxychlor [2C]	0.10	0.057	mg/Kg dry	0.114	ND	88.3	30-150	11.6	30	
Surrogate: Decachlorobiphenyl	0.243		mg/Kg dry	0.228		107	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.230		mg/Kg dry	0.228		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.110		mg/Kg dry	0.228		48.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.101		mg/Kg dry	0.228		44.3	30-150			

QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217862 - SW-846 3546										
Blank (B217862-BLK1)										
Prepared: 11/26/18 Analyzed: 11/27/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.184		mg/Kg wet	0.200		92.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.183		mg/Kg wet	0.200		91.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.165		mg/Kg wet	0.200		82.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.155		mg/Kg wet	0.200		77.3	30-150			
LCS (B217862-BS1)										
Prepared: 11/26/18 Analyzed: 11/27/18										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		82.3	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		81.2	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		86.1	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		86.7	40-140			
Surrogate: Decachlorobiphenyl	0.190		mg/Kg wet	0.200		95.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.190		mg/Kg wet	0.200		94.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.169		mg/Kg wet	0.200		84.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.159		mg/Kg wet	0.200		79.4	30-150			
LCS Dup (B217862-BSD1)										
Prepared: 11/26/18 Analyzed: 11/27/18										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		90.1	40-140	8.97	30	
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		88.8	40-140	8.98	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		94.1	40-140	8.85	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		94.9	40-140	9.10	30	
Surrogate: Decachlorobiphenyl	0.206		mg/Kg wet	0.200		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.205		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.174		mg/Kg wet	0.200		87.2	30-150			

QUALITY CONTROL

Herbicides 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 B217799 - SW-846 8151

Blank (B217799-BLK1)

Prepared: 11/26/18 Analyzed: 11/29/18

2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	66.0		µg/kg wet	95.2		69.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	63.3		µg/kg wet	95.2		66.4	30-150			

LCS (B217799-BS1)

Prepared: 11/26/18 Analyzed: 11/29/18

2,4-D	104	25	µg/kg wet	125		83.3	40-140			
2,4-D [2C]	108	25	µg/kg wet	125		86.1	40-140			
2,4-DB	107	25	µg/kg wet	125		85.7	40-140			
2,4-DB [2C]	105	25	µg/kg wet	125		83.8	40-140			
2,4,5-TP (Silvex)	10.7	2.5	µg/kg wet	12.5		85.4	40-140			
2,4,5-TP (Silvex) [2C]	11.0	2.5	µg/kg wet	12.5		88.1	40-140			
2,4,5-T	10.4	2.5	µg/kg wet	12.5		82.9	40-140			
2,4,5-T [2C]	11.6	2.5	µg/kg wet	12.5		93.1	40-140			
Dalapon	179	62	µg/kg wet	312		57.3	40-140			
Dalapon [2C]	174	62	µg/kg wet	312		55.7	40-140			
Dicamba	10.8	2.5	µg/kg wet	12.5		86.2	40-140			
Dicamba [2C]	10.5	2.5	µg/kg wet	12.5		83.7	40-140			
Dichloroprop	118	25	µg/kg wet	125		94.2	40-140			
Dichloroprop [2C]	108	25	µg/kg wet	125		86.7	40-140			
Dinoseb	13.5	12	µg/kg wet	62.5		21.6	0-42.4			
Dinoseb [2C]	13.8	12	µg/kg wet	62.5		22.1	0-41.1			
MCPA	10300	2500	µg/kg wet	12500		82.5	40-140			
MCPA [2C]	9370	2500	µg/kg wet	12500		74.9	40-140			
MCPP	13700	2500	µg/kg wet	12500		110	40-140			
MCPP [2C]	9600	2500	µg/kg wet	12500		76.8	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	80.7		µg/kg wet	100		80.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	78.0		µg/kg wet	100		78.0	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217799 - SW-846 8151										
LCS Dup (B217799-BSD1)										
					Prepared: 11/26/18 Analyzed: 11/29/18					
2,4-D	97.9	25	µg/kg wet	125		78.3	40-140	6.21	30	
2,4-D [2C]	101	25	µg/kg wet	125		80.6	40-140	6.57	30	
2,4-DB	100	25	µg/kg wet	125		80.3	40-140	6.49	30	
2,4-DB [2C]	101	25	µg/kg wet	125		80.8	40-140	3.67	30	
2,4,5-TP (Silvex)	10.3	2.5	µg/kg wet	12.5		82.5	40-140	3.50	30	
2,4,5-TP (Silvex) [2C]	10.5	2.5	µg/kg wet	12.5		83.8	40-140	4.97	30	
2,4,5-T	9.80	2.5	µg/kg wet	12.5		78.4	40-140	5.63	30	
2,4,5-T [2C]	10.7	2.5	µg/kg wet	12.5		85.6	40-140	8.40	30	
Dalapon	189	62	µg/kg wet	312		60.4	40-140	5.16	30	
Dalapon [2C]	185	62	µg/kg wet	312		59.2	40-140	6.16	30	
Dicamba	10.2	2.5	µg/kg wet	12.5		82.0	40-140	4.96	30	
Dicamba [2C]	9.73	2.5	µg/kg wet	12.5		77.8	40-140	7.32	30	
Dichloroprop	105	25	µg/kg wet	125		84.2	40-140	11.3	30	
Dichloroprop [2C]	103	25	µg/kg wet	125		82.0	40-140	5.55	30	
Dinoseb	13.3	12	µg/kg wet	62.5		21.3	0-42.4	1.47	30	
Dinoseb [2C]	13.8	12	µg/kg wet	62.5		22.1	0-41.1	0.259	30	
MCPA	9290	2500	µg/kg wet	12500		74.4	40-140	10.4	30	
MCPA [2C]	8810	2500	µg/kg wet	12500		70.5	40-140	6.11	30	
MCPP	12800	2500	µg/kg wet	12500		102	40-140	7.18	30	
MCPP [2C]	9130	2500	µg/kg wet	12500		73.0	40-140	5.06	30	
Surrogate: 2,4-Dichlorophenylacetic acid	77.5		µg/kg wet	100		77.5	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	73.0		µg/kg wet	100		73.0	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217782 - SW-846 3546										
Blank (B217782-BLK1)										
					Prepared: 11/24/18 Analyzed: 11/27/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.10		mg/Kg wet	3.33		63.1	40-140			
LCS (B217782-BS1)										
					Prepared: 11/24/18 Analyzed: 11/27/18					
TPH (C9-C36)	25.4	8.3	mg/Kg wet	33.3		76.1	40-140			
Surrogate: 2-Fluorobiphenyl	2.44		mg/Kg wet	3.33		73.2	40-140			
LCS Dup (B217782-BSD1)										
					Prepared: 11/24/18 Analyzed: 11/27/18					
TPH (C9-C36)	23.6	8.3	mg/Kg wet	33.3		70.7	40-140	7.35	30	
Surrogate: 2-Fluorobiphenyl	2.27		mg/Kg wet	3.33		68.0	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
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Batch B217937 - SW-846 3050B

Blank (B217937-BLK1)

Prepared: 11/27/18 Analyzed: 11/28/18

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 (B217937-BS1)

Prepared: 11/27/18 Analyzed: 11/28/18

Antimony	60.3	4.9	mg/Kg wet	75.5		79.8	3.8-196			
Arsenic	155	4.9	mg/Kg wet	161		96.2	83.2-116.8			
Barium	266	4.9	mg/Kg wet	260		102	82.7-117.3			
Beryllium	95.2	0.49	mg/Kg wet	97.6		97.6	83.4-116.8			
Cadmium	210	0.49	mg/Kg wet	211		99.6	83.4-116.6			
Chromium	136	0.98	mg/Kg wet	136		99.9	82.4-117.6			
Lead	109	1.5	mg/Kg wet	111		98.5	83-117.1			
Nickel	95.6	0.98	mg/Kg wet	91.9		104	82.9-117.5			
Selenium	180	9.8	mg/Kg wet	191		94.4	79.6-120.9			
Silver	45.2	0.98	mg/Kg wet	43.3		104	79.9-119.9			
Thallium	166	4.9	mg/Kg wet	156		107	81.4-119.2			
Vanadium	51.5	2.0	mg/Kg wet	56.7		90.8	79-121.2			
Zinc	199	2.0	mg/Kg wet	199		99.8	81.4-119.1			

LCS Dup (B217937-BSD1)

Prepared: 11/27/18 Analyzed: 11/28/18

Antimony	62.2	4.9	mg/Kg wet	75.5		82.3	3.8-196	3.12	30	
Arsenic	159	4.9	mg/Kg wet	161		99.0	83.2-116.8	2.81	30	
Barium	276	4.9	mg/Kg wet	260		106	82.7-117.3	3.66	30	
Beryllium	96.1	0.49	mg/Kg wet	97.6		98.4	83.4-116.8	0.876	30	
Cadmium	211	0.49	mg/Kg wet	211		99.8	83.4-116.6	0.220	30	
Chromium	140	0.98	mg/Kg wet	136		103	82.4-117.6	2.89	30	
Lead	113	1.5	mg/Kg wet	111		102	83-117.1	3.17	30	
Nickel	97.4	0.98	mg/Kg wet	91.9		106	82.9-117.5	1.82	30	
Selenium	188	9.8	mg/Kg wet	191		98.5	79.6-120.9	4.24	30	
Silver	46.8	0.98	mg/Kg wet	43.3		108	79.9-119.9	3.39	30	
Thallium	167	4.9	mg/Kg wet	156		107	81.4-119.2	0.382	30	
Vanadium	54.4	2.0	mg/Kg wet	56.7		96.0	79-121.2	5.52	30	
Zinc	204	2.0	mg/Kg wet	199		103	81.4-119.1	2.90	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
Batch B217937 - SW-846 3050B										
MRL Check (B217937-MRL1)					Prepared: 11/27/18 Analyzed: 11/29/18					
Lead	0.636	0.50	mg/Kg wet	0.499		127 *	80-120			M-10
Batch B217947 - SW-846 7471										
Blank (B217947-BLK1)					Prepared: 11/27/18 Analyzed: 11/28/18					
Mercury	ND	0.025	mg/Kg wet							
LCS (B217947-BS1)					Prepared: 11/27/18 Analyzed: 11/28/18					
Mercury	13.9	1.9	mg/Kg wet	11.5		121	71.6-127.8			
LCS Dup (B217947-BSD1)					Prepared: 11/27/18 Analyzed: 11/28/18					
Mercury	11.4	1.9	mg/Kg wet	11.5		99.2	71.6-127.8	19.9	30	

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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 B217703 - SW-846 9045C										
LCS (B217703-BS1)				Prepared & Analyzed: 11/20/18						
pH	6.01		pH Units	6.00		100	90-110			
Duplicate (B217703-DUP1)				Source: 18K0931-01		Prepared & Analyzed: 11/20/18				
pH	4.9		pH Units		4.8			0.453	5	H-03
Batch B217784 - SM21-22 2510B Modified										
Blank (B217784-BLK1)				Prepared & Analyzed: 11/26/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B217784-BS1)				Prepared & Analyzed: 11/26/18						
Specific conductance	200		µmhos/cm	192		106	90-110			
Batch B217892 - % Solids										
Duplicate (B217892-DUP1)				Source: 18K0931-01		Prepared: 11/26/18 Analyzed: 11/27/18				
% Solids	87.5		% Wt		87.7			0.272	20	
Batch B218163 - SW-846 9014										
Blank (B218163-BLK1)				Prepared: 11/29/18 Analyzed: 11/30/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B218163-BS1)				Prepared: 11/29/18 Analyzed: 11/30/18						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
Batch B218234 - SW-846 9030A										
Blank (B218234-BLK1)				Prepared: 11/29/18 Analyzed: 11/30/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B218234-BS1)				Prepared: 11/29/18 Analyzed: 11/30/18						
Reactive Sulfide	13	2.0	mg/Kg	14.8		86.5	54.9-121			

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BREAKDOWN REPORT

Lab Sample ID: S029734-PEM1 **Analyzed:** 11/27/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.89
Endrin [1] 2.54

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 1.23
Endrin [2] 2.99

BREAKDOWN REPORT

Lab Sample ID: S029734-PEM2 **Analyzed:** 11/27/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.85
Endrin [1] 2.17

Column Number: 2
Analyte **% Breakdown**
4,4'-DDT [2] 1.14
Endrin [2] 2.54

BREAKDOWN REPORT

Lab Sample ID: S029734-PEM3 **Analyzed:** 11/28/2018

Column Number: 1
Analyte **% Breakdown**
4,4'-DDT [1] 0.93
Endrin [1] 2.05

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BREAKDOWN REPORT

Lab Sample ID: S029734-PEM3 Analyzed: 11/28/2018

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	1.17
Endrin [2]	2.41

BREAKDOWN REPORT

Lab Sample ID: S029734-PEM5 Analyzed: 11/28/2018

Column Number:	1
Analyte	% Breakdown
4,4'-DDT [1]	2.24
Endrin [1]	1.74

Column Number:	2
Analyte	% Breakdown
4,4'-DDT [2]	2.78
Endrin [2]	1.99

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

B28

SW-846 8081B

Lab Sample ID: 18K0931-01 Date(s) Analyzed: 11/28/2018 11/28/2018

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDT	1	7.882	7.851	7.911	0.0078	
	2	7.878	7.848	7.908	0.0063	21.3

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8151A

LCS

Lab Sample ID: B217799-BS1 Date(s) Analyzed: 11/29/2018 11/29/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	15.679	0.000	0.000	10.4	
	2	15.213	0.000	0.000	11.6	14.8
2,4,5-TP (Silvex)	1	15.059	0.000	0.000	10.7	
	2	14.371	0.000	0.000	11.0	0.0
2,4-D	1	13.237	0.000	0.000	104	
	2	12.671	0.000	0.000	108	7.7
2,4-DB	1	16.754	0.000	0.000	107	
	2	16.297	0.000	0.000	105	4.7
Dalapon	1	4.404	0.000	0.000	179	
	2	3.874	0.000	0.000	174	3.4
Dicamba	1	11.158	0.000	0.000	10.8	
	2	10.551	0.000	0.000	10.5	4.7
Dichloroprop	1	12.736	0.000	0.000	118	
	2	12.017	0.000	0.000	108	10.5
Dinoseb	1	17.487	0.000	0.000	13.5	
	2	16.787	0.000	0.000	13.8	1.4
MCPA	1	11.965	0.000	0.000	10300	
	2	11.353	0.000	0.000	9370	6.5
MCPD	1	11.640	0.000	0.000	13700	
	2	10.885	0.000	0.000	9600	37.3

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8151A

Lab Sample ID: B217799-BSD1 Date(s) Analyzed: 11/29/2018 11/29/2018
 Instrument ID (1): ECD 8 Instrument ID (2): ECD 8
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	15.679	0.000	0.000	9.80	
	2	15.215	0.000	0.000	10.7	8.8
2,4,5-TP (Silvex)	1	15.058	0.000	0.000	10.3	
	2	14.372	0.000	0.000	10.5	4.9
2,4-D	1	13.235	0.000	0.000	97.9	
	2	12.671	0.000	0.000	101	3.0
2,4-DB	1	16.753	0.000	0.000	100	
	2	16.298	0.000	0.000	101	1.0
Dalapon	1	4.403	0.000	0.000	189	
	2	3.873	0.000	0.000	185	2.7
Dicamba	1	11.159	0.000	0.000	10.2	
	2	10.552	0.000	0.000	9.73	2.7
Dichloroprop	1	12.735	0.000	0.000	105	
	2	12.017	0.000	0.000	103	6.6
Dinoseb	1	17.487	0.000	0.000	13.3	
	2	16.786	0.000	0.000	13.8	6.0
MCPA	1	11.963	0.000	0.000	9290	
	2	11.351	0.000	0.000	8810	5.4
MCPD	1	11.640	0.000	0.000	12800	
	2	10.884	0.000	0.000	9130	35.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B217862-BS1 Date(s) Analyzed: 11/27/2018 11/27/2018

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	0.000	0.000	0.16	
	2	0.000	0.000	0.000	0.16	6.1
Aroclor-1260	1	0.000	0.000	0.000	0.17	
	2	0.000	0.000	0.000	0.17	0.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B217862-BSD1 Date(s) Analyzed: 11/27/2018 11/27/2018

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	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.18	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.19	0.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8081B

LCS

Lab Sample ID: B217863-BS1 Date(s) Analyzed: 11/28/2018 11/28/2018
 Instrument ID (1): ECD2A Instrument ID (2): ECD2B
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.664	7.634	7.694	0.10	
	2	7.635	7.605	7.665	0.086	15.1
4,4'-DDE	1	7.203	7.173	7.233	0.098	
	2	7.191	7.161	7.221	0.085	14.2
4,4'-DDT	1	7.883	7.854	7.914	0.10	
	2	7.883	7.853	7.913	0.090	10.5
Alachlor	1	6.607	6.577	6.637	0.065	
	2	6.329	6.299	6.359	0.065	0.0
Aldrin	1	6.516	6.486	6.546	0.081	
	2	6.408	6.378	6.438	0.073	10.4
alpha-BHC	1	5.747	5.717	5.777	0.053	
	2	5.651	5.621	5.681	0.052	1.9
alpha-Chlordane	1	7.154	7.123	7.183	0.089	
	2	7.065	7.034	7.094	0.082	8.2
beta-BHC	1	6.020	5.989	6.049	0.062	
	2	5.936	5.903	5.963	0.059	5.0
delta-BHC	1	6.147	6.117	6.177	0.066	
	2	6.133	6.102	6.162	0.064	3.1
Dieldrin	1	7.444	7.414	7.474	0.093	
	2	7.314	7.283	7.343	0.079	16.3
Endosulfan I	1	7.262	7.232	7.292	0.088	
	2	7.107	7.077	7.137	0.080	9.5
Endosulfan II	1	7.800	7.770	7.830	0.092	
	2	7.710	7.679	7.739	0.084	9.1
Endosulfan Sulfate	1	8.407	8.377	8.437	0.088	
	2	8.173	8.143	8.203	0.081	8.3
Endrin	1	7.626	7.595	7.655	0.093	
	2	7.545	7.515	7.575	0.084	10.2
Endrin Aldehyde	1	8.112	8.082	8.142	0.092	
	2	7.971	7.941	8.001	0.085	7.9
Endrin Ketone	1	8.583	8.552	8.612	0.093	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8081B

Lab Sample ID: B217863-BS1 Date(s) Analyzed: 11/28/2018 11/28/2018

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.521	8.491	8.551	0.087	6.7
gamma-BHC (Lindane)	1	5.964	5.934	5.994	0.061	
	2	5.882	5.851	5.911	0.057	6.8
gamma-Chlordane	1	7.053	7.024	7.084	0.086	
	2	6.956	6.925	6.985	0.081	6.0
Heptachlor	1	6.298	6.268	6.328	0.059	
	2	6.182	6.152	6.212	0.069	15.6
Heptachlor Epoxide	1	6.962	6.932	6.992	0.082	
	2	6.816	6.786	6.846	0.076	7.6
Hexachlorobenzene	1	5.632	5.602	5.662	0.058	
	2	5.562	5.532	5.592	0.055	5.3
Methoxychlor	1	8.227	8.196	8.256	0.11	
	2	8.372	8.341	8.401	0.10	9.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B217863-BSD1 Date(s) Analyzed: 11/28/2018 11/28/2018
 Instrument ID (1): ECD2A Instrument ID (2): ECD2B
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.664	7.634	7.694	0.094	
	2	7.636	7.605	7.665	0.082	13.6
4,4'-DDE	1	7.203	7.173	7.233	0.094	
	2	7.191	7.161	7.221	0.081	14.9
4,4'-DDT	1	7.884	7.854	7.914	0.096	
	2	7.883	7.853	7.913	0.084	13.3
Alachlor	1	6.608	6.577	6.637	0.068	
	2	6.330	6.299	6.359	0.067	1.5
Aldrin	1	6.516	6.486	6.546	0.083	
	2	6.409	6.378	6.438	0.074	11.5
alpha-BHC	1	5.747	5.717	5.777	0.060	
	2	5.651	5.621	5.681	0.057	5.1
alpha-Chlordane	1	7.154	7.123	7.183	0.087	
	2	7.065	7.034	7.094	0.079	9.6
beta-BHC	1	6.020	5.989	6.049	0.069	
	2	5.936	5.903	5.963	0.065	6.0
delta-BHC	1	6.147	6.117	6.177	0.070	
	2	6.133	6.102	6.162	0.067	4.4
Dieldrin	1	7.444	7.414	7.474	0.090	
	2	7.314	7.283	7.343	0.076	16.9
Endosulfan I	1	7.262	7.232	7.292	0.086	
	2	7.107	7.077	7.137	0.078	9.8
Endosulfan II	1	7.800	7.770	7.830	0.088	
	2	7.710	7.679	7.739	0.081	8.3
Endosulfan Sulfate	1	8.407	8.377	8.437	0.083	
	2	8.173	8.143	8.203	0.078	6.2
Endrin	1	7.625	7.595	7.655	0.090	
	2	7.546	7.515	7.575	0.081	10.5
Endrin Aldehyde	1	8.113	8.082	8.142	0.094	
	2	7.971	7.941	8.001	0.087	7.7
Endrin Ketone	1	8.584	8.552	8.612	0.088	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8081B

Lab Sample ID: B217863-BSD1 Date(s) Analyzed: 11/28/2018 11/28/2018

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.521	8.491	8.551	0.083	5.9
gamma-BHC (Lindane)	1	5.964	5.934	5.994	0.067	
	2	5.882	5.851	5.911	0.062	7.8
gamma-Chlordane	1	7.054	7.024	7.084	0.085	
	2	6.956	6.925	6.985	0.079	7.3
Heptachlor	1	6.298	6.268	6.328	0.062	
	2	6.182	6.152	6.212	0.071	13.5
Heptachlor Epoxide	1	6.962	6.932	6.992	0.082	
	2	6.816	6.786	6.846	0.075	8.9
Hexachlorobenzene	1	5.633	5.602	5.662	0.063	
	2	5.562	5.532	5.592	0.059	6.6
Methoxychlor	1	8.228	8.196	8.256	0.10	
	2	8.371	8.341	8.401	0.096	4.1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

Matrix Spike

SW-846 8081B

Lab Sample ID: B217863-MS1 Date(s) Analyzed: 11/29/2018 11/29/2018

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.661	7.632	7.692	0.10	
	2	7.630	7.601	7.661	0.092	8.3
4,4'-DDE	1	7.200	7.170	7.230	0.10	
	2	7.186	7.157	7.217	0.094	6.2
4,4'-DDT	1	7.880	7.851	7.911	0.11	
	2	7.878	7.848	7.908	0.098	11.5
Alachlor	1	6.605	6.575	6.635	0.057	
	2	6.325	6.296	6.356	0.054	5.4
Aldrin	1	6.513	6.484	6.544	0.082	
	2	6.404	6.375	6.435	0.073	11.6
alpha-BHC	1	5.745	5.716	5.776	0.043	
	2	5.647	5.618	5.678	0.042	2.4
beta-BHC	1	6.017	5.988	6.048	0.062	
	2	5.932	5.901	5.961	0.058	6.7
delta-BHC	1	6.145	6.115	6.175	0.066	
	2	6.129	6.100	6.160	0.063	4.7
Dieldrin	1	7.441	7.411	7.471	0.095	
	2	7.308	7.279	7.339	0.082	14.7
Endosulfan I	1	7.258	7.229	7.289	0.092	
	2	7.101	7.073	7.133	0.082	11.5
Endosulfan II	1	7.796	7.767	7.827	0.096	
	2	7.704	7.675	7.735	0.093	3.2
Endosulfan Sulfate	1	8.403	8.374	8.434	0.076	
	2	8.168	8.139	8.199	0.080	5.1
Endrin	1	7.621	7.593	7.653	0.070	
	2	7.540	7.511	7.571	0.063	10.5
Endrin Aldehyde	1	8.110	8.080	8.140	0.097	
	2	7.965	7.937	7.997	0.10	3.1
Endrin Ketone	1	8.579	8.551	8.611	0.12	
	2	8.516	8.487	8.547	0.12	0.0
gamma-BHC (Lindane)	1	5.961	5.932	5.992	0.054	

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES****Matrix Spike***SW-846 8081B*Lab Sample ID: B217863-MS1 Date(s) Analyzed: 11/29/2018 11/29/2018Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.877	5.849	5.909	0.050	7.7
Heptachlor	1	6.295	6.266	6.326	0.060	
	2	6.178	6.149	6.209	0.067	11.0
Heptachlor Epoxide	1	6.958	6.929	6.989	0.084	
	2	6.811	6.783	6.843	0.076	10.0
Hexachlorobenzene	1	5.630	5.600	5.660	0.051	
	2	5.559	5.530	5.590	0.047	8.2
Methoxychlor	1	8.224	8.195	8.255	0.11	
	2	8.367	8.338	8.398	0.11	0.0

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

Matrix Spike Dup

SW-846 8081B

Lab Sample ID: B217863-MSD1 Date(s) Analyzed: 11/29/2018 11/29/2018
 Instrument ID (1): ECD2A Instrument ID (2): ECD2B
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.662	7.632	7.692	0.094	
	2	7.630	7.601	7.661	0.085	10.1
4,4'-DDE	1	7.200	7.170	7.230	0.093	
	2	7.186	7.157	7.217	0.085	9.0
4,4'-DDT	1	7.881	7.851	7.911	0.10	
	2	7.878	7.848	7.908	0.088	12.8
Alachlor	1	6.605	6.575	6.635	0.059	
	2	6.325	6.296	6.356	0.057	3.5
Aldrin	1	6.514	6.484	6.544	0.071	
	2	6.404	6.375	6.435	0.064	10.4
alpha-BHC	1	5.745	5.716	5.776	0.035	
	2	5.647	5.618	5.678	0.034	2.9
beta-BHC	1	6.018	5.988	6.048	0.051	
	2	5.933	5.901	5.961	0.048	6.1
delta-BHC	1	6.145	6.115	6.175	0.056	
	2	6.130	6.100	6.160	0.054	3.6
Dieldrin	1	7.441	7.411	7.471	0.086	
	2	7.308	7.279	7.339	0.075	13.7
Endosulfan I	1	7.259	7.229	7.289	0.082	
	2	7.102	7.073	7.133	0.074	10.3
Endosulfan II	1	7.798	7.767	7.827	0.087	
	2	7.704	7.675	7.735	0.084	3.5
Endosulfan Sulfate	1	8.405	8.374	8.434	0.077	
	2	8.169	8.139	8.199	0.074	4.0
Endrin	1	7.623	7.593	7.653	0.088	
	2	7.540	7.511	7.571	0.080	9.5
Endrin Aldehyde	1	8.109	8.080	8.140	0.099	
	2	7.965	7.937	7.997	0.10	1.0
Endrin Ketone	1	8.581	8.551	8.611	0.094	
	2	8.517	8.487	8.547	0.091	3.2
gamma-BHC (Lindane)	1	5.962	5.932	5.992	0.044	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

Matrix Spike Dup

SW-846 8081B

Lab Sample ID: B217863-MSD1 Date(s) Analyzed: 11/29/2018 11/29/2018
Instrument ID (1): ECD2A Instrument ID (2): ECD2B
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.878	5.849	5.909	0.041	7.1
Heptachlor	1	6.296	6.266	6.326	0.051	
	2	6.178	6.149	6.209	0.058	12.8
Heptachlor Epoxide	1	6.959	6.929	6.989	0.074	
	2	6.812	6.783	6.843	0.067	9.9
Hexachlorobenzene	1	5.630	5.600	5.660	0.042	
	2	5.559	5.530	5.590	0.040	7.2
Methoxychlor	1	8.225	8.195	8.255	0.10	
	2	8.367	8.338	8.398	0.10	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.
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-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-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-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.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-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 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.
V-36	Initial calibration verification (ICV) 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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
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
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Water</i>	
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8151A in Soil</i>	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
<i>SW-846 8151A in Water</i>	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8151A in Water</i>	
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
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

CERTIFICATIONS

Certified Analyses included in this Report

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
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
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
SW-846 8270D in Water	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
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
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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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

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 VHB
 Received By TJ Date 11/20/2018 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 # 2 Actual Temp - 2.3
 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 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? LUKE
 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? _____
 Do all samples have the proper pH? NA Acid _____ Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	
HCL-		500 mL Amb.		500 mL Plastic	
Meoh-	1	250 mL Amb.		250 mL Plastic	3
Bisulfate-		Flashpoint		Col./Bacteria	
DI-	2	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:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 18K0931
Project Location: Sudbury, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

18K0931-01

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 (X)	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 A ()	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

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

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

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

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski

Position: Laboratory Director

Printed Name: Tod E. Kopyscinski

Date: 12/03/18

December 6, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18K1190

Enclosed are results of analyses for samples received by the laboratory on November 28, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 12/6/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K1190

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB48	18K1190-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
SB40	18K1190-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 12/6/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K1190

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB41	18K1190-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
SB42	18K1190-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8081B SW-846 8082A SW-846 8100 Modified SW-846 8151A 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 8151, samples were derivatized on 11/30/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 8081B

Qualifications:**DL-03**

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

18K1190-04[SB42]

SW-846 8082A

Qualifications:**O-32**

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

Analyte & Samples(s) Qualified:

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41]

SW-846 8151A

Qualifications:**DL-03**

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42]

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:**Methylene Chloride**

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-BSD1

Tetrahydrofuran

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-BSD1

Vinyl Chloride

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-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:**Diisopropyl Ether (DIPE)**

B218094-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:**Acetone**

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-BSD1

V-05

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

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

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-BSD1

Methylene Chloride

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-BSD1

Tetrahydrofuran

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-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**

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218094-BLK1, B218094-BS1, B218094-BSD1

V-20

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

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

B218094-BS1, B218094-BSD1

SW-846 8270D**Qualifications:****V-04**

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

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

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218070-BLK1, B218070-BS1, B218070-BSD1

V-05

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

Analyte & Samples(s) Qualified:**1,2-Diphenylhydrazine/Azobenzene**

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218070-BLK1, B218070-BS1, B218070-BSD1

Butylbenzylphthalate

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42]

Pyrene

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42]

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**

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218070-BLK1, B218070-BS1, B218070-BSD1

SW-846 9045C**Qualifications:****H-03**

Sample received after recommended holding time was exceeded.

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

18K1190-01[SB48], 18K1190-02[SB40], 18K1190-03[SB41], 18K1190-04[SB42], B218066-DUP1

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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, 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: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

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	0.065	mg/Kg dry	1	R-05	SW-846 8260C	11/29/18	11/29/18 10:51	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Benzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Bromobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Bromochloromethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Bromodichloromethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Bromoform	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Bromomethane	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
2-Butanone (MEK)	ND	0.026	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
n-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
sec-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
tert-Butylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Carbon Disulfide	ND	0.0039	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Carbon Tetrachloride	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Chlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Chlorodibromomethane	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Chloroethane	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Chloroform	ND	0.0026	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Chloromethane	ND	0.0065	mg/Kg dry	1	V-05	SW-846 8260C	11/29/18	11/29/18 10:51	EEH
2-Chlorotoluene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
4-Chlorotoluene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2-Dibromoethane (EDB)	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Dibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,3-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,4-Dichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1-Dichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2-Dichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
cis-1,2-Dichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
trans-1,2-Dichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,3-Dichloropropane	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
2,2-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
cis-1,3-Dichloropropene	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
trans-1,3-Dichloropropene	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Diethyl Ether	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Diisopropyl Ether (DIPE)	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,4-Dioxane	ND	0.065	mg/Kg dry	1	V-16	SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Ethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

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	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
2-Hexanone (MBK)	ND	0.013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Isopropylbenzene (Cumene)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Methylene Chloride	ND	0.0065	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 10:51	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Naphthalene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
n-Propylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Styrene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1,1,2-Tetrachloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.00065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Tetrachloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Tetrahydrofuran	ND	0.0065	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Toluene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2,3-Trichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2,4-Trichlorobenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1,1-Trichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,1,2-Trichloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Trichloroethylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Trichlorofluoromethane (Freon 11)	ND	0.0065	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2,3-Trichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,2,4-Trimethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
1,3,5-Trimethylbenzene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
Vinyl Chloride	ND	0.0065	mg/Kg dry	1	L-04	SW-846 8260C	11/29/18	11/29/18 10:51	EEH
m+p Xylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH
o-Xylene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 10:51	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	95.6	70-130	
4-Bromofluorobenzene	102	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

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	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Acenaphthylene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Acetophenone	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Aniline	ND	0.44	mg/Kg dry	1	V-04	SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Benzo(a)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Benzo(a)pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Benzo(b)fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Benzo(g,h,i)perylene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Benzo(k)fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Bis(2-chloroethoxy)methane	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Bis(2-chloroethyl)ether	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Bis(2-chloroisopropyl)ether	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Bis(2-Ethylhexyl)phthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
4-Bromophenylphenylether	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Butylbenzylphthalate	ND	0.44	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 16:47	CDT
4-Chloroaniline	ND	0.85	mg/Kg dry	1	V-34	SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2-Chloronaphthalene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2-Chlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Chrysene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Dibenz(a,h)anthracene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Dibenzofuran	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Di-n-butylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
1,2-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
1,3-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
1,4-Dichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
3,3-Dichlorobenzidine	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,4-Dichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Diethylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,4-Dimethylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Dimethylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,4-Dinitrophenol	ND	0.85	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,4-Dinitrotoluene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,6-Dinitrotoluene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Di-n-octylphthalate	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
1,2-Diphenylhydrazine/Azobenzene	ND	0.44	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Fluoranthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Fluorene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Hexachlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Hexachlorobutadiene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Hexachloroethane	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Indeno(1,2,3-cd)pyrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Isophorone	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

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	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
3/4-Methylphenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Naphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Nitrobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2-Nitrophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
4-Nitrophenol	ND	0.85	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Pentachlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Phenanthrene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Phenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Pyrene	ND	0.22	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 16:47	CDT
Pyridine	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
1,2,4-Trichlorobenzene	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,4,5-Trichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT
2,4,6-Trichlorophenol	ND	0.44	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 16:47	CDT

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	62.5	30-130	
Phenol-d6	66.0	30-130	
Nitrobenzene-d5	67.7	30-130	
2-Fluorobiphenyl	57.0	30-130	
2,4,6-Tribromophenol	81.2	30-130	
p-Terphenyl-d14	77.1	30-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.025	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Aldrin [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
alpha-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
beta-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
delta-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
gamma-BHC (Lindane) [1]	ND	0.0025	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Chlordane [1]	ND	0.025	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
4,4'-DDD [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
4,4'-DDE [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
4,4'-DDT [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Dieldrin [1]	ND	0.0049	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Endosulfan I [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Endosulfan II [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Endosulfan sulfate [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Endrin [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Endrin aldehyde [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Endrin ketone [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Heptachlor [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Heptachlor epoxide [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Hexachlorobenzene [1]	ND	0.0074	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Methoxychlor [1]	ND	0.062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 9:39	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.6	30-150					12/4/18 9:39	
Decachlorobiphenyl [2]		84.5	30-150					12/4/18 9:39	
Tetrachloro-m-xylene [1]		69.0	30-150					12/4/18 9:39	
Tetrachloro-m-xylene [2]		76.2	30-150					12/4/18 9:39	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/28/18	11/29/18 18:38	TG
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:38	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		79.8	30-150					11/29/18 18:38	
Decachlorobiphenyl [2]		81.3	30-150					11/29/18 18:38	
Tetrachloro-m-xylene [1]		83.4	30-150					11/29/18 18:38	
Tetrachloro-m-xylene [2]		86.3	30-150					11/29/18 18:38	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

Sample Matrix: Soil

Sample Flags: DL-03

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	160	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
2,4-DB [1]	ND	160	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
2,4,5-TP (Silvex) [1]	ND	16	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
2,4,5-T [1]	ND	16	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
Dalapon [1]	ND	400	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
Dicamba [1]	ND	16	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
Dichloroprop [1]	ND	160	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
Dinoseb [1]	ND	80	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
MCPA [1]	ND	16000	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
MCPP [1]	ND	16000	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:02	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		82.5	30-150					12/1/18 0:02	
2,4-Dichlorophenylacetic acid [2]		105	30-150					12/1/18 0:02	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB48

Sampled: 11/15/2018 09:00

Sample ID: 18K1190-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	29	11	mg/Kg dry	1		SW-846 8100 Modified	11/29/18	12/3/18 15:12	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		52.5	40-140					12/3/18 15:12	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 09:00

Field Sample #: SB48

Sample ID: 18K1190-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.2	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Arsenic	4.2	2.2	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Barium	32	2.2	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Beryllium	0.42	0.22	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Cadmium	ND	0.22	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Chromium	13	0.43	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Lead	9.4	0.65	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Mercury	ND	0.032	mg/Kg dry	1		SW-846 7471B	12/5/18	12/6/18 12:12	AJL
Nickel	8.7	0.43	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Selenium	ND	4.3	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Silver	ND	0.43	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Thallium	ND	2.2	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Vanadium	13	0.87	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW
Zinc	17	0.87	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:15	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 09:00

Field Sample #: SB48

Sample ID: 18K1190-01

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/30/18	11/30/18 16:35	LED
pH @19.2°C	5.2		pH Units	1	H-03	SW-846 9045C	11/28/18	11/28/18 20:30	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/30/18	12/3/18 11:00	LL
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/30/18	12/3/18 11:00	LL
Specific conductance	ND	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/30/18	11/30/18 14:30	EC
% Solids	77.3		% Wt	1		SM 2540G	12/5/18	12/6/18 11:36	KMG

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

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	0.061	mg/Kg dry	1	R-05	SW-846 8260C	11/29/18	11/29/18 11:15	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Benzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Bromobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Bromochloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Bromodichloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Bromoform	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Bromomethane	ND	0.0061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
2-Butanone (MEK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
n-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
sec-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
tert-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Carbon Disulfide	ND	0.0036	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Carbon Tetrachloride	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Chlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Chlorodibromomethane	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Chloroethane	ND	0.0061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Chloroform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Chloromethane	ND	0.0061	mg/Kg dry	1	V-05	SW-846 8260C	11/29/18	11/29/18 11:15	EEH
2-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
4-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2-Dibromoethane (EDB)	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Dibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,3-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,4-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.0061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
cis-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
trans-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,3-Dichloropropane	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
2,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
cis-1,3-Dichloropropene	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
trans-1,3-Dichloropropene	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Diethyl Ether	ND	0.0061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Diisopropyl Ether (DIPE)	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,4-Dioxane	ND	0.061	mg/Kg dry	1	V-16	SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Ethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

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	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
2-Hexanone (MBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Isopropylbenzene (Cumene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Methylene Chloride	ND	0.0061	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 11:15	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Naphthalene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
n-Propylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Styrene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1,1,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.00061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Tetrachloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Tetrahydrofuran	ND	0.0061	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Toluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2,3-Trichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2,4-Trichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1,1-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,1,2-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Trichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Trichlorofluoromethane (Freon 11)	ND	0.0061	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2,3-Trichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,2,4-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
1,3,5-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
Vinyl Chloride	ND	0.0061	mg/Kg dry	1	L-04	SW-846 8260C	11/29/18	11/29/18 11:15	EEH
m+p Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH
o-Xylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:15	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.5	70-130	11/29/18 11:15
Toluene-d8	96.1	70-130	11/29/18 11:15
4-Bromofluorobenzene	103	70-130	11/29/18 11:15

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

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	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Acetophenone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Aniline	ND	0.41	mg/Kg dry	1	V-04	SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Bis(2-chloroethoxy)methane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Bis(2-chloroisopropyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Bis(2-Ethylhexyl)phthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
4-Bromophenylphenylether	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Butylbenzylphthalate	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 17:10	CDT
4-Chloroaniline	ND	0.80	mg/Kg dry	1	V-34	SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2-Chloronaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2-Chlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Dibenzofuran	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Di-n-butylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
1,2-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
1,3-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
1,4-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,4-Dichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Diethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,4-Dimethylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Dimethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,4-Dinitrophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,4-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,6-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Di-n-octylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
1,2-Diphenylhydrazine/Azobenzene	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Hexachlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Hexachlorobutadiene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Hexachloroethane	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Isophorone	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

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	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
3/4-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Nitrobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2-Nitrophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
4-Nitrophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Pentachlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Phenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Pyrene	ND	0.21	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Pyridine	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
1,2,4-Trichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,4,5-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
2,4,6-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:10	CDT
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		72.8	30-130					12/3/18 17:10	
Phenol-d6		75.7	30-130					12/3/18 17:10	
Nitrobenzene-d5		79.6	30-130					12/3/18 17:10	
2-Fluorobiphenyl		70.4	30-130					12/3/18 17:10	
2,4,6-Tribromophenol		90.8	30-130					12/3/18 17:10	
p-Terphenyl-d14		92.2	30-130					12/3/18 17:10	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Aldrin [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
alpha-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
beta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
delta-BHC [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
gamma-BHC (Lindane) [1]	ND	0.0024	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Chlordane [1]	ND	0.024	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
4,4'-DDD [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
4,4'-DDE [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
4,4'-DDT [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Dieldrin [1]	ND	0.0047	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Endosulfan I [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Endosulfan II [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Endosulfan sulfate [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Endrin [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Endrin aldehyde [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Endrin ketone [1]	ND	0.0095	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Heptachlor [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Heptachlor epoxide [1]	ND	0.0059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Hexachlorobenzene [1]	ND	0.0071	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Methoxychlor [1]	ND	0.059	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:06	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		76.0	30-150					12/4/18 10:06	
Decachlorobiphenyl [2]		73.7	30-150					12/4/18 10:06	
Tetrachloro-m-xylene [1]		66.2	30-150					12/4/18 10:06	
Tetrachloro-m-xylene [2]		70.6	30-150					12/4/18 10:06	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/28/18	11/29/18 18:56	TG
Aroclor-1221 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1232 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1242 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1248 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1254 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1260 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1262 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Aroclor-1268 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 18:56	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		94.8	30-150					11/29/18 18:56	
Decachlorobiphenyl [2]		98.1	30-150					11/29/18 18:56	
Tetrachloro-m-xylene [1]		90.3	30-150					11/29/18 18:56	
Tetrachloro-m-xylene [2]		93.2	30-150					11/29/18 18:56	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB40

Sampled: 11/15/2018 10:30

Sample ID: 18K1190-02

Sample Matrix: Soil

Sample Flags: DL-03

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
2,4-DB [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
2,4,5-TP (Silvex) [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
2,4,5-T [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
Dalapon [1]	ND	380	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
Dicamba [1]	ND	15	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
Dichloroprop [1]	ND	150	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
Dinoseb [1]	ND	76	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
MCPA [1]	ND	15000	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
MCPP [1]	ND	15000	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 0:42	TG
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2,4-Dichlorophenylacetic acid [1]	88.9	30-150						12/1/18 0:42	
2,4-Dichlorophenylacetic acid [2]	94.5	30-150						12/1/18 0:42	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 10:30

Field Sample #: SB40

Sample ID: 18K1190-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	29	10	mg/Kg dry	1		SW-846 8100 Modified	11/29/18	12/3/18 15:12	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		59.2	40-140					12/3/18 15:12	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 10:30

Field Sample #: SB40

Sample ID: 18K1190-02

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	12/4/18	12/5/18 12:20	QNW
Arsenic	12	2.0	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Barium	23	2.0	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Beryllium	0.37	0.20	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Cadmium	0.45	0.20	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Chromium	11	0.40	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Lead	8.9	0.60	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	12/5/18	12/6/18 12:14	AJL
Nickel	8.1	0.40	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Vanadium	15	0.80	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW
Zinc	18	0.80	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:20	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 10:30

Field Sample #: SB40

Sample ID: 18K1190-02

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/30/18	11/30/18 16:35	LED
pH @19°C	5.0		pH Units	1	H-03	SW-846 9045C	11/28/18	11/28/18 20:30	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/30/18	12/3/18 11:00	LL
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	11/30/18	12/3/18 11:00	LL
Specific conductance	4.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/30/18	11/30/18 14:30	EC
% Solids	82.6		% Wt	1		SM 2540G	12/5/18	12/6/18 11:36	KMG

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

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	0.078	mg/Kg dry	1	R-05	SW-846 8260C	11/29/18	11/29/18 11:40	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Bromomethane	ND	0.0078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
2-Butanone (MEK)	ND	0.031	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Carbon Disulfide	ND	0.0047	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Chlorodibromomethane	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Chloroethane	ND	0.0078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Chloroform	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Chloromethane	ND	0.0078	mg/Kg dry	1	V-05	SW-846 8260C	11/29/18	11/29/18 11:40	EEH
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2-Dibromoethane (EDB)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.0078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,3-Dichloropropane	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
cis-1,3-Dichloropropene	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
trans-1,3-Dichloropropene	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Diethyl Ether	ND	0.0078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Diisopropyl Ether (DIPE)	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,4-Dioxane	ND	0.078	mg/Kg dry	1	V-16	SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

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	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Methylene Chloride	ND	0.0078	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 11:40	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Naphthalene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.00078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Tetrahydrofuran	ND	0.0078	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Trichlorofluoromethane (Freon 11)	ND	0.0078	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
Vinyl Chloride	ND	0.0078	mg/Kg dry	1	L-04	SW-846 8260C	11/29/18	11/29/18 11:40	EEH
m+p Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 11:40	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	11/29/18 11:40
Toluene-d8	96.7	70-130	11/29/18 11:40
4-Bromofluorobenzene	104	70-130	11/29/18 11:40

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

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	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Aniline	ND	0.42	mg/Kg dry	1	V-04	SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Bis(2-Ethylhexyl)phthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Butylbenzylphthalate	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 17:34	CDT
4-Chloroaniline	ND	0.82	mg/Kg dry	1	V-34	SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,4-Dinitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Di-n-octylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
1,2-Diphenylhydrazine/Azobenzene	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

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	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
4-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Pentachlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Pyrene	ND	0.21	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 17:34	CDT
Pyridine	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 17:34	CDT

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	66.2	30-130	
Phenol-d6	73.3	30-130	
Nitrobenzene-d5	73.0	30-130	
2-Fluorobiphenyl	63.5	30-130	
2,4,6-Tribromophenol	86.8	30-130	
p-Terphenyl-d14	90.0	30-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.025	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Aldrin [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
alpha-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
beta-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
delta-BHC [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
gamma-BHC (Lindane) [1]	ND	0.0025	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Chlordane [1]	ND	0.025	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
4,4'-DDD [1]	ND	0.0050	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
4,4'-DDE [1]	ND	0.0050	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
4,4'-DDT [1]	ND	0.0050	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Dieldrin [1]	ND	0.0050	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Endosulfan I [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Endosulfan II [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Endosulfan sulfate [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Endrin [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Endrin aldehyde [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Endrin ketone [1]	ND	0.0099	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Heptachlor [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Heptachlor epoxide [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Hexachlorobenzene [1]	ND	0.0074	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Methoxychlor [1]	ND	0.062	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Toxaphene [1]	ND	0.12	mg/Kg dry	1		SW-846 8081B	11/29/18	12/4/18 10:33	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		83.1	30-150					12/4/18 10:33	
Decachlorobiphenyl [2]		80.9	30-150					12/4/18 10:33	
Tetrachloro-m-xylene [1]		62.0	30-150					12/4/18 10:33	
Tetrachloro-m-xylene [2]		68.3	30-150					12/4/18 10:33	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

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	11/28/18	11/29/18 19:13	TG
Aroclor-1221 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1232 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1242 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1248 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1254 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1260 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1262 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Aroclor-1268 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:13	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		76.7	30-150					11/29/18 19:13	
Decachlorobiphenyl [2]		80.1	30-150					11/29/18 19:13	
Tetrachloro-m-xylene [1]		80.5	30-150					11/29/18 19:13	
Tetrachloro-m-xylene [2]		83.4	30-150					11/29/18 19:13	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB41

Sampled: 11/15/2018 11:30

Sample ID: 18K1190-03

Sample Matrix: Soil

Sample Flags: DL-03

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	160	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
2,4-DB [1]	ND	160	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
2,4,5-TP (Silvex) [1]	ND	16	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
2,4,5-T [1]	ND	16	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
Dalalpon [1]	ND	390	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
Dicamba [1]	ND	16	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
Dichloroprop [1]	ND	160	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
Dinoseb [1]	ND	78	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
MCPA [1]	ND	16000	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
MCPP [1]	ND	16000	µg/kg dry	5		SW-846 8151A	11/28/18	12/1/18 1:21	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		91.1	30-150					12/1/18 1:21	
2,4-Dichlorophenylacetic acid [2]		104	30-150					12/1/18 1:21	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 11:30

Field Sample #: SB41

Sample ID: 18K1190-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	47	10	mg/Kg dry	1		SW-846 8100 Modified	11/29/18	12/3/18 15:33	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		60.0	40-140					12/3/18 15:33	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 11:30

Field Sample #: SB41

Sample ID: 18K1190-03

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	12/4/18	12/5/18 12:51	QNW
Arsenic	9.2	2.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Barium	19	2.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Beryllium	0.35	0.21	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Cadmium	0.35	0.21	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Chromium	10	0.42	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Lead	8.9	0.63	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Mercury	ND	0.033	mg/Kg dry	1		SW-846 7471B	12/5/18	12/6/18 12:16	AJL
Nickel	7.8	0.42	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Selenium	ND	4.2	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Silver	ND	0.42	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Vanadium	13	0.84	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW
Zinc	14	0.84	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:51	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 11:30

Field Sample #: SB41

Sample ID: 18K1190-03

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/30/18	11/30/18 16:35	LED
pH @19°C	5.2		pH Units	1	H-03	SW-846 9045C	11/28/18	11/28/18 20:30	LED
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	11/30/18	12/3/18 11:00	LL
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	11/30/18	12/3/18 11:00	LL
Specific conductance	3.6	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/30/18	11/30/18 14:30	EC
% Solids	79.9		% Wt	1		SM 2540G	12/5/18	12/6/18 11:36	KMG

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.35	0.074	mg/Kg dry	1	R-05	SW-846 8260C	11/29/18	11/29/18 12:05	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Bromomethane	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Chlorodibromomethane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Chloroethane	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Chloromethane	ND	0.0074	mg/Kg dry	1	V-05	SW-846 8260C	11/29/18	11/29/18 12:05	EEH
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2-Dibromoethane (EDB)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,3-Dichloropropane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
cis-1,3-Dichloropropene	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
trans-1,3-Dichloropropene	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Diethyl Ether	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Diisopropyl Ether (DIPE)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,4-Dioxane	ND	0.074	mg/Kg dry	1	V-16	SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

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	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Methylene Chloride	ND	0.0074	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 12:05	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Tetrahydrofuran	ND	0.0074	mg/Kg dry	1	L-04, V-05	SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Trichlorofluoromethane (Freon 11)	ND	0.0074	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
Vinyl Chloride	ND	0.0074	mg/Kg dry	1	L-04	SW-846 8260C	11/29/18	11/29/18 12:05	EEH
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	11/29/18	11/29/18 12:05	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	105	70-130	
Toluene-d8	91.7	70-130	
4-Bromofluorobenzene	89.8	70-130	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

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	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Acenaphthylene	0.31	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Aniline	ND	0.42	mg/Kg dry	1	V-04	SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Benzo(a)anthracene	0.95	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Benzo(a)pyrene	0.98	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Benzo(b)fluoranthene	1.5	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Benzo(g,h,i)perylene	0.69	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Benzo(k)fluoranthene	0.65	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Bis(2-Ethylhexyl)phthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Butylbenzylphthalate	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 18:00	CDT
4-Chloroaniline	ND	0.82	mg/Kg dry	1	V-34	SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Chrysene	1.3	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,4-Dinitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Di-n-octylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
1,2-Diphenylhydrazine/Azobenzene	ND	0.42	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Fluoranthene	1.8	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Indeno(1,2,3-cd)pyrene	0.78	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

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	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
4-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Pentachlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Phenanthrene	0.61	0.21	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Pyrene	2.0	0.21	mg/Kg dry	1	V-05	SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Pyridine	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/29/18	12/3/18 18:00	CDT
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		62.8	30-130					12/3/18 18:00	
Phenol-d6		68.3	30-130					12/3/18 18:00	
Nitrobenzene-d5		69.4	30-130					12/3/18 18:00	
2-Fluorobiphenyl		59.8	30-130					12/3/18 18:00	
2,4,6-Tribromophenol		84.2	30-130					12/3/18 18:00	
p-Terphenyl-d14		81.3	30-130					12/3/18 18:00	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.48	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Aldrin [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
alpha-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
beta-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
delta-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
gamma-BHC (Lindane) [1]	ND	0.048	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Chlordane [1]	ND	0.48	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
4,4'-DDD [1]	ND	0.095	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
4,4'-DDE [1]	ND	0.095	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
4,4'-DDT [2]	0.34	0.095	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Dieldrin [1]	ND	0.095	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Endosulfan I [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Endosulfan II [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Endosulfan sulfate [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Endrin [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Endrin aldehyde [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Endrin ketone [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Heptachlor [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Heptachlor epoxide [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Hexachlorobenzene [1]	ND	0.14	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Methoxychlor [1]	ND	1.2	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Toxaphene [1]	ND	2.4	mg/Kg dry	20		SW-846 8081B	11/29/18	12/4/18 10:59	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.1	30-150					12/4/18 10:59	
Decachlorobiphenyl [2]		103	30-150					12/4/18 10:59	
Tetrachloro-m-xylene [1]		61.6	30-150					12/4/18 10:59	
Tetrachloro-m-xylene [2]		76.1	30-150					12/4/18 10:59	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

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	11/28/18	11/29/18 19:31	TG
Aroclor-1221 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1232 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1242 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1248 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1254 [2]	0.23	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1260 [2]	0.18	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1262 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Aroclor-1268 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	11/28/18	11/29/18 19:31	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.4	30-150					11/29/18 19:31	
Decachlorobiphenyl [2]		93.7	30-150					11/29/18 19:31	
Tetrachloro-m-xylene [1]		89.3	30-150					11/29/18 19:31	
Tetrachloro-m-xylene [2]		90.4	30-150					11/29/18 19:31	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Field Sample #: SB42

Sampled: 11/15/2018 14:00

Sample ID: 18K1190-04

Sample Matrix: Soil

Sample Flags: DL-03

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	310	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
2,4-DB [1]	ND	310	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
2,4,5-TP (Silvex) [1]	ND	31	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
2,4,5-T [1]	ND	31	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
Dalalpon [1]	ND	760	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
Dicamba [1]	ND	31	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
Dichloroprop [1]	ND	310	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
Dinoseb [1]	ND	150	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
MCPA [1]	ND	31000	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
MCPP [1]	ND	31000	µg/kg dry	10		SW-846 8151A	11/28/18	12/1/18 2:01	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,4-Dichlorophenylacetic acid [1]		97.3	30-150					12/1/18 2:01	
2,4-Dichlorophenylacetic acid [2]		104	30-150					12/1/18 2:01	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 14:00

Field Sample #: SB42

Sample ID: 18K1190-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	100	mg/Kg dry	10		SW-846 8100 Modified	11/29/18	12/3/18 20:15	RMW
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		71.8	40-140					12/3/18 20:15	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 14:00

Field Sample #: SB42

Sample ID: 18K1190-04

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	12/4/18	12/5/18 12:56	QNW
Arsenic	14	2.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Barium	57	2.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Beryllium	0.36	0.21	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Cadmium	0.68	0.21	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Chromium	20	0.41	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Lead	180	0.62	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Mercury	0.038	0.030	mg/Kg dry	1		SW-846 7471B	12/5/18	12/6/18 12:17	AJL
Nickel	15	0.41	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Vanadium	28	0.83	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW
Zinc	50	0.83	mg/Kg dry	1		SW-846 6010D	12/4/18	12/5/18 12:56	QNW

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18K1190

Date Received: 11/28/2018

Sampled: 11/15/2018 14:00

Field Sample #: SB42

Sample ID: 18K1190-04

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
Ignitability	Absent		present/absent	1		SW-846 1030	11/30/18	11/30/18 16:35	LED
pH @19°C	5.3		pH Units	1	H-03	SW-846 9045C	11/28/18	11/28/18 20:30	LED
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	12/1/18	12/3/18 11:00	LL
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	12/1/18	12/3/18 11:00	LL
Specific conductance	8.1	2.0	µmhos/cm	1		SM21-22 2510B Modified	11/30/18	11/30/18 14:30	EC
% Solids	80.6		% Wt	1		SM 2540G	12/5/18	12/6/18 11:36	KMG

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18K1190-01 [SB48]	B218583	12/05/18
18K1190-02 [SB40]	B218583	12/05/18
18K1190-03 [SB41]	B218583	12/05/18
18K1190-04 [SB42]	B218583	12/05/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18K1190-01 [SB48]	B218203	1.00	11/30/18
18K1190-02 [SB40]	B218203	1.00	11/30/18
18K1190-03 [SB41]	B218203	1.00	11/30/18
18K1190-04 [SB42]	B218203	1.00	11/30/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18K1190-01 [SB48]	B218252	50.0	11/30/18
18K1190-02 [SB40]	B218252	50.0	11/30/18
18K1190-03 [SB41]	B218252	50.0	11/30/18
18K1190-04 [SB42]	B218252	50.0	11/30/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218441	1.49	50.0	12/04/18
18K1190-02 [SB40]	B218441	1.51	50.0	12/04/18
18K1190-03 [SB41]	B218441	1.50	50.0	12/04/18
18K1190-04 [SB42]	B218441	1.50	50.0	12/04/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218536	0.598	50.0	12/05/18
18K1190-02 [SB40]	B218536	0.600	50.0	12/05/18
18K1190-03 [SB41]	B218536	0.574	50.0	12/05/18
18K1190-04 [SB42]	B218536	0.611	50.0	12/05/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218069	10.5	10.0	11/29/18
18K1190-02 [SB40]	B218069	10.2	10.0	11/29/18
18K1190-03 [SB41]	B218069	10.1	10.0	11/29/18
18K1190-04 [SB42]	B218069	10.4	10.0	11/29/18

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218009	10.1	10.0	11/28/18
18K1190-02 [SB40]	B218009	10.5	10.0	11/28/18
18K1190-03 [SB41]	B218009	10.2	10.0	11/28/18
18K1190-04 [SB42]	B218009	10.3	10.0	11/28/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218071	30.3	1.00	11/29/18
18K1190-02 [SB40]	B218071	30.1	1.00	11/29/18
18K1190-03 [SB41]	B218071	30.1	1.00	11/29/18
18K1190-04 [SB42]	B218071	30.0	1.00	11/29/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B217974	20.3	5.00	11/28/18
18K1190-02 [SB40]	B217974	20.0	5.00	11/28/18
18K1190-03 [SB41]	B217974	20.0	5.00	11/28/18
18K1190-04 [SB42]	B217974	20.3	5.00	11/28/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218094	9.89	10.0	11/29/18
18K1190-02 [SB40]	B218094	9.97	10.0	11/29/18
18K1190-03 [SB41]	B218094	8.06	10.0	11/29/18
18K1190-04 [SB42]	B218094	8.36	10.0	11/29/18

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218070	30.3	1.00	11/29/18
18K1190-02 [SB40]	B218070	30.1	1.00	11/29/18
18K1190-03 [SB41]	B218070	30.1	1.00	11/29/18
18K1190-04 [SB42]	B218070	30.0	1.00	11/29/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218238	25.5	250	11/30/18
18K1190-02 [SB40]	B218238	25.7	250	11/30/18
18K1190-03 [SB41]	B218238	25.4	250	11/30/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
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Sample Extraction Data

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-04 [SB42]	B218263	25.1	250	12/01/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-01 [SB48]	B218248	25.5	250	11/30/18
18K1190-02 [SB40]	B218248	25.7	250	11/30/18
18K1190-03 [SB41]	B218248	25.4	250	11/30/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18K1190-04 [SB42]	B218264	25.1	250	12/01/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18K1190-01 [SB48]	B218066	20.0	11/28/18
18K1190-02 [SB40]	B218066	20.0	11/28/18
18K1190-03 [SB41]	B218066	20.0	11/28/18
18K1190-04 [SB42]	B218066	20.0	11/28/18

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218094 - SW-846 5035										
Blank (B218094-BLK1)										
Prepared & Analyzed: 11/29/18										
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							
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							V-05
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							L-04, V-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 B218094 - SW-846 5035

Blank (B218094-BLK1)

Prepared & Analyzed: 11/29/18

n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							L-04, V-05
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	0.0509		mg/Kg wet	0.0500		102	70-130			
Surrogate: Toluene-d8	0.0482		mg/Kg wet	0.0500		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0521		mg/Kg wet	0.0500		104	70-130			

LCS (B218094-BS1)

Prepared & Analyzed: 11/29/18

Acetone	0.244	0.10	mg/Kg wet	0.200		122	40-160			R-05 †
tert-Amyl Methyl Ether (TAME)	0.0177	0.0010	mg/Kg wet	0.0200		88.4	70-130			
Benzene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130			
Bromobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
Bromochloromethane	0.0150	0.0020	mg/Kg wet	0.0200		74.8	70-130			
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
Bromoform	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Bromomethane	0.0114	0.010	mg/Kg wet	0.0200		57.2	40-160			L-14 †
2-Butanone (MEK)	0.199	0.040	mg/Kg wet	0.200		99.3	40-160			†
n-Butylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.7	70-130			
sec-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
tert-Butylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0163	0.0010	mg/Kg wet	0.0200		81.4	70-130			
Carbon Disulfide	0.0169	0.0060	mg/Kg wet	0.0200		84.7	70-130			
Carbon Tetrachloride	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			V-20
Chlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Chlorodibromomethane	0.0217	0.0010	mg/Kg wet	0.0200		109	70-130			
Chloroethane	0.0157	0.010	mg/Kg wet	0.0200		78.6	70-130			
Chloroform	0.0196	0.0040	mg/Kg wet	0.0200		97.9	70-130			
Chloromethane	0.0109	0.010	mg/Kg wet	0.0200		54.5	40-160			V-05, L-14 †
2-Chlorotoluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
4-Chlorotoluene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130			
1,2-Dibromoethane (EDB)	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
Dibromomethane	0.0180	0.0020	mg/Kg wet	0.0200		89.9	70-130			
1,2-Dichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
1,3-Dichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
1,4-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	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
Batch B218094 - SW-846 5035										
LCS (B218094-BS1)										
Prepared & Analyzed: 11/29/18										
Dichlorodifluoromethane (Freon 12)	0.0108	0.010	mg/Kg wet	0.0200		53.9	40-160			L-14 †
1,1-Dichloroethane	0.0167	0.0020	mg/Kg wet	0.0200		83.6	70-130			
1,2-Dichloroethane	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130			
1,1-Dichloroethylene	0.0162	0.0040	mg/Kg wet	0.0200		80.8	70-130			
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130			
trans-1,2-Dichloroethylene	0.0162	0.0020	mg/Kg wet	0.0200		81.0	70-130			
1,2-Dichloropropane	0.0153	0.0020	mg/Kg wet	0.0200		76.3	70-130			
1,3-Dichloropropane	0.0178	0.0010	mg/Kg wet	0.0200		89.2	70-130			
2,2-Dichloropropane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1-Dichloropropene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
cis-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.4	70-130			
trans-1,3-Dichloropropene	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
Diethyl Ether	0.0147	0.010	mg/Kg wet	0.0200		73.3	70-130			
Diisopropyl Ether (DIPE)	0.0141	0.0010	mg/Kg wet	0.0200		70.7	70-130			
1,4-Dioxane	0.161	0.10	mg/Kg wet	0.200		80.7	40-160			V-16 †
Ethylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
Hexachlorobutadiene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
2-Hexanone (MBK)	0.169	0.020	mg/Kg wet	0.200		84.6	40-160			†
Isopropylbenzene (Cumene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
p-Isopropyltoluene (p-Cymene)	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0201	0.0040	mg/Kg wet	0.0200		101	70-130			
Methylene Chloride	0.0120	0.010	mg/Kg wet	0.0200		59.9 *	70-130			L-04, V-05
4-Methyl-2-pentanone (MIBK)	0.150	0.020	mg/Kg wet	0.200		74.9	40-160			†
Naphthalene	0.0180	0.0040	mg/Kg wet	0.0200		90.2	70-130			
n-Propylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Styrene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,1,2-Tetrachloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,1,2,2-Tetrachloroethane	0.0186	0.0010	mg/Kg wet	0.0200		93.2	70-130			
Tetrachloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
Tetrahydrofuran	0.0129	0.010	mg/Kg wet	0.0200		64.3 *	70-130			L-04, V-05
Toluene	0.0177	0.0020	mg/Kg wet	0.0200		88.4	70-130			
1,2,3-Trichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
1,2,4-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
1,1,1-Trichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
1,1,2-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
Trichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0175	0.010	mg/Kg wet	0.0200		87.4	70-130			
1,2,3-Trichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130			
1,2,4-Trimethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
1,3,5-Trimethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
Vinyl Chloride	0.0134	0.010	mg/Kg wet	0.0200		67.0 *	70-130			L-04
m+p Xylene	0.0409	0.0040	mg/Kg wet	0.0400		102	70-130			
o-Xylene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0497		mg/Kg wet	0.0500		99.4	70-130			
Surrogate: Toluene-d8	0.0484		mg/Kg wet	0.0500		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0529		mg/Kg wet	0.0500		106	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218094 - SW-846 5035										
LCS Dup (B218094-BSD1)										
Prepared & Analyzed: 11/29/18										
Acetone	0.196	0.10	mg/Kg wet	0.200		98.1	40-160	21.8 *	20	R-05 †
tert-Amyl Methyl Ether (TAME)	0.0171	0.0010	mg/Kg wet	0.0200		85.3	70-130	3.65	20	
Benzene	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130	3.14	20	
Bromobenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.4	70-130	7.88	20	
Bromochloromethane	0.0155	0.0020	mg/Kg wet	0.0200		77.4	70-130	3.43	20	
Bromodichloromethane	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	2.33	20	
Bromoform	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	9.54	20	
Bromomethane	0.0120	0.010	mg/Kg wet	0.0200		59.8	40-160	4.43	20	L-14 †
2-Butanone (MEK)	0.186	0.040	mg/Kg wet	0.200		92.9	40-160	6.65	20	†
n-Butylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130	5.35	20	
sec-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130	4.11	20	
tert-Butylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130	6.01	20	
tert-Butyl Ethyl Ether (TBEE)	0.0161	0.0010	mg/Kg wet	0.0200		80.7	70-130	0.864	20	
Carbon Disulfide	0.0173	0.0060	mg/Kg wet	0.0200		86.4	70-130	1.91	20	
Carbon Tetrachloride	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.57	20	V-20
Chlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	3.97	20	
Chlorodibromomethane	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130	1.10	20	
Chloroethane	0.0164	0.010	mg/Kg wet	0.0200		81.8	70-130	3.98	20	
Chloroform	0.0188	0.0040	mg/Kg wet	0.0200		93.8	70-130	4.29	20	
Chloromethane	0.0110	0.010	mg/Kg wet	0.0200		55.1	40-160	1.11	20	V-05, L-14 †
2-Chlorotoluene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	2.90	20	
4-Chlorotoluene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	3.61	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0174	0.0020	mg/Kg wet	0.0200		87.1	70-130	1.10	20	
1,2-Dibromoethane (EDB)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	0.422	20	
Dibromomethane	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	3.24	20	
1,2-Dichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	3.64	20	
1,3-Dichlorobenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	5.09	20	
1,4-Dichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130	4.78	20	
Dichlorodifluoromethane (Freon 12)	0.0108	0.010	mg/Kg wet	0.0200		53.8	40-160	0.130	20	L-14 †
1,1-Dichloroethane	0.0166	0.0020	mg/Kg wet	0.0200		82.9	70-130	0.793	20	
1,2-Dichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	1.71	20	
1,1-Dichloroethylene	0.0164	0.0040	mg/Kg wet	0.0200		82.2	70-130	1.62	20	
cis-1,2-Dichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130	0.220	20	
trans-1,2-Dichloroethylene	0.0162	0.0020	mg/Kg wet	0.0200		81.2	70-130	0.283	20	
1,2-Dichloropropane	0.0160	0.0020	mg/Kg wet	0.0200		80.1	70-130	4.82	20	
1,3-Dichloropropane	0.0169	0.0010	mg/Kg wet	0.0200		84.6	70-130	5.22	20	
2,2-Dichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	4.88	20	
1,1-Dichloropropene	0.0179	0.0020	mg/Kg wet	0.0200		89.3	70-130	4.20	20	
cis-1,3-Dichloropropene	0.0178	0.0010	mg/Kg wet	0.0200		88.9	70-130	2.77	20	
trans-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	1.83	20	
Diethyl Ether	0.0140	0.010	mg/Kg wet	0.0200		70.0	70-130	4.63	20	
Diisopropyl Ether (DIPE)	0.0139	0.0010	mg/Kg wet	0.0200		69.3 *	70-130	2.00	20	L-07
1,4-Dioxane	0.193	0.10	mg/Kg wet	0.200		96.7	40-160	18.0	20	V-16 †
Ethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	1.43	20	
Hexachlorobutadiene	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	1.40	20	
2-Hexanone (MBK)	0.166	0.020	mg/Kg wet	0.200		83.0	40-160	1.94	20	†
Isopropylbenzene (Cumene)	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	1.31	20	
p-Isopropyltoluene (p-Cymene)	0.0181	0.0020	mg/Kg wet	0.0200		90.5	70-130	4.21	20	
Methyl tert-Butyl Ether (MTBE)	0.0188	0.0040	mg/Kg wet	0.0200		94.1	70-130	6.86	20	
Methylene Chloride	0.0123	0.010	mg/Kg wet	0.0200		61.7 *	70-130	2.91	20	L-04, V-05
4-Methyl-2-pentanone (MIBK)	0.149	0.020	mg/Kg wet	0.200		74.7	40-160	0.290	20	†
Naphthalene	0.0166	0.0040	mg/Kg wet	0.0200		83.2	70-130	8.13	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218094 - SW-846 5035										
LCS Dup (B218094-BSD1)										
					Prepared & Analyzed: 11/29/18					
n-Propylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	1.89	20	
Styrene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	4.62	20	
1,1,1,2-Tetrachloroethane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	7.09	20	
1,1,2,2-Tetrachloroethane	0.0191	0.0010	mg/Kg wet	0.0200		95.3	70-130	2.16	20	
Tetrachloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	4.09	20	
Tetrahydrofuran	0.0127	0.010	mg/Kg wet	0.0200		63.3 *	70-130	1.52	20	L-04, V-05
Toluene	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130	1.83	20	
1,2,3-Trichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130	8.56	20	
1,2,4-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130	6.73	20	
1,1,1-Trichloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	1.36	20	
1,1,2-Trichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	4.40	20	
Trichloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	2.27	20	
Trichlorofluoromethane (Freon 11)	0.0169	0.010	mg/Kg wet	0.0200		84.4	70-130	3.55	20	
1,2,3-Trichloropropane	0.0166	0.0020	mg/Kg wet	0.0200		82.9	70-130	13.5	20	
1,2,4-Trimethylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	4.38	20	
1,3,5-Trimethylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.619	20	
Vinyl Chloride	0.0131	0.010	mg/Kg wet	0.0200		65.4 *	70-130	2.48	20	L-04
m+p Xylene	0.0396	0.0040	mg/Kg wet	0.0400		99.0	70-130	3.19	20	
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	1.65	20	
Surrogate: 1,2-Dichloroethane-d4	0.0489		mg/Kg wet	0.0500		97.9	70-130			
Surrogate: Toluene-d8	0.0496		mg/Kg wet	0.0500		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0530		mg/Kg wet	0.0500		106	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 B218070 - SW-846 3546

Blank (B218070-BLK1)

Prepared: 11/29/18 Analyzed: 11/30/18

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							V-04
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							V-05
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 B218070 - SW-846 3546

Blank (B218070-BLK1)

Prepared: 11/29/18 Analyzed: 11/30/18

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	4.56		mg/Kg wet	6.67		68.4	30-130			
Surrogate: Phenol-d6	4.84		mg/Kg wet	6.67		72.5	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		69.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.04		mg/Kg wet	3.33		61.3	30-130			
Surrogate: 2,4,6-Tribromophenol	5.28		mg/Kg wet	6.67		79.3	30-130			
Surrogate: p-Terphenyl-d14	2.66		mg/Kg wet	3.33		79.9	30-130			

LCS (B218070-BS1)

Prepared: 11/29/18 Analyzed: 11/30/18

Acenaphthene	1.08	0.17	mg/Kg wet	1.67		64.9	40-140			
Acenaphthylene	1.20	0.17	mg/Kg wet	1.67		72.1	40-140			
Acetophenone	1.21	0.34	mg/Kg wet	1.67		72.9	40-140			
Aniline	0.883	0.34	mg/Kg wet	1.67		53.0	40-140			V-04
Anthracene	1.25	0.17	mg/Kg wet	1.67		74.9	40-140			
Benzo(a)anthracene	1.25	0.17	mg/Kg wet	1.67		74.8	40-140			
Benzo(a)pyrene	1.25	0.17	mg/Kg wet	1.67		75.1	40-140			
Benzo(b)fluoranthene	1.13	0.17	mg/Kg wet	1.67		67.8	40-140			
Benzo(g,h,i)perylene	1.31	0.17	mg/Kg wet	1.67		78.8	40-140			
Benzo(k)fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.3	40-140			
Bis(2-chloroethoxy)methane	1.47	0.34	mg/Kg wet	1.67		88.3	40-140			
Bis(2-chloroethyl)ether	1.27	0.34	mg/Kg wet	1.67		76.1	40-140			
Bis(2-chloroisopropyl)ether	1.43	0.34	mg/Kg wet	1.67		85.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.15	0.34	mg/Kg wet	1.67		68.9	40-140			
4-Bromophenylphenylether	1.40	0.34	mg/Kg wet	1.67		83.8	40-140			
Butylbenzylphthalate	1.15	0.34	mg/Kg wet	1.67		69.2	40-140			
4-Chloroaniline	0.610	0.66	mg/Kg wet	1.67		36.6	15-140			V-34 †
2-Chloronaphthalene	1.14	0.34	mg/Kg wet	1.67		68.3	40-140			
2-Chlorophenol	1.31	0.34	mg/Kg wet	1.67		78.7	30-130			
Chrysene	1.21	0.17	mg/Kg wet	1.67		72.8	40-140			
Dibenz(a,h)anthracene	1.20	0.17	mg/Kg wet	1.67		71.9	40-140			
Dibenzofuran	1.27	0.34	mg/Kg wet	1.67		76.2	40-140			
Di-n-butylphthalate	1.26	0.34	mg/Kg wet	1.67		75.5	40-140			
1,2-Dichlorobenzene	1.20	0.34	mg/Kg wet	1.67		72.2	40-140			
1,3-Dichlorobenzene	1.15	0.34	mg/Kg wet	1.67		68.7	40-140			
1,4-Dichlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.2	40-140			
3,3-Dichlorobenzidine	0.833	0.17	mg/Kg wet	1.67		50.0	40-140			
2,4-Dichlorophenol	1.28	0.34	mg/Kg wet	1.67		76.9	30-130			
Diethylphthalate	1.23	0.34	mg/Kg wet	1.67		73.9	40-140			
2,4-Dimethylphenol	1.30	0.34	mg/Kg wet	1.67		78.3	30-130			
Dimethylphthalate	1.28	0.34	mg/Kg wet	1.67		76.7	40-140			
2,4-Dinitrophenol	1.12	0.66	mg/Kg wet	1.67		67.3	15-140			†
2,4-Dinitrotoluene	1.28	0.34	mg/Kg wet	1.67		76.8	40-140			
2,6-Dinitrotoluene	1.34	0.34	mg/Kg wet	1.67		80.5	40-140			
Di-n-octylphthalate	1.06	0.34	mg/Kg wet	1.67		63.8	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.11	0.34	mg/Kg wet	1.67		66.8	40-140			V-05
Fluoranthene	1.34	0.17	mg/Kg wet	1.67		80.7	40-140			
Fluorene	1.23	0.17	mg/Kg wet	1.67		73.5	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 B218070 - SW-846 3546

LCS (B218070-BS1)

Prepared: 11/29/18 Analyzed: 11/30/18

Hexachlorobenzene	1.36	0.34	mg/Kg wet	1.67		81.8	40-140			
Hexachlorobutadiene	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Hexachloroethane	1.14	0.34	mg/Kg wet	1.67		68.5	40-140			
Indeno(1,2,3-cd)pyrene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140			
Isophorone	1.34	0.34	mg/Kg wet	1.67		80.7	40-140			
2-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.67		81.5	40-140			
2-Methylphenol	1.30	0.34	mg/Kg wet	1.67		78.0	30-130			
3/4-Methylphenol	1.17	0.34	mg/Kg wet	1.67		70.0	30-130			
Naphthalene	1.26	0.17	mg/Kg wet	1.67		75.5	40-140			
Nitrobenzene	1.20	0.34	mg/Kg wet	1.67		72.2	40-140			
2-Nitrophenol	1.28	0.34	mg/Kg wet	1.67		76.9	30-130			
4-Nitrophenol	1.19	0.66	mg/Kg wet	1.67		71.2	15-140			†
Pentachlorophenol	1.04	0.34	mg/Kg wet	1.67		62.5	30-130			
Phenanthrene	1.24	0.17	mg/Kg wet	1.67		74.3	40-140			
Phenol	1.24	0.34	mg/Kg wet	1.67		74.6	15-140			†
Pyrene	1.14	0.17	mg/Kg wet	1.67		68.3	40-140			
Pyridine	0.827	0.34	mg/Kg wet	1.67		49.6	30-140			†
1,2,4-Trichlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.9	40-140			
2,4,5-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.4	30-130			
2,4,6-Trichlorophenol	1.28	0.34	mg/Kg wet	1.67		76.8	30-130			
Surrogate: 2-Fluorophenol	5.34		mg/Kg wet	6.67		80.1	30-130			
Surrogate: Phenol-d6	5.45		mg/Kg wet	6.67		81.8	30-130			
Surrogate: Nitrobenzene-d5	2.72		mg/Kg wet	3.33		81.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.31		mg/Kg wet	3.33		69.4	30-130			
Surrogate: 2,4,6-Tribromophenol	5.45		mg/Kg wet	6.67		81.7	30-130			
Surrogate: p-Terphenyl-d14	2.57		mg/Kg wet	3.33		77.0	30-130			

LCS Dup (B218070-BSD1)

Prepared: 11/29/18 Analyzed: 11/30/18

Acenaphthene	1.06	0.17	mg/Kg wet	1.67		63.5	40-140	2.09	30	
Acenaphthylene	1.17	0.17	mg/Kg wet	1.67		70.2	40-140	2.64	30	
Acetophenone	1.17	0.34	mg/Kg wet	1.67		69.9	40-140	4.12	30	
Aniline	0.839	0.34	mg/Kg wet	1.67		50.3	40-140	5.11	30	V-04
Anthracene	1.22	0.17	mg/Kg wet	1.67		73.4	40-140	1.97	30	
Benzo(a)anthracene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140	3.54	30	
Benzo(a)pyrene	1.22	0.17	mg/Kg wet	1.67		73.0	40-140	2.81	30	
Benzo(b)fluoranthene	1.08	0.17	mg/Kg wet	1.67		64.8	40-140	4.59	30	
Benzo(g,h,i)perylene	1.29	0.17	mg/Kg wet	1.67		77.3	40-140	1.85	30	
Benzo(k)fluoranthene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	4.38	30	
Bis(2-chloroethoxy)methane	1.41	0.34	mg/Kg wet	1.67		84.5	40-140	4.47	30	
Bis(2-chloroethyl)ether	1.22	0.34	mg/Kg wet	1.67		73.1	40-140	4.05	30	
Bis(2-chloroisopropyl)ether	1.37	0.34	mg/Kg wet	1.67		82.4	40-140	3.76	30	
Bis(2-Ethylhexyl)phthalate	1.13	0.34	mg/Kg wet	1.67		67.5	40-140	2.05	30	
4-Bromophenylphenylether	1.31	0.34	mg/Kg wet	1.67		78.8	40-140	6.08	30	
Butylbenzylphthalate	1.12	0.34	mg/Kg wet	1.67		67.3	40-140	2.75	30	
4-Chloroaniline	0.575	0.66	mg/Kg wet	1.67		34.5	15-140	6.02	30	V-34 †
2-Chloronaphthalene	1.03	0.34	mg/Kg wet	1.67		62.0	40-140	9.67	30	
2-Chlorophenol	1.25	0.34	mg/Kg wet	1.67		75.1	30-130	4.68	30	
Chrysene	1.18	0.17	mg/Kg wet	1.67		70.7	40-140	2.93	30	
Dibenz(a,h)anthracene	1.16	0.17	mg/Kg wet	1.67		69.9	40-140	2.91	30	
Dibenzofuran	1.24	0.34	mg/Kg wet	1.67		74.2	40-140	2.66	30	
Di-n-butylphthalate	1.23	0.34	mg/Kg wet	1.67		74.1	40-140	1.87	30	
1,2-Dichlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.2	40-140	4.30	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
Batch B218070 - SW-846 3546										
LCS Dup (B218070-BSD1)										
					Prepared: 11/29/18 Analyzed: 11/30/18					
1,3-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.8	40-140	2.80	30	
1,4-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.0	40-140	3.26	30	
3,3-Dichlorobenzidine	0.810	0.17	mg/Kg wet	1.67		48.6	40-140	2.80	30	
2,4-Dichlorophenol	1.23	0.34	mg/Kg wet	1.67		74.1	30-130	3.71	30	
Diethylphthalate	1.24	0.34	mg/Kg wet	1.67		74.6	40-140	0.969	30	
2,4-Dimethylphenol	1.26	0.34	mg/Kg wet	1.67		75.5	30-130	3.62	30	
Dimethylphthalate	1.27	0.34	mg/Kg wet	1.67		76.0	40-140	0.917	30	
2,4-Dinitrophenol	1.12	0.66	mg/Kg wet	1.67		67.4	15-140	0.178	30	†
2,4-Dinitrotoluene	1.30	0.34	mg/Kg wet	1.67		77.7	40-140	1.14	30	
2,6-Dinitrotoluene	1.34	0.34	mg/Kg wet	1.67		80.3	40-140	0.249	30	
Di-n-octylphthalate	1.03	0.34	mg/Kg wet	1.67		61.7	40-140	3.38	30	
1,2-Diphenylhydrazine/Azobenzene	1.06	0.34	mg/Kg wet	1.67		63.6	40-140	4.94	30	V-05
Fluoranthene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140	2.00	30	
Fluorene	1.21	0.17	mg/Kg wet	1.67		72.6	40-140	1.26	30	
Hexachlorobenzene	1.30	0.34	mg/Kg wet	1.67		78.2	40-140	4.55	30	
Hexachlorobutadiene	1.28	0.34	mg/Kg wet	1.67		76.8	40-140	3.55	30	
Hexachloroethane	1.09	0.34	mg/Kg wet	1.67		65.7	40-140	4.26	30	
Indeno(1,2,3-cd)pyrene	1.22	0.17	mg/Kg wet	1.67		73.5	40-140	3.03	30	
Isophorone	1.31	0.34	mg/Kg wet	1.67		78.7	40-140	2.53	30	
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140	2.33	30	
2-Methylphenol	1.28	0.34	mg/Kg wet	1.67		76.6	30-130	1.81	30	
3/4-Methylphenol	1.13	0.34	mg/Kg wet	1.67		68.0	30-130	2.96	30	
Naphthalene	1.21	0.17	mg/Kg wet	1.67		72.6	40-140	3.97	30	
Nitrobenzene	1.16	0.34	mg/Kg wet	1.67		69.8	40-140	3.41	30	
2-Nitrophenol	1.24	0.34	mg/Kg wet	1.67		74.3	30-130	3.54	30	
4-Nitrophenol	1.19	0.66	mg/Kg wet	1.67		71.6	15-140	0.672	30	†
Pentachlorophenol	1.00	0.34	mg/Kg wet	1.67		60.2	30-130	3.78	30	
Phenanthrene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140	2.81	30	
Phenol	1.18	0.34	mg/Kg wet	1.67		70.6	15-140	5.51	30	†
Pyrene	1.11	0.17	mg/Kg wet	1.67		66.4	40-140	2.82	30	
Pyridine	0.808	0.34	mg/Kg wet	1.67		48.5	30-140	2.37	30	†
1,2,4-Trichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	3.30	30	
2,4,5-Trichlorophenol	1.25	0.34	mg/Kg wet	1.67		74.7	30-130	0.375	30	
2,4,6-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.1	30-130	3.58	30	
Surrogate: 2-Fluorophenol	4.99		mg/Kg wet	6.67		74.8	30-130			
Surrogate: Phenol-d6	5.10		mg/Kg wet	6.67		76.5	30-130			
Surrogate: Nitrobenzene-d5	2.55		mg/Kg wet	3.33		76.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.15		mg/Kg wet	3.33		64.4	30-130			
Surrogate: 2,4,6-Tribromophenol	5.30		mg/Kg wet	6.67		79.4	30-130			
Surrogate: p-Terphenyl-d14	2.47		mg/Kg wet	3.33		74.0	30-130			

QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218069 - SW-846 3546										
Blank (B218069-BLK1)										
Prepared: 11/29/18 Analyzed: 12/04/18										
alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.163		mg/Kg wet	0.200		81.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.156		mg/Kg wet	0.200		78.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.120		mg/Kg wet	0.200		60.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.144		mg/Kg wet	0.200		71.8	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218069 - SW-846 3546										
LCS (B218069-BS1)										
					Prepared: 11/29/18 Analyzed: 12/04/18					
alpha-Chlordane	0.089	0.0050	mg/Kg wet	0.100		89.3	40-140			
alpha-Chlordane [2C]	0.089	0.0050	mg/Kg wet	0.100		88.6	40-140			
gamma-Chlordane	0.086	0.0050	mg/Kg wet	0.100		85.9	40-140			
gamma-Chlordane [2C]	0.088	0.0050	mg/Kg wet	0.100		88.2	40-140			
Alachlor	0.066	0.020	mg/Kg wet	0.100		66.0	40-140			
Alachlor [2C]	0.069	0.020	mg/Kg wet	0.100		69.5	40-140			
Aldrin	0.083	0.0050	mg/Kg wet	0.100		83.3	40-140			
Aldrin [2C]	0.081	0.0050	mg/Kg wet	0.100		81.0	40-140			
alpha-BHC	0.050	0.0050	mg/Kg wet	0.100		50.2	40-140			
alpha-BHC [2C]	0.053	0.0050	mg/Kg wet	0.100		52.5	40-140			
beta-BHC	0.071	0.0050	mg/Kg wet	0.100		70.6	40-140			
beta-BHC [2C]	0.071	0.0050	mg/Kg wet	0.100		70.6	40-140			
delta-BHC	0.072	0.0050	mg/Kg wet	0.100		72.4	40-140			
delta-BHC [2C]	0.075	0.0050	mg/Kg wet	0.100		75.2	40-140			
gamma-BHC (Lindane)	0.060	0.0020	mg/Kg wet	0.100		60.3	40-140			
gamma-BHC (Lindane) [2C]	0.061	0.0020	mg/Kg wet	0.100		60.6	40-140			
4,4'-DDD	0.099	0.0040	mg/Kg wet	0.100		99.1	40-140			
4,4'-DDD [2C]	0.094	0.0040	mg/Kg wet	0.100		93.7	40-140			
4,4'-DDE	0.099	0.0040	mg/Kg wet	0.100		99.4	40-140			
4,4'-DDE [2C]	0.095	0.0040	mg/Kg wet	0.100		95.0	40-140			
4,4'-DDT	0.096	0.0040	mg/Kg wet	0.100		95.7	40-140			
4,4'-DDT [2C]	0.090	0.0040	mg/Kg wet	0.100		89.7	40-140			
Dieldrin	0.089	0.0040	mg/Kg wet	0.100		89.2	40-140			
Dieldrin [2C]	0.086	0.0040	mg/Kg wet	0.100		85.7	40-140			
Endosulfan I	0.088	0.0050	mg/Kg wet	0.100		88.1	40-140			
Endosulfan I [2C]	0.086	0.0050	mg/Kg wet	0.100		86.2	40-140			
Endosulfan II	0.091	0.0080	mg/Kg wet	0.100		90.9	40-140			
Endosulfan II [2C]	0.090	0.0080	mg/Kg wet	0.100		89.8	40-140			
Endosulfan Sulfate	0.087	0.0080	mg/Kg wet	0.100		86.5	40-140			
Endosulfan Sulfate [2C]	0.088	0.0080	mg/Kg wet	0.100		87.9	40-140			
Endrin	0.092	0.0080	mg/Kg wet	0.100		91.7	40-140			
Endrin [2C]	0.090	0.0080	mg/Kg wet	0.100		89.6	40-140			
Endrin Aldehyde	0.091	0.0080	mg/Kg wet	0.100		90.9	40-140			
Endrin Aldehyde [2C]	0.089	0.0080	mg/Kg wet	0.100		88.8	40-140			
Endrin Ketone	0.094	0.0080	mg/Kg wet	0.100		93.5	40-140			
Endrin Ketone [2C]	0.091	0.0080	mg/Kg wet	0.100		91.2	40-140			
Heptachlor	0.058	0.0050	mg/Kg wet	0.100		58.0	40-140			
Heptachlor [2C]	0.074	0.0050	mg/Kg wet	0.100		74.5	40-140			
Heptachlor Epoxide	0.083	0.0050	mg/Kg wet	0.100		83.1	40-140			
Heptachlor Epoxide [2C]	0.082	0.0050	mg/Kg wet	0.100		82.3	40-140			
Hexachlorobenzene	0.083	0.0060	mg/Kg wet	0.100		83.0	40-140			
Hexachlorobenzene [2C]	0.086	0.0060	mg/Kg wet	0.100		86.2	40-140			
Methoxychlor	0.094	0.050	mg/Kg wet	0.100		93.7	40-140			
Methoxychlor [2C]	0.095	0.050	mg/Kg wet	0.100		95.0	40-140			
Surrogate: Decachlorobiphenyl	0.178		mg/Kg wet	0.200		88.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.171		mg/Kg wet	0.200		85.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.149		mg/Kg wet	0.200		74.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.159		mg/Kg wet	0.200		79.3	30-150			

QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218069 - SW-846 3546										
LCS Dup (B218069-BSD1)										
					Prepared: 11/29/18 Analyzed: 12/04/18					
alpha-Chlordane	0.089	0.0050	mg/Kg wet	0.100		89.0	40-140	0.413	30	
alpha-Chlordane [2C]	0.089	0.0050	mg/Kg wet	0.100		89.1	40-140	0.644	30	
gamma-Chlordane	0.085	0.0050	mg/Kg wet	0.100		84.8	40-140	1.29	30	
gamma-Chlordane [2C]	0.088	0.0050	mg/Kg wet	0.100		87.9	40-140	0.300	30	
Alachlor	0.063	0.020	mg/Kg wet	0.100		62.6	40-140	5.35	30	
Alachlor [2C]	0.065	0.020	mg/Kg wet	0.100		65.4	40-140	6.00	30	
Aldrin	0.079	0.0050	mg/Kg wet	0.100		79.1	40-140	5.21	30	
Aldrin [2C]	0.078	0.0050	mg/Kg wet	0.100		78.3	40-140	3.47	30	
alpha-BHC	0.044	0.0050	mg/Kg wet	0.100		44.1	40-140	12.9	30	
alpha-BHC [2C]	0.047	0.0050	mg/Kg wet	0.100		46.8	40-140	11.5	30	
beta-BHC	0.060	0.0050	mg/Kg wet	0.100		60.2	40-140	15.8	30	
beta-BHC [2C]	0.063	0.0050	mg/Kg wet	0.100		63.1	40-140	11.2	30	
delta-BHC	0.064	0.0050	mg/Kg wet	0.100		64.1	40-140	12.2	30	
delta-BHC [2C]	0.068	0.0050	mg/Kg wet	0.100		67.6	40-140	10.6	30	
gamma-BHC (Lindane)	0.052	0.0020	mg/Kg wet	0.100		51.6	40-140	15.5	30	
gamma-BHC (Lindane) [2C]	0.053	0.0020	mg/Kg wet	0.100		52.9	40-140	13.6	30	
4,4'-DDD	0.10	0.0040	mg/Kg wet	0.100		103	40-140	3.73	30	
4,4'-DDD [2C]	0.098	0.0040	mg/Kg wet	0.100		98.3	40-140	4.75	30	
4,4'-DDE	0.10	0.0040	mg/Kg wet	0.100		101	40-140	2.04	30	
4,4'-DDE [2C]	0.10	0.0040	mg/Kg wet	0.100		100	40-140	5.63	30	
4,4'-DDT	0.090	0.0040	mg/Kg wet	0.100		89.5	40-140	6.65	30	
4,4'-DDT [2C]	0.095	0.0040	mg/Kg wet	0.100		95.0	40-140	5.72	30	
Dieldrin	0.090	0.0040	mg/Kg wet	0.100		89.6	40-140	0.372	30	
Dieldrin [2C]	0.087	0.0040	mg/Kg wet	0.100		86.9	40-140	1.38	30	
Endosulfan I	0.087	0.0050	mg/Kg wet	0.100		87.3	40-140	0.996	30	
Endosulfan I [2C]	0.086	0.0050	mg/Kg wet	0.100		86.4	40-140	0.178	30	
Endosulfan II	0.093	0.0080	mg/Kg wet	0.100		92.7	40-140	1.96	30	
Endosulfan II [2C]	0.091	0.0080	mg/Kg wet	0.100		91.4	40-140	1.73	30	
Endosulfan Sulfate	0.090	0.0080	mg/Kg wet	0.100		90.5	40-140	4.47	30	
Endosulfan Sulfate [2C]	0.092	0.0080	mg/Kg wet	0.100		91.6	40-140	4.08	30	
Endrin	0.092	0.0080	mg/Kg wet	0.100		92.4	40-140	0.799	30	
Endrin [2C]	0.091	0.0080	mg/Kg wet	0.100		91.0	40-140	1.56	30	
Endrin Aldehyde	0.099	0.0080	mg/Kg wet	0.100		98.9	40-140	8.43	30	
Endrin Aldehyde [2C]	0.096	0.0080	mg/Kg wet	0.100		96.2	40-140	7.90	30	
Endrin Ketone	0.098	0.0080	mg/Kg wet	0.100		97.6	40-140	4.28	30	
Endrin Ketone [2C]	0.096	0.0080	mg/Kg wet	0.100		95.9	40-140	5.07	30	
Heptachlor	0.052	0.0050	mg/Kg wet	0.100		52.0	40-140	10.8	30	
Heptachlor [2C]	0.068	0.0050	mg/Kg wet	0.100		67.9	40-140	9.22	30	
Heptachlor Epoxide	0.080	0.0050	mg/Kg wet	0.100		79.8	40-140	4.07	30	
Heptachlor Epoxide [2C]	0.080	0.0050	mg/Kg wet	0.100		80.1	40-140	2.72	30	
Hexachlorobenzene	0.083	0.0060	mg/Kg wet	0.100		83.2	40-140	0.242	30	
Hexachlorobenzene [2C]	0.087	0.0060	mg/Kg wet	0.100		86.6	40-140	0.508	30	
Methoxychlor	0.098	0.050	mg/Kg wet	0.100		98.3	40-140	4.78	30	
Methoxychlor [2C]	0.10	0.050	mg/Kg wet	0.100		101	40-140	6.43	30	
Surrogate: Decachlorobiphenyl	0.187		mg/Kg wet	0.200		93.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.180		mg/Kg wet	0.200		90.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.132		mg/Kg wet	0.200		65.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.156		mg/Kg wet	0.200		77.8	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218009 - SW-846 3546										
Blank (B218009-BLK1)										
Prepared: 11/28/18 Analyzed: 11/29/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.131		mg/Kg wet	0.200		65.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.135		mg/Kg wet	0.200		67.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.123		mg/Kg wet	0.200		61.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.123		mg/Kg wet	0.200		61.4	30-150			
LCS (B218009-BS1)										
Prepared: 11/28/18 Analyzed: 11/29/18										
Aroclor-1016	0.13	0.020	mg/Kg wet	0.200		62.6	40-140			
Aroclor-1016 [2C]	0.13	0.020	mg/Kg wet	0.200		64.2	40-140			
Aroclor-1260	0.12	0.020	mg/Kg wet	0.200		61.0	40-140			
Aroclor-1260 [2C]	0.12	0.020	mg/Kg wet	0.200		62.3	40-140			
Surrogate: Decachlorobiphenyl	0.136		mg/Kg wet	0.200		68.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.142		mg/Kg wet	0.200		71.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.132		mg/Kg wet	0.200		65.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.132		mg/Kg wet	0.200		66.2	30-150			
LCS Dup (B218009-BSD1)										
Prepared: 11/28/18 Analyzed: 11/29/18										
Aroclor-1016	0.13	0.020	mg/Kg wet	0.200		67.3	40-140	7.17	30	
Aroclor-1016 [2C]	0.14	0.020	mg/Kg wet	0.200		69.3	40-140	7.60	30	
Aroclor-1260	0.13	0.020	mg/Kg wet	0.200		66.2	40-140	8.14	30	
Aroclor-1260 [2C]	0.14	0.020	mg/Kg wet	0.200		68.1	40-140	8.93	30	
Surrogate: Decachlorobiphenyl	0.152		mg/Kg wet	0.200		75.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.156		mg/Kg wet	0.200		78.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.141		mg/Kg wet	0.200		70.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.141		mg/Kg wet	0.200		70.7	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217974 - SW-846 8151										
Blank (B217974-BLK1)										
Prepared: 11/28/18 Analyzed: 11/29/18										
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	72.3		µg/kg wet	95.2		75.9	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	69.3		µg/kg wet	95.2		72.7	30-150			
LCS (B217974-BS1)										
Prepared: 11/28/18 Analyzed: 11/29/18										
2,4-D	113	25	µg/kg wet	125		90.6	40-140			
2,4-D [2C]	116	25	µg/kg wet	125		92.6	40-140			
2,4-DB	116	25	µg/kg wet	125		92.9	40-140			
2,4-DB [2C]	115	25	µg/kg wet	125		92.2	40-140			
2,4,5-TP (Silvex)	11.8	2.5	µg/kg wet	12.5		94.0	40-140			
2,4,5-TP (Silvex) [2C]	12.0	2.5	µg/kg wet	12.5		95.7	40-140			
2,4,5-T	11.2	2.5	µg/kg wet	12.5		89.3	40-140			
2,4,5-T [2C]	12.3	2.5	µg/kg wet	12.5		98.4	40-140			
Dalapon	193	62	µg/kg wet	312		61.7	40-140			
Dalapon [2C]	191	62	µg/kg wet	312		61.1	40-140			
Dicamba	11.4	2.5	µg/kg wet	12.5		91.6	40-140			
Dicamba [2C]	11.1	2.5	µg/kg wet	12.5		89.1	40-140			
Dichloroprop	119	25	µg/kg wet	125		94.9	40-140			
Dichloroprop [2C]	117	25	µg/kg wet	125		93.6	40-140			
Dinoseb	15.4	12	µg/kg wet	62.5		24.6	0-42.4			
Dinoseb [2C]	16.0	12	µg/kg wet	62.5		25.5	0-41.1			
MCPA	10900	2500	µg/kg wet	12500		87.2	40-140			
MCPA [2C]	10000	2500	µg/kg wet	12500		80.3	40-140			
MCPP	14700	2500	µg/kg wet	12500		118	40-140			
MCPP [2C]	10400	2500	µg/kg wet	12500		83.2	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	86.8		µg/kg wet	100		86.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	83.6		µg/kg wet	100		83.6	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B217974 - SW-846 8151										
LCS Dup (B217974-BSD1)										
					Prepared: 11/28/18 Analyzed: 11/29/18					
2,4-D	102	25	µg/kg wet	125		81.5	40-140	10.6	30	
2,4-D [2C]	105	25	µg/kg wet	125		83.7	40-140	10.1	30	
2,4-DB	103	25	µg/kg wet	125		82.2	40-140	12.3	30	
2,4-DB [2C]	102	25	µg/kg wet	125		81.7	40-140	12.1	30	
2,4,5-TP (Silvex)	10.6	2.5	µg/kg wet	12.5		84.8	40-140	10.4	30	
2,4,5-TP (Silvex) [2C]	10.7	2.5	µg/kg wet	12.5		86.0	40-140	10.7	30	
2,4,5-T	10.0	2.5	µg/kg wet	12.5		80.0	40-140	11.0	30	
2,4,5-T [2C]	11.1	2.5	µg/kg wet	12.5		88.6	40-140	10.5	30	
Dalapon	170	62	µg/kg wet	312		54.5	40-140	12.5	30	
Dalapon [2C]	169	62	µg/kg wet	312		53.9	40-140	12.5	30	
Dicamba	10.4	2.5	µg/kg wet	12.5		82.8	40-140	10.0	30	
Dicamba [2C]	10.2	2.5	µg/kg wet	12.5		81.3	40-140	9.14	30	
Dichloroprop	106	25	µg/kg wet	125		84.8	40-140	11.2	30	
Dichloroprop [2C]	106	25	µg/kg wet	125		84.9	40-140	9.84	30	
Dinoseb	17.3	12	µg/kg wet	62.5		27.7	0-42.4	11.8	30	
Dinoseb [2C]	17.6	12	µg/kg wet	62.5		28.2	0-41.1	9.70	30	
MCPA	9580	2500	µg/kg wet	12500		76.6	40-140	12.9	30	
MCPA [2C]	9070	2500	µg/kg wet	12500		72.6	40-140	10.1	30	
MCPP	13400	2500	µg/kg wet	12500		107	40-140	9.18	30	
MCPP [2C]	9190	2500	µg/kg wet	12500		73.5	40-140	12.4	30	
Surrogate: 2,4-Dichlorophenylacetic acid	76.7		µg/kg wet	100		76.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	75.6		µg/kg wet	100		75.6	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218071 - SW-846 3546										
Blank (B218071-BLK1)					Prepared: 11/29/18 Analyzed: 11/30/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.17		mg/Kg wet	3.33		65.0	40-140			
LCS (B218071-BS1)					Prepared: 11/29/18 Analyzed: 11/30/18					
TPH (C9-C36)	25.1	8.3	mg/Kg wet	33.3		75.3	40-140			
Surrogate: 2-Fluorobiphenyl	2.41		mg/Kg wet	3.33		72.3	40-140			
LCS Dup (B218071-BSD1)					Prepared: 11/29/18 Analyzed: 11/30/18					
TPH (C9-C36)	26.1	8.3	mg/Kg wet	33.3		78.3	40-140	3.96	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
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Batch B218441 - SW-846 3050B

Blank (B218441-BLK1)

Prepared: 12/04/18 Analyzed: 12/05/18

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 (B218441-BS1)

Prepared: 12/04/18 Analyzed: 12/05/18

Antimony	62.5	4.9	mg/Kg wet	75.5		82.8	3.8-196			
Arsenic	161	4.9	mg/Kg wet	161		99.7	83.2-116.8			
Barium	284	4.9	mg/Kg wet	260		109	82.7-117.3			
Beryllium	104	0.49	mg/Kg wet	97.6		107	83.4-116.8			
Cadmium	214	0.49	mg/Kg wet	211		102	83.4-116.6			
Chromium	142	0.98	mg/Kg wet	136		104	82.4-117.6			
Lead	110	1.5	mg/Kg wet	111		98.8	83-117.1			
Nickel	97.7	0.98	mg/Kg wet	91.9		106	82.9-117.5			
Selenium	187	9.8	mg/Kg wet	191		97.7	79.6-120.9			
Silver	47.3	0.98	mg/Kg wet	43.3		109	79.9-119.9			
Thallium	166	4.9	mg/Kg wet	156		107	81.4-119.2			
Vanadium	54.4	2.0	mg/Kg wet	56.7		95.9	79-121.2			
Zinc	205	2.0	mg/Kg wet	199		103	81.4-119.1			

LCS Dup (B218441-BSD1)

Prepared: 12/04/18 Analyzed: 12/05/18

Antimony	63.1	5.0	mg/Kg wet	75.5		83.6	3.8-196	1.03	30	
Arsenic	157	5.0	mg/Kg wet	161		97.5	83.2-116.8	2.21	30	
Barium	275	5.0	mg/Kg wet	260		106	82.7-117.3	3.49	30	
Beryllium	102	0.50	mg/Kg wet	97.6		105	83.4-116.8	2.04	30	
Cadmium	210	0.50	mg/Kg wet	211		99.8	83.4-116.6	1.74	30	
Chromium	138	0.99	mg/Kg wet	136		102	82.4-117.6	2.52	30	
Lead	109	1.5	mg/Kg wet	111		98.3	83-117.1	0.504	30	
Nickel	95.4	0.99	mg/Kg wet	91.9		104	82.9-117.5	2.38	30	
Selenium	183	9.9	mg/Kg wet	191		95.9	79.6-120.9	1.90	30	
Silver	46.9	0.99	mg/Kg wet	43.3		108	79.9-119.9	0.740	30	
Thallium	163	5.0	mg/Kg wet	156		105	81.4-119.2	1.75	30	
Vanadium	52.8	2.0	mg/Kg wet	56.7		93.2	79-121.2	2.82	30	
Zinc	201	2.0	mg/Kg wet	199		101	81.4-119.1	2.10	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
Batch B218441 - SW-846 3050B										
MRL Check (B218441-MRL1)					Prepared: 12/04/18 Analyzed: 12/05/18					
Lead	0.529	0.49	mg/Kg wet	0.493		107	80-120			
Batch B218536 - SW-846 7471										
Blank (B218536-BLK1)					Prepared: 12/05/18 Analyzed: 12/06/18					
Mercury	ND	0.025	mg/Kg wet							
LCS (B218536-BS1)					Prepared: 12/05/18 Analyzed: 12/06/18					
Mercury	14.3	1.9	mg/Kg wet	11.5		125	71.6-127.8			
LCS Dup (B218536-BSD1)					Prepared: 12/05/18 Analyzed: 12/06/18					
Mercury	11.8	1.9	mg/Kg wet	11.5		103	71.6-127.8	19.1	30	

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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 B218066 - SW-846 9045C										
LCS (B218066-BS1)				Prepared & Analyzed: 11/28/18						
pH	6.01		pH Units	6.00		100	90-110			
Duplicate (B218066-DUP1)				Source: 18K1190-04		Prepared & Analyzed: 11/28/18				
pH	5.4		pH Units		5.3			1.48	5	H-03
Batch B218203 - SM21-22 2510B Modified										
Blank (B218203-BLK1)				Prepared & Analyzed: 11/30/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B218203-BS1)				Prepared & Analyzed: 11/30/18						
Specific conductance	200		µmhos/cm	192		102	90-110			
Duplicate (B218203-DUP2)				Source: 18K1190-01		Prepared & Analyzed: 11/30/18				
Specific conductance	2.0	2.0	µmhos/cm		2.0			2.51	21	
Batch B218238 - SW-846 9014										
Blank (B218238-BLK1)				Prepared: 11/30/18 Analyzed: 12/03/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B218238-BS1)				Prepared: 11/30/18 Analyzed: 12/03/18						
Reactive Cyanide	11	0.40	mg/Kg	10.0		106	83.6-111			
Batch B218248 - SW-846 9030A										
Blank (B218248-BLK1)				Prepared: 11/30/18 Analyzed: 12/03/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B218248-BS1)				Prepared: 11/30/18 Analyzed: 12/03/18						
Reactive Sulfide	12	2.0	mg/Kg	14.8		83.8	54.9-121			
Batch B218263 - SW-846 9014										
Blank (B218263-BLK1)				Prepared: 12/01/18 Analyzed: 12/03/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B218263-BS1)				Prepared: 12/01/18 Analyzed: 12/03/18						
Reactive Cyanide	11	0.40	mg/Kg	10.0		106	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
Batch B218264 - SW-846 9030A										
Blank (B218264-BLK1)					Prepared: 12/01/18 Analyzed: 12/03/18					
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B218264-BS1)					Prepared: 12/01/18 Analyzed: 12/03/18					
Reactive Sulfide	12	2.0	mg/Kg	14.8		83.8	54.9-121			
Batch B218583 - % Solids										
Duplicate (B218583-DUP3)		Source: 18K1190-01			Prepared: 12/05/18 Analyzed: 12/06/18					
% Solids	78.8		% Wt		77.3			1.85	20	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SB42

SW-846 8081B

Lab Sample ID: 18K1190-04 Date(s) Analyzed: 12/04/2018 12/04/2018

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		
4,4'-DDT	1	7.811	-0.030	0.030	0.33	
	2	7.800	-0.030	0.030	0.34	3.0
Aroclor-1254	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.23	14.0
Aroclor-1260	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.18	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.
- DL-03 Elevated reporting limit due to matrix.
 - 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.
 - O-32 A dilution was performed as part of the standard analytical procedure.
 - R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
 - V-04 Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound.
 - 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 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
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
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
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8151A in Soil	
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
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

CERTIFICATIONS

Certified Analyses included in this Report

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
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
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	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
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	12/14/2018
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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East Longmeadow, MA 01028

Page 1 of 1

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Email: info@con-testlabs.com



Requested Turnaround Time
 7-Day 10-Day
 Due Date: _____

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

Data Delivery
 Format: PDF EXCEL
 Other: Limit Checker

CLP Like Data Pkg Required:

Email To: pcornell@vhb.com; tylerphillips@vhb.com;
 fbeyans@vhb.com

Fax To #: _____

Company Name: VHB
 Address: 101 Walnut Street, Watertown, MA
 Phone: 617-607-1841

Project Name: EverSource Transmission Project
 Project Location: Sudbury, Massachusetts
 Project Number: 12970.03
 Project Manager: Paige Cornell
 Con-Test Quote Name/Number: _____
 Invoice Recipient: _____
 Sampled By: T.JP

Con-Test Work Order#	Client Sample ID / Description	Date	Time	Composite	Grab	Matrix Code	Conc Code
1	SB48	11/15/18	9:00	X	X	S	A/V
2	SB40	11/15/18	10:30	X	X	S	A/V
3	SB41	11/15/18	11:30	X	X	S	A/V
4	SB42	11/15/18	14:00	X	X	S	A/V

ANALYSIS REQUESTED		1	2	3
Conductivity		A	A	A
Pesticide/Herbicide		A	A	A
SVOCs, PCBs, TPH		I	I	I
VOCs		I	M/O	I
MCP 14 Metals		1	1	3

of Containers
 2 Preservation Code
 3 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) _DI
 H2O

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:
 Vials frozen on day of generation by 16:00
 Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*
 Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*
 Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*
 Relinquished by: (signature) *[Signature]*
 Received by: (signature) *[Signature]*

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 Other
 Federal 21 J School Chromatogram
 City Brownfield MBTA AIHA-LAP, LLC

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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

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 VNR

Received By LR Date 11-28-18 Time 1730

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 - 5.1
 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? Luke

Is there enough Volume? T

Is there Headspace where applicable? T 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>4</u>	250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-	<u>8</u>	Other Glass		Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen: DI @ 11-28-18 1730
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:

* Containers for sample SB40 labeled SB41, Identified by container date/time

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 18K1190
Project Location: Sudbury, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
18K1190-01 thru 18K1190-04

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 (X)	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 A ()	8151 Herbicides CAM V C (X)	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()

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

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹

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

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

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

¹All 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: 12/06/18

December 17, 2018

Paige Cornell
Vanasse Hangen Brustlin, Inc.
101 Walnut Street
Watertown, MA 02472

Project Location: Sudbury, MA
Client Job Number:
Project Number: 12970.03
Laboratory Work Order Number: 18L0240

Enclosed are results of analyses for samples received by the laboratory on December 6, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive style with a large, prominent 'K' and 'M'.

Kerry K. McGee
Project Manager

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Vanasse Hangen Brustlin, Inc.
 101 Walnut Street
 Watertown, MA 02472
 ATTN: Paige Cornell

REPORT DATE: 12/17/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 12970.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18L0240

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

PROJECT LOCATION: Sudbury, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW33	18L0240-01	Ground Water		SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8100 Modified SW-846 8260C	
MW35	18L0240-02	Ground Water		SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8100 Modified SW-846 8260C	
MW42	18L0240-03	Ground Water		SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8100 Modified SW-846 8260C	

CASE NARRATIVE SUMMARY

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

For method 6020, only a select list of metals was requested and reported.

SW-846 8082A**Qualifications:****H-01**

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

18L0240-01[MW33]

SW-846 8260C**Qualifications:****RL-07**

Elevated reporting limit based on lowest point in calibration.

MA CAM reporting limit not met.

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

18L0240-01[MW33], 18L0240-02[MW35], 18L0240-03[MW42]

Methylene Chloride

18L0240-01[MW33], 18L0240-02[MW35], 18L0240-03[MW42]

V-05

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

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

18L0240-01[MW33], 18L0240-02[MW35], 18L0240-03[MW42], B219108-BLK1, B219108-BS1, B219108-BSD1, S030354-CCV1

Dichlorodifluoromethane (Freon 1)

18L0240-01[MW33], 18L0240-02[MW35], 18L0240-03[MW42], B219108-BLK1, B219108-BS1, B219108-BSD1, S030354-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**

18L0240-01[MW33], 18L0240-02[MW35], 18L0240-03[MW42], B219108-BLK1, B219108-BS1, B219108-BSD1, S030354-CCV1

V-20

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

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

B219108-BS1, B219108-BSD1, S030354-CCV1

Bromomethane

B219108-BS1, B219108-BSD1, S030354-CCV1

Hexachlorobutadiene

B219108-BS1, B219108-BSD1, S030354-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.

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 Kopyscinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopyscinski
Laboratory Director

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW33

Sampled: 12/5/2018 09:08

Sample ID: 18L0240-01

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	V-05	SW-846 8260C	12/13/18	12/14/18 19:04	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW33

Sampled: 12/5/2018 09:08

Sample ID: 18L0240-01

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	12/13/18	12/14/18 19:04	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/13/18	12/14/18 19:04	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:04	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	84.8	70-130	12/14/18 19:04
Toluene-d8	96.5	70-130	12/14/18 19:04
4-Bromofluorobenzene	97.6	70-130	12/14/18 19:04

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW33

Sampled: 12/5/2018 09:08

Sample ID: 18L0240-01

Sample Matrix: Ground Water

Sample Flags: H-01

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1221 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1232 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1242 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1248 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1254 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1260 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1262 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Aroclor-1268 [1]	ND	0.19	µg/L	1		SW-846 8082A	12/13/18	12/14/18 21:23	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		68.6	30-150					12/14/18 21:23	
Decachlorobiphenyl [2]		72.3	30-150					12/14/18 21:23	
Tetrachloro-m-xylene [1]		81.5	30-150					12/14/18 21:23	
Tetrachloro-m-xylene [2]		87.5	30-150					12/14/18 21:23	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW33

Sampled: 12/5/2018 09:08

Sample ID: 18L0240-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	0.19	mg/L	1		SW-846 8100 Modified	12/11/18	12/14/18 18:19	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	61.8		40-140					12/14/18 18:19	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Sampled: 12/5/2018 09:08

Field Sample #: MW33

Sample ID: 18L0240-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date	Date/Time	Analyst
							Prepared	Analyzed	
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH
Barium	16	10	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH
Chromium	ND	1.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH
Lead	ND	1.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/11/18	12/12/18 13:06	AJL
Selenium	ND	5.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020B	12/11/18	12/12/18 9:58	MJH

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW35

Sampled: 12/5/2018 10:40

Sample ID: 18L0240-02

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	V-05	SW-846 8260C	12/13/18	12/14/18 19:30	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW35

Sampled: 12/5/2018 10:40

Sample ID: 18L0240-02

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	12/13/18	12/14/18 19:30	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/13/18	12/14/18 19:30	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:30	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	85.8	70-130	12/14/18 19:30
Toluene-d8	95.1	70-130	12/14/18 19:30
4-Bromofluorobenzene	97.6	70-130	12/14/18 19:30

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW35

Sampled: 12/5/2018 10:40

Sample ID: 18L0240-02

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	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:27	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		73.1	30-150					12/14/18 13:27	
Decachlorobiphenyl [2]		73.4	30-150					12/14/18 13:27	
Tetrachloro-m-xylene [1]		91.3	30-150					12/14/18 13:27	
Tetrachloro-m-xylene [2]		92.8	30-150					12/14/18 13:27	

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW35

Sampled: 12/5/2018 10:40

Sample ID: 18L0240-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	0.22	mg/L	1		SW-846 8100 Modified	12/11/18	12/14/18 18:36	KLB
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2-Fluorobiphenyl	69.8	40-140				12/14/18 18:36			

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW35

Sampled: 12/5/2018 10:40

Sample ID: 18L0240-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH
Barium	18	10	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH
Chromium	1.0	1.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH
Lead	ND	1.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/11/18	12/12/18 13:12	AJL
Selenium	ND	5.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:02	MJH

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW42

Sampled: 12/5/2018 12:32

Sample ID: 18L0240-03

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	V-05	SW-846 8260C	12/13/18	12/14/18 19:57	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1	V-05	SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW42

Sampled: 12/5/2018 12:32

Sample ID: 18L0240-03

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	12/13/18	12/14/18 19:57	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	12/13/18	12/14/18 19:57	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	12/13/18	12/14/18 19:57	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	86.8	70-130	12/14/18 19:57
Toluene-d8	95.7	70-130	12/14/18 19:57
4-Bromofluorobenzene	96.5	70-130	12/14/18 19:57

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

Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW42

Sampled: 12/5/2018 12:32

Sample ID: 18L0240-03

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	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	12/11/18	12/14/18 13:45	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		75.7	30-150					12/14/18 13:45	
Decachlorobiphenyl [2]		76.3	30-150					12/14/18 13:45	
Tetrachloro-m-xylene [1]		90.4	30-150					12/14/18 13:45	
Tetrachloro-m-xylene [2]		93.1	30-150					12/14/18 13:45	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW42

Sampled: 12/5/2018 12:32

Sample ID: 18L0240-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	0.19	mg/L	1		SW-846 8100 Modified	12/11/18	12/14/18 18:54	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	67.9		40-140					12/14/18 18:54	

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Project Location: Sudbury, MA

Sample Description:

Work Order: 18L0240

Date Received: 12/6/2018

Field Sample #: MW42

Sampled: 12/5/2018 12:32

Sample ID: 18L0240-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.4	0.40	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH
Barium	87	10	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH
Chromium	1.7	1.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH
Lead	1.0	1.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	12/11/18	12/12/18 13:13	AJL
Selenium	ND	5.0	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020B	12/11/18	12/12/18 10:05	MJH

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18L0240-01 [MW33]	B218945	50.0	50.0	12/11/18
18L0240-02 [MW35]	B218945	50.0	50.0	12/11/18
18L0240-03 [MW42]	B218945	50.0	50.0	12/11/18

Prep Method: SW-846 7470A Dissolved-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18L0240-01 [MW33]	B218973	6.00	6.00	12/11/18
18L0240-02 [MW35]	B218973	6.00	6.00	12/11/18
18L0240-03 [MW42]	B218973	6.00	6.00	12/11/18

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18L0240-02 [MW35]	B218987	1000	10.0	12/11/18
18L0240-03 [MW42]	B218987	1000	10.0	12/11/18

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18L0240-01 [MW33]	B219185	1030	10.0	12/13/18

Prep Method: SW-846 3510C-SW-846 8100 Modified

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18L0240-01 [MW33]	B218938	1040	1.00	12/11/18
18L0240-02 [MW35]	B218938	910	1.00	12/11/18
18L0240-03 [MW42]	B218938	1040	1.00	12/11/18

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18L0240-01 [MW33]	B219108	5	5.00	12/13/18
18L0240-02 [MW35]	B219108	5	5.00	12/13/18
18L0240-03 [MW42]	B219108	5	5.00	12/13/18

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 B219108 - SW-846 5030B

Blank (B219108-BLK1)

Prepared: 12/13/18 Analyzed: 12/14/18

Acetone	ND	10	µg/L							V-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							V-05
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 B219108 - SW-846 5030B

Blank (B219108-BLK1)

Prepared: 12/13/18 Analyzed: 12/14/18

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	21.2		µg/L	25.0		85.0	70-130			
Surrogate: Toluene-d8	24.0		µg/L	25.0		95.9	70-130			
Surrogate: 4-Bromofluorobenzene	24.4		µg/L	25.0		97.7	70-130			

LCS (B219108-BS1)

Prepared: 12/13/18 Analyzed: 12/14/18

Acetone	81.0	10	µg/L	100		81.0	40-160			V-05 †
tert-Amyl Methyl Ether (TAME)	9.04	0.50	µg/L	10.0		90.4	70-130			
Benzene	9.28	1.0	µg/L	10.0		92.8	70-130			
Bromobenzene	10.7	1.0	µg/L	10.0		107	70-130			
Bromochloromethane	9.45	1.0	µg/L	10.0		94.5	70-130			
Bromodichloromethane	9.46	1.0	µg/L	10.0		94.6	70-130			
Bromoform	11.0	1.0	µg/L	10.0		110	70-130			
Bromomethane	9.78	2.0	µg/L	10.0		97.8	40-160			V-20 †
2-Butanone (MEK)	79.5	10	µg/L	100		79.5	40-160			†
n-Butylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
sec-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
tert-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
tert-Butyl Ethyl Ether (TBEE)	8.42	0.50	µg/L	10.0		84.2	70-130			
Carbon Disulfide	9.70	5.0	µg/L	10.0		97.0	70-130			
Carbon Tetrachloride	8.97	1.0	µg/L	10.0		89.7	70-130			
Chlorobenzene	11.1	1.0	µg/L	10.0		111	70-130			
Chlorodibromomethane	10.1	0.50	µg/L	10.0		101	70-130			
Chloroethane	8.30	2.0	µg/L	10.0		83.0	70-130			
Chloroform	9.38	2.0	µg/L	10.0		93.8	70-130			
Chloromethane	7.45	2.0	µg/L	10.0		74.5	40-160			†
2-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130			
4-Chlorotoluene	10.6	1.0	µg/L	10.0		106	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	9.21	2.0	µg/L	10.0		92.1	70-130			
1,2-Dibromoethane (EDB)	10.4	0.50	µg/L	10.0		104	70-130			
Dibromomethane	10.0	1.0	µg/L	10.0		100	70-130			
1,2-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130			
1,3-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130			
1,4-Dichlorobenzene	10.5	1.0	µg/L	10.0		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
Batch B219108 - SW-846 5030B										
LCS (B219108-BS1)										
					Prepared: 12/13/18 Analyzed: 12/14/18					
Dichlorodifluoromethane (Freon 12)	7.21	2.0	µg/L	10.0		72.1	40-160			V-05 †
1,1-Dichloroethane	9.11	1.0	µg/L	10.0		91.1	70-130			
1,2-Dichloroethane	9.07	1.0	µg/L	10.0		90.7	70-130			
1,1-Dichloroethylene	8.53	1.0	µg/L	10.0		85.3	70-130			
cis-1,2-Dichloroethylene	8.71	1.0	µg/L	10.0		87.1	70-130			
trans-1,2-Dichloroethylene	8.64	1.0	µg/L	10.0		86.4	70-130			
1,2-Dichloropropane	9.82	1.0	µg/L	10.0		98.2	70-130			
1,3-Dichloropropane	9.18	0.50	µg/L	10.0		91.8	70-130			
2,2-Dichloropropane	10.5	1.0	µg/L	10.0		105	70-130			
1,1-Dichloropropene	8.68	0.50	µg/L	10.0		86.8	70-130			
cis-1,3-Dichloropropene	9.47	0.40	µg/L	10.0		94.7	70-130			
trans-1,3-Dichloropropene	9.84	0.40	µg/L	10.0		98.4	70-130			
Diethyl Ether	9.24	2.0	µg/L	10.0		92.4	70-130			
Diisopropyl Ether (DIPE)	8.39	0.50	µg/L	10.0		83.9	70-130			
1,4-Dioxane	107	50	µg/L	100		107	40-160			V-16 †
Ethylbenzene	11.3	1.0	µg/L	10.0		113	70-130			
Hexachlorobutadiene	12.6	0.60	µg/L	10.0		126	70-130			V-20
2-Hexanone (MBK)	85.3	10	µg/L	100		85.3	40-160			†
Isopropylbenzene (Cumene)	11.6	1.0	µg/L	10.0		116	70-130			
p-Isopropyltoluene (p-Cymene)	10.8	1.0	µg/L	10.0		108	70-130			
Methyl tert-Butyl Ether (MTBE)	8.93	1.0	µg/L	10.0		89.3	70-130			
Methylene Chloride	7.63	5.0	µg/L	10.0		76.3	70-130			
4-Methyl-2-pentanone (MIBK)	86.2	10	µg/L	100		86.2	40-160			†
Naphthalene	10.0	2.0	µg/L	10.0		100	70-130			
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
Styrene	11.0	1.0	µg/L	10.0		110	70-130			
1,1,1,2-Tetrachloroethane	12.0	1.0	µg/L	10.0		120	70-130			V-20
1,1,1,2,2-Tetrachloroethane	11.7	0.50	µg/L	10.0		117	70-130			
Tetrachloroethylene	11.3	1.0	µg/L	10.0		113	70-130			
Tetrahydrofuran	8.46	2.0	µg/L	10.0		84.6	70-130			
Toluene	10.0	1.0	µg/L	10.0		100	70-130			
1,2,3-Trichlorobenzene	10.8	2.0	µg/L	10.0		108	70-130			
1,2,4-Trichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			
1,1,1-Trichloroethane	9.55	1.0	µg/L	10.0		95.5	70-130			
1,1,2-Trichloroethane	10.7	1.0	µg/L	10.0		107	70-130			
Trichloroethylene	10.2	1.0	µg/L	10.0		102	70-130			
Trichlorofluoromethane (Freon 11)	8.46	2.0	µg/L	10.0		84.6	70-130			
1,2,3-Trichloropropane	9.91	2.0	µg/L	10.0		99.1	70-130			
1,2,4-Trimethylbenzene	9.65	1.0	µg/L	10.0		96.5	70-130			
1,3,5-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Vinyl Chloride	7.68	2.0	µg/L	10.0		76.8	70-130			
m+p Xylene	21.6	2.0	µg/L	20.0		108	70-130			
o-Xylene	10.7	1.0	µg/L	10.0		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	21.0		µg/L	25.0		84.2	70-130			
Surrogate: Toluene-d8	24.3		µg/L	25.0		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	25.5		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 B219108 - SW-846 5030B

LCS Dup (B219108-BSD1)

Prepared: 12/13/18 Analyzed: 12/14/18

Acetone	74.4	10	µg/L	100		74.4	40-160	8.58	20	V-05 †
tert-Amyl Methyl Ether (TAME)	8.97	0.50	µg/L	10.0		89.7	70-130	0.777	20	
Benzene	8.62	1.0	µg/L	10.0		86.2	70-130	7.37	20	
Bromobenzene	10.0	1.0	µg/L	10.0		100	70-130	6.36	20	
Bromochloromethane	9.03	1.0	µg/L	10.0		90.3	70-130	4.55	20	
Bromodichloromethane	9.22	1.0	µg/L	10.0		92.2	70-130	2.57	20	
Bromoform	10.7	1.0	µg/L	10.0		107	70-130	2.12	20	
Bromomethane	11.4	2.0	µg/L	10.0		114	40-160	15.3	20	V-20 †
2-Butanone (MEK)	73.9	10	µg/L	100		73.9	40-160	7.32	20	†
n-Butylbenzene	9.79	1.0	µg/L	10.0		97.9	70-130	8.79	20	
sec-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	7.26	20	
tert-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130	3.05	20	
tert-Butyl Ethyl Ether (TBEE)	8.13	0.50	µg/L	10.0		81.3	70-130	3.50	20	
Carbon Disulfide	8.57	5.0	µg/L	10.0		85.7	70-130	12.4	20	
Carbon Tetrachloride	8.47	1.0	µg/L	10.0		84.7	70-130	5.73	20	
Chlorobenzene	10.8	1.0	µg/L	10.0		108	70-130	2.66	20	
Chlorodibromomethane	9.86	0.50	µg/L	10.0		98.6	70-130	2.11	20	
Chloroethane	7.87	2.0	µg/L	10.0		78.7	70-130	5.32	20	
Chloroform	8.84	2.0	µg/L	10.0		88.4	70-130	5.93	20	
Chloromethane	7.08	2.0	µg/L	10.0		70.8	40-160	5.09	20	†
2-Chlorotoluene	10.1	1.0	µg/L	10.0		101	70-130	6.40	20	
4-Chlorotoluene	10.1	1.0	µg/L	10.0		101	70-130	4.91	20	
1,2-Dibromo-3-chloropropane (DBCP)	8.70	2.0	µg/L	10.0		87.0	70-130	5.70	20	
1,2-Dibromoethane (EDB)	10.1	0.50	µg/L	10.0		101	70-130	2.92	20	
Dibromomethane	9.88	1.0	µg/L	10.0		98.8	70-130	1.31	20	
1,2-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	6.55	20	
1,3-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130	3.86	20	
1,4-Dichlorobenzene	10.3	1.0	µg/L	10.0		103	70-130	1.64	20	
Dichlorodifluoromethane (Freon 12)	6.51	2.0	µg/L	10.0		65.1	40-160	10.2	20	L-14, V-05 †
1,1-Dichloroethane	8.70	1.0	µg/L	10.0		87.0	70-130	4.60	20	
1,2-Dichloroethane	8.84	1.0	µg/L	10.0		88.4	70-130	2.57	20	
1,1-Dichloroethylene	8.15	1.0	µg/L	10.0		81.5	70-130	4.56	20	
cis-1,2-Dichloroethylene	8.20	1.0	µg/L	10.0		82.0	70-130	6.03	20	
trans-1,2-Dichloroethylene	8.47	1.0	µg/L	10.0		84.7	70-130	1.99	20	
1,2-Dichloropropane	9.26	1.0	µg/L	10.0		92.6	70-130	5.87	20	
1,3-Dichloropropane	9.10	0.50	µg/L	10.0		91.0	70-130	0.875	20	
2,2-Dichloropropane	9.42	1.0	µg/L	10.0		94.2	70-130	10.6	20	
1,1-Dichloropropene	8.21	0.50	µg/L	10.0		82.1	70-130	5.57	20	
cis-1,3-Dichloropropene	9.32	0.40	µg/L	10.0		93.2	70-130	1.60	20	
trans-1,3-Dichloropropene	9.72	0.40	µg/L	10.0		97.2	70-130	1.23	20	
Diethyl Ether	8.68	2.0	µg/L	10.0		86.8	70-130	6.25	20	
Diisopropyl Ether (DIPE)	8.18	0.50	µg/L	10.0		81.8	70-130	2.53	20	
1,4-Dioxane	92.1	50	µg/L	100		92.1	40-160	15.1	20	V-16 †
Ethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	6.13	20	
Hexachlorobutadiene	11.6	0.60	µg/L	10.0		116	70-130	8.66	20	V-20
2-Hexanone (MBK)	80.1	10	µg/L	100		80.1	40-160	6.36	20	†
Isopropylbenzene (Cumene)	10.9	1.0	µg/L	10.0		109	70-130	6.24	20	
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101	70-130	6.23	20	
Methyl tert-Butyl Ether (MTBE)	9.07	1.0	µg/L	10.0		90.7	70-130	1.56	20	
Methylene Chloride	7.22	5.0	µg/L	10.0		72.2	70-130	5.52	20	
4-Methyl-2-pentanone (MIBK)	82.2	10	µg/L	100		82.2	40-160	4.70	20	†
Naphthalene	9.55	2.0	µg/L	10.0		95.5	70-130	4.80	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B219108 - SW-846 5030B										
LCS Dup (B219108-BSD1)										
					Prepared: 12/13/18 Analyzed: 12/14/18					
n-Propylbenzene	9.89	1.0	µg/L	10.0		98.9	70-130	6.84	20	
Styrene	10.5	1.0	µg/L	10.0		105	70-130	5.30	20	
1,1,1,2-Tetrachloroethane	11.5	1.0	µg/L	10.0		115	70-130	4.60	20	V-20
1,1,2,2-Tetrachloroethane	11.1	0.50	µg/L	10.0		111	70-130	4.73	20	
Tetrachloroethylene	10.7	1.0	µg/L	10.0		107	70-130	4.99	20	
Tetrahydrofuran	8.20	2.0	µg/L	10.0		82.0	70-130	3.12	20	
Toluene	9.46	1.0	µg/L	10.0		94.6	70-130	6.05	20	
1,2,3-Trichlorobenzene	9.86	2.0	µg/L	10.0		98.6	70-130	9.10	20	
1,2,4-Trichlorobenzene	10.3	1.0	µg/L	10.0		103	70-130	1.55	20	
1,1,1-Trichloroethane	8.76	1.0	µg/L	10.0		87.6	70-130	8.63	20	
1,1,2-Trichloroethane	10.3	1.0	µg/L	10.0		103	70-130	4.09	20	
Trichloroethylene	9.56	1.0	µg/L	10.0		95.6	70-130	6.58	20	
Trichlorofluoromethane (Freon 11)	7.89	2.0	µg/L	10.0		78.9	70-130	6.97	20	
1,2,3-Trichloropropane	9.00	2.0	µg/L	10.0		90.0	70-130	9.62	20	
1,2,4-Trimethylbenzene	9.16	1.0	µg/L	10.0		91.6	70-130	5.21	20	
1,3,5-Trimethylbenzene	9.92	1.0	µg/L	10.0		99.2	70-130	7.75	20	
Vinyl Chloride	7.30	2.0	µg/L	10.0		73.0	70-130	5.07	20	
m+p Xylene	20.6	2.0	µg/L	20.0		103	70-130	4.69	20	
o-Xylene	10.2	1.0	µg/L	10.0		102	70-130	4.98	20	
Surrogate: 1,2-Dichloroethane-d4	20.9		µg/L	25.0		83.8	70-130			
Surrogate: Toluene-d8	24.1		µg/L	25.0		96.3	70-130			
Surrogate: 4-Bromofluorobenzene	25.2		µg/L	25.0		101	70-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218987 - SW-846 3510C										
Blank (B218987-BLK1)										
Prepared: 12/11/18 Analyzed: 12/14/18										
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	1.79		µg/L	2.00		89.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.93		µg/L	2.00		96.5	30-150			
Surrogate: Tetrachloro-m-xylene	1.51		µg/L	2.00		75.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.60		µg/L	2.00		80.0	30-150			
LCS (B218987-BS1)										
Prepared: 12/11/18 Analyzed: 12/14/18										
Aroclor-1016	0.38	0.20	µg/L	0.500		75.3	40-140			
Aroclor-1016 [2C]	0.41	0.20	µg/L	0.500		82.1	40-140			
Aroclor-1260	0.41	0.20	µg/L	0.500		81.8	40-140			
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		91.7	40-140			
Surrogate: Decachlorobiphenyl	1.62		µg/L	2.00		81.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.76		µg/L	2.00		87.8	30-150			
Surrogate: Tetrachloro-m-xylene	1.44		µg/L	2.00		72.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.52		µg/L	2.00		76.1	30-150			
LCS Dup (B218987-BSD1)										
Prepared: 12/11/18 Analyzed: 12/14/18										
Aroclor-1016	0.40	0.20	µg/L	0.500		80.8	40-140	7.05	20	
Aroclor-1016 [2C]	0.45	0.20	µg/L	0.500		89.4	40-140	8.55	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		88.6	40-140	7.96	20	
Aroclor-1260 [2C]	0.50	0.20	µg/L	0.500		100	40-140	8.94	20	
Surrogate: Decachlorobiphenyl	1.82		µg/L	2.00		91.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.98		µg/L	2.00		99.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.45		µg/L	2.00		72.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.54		µg/L	2.00		76.9	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B219185 - SW-846 3510C										
Blank (B219185-BLK1)										
Prepared: 12/13/18 Analyzed: 12/14/18										
Aroclor-1016	ND	0.040	µg/L							
Aroclor-1016 [2C]	ND	0.040	µg/L							
Aroclor-1221	ND	0.040	µg/L							
Aroclor-1221 [2C]	ND	0.040	µg/L							
Aroclor-1232	ND	0.040	µg/L							
Aroclor-1232 [2C]	ND	0.040	µg/L							
Aroclor-1242	ND	0.040	µg/L							
Aroclor-1242 [2C]	ND	0.040	µg/L							
Aroclor-1248	ND	0.040	µg/L							
Aroclor-1248 [2C]	ND	0.040	µg/L							
Aroclor-1254	ND	0.040	µg/L							
Aroclor-1254 [2C]	ND	0.040	µg/L							
Aroclor-1260	ND	0.040	µg/L							
Aroclor-1260 [2C]	ND	0.040	µg/L							
Aroclor-1262	ND	0.040	µg/L							
Aroclor-1262 [2C]	ND	0.040	µg/L							
Aroclor-1268	ND	0.040	µg/L							
Aroclor-1268 [2C]	ND	0.040	µg/L							
Surrogate: Decachlorobiphenyl	1.88		µg/L	2.00		94.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.55		µg/L	2.00		77.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.64		µg/L	2.00		82.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.47		µg/L	2.00		73.4	30-150			
LCS (B219185-BS1)										
Prepared: 12/13/18 Analyzed: 12/14/18										
Aroclor-1016	0.47	0.20	µg/L	0.500		94.4	40-140			
Aroclor-1016 [2C]	0.50	0.20	µg/L	0.500		99.4	40-140			
Aroclor-1260	0.47	0.20	µg/L	0.500		93.2	40-140			
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		96.8	40-140			
Surrogate: Decachlorobiphenyl	1.89		µg/L	2.00		94.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.02		µg/L	2.00		101	30-150			
Surrogate: Tetrachloro-m-xylene	1.67		µg/L	2.00		83.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.82		µg/L	2.00		90.8	30-150			
LCS Dup (B219185-BSD1)										
Prepared: 12/13/18 Analyzed: 12/14/18										
Aroclor-1016	0.44	0.20	µg/L	0.500		88.1	40-140	6.85	20	
Aroclor-1016 [2C]	0.48	0.20	µg/L	0.500		96.7	40-140	2.68	20	
Aroclor-1260	0.45	0.20	µg/L	0.500		90.1	40-140	3.35	20	
Aroclor-1260 [2C]	0.49	0.20	µg/L	0.500		98.7	40-140	1.98	20	
Surrogate: Decachlorobiphenyl	1.84		µg/L	2.00		91.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.96		µg/L	2.00		97.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.65		µg/L	2.00		82.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.83		µg/L	2.00		91.7	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B218938 - SW-846 3510C										
Blank (B218938-BLK1)					Prepared: 12/11/18 Analyzed: 12/12/18					
TPH (C9-C36)	ND	0.20	mg/L							
Surrogate: 2-Fluorobiphenyl	0.0758		mg/L	0.100		75.8	40-140			
LCS (B218938-BS1)					Prepared: 12/11/18 Analyzed: 12/12/18					
TPH (C9-C36)	0.808	0.20	mg/L	1.00		80.8	40-140			
Surrogate: 2-Fluorobiphenyl	0.0683		mg/L	0.100		68.3	40-140			
LCS Dup (B218938-BSD1)					Prepared: 12/11/18 Analyzed: 12/12/18					
TPH (C9-C36)	0.936	0.20	mg/L	1.00		93.6	40-140	14.7	30	
Surrogate: 2-Fluorobiphenyl	0.0753		mg/L	0.100		75.3	40-140			

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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 B218945 - SW-846 3005A Dissolved										
Blank (B218945-BLK1)										
Prepared: 12/11/18 Analyzed: 12/12/18										
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
LCS (B218945-BS1)										
Prepared: 12/11/18 Analyzed: 12/12/18										
Arsenic	499	4.0	µg/L	500		99.8	80-120			
Barium	498	100	µg/L	500		99.5	80-120			
Cadmium	505	5.0	µg/L	500		101	80-120			
Chromium	507	10	µg/L	500		101	80-120			
Lead	504	10	µg/L	500		101	80-120			
Selenium	494	50	µg/L	500		98.9	80-120			
Silver	491	5.0	µg/L	500		98.2	80-120			
LCS Dup (B218945-BSD1)										
Prepared: 12/11/18 Analyzed: 12/12/18										
Arsenic	498	4.0	µg/L	500		99.5	80-120	0.317	20	
Barium	498	100	µg/L	500		99.7	80-120	0.148	20	
Cadmium	501	5.0	µg/L	500		100	80-120	0.859	20	
Chromium	506	10	µg/L	500		101	80-120	0.198	20	
Lead	501	10	µg/L	500		100	80-120	0.536	20	
Selenium	502	50	µg/L	500		100	80-120	1.60	20	
Silver	493	5.0	µg/L	500		98.7	80-120	0.454	20	
Batch B218973 - SW-846 7470A Dissolved										
Blank (B218973-BLK1)										
Prepared: 12/11/18 Analyzed: 12/12/18										
Mercury	ND	0.00010	mg/L							
LCS (B218973-BS1)										
Prepared: 12/11/18 Analyzed: 12/12/18										
Mercury	0.00192	0.00010	mg/L	0.00200		95.9	80-120			
LCS Dup (B218973-BSD1)										
Prepared: 12/11/18 Analyzed: 12/12/18										
Mercury	0.00196	0.00010	mg/L	0.00200		98.2	80-120	2.43	20	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8082A

Lab Sample ID: B218987-BS1 Date(s) Analyzed: 12/14/2018 12/14/2018

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	0.000	0.000	0.38	
	2	0.000	0.000	0.000	0.41	7.6
Aroclor-1260	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.46	11.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B218987-BSD1 Date(s) Analyzed: 12/14/2018 12/14/2018

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	0.000	0.000	0.40	
	2	0.000	0.000	0.000	0.45	11.8
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.50	12.8

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS

SW-846 8082A

Lab Sample ID: B219185-BS1 Date(s) Analyzed: 12/14/2018 12/14/2018

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	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.50	6.2
Aroclor-1260	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.48	2.1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS Dup

Lab Sample ID: B219185-BSD1 Date(s) Analyzed: 12/14/2018 12/14/2018

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	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.48	8.7
Aroclor-1260	1	0.000	0.000	0.000	0.45	
	2	0.000	0.000	0.000	0.49	8.5

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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-01	Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.
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.
RL-07	Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
V-05	Continuing calibration 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 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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6020B in Water	
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Water</i>	
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
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
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

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	02/5/2019
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

180240
 Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com

39 Spruce Street
 East Longmeadow, MA 01028

www.contestlabs.com

CHAIN OF CUSTODY RECORD

7-Day 10-Day
 Due Date: _____
 1-Day 3-Day
 2-Day 4-Day
 Format: PDF EXCEL
 Other: _____
 CLP Like Data Pkg Required:
 Email To: Flawell@contestlabs.com
 Fax To #: _____

Address: 101 Walnut St, Waterbury, MA
 Phone: 617-607-1841
 Project Location: Everance Sidbury to Holden
 Project Number: 12910-03
 Project Manager: Roxy Carney
 Con-Test Quote Name/Number: _____
 Invoice Recipient: _____
 Sampled By: REC

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	MW33	12/18 9:08	9:08			GW	U
2	MW35	12/18 10:40	10:40				
3	MW42	12/18 12:21	12:21				

ANALYSIS REQUESTED

PCBs	X						
PCBs & Metals	X						
TCX	X						
VOCs	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

- 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

Relinquished by (signature): _____ Date/Time: 12/6/18

Received by (signature): _____ Date/Time: 12/6/18

Relinquished by (signature): _____ Date/Time: 12/6/18 2:26 PM

Received by (signature): _____ Date/Time: 12-6-18 1425

Relinquished by (signature): _____ Date/Time: _____

Received by (signature): _____ Date/Time: _____

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 _____

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NEIAC and AIHA-LAP, LLC Accredited

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



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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 VHB
 Received By LR Date 12-6-18 Time 1425
 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 - 3.1
 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? F MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? PT On COC? F
 Do all samples have the proper pH? Acid 10.2 Base _____

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.	11	1 Liter Plastic	16 oz Amb.
HCL-	17	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:

received trip blanks, not on COC

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory		Project #: 18L0240	
Project Location: Sudbury, MA		RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 18L0240-01 thru 18L0240-04			
Matrices: Water			
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 ()	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 A ()	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			
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
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 ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).		<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?		<input type="checkbox"/> Yes <input type="checkbox"/> No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status			
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.			
H	Were all QC performance standards specified in the CAM protocol(s) achieved?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.			
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.			
Signature: <u>Tod E. Kopyscinski</u>		Position: Laboratory Director	
Printed Name: <u>Tod E. Kopyscinski</u>		Date: <u>12/17/18</u>	