APPENDIX F:

MassDEP SearchWell Records

Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program
UST1 – Cover Sheet/Certification

UST Facility

UST Facility ID #

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Notes:

- If this is a new facility registration, MassDEP will provide you with a Facility Account Number
- A New Facility must be registered within 30 days of the tank(s) receiving regulated product.
- A New Owner must be registered within 30 days of taking ownership.

Check the appropriate category(s). Complete and attach ONLY the required forms.

Register a New Facility and/or Owner

- ☐ UST2–Owner/Operator & Facility Registration Attached
- ☐ UST3–Financial Responsibility Registration Attached
- ☐ UST4–Tank, Piping & Component Registration Attached

Register a New UST System & Components

- ☐ UST4–Tank, Piping & Component Registration Attached

Register a Change of Tank Status/Product

- ☐ UST5–Change of Tank Status/Product Attached

Register a UST System Removal/Closure & Assessment

- ☑ UST 6–UST System Removal/Closure in Place Attached

Update Existing Owner/Operator/Facility Information
(Not a New Owner)

- ☐ UST2–Owner/Operator/Facility Registration Attached

Update Financial Responsibility Information

- ☐ UST3–Financial Responsibility Registration Attached

Update Existing UST System/Component Information

- ☐ UST4–Tank, Piping & Component Registration Attached

A. Legal Owner Of UST(s)

a. Individual/Entity Name: Joe Mullins, Massachusetts Mills III Ltd Partnership

b. Contact Name:

c. Contact Email Address:

d. Address 1 – Note: Enter Mailing Address of the Owner Contact: 31 Saint James Ave

e. Address 2:

f. City/Town: BOSTON

g. State: MA

h. Zip Code: 02116

B. UST Facility Information

a. Facility Name: Mass Mills III

b. Address 1 – Note: Enter Physical Street Address (No P.O. Boxes): 150 mass mills Dr

c. Address 2:

d. City/Town: Lowell

e. State: MA

f. Zip Code: 01852

Continue to Next Page ▶

Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program

UST1 – Cover Sheet/Certification

UST Facility

UST Facility ID #

Notes:

- The Owner must retain a copy of the registration until the UST system is removed or permanently closed in accordance with 310 CMR 80.43(2) or (3).
- Forms may be scanned and submitted electronically to dep.ust@state.ma.us or mailed to:

MassDEP
UST Program
P.O. Box 120-165
Boston, MA 02112-0165

C. Certification Statement

Important: A new Facility registration and new Owner registration must be certified only by the Owner. The Owner may designate the Operator to certify updated registration submittals.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

I am the Facility's ☒ Owner ☐ Operator

1. Print Name: Joseph R Mullins
2. Owner/Operator Entity Name: Massachusetts Mills III LP
3. Signature: Joseph R Mullins
4. Date Signed (MM/DD/YYYY): 7/11/2016

5. Source of Signatory Authority (check only one box below):

If a Corporation or Non-Profit Corporation:

a. ☐ President
b. ☐ Secretary
c. ☐ Treasurer
d. ☐ Vice President (if authorized to bind the corporation)
e. ☐ Employee of the Corporation (if authorized to bind the corporation)

If a Limited Liability Company (LLC):

f. ☐ Person authorized to bind the company

If a Partnership:

g. ☒ General Partner (if authorized to bind the partnership)

If a Sole Proprietorship:

h. ☐ Proprietor

If a Municipality or Public Agency:

i. ☐ Principal Executive Officer
j. ☐ Ranking Elected Official (if authorized to bind the municipality or public agency)

If a Trust:

k. ☐ Trustee or Other Person authorized to bind the trust

Massachusetts Department of Environmental Protection

Bureau of Air & Waste
Underground Storage Tank (UST) Program

UST6 – System Removal/Closure in Place

UST Facility Name

UST Facility ID #

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Notes:

- Make additional copies as needed.
- If you are replacing a removed tank with a new tank in the same location at the facility, you must register the new tank with MassDEP.
- For abandoned or unregistered tanks, answer the questions in the appropriate sections. There will be no UST Facility Number assigned to tank systems found at unregistered facilities.

Check the appropriate action(s) below. Complete ONLY the appropriate section(s) and submit with the UST1-Cover Sheet/Certification Form.

- ☐ UST System Removal/Closure Sections A.1.& B.
- ☒ Removal of Abandoned/Unregistered UST System Sections A.1., A.3. & B.
- ☐ UST System Permanent Closure in Place Sections A.2. & B
- ☐ Permanent Closure of Abandoned/Unregistered UST System Sections A.2., A.3. & B

A. UST System Removal/Closure

1. UST System Removal

	GT 1 Tank ID	GT 2 Tank ID	Tank ID	Tank ID
a. Date of tank removal:	03/08/2016 MM/DD/YYYY	03/08/2016 MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
b. Were all regulated substances removed from the tank managed per applicable requirements?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
c. Was the tank system rendered inert per 310 CMR 80.47?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
d. Were all openings secured?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Was all piping removed?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
f. Capacity of Tank:	~2500 Gallons	~1000 Gallons	Gallons	Gallons

2. UST System Permanent Closure in Place

	Tank ID	Tank ID	Tank ID	Tank ID
a. Date of closure in place:	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
b. Has a registered professional civil or structural engineer determined that the tank cannot be removed without endangering the structural integrity of another UST system, structure, underground piping or underground utilities, per 310 CMR 80.43(3)(a)(1)?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
c. Were all regulated substances removed from the tank managed per applicable requirements?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
d. Was the tank system rendered inert per 310 CMR 80.47?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Was the tank filled with appropriate material (e.g. concrete slurry mix or approved inert material)?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
f. Capacity of Tank:	Gallons	Gallons	Gallons	Gallons

UST6 – System Removal/Closure in Place

UST Facility Name

UST Facility ID #

A. UST Removal/Closure (continued)

Notes:

- Make additional copies as needed.
- Removal/closure of a **consumptive use** tank with a capacity of greater than 1,100 gallons must comply with the requirements of 310 CMR 80.43 & 80.47

3. Removal/Permanent Closure of Abandoned/Unregistered UST System				
	Tank 1	**Tank 2**	**Tank 3**	**Tank 4**
If unregistered, where was this tank located?	-71.303478° Longitude 42.645826 Latitude	-71.303478 Longitude 42.645826 Latitude	Longitude Latitude	Longitude Latitude

B. Assessment of Release at Removal or Closure

	GT-1 **Tank ID**	GT-2 **Tank ID**	**Tank ID**	**Tank ID**
Was an assessment conducted in accordance with 310 CMR 80.43(4) within 24 hours of the removal or before the closure in place was completed?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

Goldman Environmental Consultants, Inc.
60 Brooks Drive
Braintree, MA 02184
(781)356-9140 (Phone) (781)356-9147

TANK REMOVAL / CLOSURE SHEET

Client: J-M Developer LLC Project Number: 1785-5060_____ Date:_3/8/2016_____

Owner:_MMIII Limited Partnership Address: 179 Boylston St. Jamaica Plain_

Phone __617-838-9388___

Operator:NRC__ Address:_114 Bridge road Salisbury MA Phone _978-465-1595_____

Facility Name:___169.2 Bridge St./150 Mass Mills Dr Location:__Lowell, MA__ Phone

Tax Map and Lot #:__177 Lot 3B_ Facility Reg #:__N/A_ Tank Reg #:____N/A_____

Date of Inspection:__3/8/2016_____ Reason for Closure/Removal:___Historic- out of use___
DigSafe Number:__20160900432 Weather:_40's Sunny_ Personnel:___Andrew Foley____

Tank1 Volume: __2500__ gallons Dimensions: Diameter_12'_ Length_6'__

Tank1 Construction: Steel Single Wall

Tank2 Volume: __1000 gallons Dimensions: Diameter___10'_ Length__4'____

Tank2 Construction: Steel Single Wall

Pipe Construction: None found in excavation

Leak Detection? ____No_____ Cathodic Protection?_____No_____

Tank 1& 2 Contents:
Liquids: Type:_water/wash water_ Quantity Removed:_____225____
Solids: Type:_____none___ Quantity Removed:_____
Sludge: Type:_rust/soil__ Quantity Removed:____~20 gallons_____

Ground Surface Material: Gravel/overgrowth
Excavation Material: Fill

Excavation Size: Length:_20_ Width:_20_ Depth:tank1=8' tank2=6' Depth to Water:~17' BSG

Depth to Tank:_~2-2.5'_ Tank Condition:_Intact, lots of rust and pitting, oil absorbent pads stuffed into the old fill/vent holes__

Evidence of: pitting?_Y_ holes?_N_ rust?_Y_ Describe:_the entire surface shows evidence of rust and pitting_

Visible Contamination? __N___ Description:_____

Odors?___N___ Description:_____

Tank Removed?___Y_____ Tank Filled in Place: Volume:_____ Type of Fill:_____

Field Headspace Screening Results

Sample Identification	Location	Depth (feet)	PID Reading* (Benzene equivalent)	Temperature (C)
NSW-GT1	north side of GT1	5-6’	1.2	5
SSW-GT1	South side of GT1	5-6’	0.5	5
ESWa-GT1	northeast side GT1	5-6’	0.0	5
ESWb-GT1	southeast side GT1	5-6’	0.0	5
BTMn-GT-1	northern bottomGT1	~8’	0.7	5
BTMs-GT1	Southern bottom GT1	~8’	0.1	5
NSW-GT2	north side of GT2	3-4’	0.8	5
SSW-GT2	South side of GT2	3-4’	2.1	5
WSWa-GT2	northwestern side GT2	3-4’	0.0	5
WSWb-GT2	southwestern side GT2	3-4’	0.0	5
BTMn-GT-2	northern bottomGT2	~6’	5.9	5
BTMs-GT2	Southern bottom GT2	~6’	1.0	5

*Background PID Reading: 0.0

Notes: Screen soil samples from following locations:

Soil from under each end of UST and immediately beneath
Soil from each sidewall of UST
Soil surrounding fill pipe
Soil along piping (runs every 20 feet),near elbows and joints if possible
If groundwater encounters, screen samples collected just above water table and at end of UST and screen samples of the water itself

Groundwater Present in Excavation? ____N___ Visual Evidence of Product? ___N_____

Water/Oil Pumped from Excavation? ___N_____ Gallons recovered:_____

Samples Collected for laboratory analysis?___Y_____

Sample ID:_GT-1_ Location:_contents of GT-1_ Matrix:__water_____

Sample ID:_GT-2_ Location:_contents of GT-2_ Matrix:__water_____

Sample ID:NSW-GT-1 Location:_north sidewall of GT-1 Matrix:_soil_____

Sample ID:_SSW-GT-1 Location:_north sidewall of GT-1 Matrix:_soil_____

Sample ID:_ESW-GT-1 Location:_north sidewall of GT-1 Matrix:____soil_____

Sample ID:BTM-GT-1 Location:_composite sample from below GT-1 Matrix:_soil____
Sample ID:_NSW-GT-2 Location:_North sidewall of GT-2_ Matrix:_soil_____

Sample ID:_SSW-GT-2_ Location:_south sidewall of GT-2_ Matrix:_soil___

Sample ID:_WSW-GT-2_ Location:_west sidewall of GT-2 Matrix:_soil_____

Sample ID:_BTM-GT-2_ Location:_composite sample from below GT-2_ Matrix:_soil_

Fire Prevention Contact: _Lt. Steve Mello_ Permits: State:_____ Fire Dept.: #01616

Excavation Inspected by:_Lt. Steve Mello Time:_13:45___ Date:__03-08-2016_____

MCP Reportable Conditions Encountered? _None associated with the gasoline USTs-a 72-hour reportable condition was encountered in the monitoring wells that were installed to assess if the gasoline USTs had been breached. >1/2" NAPL (#6 Fuel Oil) was present in the subsurface ~17' BSG. Tanks are located in a disposal site that includes #6 fuel oil, PCBs, metals, urban fill and herbicides_

Notification: Client Name:_MMIII_ State Contact:_Y_____ Time: _August 21, 2015____

DEP Contact:Ida Babroudi_____ RTN Assigned: _3-33101_____

Remedial Action Required?__Y___

Approved Remedial Action (Description):_IRA Plan Submitted_____

Excavation Backfill Approval? _Y___ Backfill: Type:_Overburden and clean off-site fill_
Quantity:___<25 CYs_____ Compacted?____Y_____

Excavator Information

Company: ENPRO

Address: 114 Bridge St. Salisbury MA

Foreman: Tony Santa Fe, Kyle

Equipment: mini-excavator, mini loader

Tank Disposal Facility

Company: Winfield Alloy Inc.

Address: 1-15 Medford St. Lawrence, MA 01841

Contaminated Soil/Sludge Transporter Information

Company: ENPRO

Address:

Equipment:

Soil Disposal Facility

Company: TBD-IRA still on-going

Address:

Petroleum Disposal Facility

Company:

Address:

Tank contents and wash water Disposal Facility

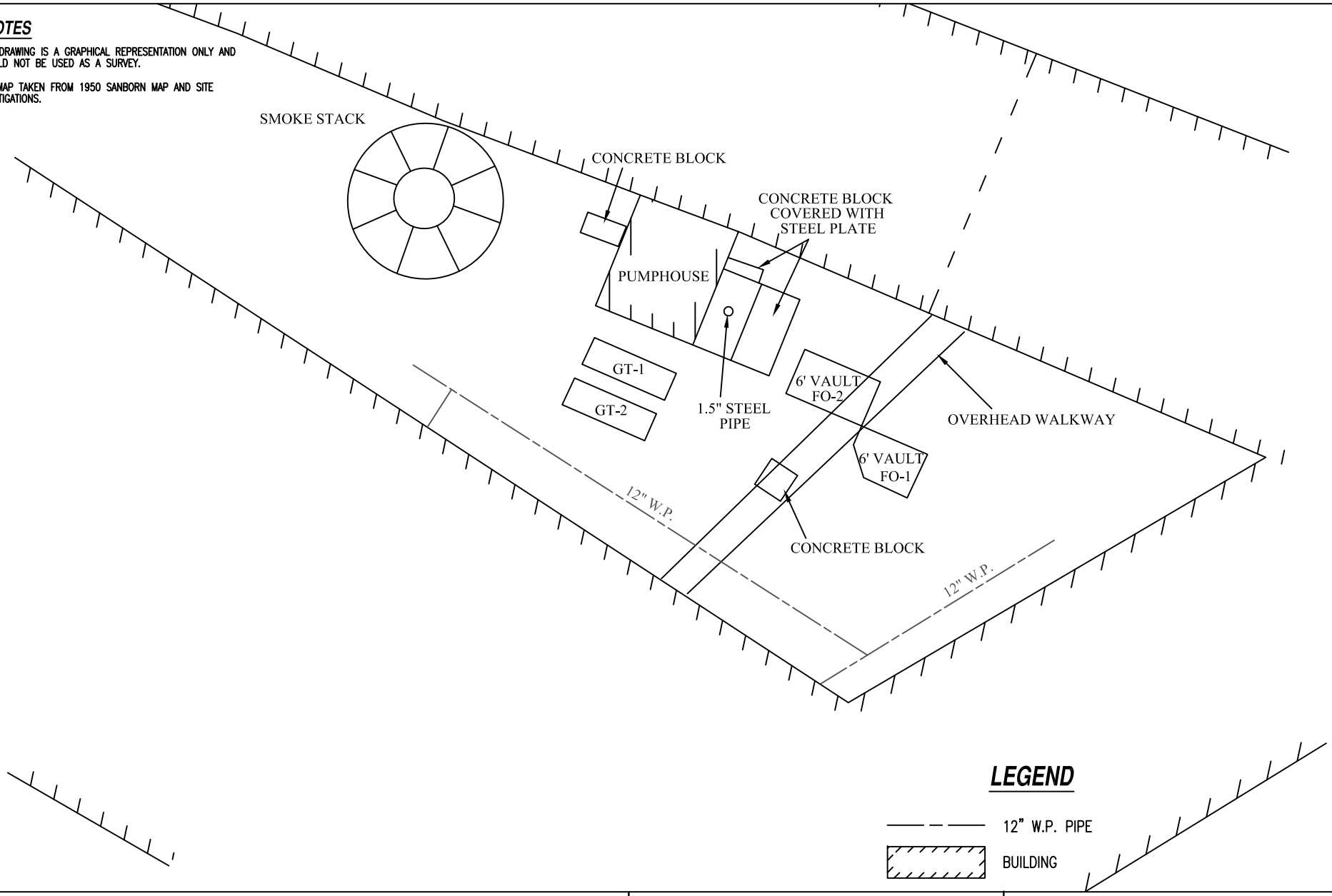
Company: CYN Environmental Services Inc.

Address: 8 Progressive Dr. Dover, NH

NOTES

1.) THIS DRAWING IS A GRAPHICAL REPRESENTATION ONLY AND SHOULD NOT BE USED AS A SURVEY.

2.) BASEMAP TAKEN FROM 1950 SANBORN MAP AND SITE INVESTIGATIONS.



Goldman Environmental Consultants, Inc.
60 Brooks Drive
Braintree, MA 02184
(781) 356-9140 Fax: (781) 356-9147
www.GoldmanEnvironmental.com

Site Plan

151 Mass Mills Drive
Lowell, Massachusetts

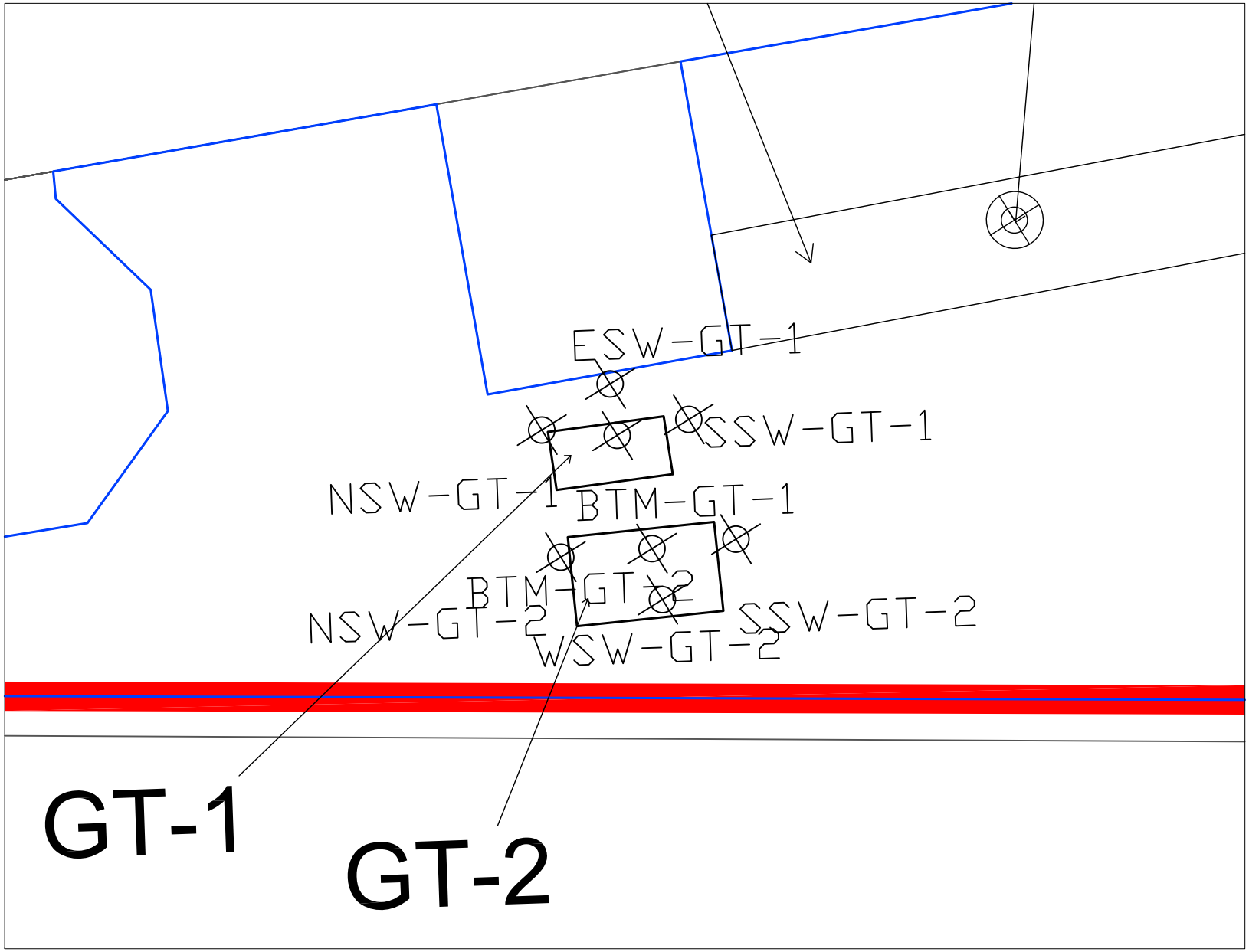
GEC Project Number 1785-3010
GEC File Number 120413A

FIGURE 2

SCALE

0 10 20 Feet

N



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Legend

Lot 3B

Calculated Area

Confirmatory sample location

Site Plan- Showing Area of UST Removal and Confirmatory Sampling Locations

Massachusetts Mills
169.2 Bridge Street
Lowell, Massachusetts

GEC Project Number 1785-6080

Figure 10

NOT TO SCALE

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK FORMERLY CONTAINING MOTOR FUEL

NAME AND ADDRESS OF APPROVED TANK YARD: WINDFIELD ALLOY INC.
15 MEDFORD ST.
LAWRENCE, MA 01841

Approved tank yard no. 0114 Tank Yard Ledger 502 CMR 3.03(4) Number

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by (firm, corporation or partnership) _____ and accepted same in conformance with Office of the State Fire Marshal Regulations 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank Dismantling Yards. A valid permit was issued by the head of the **LOCAL** fire department FDID# 17160 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

Signature: [signature] Title: Scalowastor Date signed: 3/16/2016

TANK DATA:	TANK REMOVED FROM:
Gallons: 2000 gal	No. and Street: 179 Bylston St
Previous contents: Gasoline	City and Town: Seven Plains
Diameter: 8x4	Fire Dept. Permit #: 01617
Length:	Notes:
Date Received: 3/16/2016	
Serial # (if available):	
Tank I.D. # (Form FP-290):	

EACH TANK MUST HAVE A RECEIPT OF DISPOSAL

Owner/Operator to mail revised copy of Notification Form (FP290, or FP290R) to local fire department and:

Department of Environmental Protection
Bureau of Waste Prevention - UST Program
P.O. Box 120-0165
Boston, MA 02112-0165

62303-0027

This signed receipt of disposal must be returned to the head of the local fire department.

SC

Form FP-291 (Rev. 11/2005)

Make application to local fire department.
Fire department retains original application and issues duplicate as permit.

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

APPLICATION and PERMIT

Fee: _____

for steel underground storage tank removal and transportation to approved tank disposal yard in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 1.00 Section 1.12.8.40, application is hereby made by:

Tank Owner

Tank Owner Name (please print) MM Picker LLC c/o Rees-Larkin Development, LLC X _____ Signature (if applying for permit)

Address 174 Boylston Street (Street) Jamaica Plain (City) MA (State) 02130 (Zip)

Removal Contractor

Company Name ENPRO Services, Inc. (Print)

Address 114 Bridge Rd Salisbury MA (Print)

Signature (if applying for permit) _____

IFCI* Certified Other _____

Contamination Assessment

Co. or Individual Goldman Env (Print)

Address 60 Brooks Dr Braintree MA (Print)

Signature (if applying for permit) _____

IFCI* Certified LSP # _____ Other _____

Tank Information

Tank Location 151 Massmills (Steet Address) Lowell, MA (City)

Tank Capacity (gallons) 2K gallon Substance Last Stored Gasoline

Tank Dimensions (diameter x length) ~8' x 4'

Remarks: _____

Disposal Information

Firm Transporting Waste Enpro Services Inc. State Lic. # 62303-0027

Hazardous Waste Manifest# TBD E.P.A. # _____

Approved Tank Disposal Yard ~~Mattras St Vaya~~ WINTERS Tank Yard # 002

Type of Inert Gas Dri Ice Tank Yard Address ~~23 Mulford St Lawrence MA~~ Commercial Street Lynn, MA

Approvals

City or Town Lowell FDID# 17160 Permit# 06 01617

Date of Issue _____ Date of Expiration 03/14/2016

Dig Safe approval number: _____ Trenching Permit # _____
Dig Safe Toll Free Tel. Number - 800-322-4844

Signature / Title of Officer granting permit _____ SC

After removal(s) ("consumptive use" fuel oil tanks exempted) send Form FP290 or Form FP-290R signed by the local fire department to MassDEP, Bureau of Waste Prevention UST Program, PO Box 120-0165, Boston, MA 02112-0165.

*International Fire Code Institute

FP-292 (Revised 1.1.2015)

The Commonwealth of Massachusetts
Department of Fire Services - Office of the State Fire Marshal

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK FORMERLY CONTAINING MOTOR FUEL

NAME AND ADDRESS OF APPROVED TANK YARD: WINDFIELD ALLOY INC.
15 MEDFORD ST.
LAWRENCE, MA 01841

Approved tank yard no. 614 Tank Yard Ledger 502 CMR 3.03(4) Number

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by (firm, corporation or partnership) _____ and accepted same in conformance with Office of the State Fire Marshal Regulations 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank Dismantling Yards. A valid permit was issued by the head of the LOCAL fire department FDID# 17160 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

Signature: _____ Title: Scrapmaster Date signed: 3/16/2016

TANK DATA:	TANK REMOVED FROM:
Gallons: 2000	No. and Street: 179 Boylston St
Previous contents: Gasoline	City and Town: Jamaica Plain
Diameter: 8x4	Fire Dept. Permit #: 01616
Length:	Notes:
Date Received: 3/16/2016	
Serial # (if available):	
Tank I.D. # (Form FP-290):	

EACH TANK MUST HAVE A RECEIPT OF DISPOSAL

Owner/Operator to mail revised copy of Notification Form (FP290, or FP290R) to local fire department and:

Department of Environmental Protection
Bureau of Waste Prevention - UST Program
P.O. Box 120-0165
Boston, MA 02112-0165

62303-0027

This signed receipt of disposal must be returned to the head of the local fire department.

SC

Form FP-251 (Rev. 11/2005)

Make application to local fire department.
Fire department retains original application and issues duplicate as permit.

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

APPLICATION and PERMIT

Fee: _____

for steel underground storage tank removal and transportation to approved tank disposal yard in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 1.00 Section 1.12.8.40, application is hereby made by:

Tank Owner

Tank Owner Name (please print) MM Picker LLC c/o Rees-Larkin Development, LLC X _____ Signature (if applying for permit)

Address 174 Boylston Street (Street) Jamaica Plain (City) MA (State) 02130 (Zip)

Removal Contractor

Company Name ENPRO Services, Inc. (Print)

Address 114 Bridge Rd Salisbury, MA (Print)

Signature (if applying for permit) _____

☞ IFCI* Certified Other _____

Contamination Assessment

Co. or Individual Goldman Env (Print)

Address 60 Brooks Drive Braintree MA (Print)

Signature (if applying for permit) _____

☞ IFCI* Certified ☞ LSP # _____ Other _____

Tank Information

Tank Location ~~[illegible]~~ 151 Mass mills (Steet Address) Lowell, MA (City)

Tank Capacity (gallons) 2K gallon Substance Last Stored Gasoline, MA

Tank Dimensions (diameter x length) ~ 8' x 4'

Remarks: _____

Disposal Information

Firm Transporting Waste ENPRO Services, Inc. State Lic. # 62303-0027

Hazardous Waste Manifest# TBD E.P.A. # _____

Approved Tank Disposal Yard ~~Turner's~~ WINFIELD Savage Tank Yard # 002

Type of Inert Gas Dri Ice Tank Yard Address ~~225 Commercial Street Lynn, MA~~ ALLIED FORD SO. LAWRENCE MA

Approvals

City or Town Lowell FDID# 17160 Permit# 01616

Date of Issue 03/07/2016 Date of Expiration 03/14/2016

Dig Safe approval number: _____ Trenching Permit # _____
Dig Safe Toll Free Tel. Number - 800-322-4844

Signature / Title of Officer granting permit SC

After removal(s) ("consumptive use" fuel oil tanks exempted) send Form FP290 or Form FP-290R signed by the local fire department to MassDEP, Bureau of Waste Prevention UST Program, PO Box 120-0165, Boston, MA 02112-0165.

*International Fire Code Institute

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

March 11, 2016

Andrew Foley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: Lowell
Client Job Number:
Project Number: 1785-5060
Laboratory Work Order Number: 16C0420

Enclosed are results of analyses for samples received by the laboratory on March 9, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James M. Georgantas
Project Manager

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con-test® ANALYTICAL LABORATORY

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

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Andrew Foley

REPORT DATE: 3/11/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1785-5060

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16C0420

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

PROJECT LOCATION: Lowell

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
NSW-GT-1	16C0420-01	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
ESW-GT-1	16C0420-02	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
SSW-GT-1	16C0420-03	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
BTM-GT-1	16C0420-04	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
NSW-GT-2	16C0420-05	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
WSW-GT-2	16C0420-06	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	

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

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Andrew Foley

REPORT DATE: 3/11/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1785-5060

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16C0420

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

PROJECT LOCATION: Lowell

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SSW-GT-2	16C0420-07	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
BTM-GT-2	16C0420-08	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	

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CASE NARRATIVE SUMMARY

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

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MADEP-EPH-04-1.1

Qualifications:

MS-07A

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

Analyte & Samples(s) Qualified:

n-Nonane

B143900-MS1, B143900-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Naphthalene

B143900-MSD1

SW-846 6010C/D

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:

Lead

B143921-BSD1

SW-846 8081B

Qualifications:

DL-03

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

16C0420-01[NSW-GT-1], 16C0420-05[NSW-GT-2], 16C0420-07[SSW-GT-2], 16C0420-08[BTM-GT-2]

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:

Dieldrin

16C0420-01[NSW-GT-1]

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1260

B143898-MS1, B143898-MSD1

Aroclor-1260 [2C]

B143898-MS1, B143898-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Aroclor-1016 [2C]

B143898-MSD1

O-32

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

Analyte & Samples(s) Qualified:

16C0420-02[ESW-GT-1], 16C0420-03[SSW-GT-1], 16C0420-04[BTM-GT-1], 16C0420-08[BTM-GT-2]

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S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16C0420-01[NSW-GT-1]

Decachlorobiphenyl [2C]
16C0420-01[NSW-GT-1]

Tetrachloro-m-xylene
16C0420-01[NSW-GT-1]

Tetrachloro-m-xylene [2C]
16C0420-01[NSW-GT-1]

MADEP-EPH-04-1.1

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

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

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

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

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-1
Sampled: 3/8/2016 15:10
Sample ID: 16C0420-01
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
Aldrin [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
alpha-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
beta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
delta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
gamma-BHC (Lindane) [1]	ND	0.045	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Chlordane [1]	ND	0.45	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
4,4'-DDD [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
4,4'-DDE [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
4,4'-DDT [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Dieldrin [1]	0.11	0.090	mg/Kg dry	20	P-02	SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Endosulfan I [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Endosulfan II [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Endosulfan sulfate [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Endrin [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Endrin ketone [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Heptachlor [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Heptachlor epoxide [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Hexachlorobenzene [1]	ND	0.14	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB
Methoxychlor [1]	ND	1.1	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 4:39	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	69.0	30-150		3/11/16 4:39
Decachlorobiphenyl [2]	67.7	30-150		3/11/16 4:39
Tetrachloro-m-xylene [1]	75.2	30-150		3/11/16 4:39
Tetrachloro-m-xylene [2]	76.6	30-150		3/11/16 4:39

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-1
Sampled: 3/8/2016 15:10
Sample ID: 16C0420-01
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1221 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1232 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1242 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1248 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1254 [1]	6.3	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1260 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1262 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL
Aroclor-1268 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/9/16	3/11/16 11:58	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	3/11/16 11:58
Decachlorobiphenyl [2]	*	30-150	S-01	3/11/16 11:58
Tetrachloro-m-xylene [1]	*	30-150	S-01	3/11/16 11:58
Tetrachloro-m-xylene [2]	*	30-150	S-01	3/11/16 11:58

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-1
Sampled: 3/8/2016 15:10
Sample ID: 16C0420-01
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	34	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
C19-C36 Aliphatics	140	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Unadjusted C11-C22 Aromatics	560	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
C11-C22 Aromatics	420	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Acenaphthene	1.7	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Acenaphthylene	ND	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Anthracene	4.7	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Benzo(a)anthracene	10	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Benzo(a)pyrene	9.3	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Benzo(b)fluoranthene	13	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Benzo(g,h,i)perylene	4.9	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Benzo(k)fluoranthene	4.8	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Chrysene	12	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Dibenz(a,h)anthracene	1.5	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Fluoranthene	27	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Fluorene	2.1	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Indeno(1,2,3-cd)pyrene	5.2	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
2-Methylnaphthalene	0.48	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Naphthalene	0.70	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Phenanthrene	19	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS
Pyrene	25	0.23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:38	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	58.5	40-140		3/10/16 11:38
o-Terphenyl (OTP)	76.2	40-140		3/10/16 11:38
2-Bromonaphthalene	84.0	40-140		3/10/16 11:38
2-Fluorobiphenyl	85.9	40-140		3/10/16 11:38

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-1
Sampled: 3/8/2016 15:10
Sample ID: 16C0420-01
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Arsenic	9.8	2.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Barium	72	2.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Beryllium	ND	0.26	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Cadmium	0.81	0.26	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Chromium	26	0.53	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Lead	230	0.79	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Mercury	1.3	0.14	mg/Kg dry	5		SW-846 7471B	3/10/16	3/11/16 15:45	JMP
Nickel	22	0.53	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Selenium	ND	5.3	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Silver	ND	0.53	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Vanadium	100	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME
Zinc	140	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:10	AME

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Project Location: Lowell
Sample Description:
Work Order: 16C0420

Date Received: 3/9/2016

Field Sample #: NSW-GT-1
Sampled: 3/8/2016 15:10

Sample ID: 16C0420-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.0		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: ESW-GT-1
Sampled: 3/8/2016 15:15
Sample ID: 16C0420-02
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
alpha-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
beta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
delta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
4,4'-DDD [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
4,4'-DDE [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
4,4'-DDT [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Dieldrin [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Endosulfan I [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Endosulfan II [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Endosulfan sulfate [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Endrin [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Endrin ketone [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Heptachlor [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Heptachlor epoxide [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Hexachlorobenzene [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB
Methoxychlor [1]	ND	0.056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:02	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.9	30-150		3/11/16 5:02
Decachlorobiphenyl [2]	87.6	30-150		3/11/16 5:02
Tetrachloro-m-xylene [1]	84.0	30-150		3/11/16 5:02
Tetrachloro-m-xylene [2]	92.2	30-150		3/11/16 5:02

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: ESW-GT-1
Sampled: 3/8/2016 15:15
Sample ID: 16C0420-02
Sample Matrix: Soil
Sample Flags: O-32

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:09	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.2	30-150		3/10/16 23:09
Decachlorobiphenyl [2]	87.2	30-150		3/10/16 23:09
Tetrachloro-m-xylene [1]	91.7	30-150		3/10/16 23:09
Tetrachloro-m-xylene [2]	98.5	30-150		3/10/16 23:09

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: ESW-GT-1
Sampled: 3/8/2016 15:15
Sample ID: 16C0420-02
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	13	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
C19-C36 Aliphatics	29	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Unadjusted C11-C22 Aromatics	41	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
C11-C22 Aromatics	41	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Benzo(a)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Benzo(b)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Chrysene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Fluoranthene	0.14	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Phenanthrene	0.30	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS
Pyrene	0.13	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 11:59	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	62.1	40-140		3/10/16 11:59
o-Terphenyl (OTP)	82.5	40-140		3/10/16 11:59
2-Bromonaphthalene	91.9	40-140		3/10/16 11:59
2-Fluorobiphenyl	92.4	40-140		3/10/16 11:59

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: ESW-GT-1
Sampled: 3/8/2016 15:15
Sample ID: 16C0420-02
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Arsenic	14	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Barium	43	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Cadmium	1.0	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Chromium	14	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Lead	290	0.83	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Mercury	0.63	0.13	mg/Kg dry	5		SW-846 7471B	3/10/16	3/11/16 15:46	JMP
Nickel	23	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Vanadium	36	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME
Zinc	210	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:14	AME

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420

Date Received: 3/9/2016

Field Sample #: ESW-GT-1
Sampled: 3/8/2016 15:15

Sample ID: 16C0420-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-1
Sampled: 3/8/2016 15:18
Sample ID: 16C0420-03
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
alpha-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
beta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
delta-BHC [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Chlordane [1]	ND	0.022	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
4,4'-DDD [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
4,4'-DDE [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
4,4'-DDT [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Dieldrin [1]	ND	0.0045	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Endosulfan I [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Endosulfan II [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Endosulfan sulfate [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Endrin [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Endrin ketone [1]	ND	0.0089	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Heptachlor [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Heptachlor epoxide [1]	ND	0.0056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Hexachlorobenzene [1]	ND	0.0067	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB
Methoxychlor [1]	ND	0.056	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:26	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	79.7	30-150		3/11/16 5:26
Decachlorobiphenyl [2]	83.9	30-150		3/11/16 5:26
Tetrachloro-m-xylene [1]	82.3	30-150		3/11/16 5:26
Tetrachloro-m-xylene [2]	85.1	30-150		3/11/16 5:26

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-1
Sampled: 3/8/2016 15:18
Sample ID: 16C0420-03
Sample Matrix: Soil
Sample Flags: O-32

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:27	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	83.5	30-150		3/10/16 23:27
Decachlorobiphenyl [2]	85.3	30-150		3/10/16 23:27
Tetrachloro-m-xylene [1]	88.6	30-150		3/10/16 23:27
Tetrachloro-m-xylene [2]	96.0	30-150		3/10/16 23:27

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-1
Sampled: 3/8/2016 15:18
Sample ID: 16C0420-03
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
C19-C36 Aliphatics	17	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Unadjusted C11-C22 Aromatics	33	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
C11-C22 Aromatics	31	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Benzo(a)pyrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Benzo(b)fluoranthene	0.31	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Benzo(g,h,i)perylene	0.33	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Chrysene	0.17	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Fluoranthene	0.19	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Indeno(1,2,3-cd)pyrene	0.25	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Phenanthrene	0.24	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS
Pyrene	0.19	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:41	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	54.8	40-140		3/10/16 12:41
o-Terphenyl (OTP)	68.4	40-140		3/10/16 12:41
2-Bromonaphthalene	95.4	40-140		3/10/16 12:41
2-Fluorobiphenyl	95.2	40-140		3/10/16 12:41

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-1
Sampled: 3/8/2016 15:18
Sample ID: 16C0420-03
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Arsenic	3.1	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Barium	27	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Cadmium	ND	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Chromium	12	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Lead	58	0.84	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Mercury	0.10	0.027	mg/Kg dry	1		SW-846 7471B	3/10/16	3/11/16 15:25	JMP
Nickel	9.0	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Vanadium	14	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME
Zinc	42	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:19	AME

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-1
Sampled: 3/8/2016 15:18
Sample ID: 16C0420-03
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-1
Sampled: 3/8/2016 15:05
Sample ID: 16C0420-04
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
alpha-BHC [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
beta-BHC [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
delta-BHC [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
gamma-BHC (Lindane) [1]	ND	0.0023	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Chlordane [1]	ND	0.023	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
4,4'-DDD [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
4,4'-DDE [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
4,4'-DDT [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Dieldrin [1]	ND	0.0046	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Endosulfan I [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Endosulfan II [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Endosulfan sulfate [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Endrin [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Endrin ketone [1]	ND	0.0092	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Heptachlor [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Heptachlor epoxide [1]	ND	0.0058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Hexachlorobenzene [1]	ND	0.0069	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB
Methoxychlor [1]	ND	0.058	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 5:50	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.6	30-150		3/11/16 5:50
Decachlorobiphenyl [2]	91.8	30-150		3/11/16 5:50
Tetrachloro-m-xylene [1]	89.2	30-150		3/11/16 5:50
Tetrachloro-m-xylene [2]	90.1	30-150		3/11/16 5:50

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-1
Sampled: 3/8/2016 15:05
Sample ID: 16C0420-04
Sample Matrix: Soil
Sample Flags: O-32

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/10/16 23:45	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.0	30-150		3/10/16 23:45
Decachlorobiphenyl [2]	93.6	30-150		3/10/16 23:45
Tetrachloro-m-xylene [1]	94.6	30-150		3/10/16 23:45
Tetrachloro-m-xylene [2]	102	30-150		3/10/16 23:45

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-1
Sampled: 3/8/2016 15:05
Sample ID: 16C0420-04
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Unadjusted C11-C22 Aromatics	27	12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
C11-C22 Aromatics	25	12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Acenaphthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Acenaphthylene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Benzo(a)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Benzo(a)pyrene	0.27	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Benzo(b)fluoranthene	0.32	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Benzo(g,h,i)perylene	0.38	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Benzo(k)fluoranthene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Chrysene	0.15	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Dibenz(a,h)anthracene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Fluoranthene	0.15	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Fluorene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Indeno(1,2,3-cd)pyrene	0.36	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
2-Methylnaphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Naphthalene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Phenanthrene	0.34	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS
Pyrene	ND	0.12	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 12:20	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	49.9	40-140		3/10/16 12:20
o-Terphenyl (OTP)	57.3	40-140		3/10/16 12:20
2-Bromonaphthalene	78.6	40-140		3/10/16 12:20
2-Fluorobiphenyl	79.3	40-140		3/10/16 12:20

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-1
Sampled: 3/8/2016 15:05
Sample ID: 16C0420-04
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Arsenic	7.4	2.9	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Barium	34	2.9	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Beryllium	ND	0.29	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Cadmium	0.36	0.29	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Chromium	11	0.59	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Lead	100	0.88	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Mercury	0.14	0.027	mg/Kg dry	1		SW-846 7471B	3/10/16	3/11/16 15:27	JMP
Nickel	11	0.59	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Selenium	ND	5.9	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Silver	ND	0.59	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Vanadium	27	1.2	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME
Zinc	37	1.2	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:25	AME

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420

Date Received: 3/9/2016

Field Sample #: BTM-GT-1
Sampled: 3/8/2016 15:05

Sample ID: 16C0420-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-2
Sampled: 3/8/2016 14:00
Sample ID: 16C0420-05
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
Aldrin [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
alpha-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
beta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
delta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
gamma-BHC (Lindane) [1]	ND	0.044	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Chlordane [1]	ND	0.44	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
4,4'-DDD [1]	ND	0.088	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
4,4'-DDE [1]	ND	0.088	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
4,4'-DDT [1]	ND	0.088	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Dieldrin [1]	ND	0.088	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Endosulfan I [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Endosulfan II [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Endosulfan sulfate [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Endrin [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Endrin ketone [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Heptachlor [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Heptachlor epoxide [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Hexachlorobenzene [1]	ND	0.13	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB
Methoxychlor [1]	ND	1.1	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 6:14	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	76.4	30-150		3/11/16 6:14
Decachlorobiphenyl [2]	74.8	30-150		3/11/16 6:14
Tetrachloro-m-xylene [1]	85.9	30-150		3/11/16 6:14
Tetrachloro-m-xylene [2]	88.1	30-150		3/11/16 6:14

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-2
Sampled: 3/8/2016 14:00
Sample ID: 16C0420-05
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1254 [1]	1.2	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:03	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.7	30-150		3/11/16 0:03
Decachlorobiphenyl [2]	91.1	30-150		3/11/16 0:03
Tetrachloro-m-xylene [1]	94.7	30-150		3/11/16 0:03
Tetrachloro-m-xylene [2]	95.1	30-150		3/11/16 0:03

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-2
Sampled: 3/8/2016 14:00
Sample ID: 16C0420-05
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
C19-C36 Aliphatics	77	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Unadjusted C11-C22 Aromatics	140	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
C11-C22 Aromatics	120	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Acenaphthene	0.37	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Acenaphthylene	ND	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Anthracene	0.73	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Benzo(a)anthracene	1.7	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Benzo(a)pyrene	0.69	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Benzo(b)fluoranthene	2.0	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Benzo(g,h,i)perylene	0.96	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Benzo(k)fluoranthene	0.73	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Chrysene	1.8	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Dibenz(a,h)anthracene	ND	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Fluoranthene	3.7	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Fluorene	0.37	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Indeno(1,2,3-cd)pyrene	0.93	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
2-Methylnaphthalene	ND	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Naphthalene	ND	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Phenanthrene	3.0	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS
Pyrene	3.4	0.22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:02	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	49.5	40-140		3/10/16 13:02
o-Terphenyl (OTP)	55.9	40-140		3/10/16 13:02
2-Bromonaphthalene	77.9	40-140		3/10/16 13:02
2-Fluorobiphenyl	79.9	40-140		3/10/16 13:02

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: NSW-GT-2
Sampled: 3/8/2016 14:00
Sample ID: 16C0420-05
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Arsenic	6.0	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Barium	42	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Cadmium	0.61	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Chromium	19	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Lead	64	0.83	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Mercury	0.25	0.028	mg/Kg dry	1		SW-846 7471B	3/10/16	3/11/16 15:28	JMP
Nickel	14	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Selenium	ND	5.6	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Silver	ND	0.56	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Vanadium	32	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME
Zinc	89	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:29	AME

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420

Date Received: 3/9/2016

Field Sample #: NSW-GT-2
Sampled: 3/8/2016 14:00

Sample ID: 16C0420-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: WSW-GT-2
Sampled: 3/8/2016 14:15
Sample ID: 16C0420-06
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
alpha-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
beta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
delta-BHC [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
gamma-BHC (Lindane) [1]	ND	0.0022	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Chlordane [1]	0.045	0.022	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
4,4'-DDD [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
4,4'-DDE [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
4,4'-DDT [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Dieldrin [1]	ND	0.0044	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Endosulfan I [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Endosulfan II [1]	ND	0.0088	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Endosulfan sulfate [1]	ND	0.0088	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Endrin [1]	ND	0.0088	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Endrin ketone [1]	ND	0.0088	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Heptachlor [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Heptachlor epoxide [1]	ND	0.0055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Hexachlorobenzene [1]	ND	0.0066	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB
Methoxychlor [1]	ND	0.055	mg/Kg dry	1		SW-846 8081B	3/9/16	3/11/16 6:37	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	87.9	30-150		3/11/16 6:37
Decachlorobiphenyl [2]	85.7	30-150		3/11/16 6:37
Tetrachloro-m-xylene [1]	86.9	30-150		3/11/16 6:37
Tetrachloro-m-xylene [2]	87.7	30-150		3/11/16 6:37

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: WSW-GT-2
Sampled: 3/8/2016 14:15
Sample ID: 16C0420-06
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1254 [2]	0.16	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:21	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.5	30-150		3/11/16 0:21
Decachlorobiphenyl [2]	91.9	30-150		3/11/16 0:21
Tetrachloro-m-xylene [1]	95.6	30-150		3/11/16 0:21
Tetrachloro-m-xylene [2]	101	30-150		3/11/16 0:21

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: WSW-GT-2
Sampled: 3/8/2016 14:15
Sample ID: 16C0420-06
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Unadjusted C11-C22 Aromatics	40	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
C11-C22 Aromatics	33	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Anthracene	0.18	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Benzo(a)anthracene	0.50	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Benzo(a)pyrene	0.52	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Benzo(b)fluoranthene	0.67	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Benzo(g,h,i)perylene	0.41	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Benzo(k)fluoranthene	0.26	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Chrysene	0.59	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Fluoranthene	1.1	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Indeno(1,2,3-cd)pyrene	0.36	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Phenanthrene	0.74	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS
Pyrene	1.0	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 13:23	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	46.4	40-140		3/10/16 13:23
o-Terphenyl (OTP)	51.8	40-140		3/10/16 13:23
2-Bromonaphthalene	79.0	40-140		3/10/16 13:23
2-Fluorobiphenyl	77.4	40-140		3/10/16 13:23

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: WSW-GT-2
Sampled: 3/8/2016 14:15
Sample ID: 16C0420-06
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Arsenic	4.4	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Barium	28	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Cadmium	0.33	0.27	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Chromium	11	0.55	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Lead	40	0.82	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Mercury	0.099	0.026	mg/Kg dry	1		SW-846 7471B	3/10/16	3/11/16 15:30	JMP
Nickel	8.8	0.55	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Vanadium	15	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME
Zinc	35	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 14:33	AME

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420

Date Received: 3/9/2016

Field Sample #: WSW-GT-2
Sampled: 3/8/2016 14:15

Sample ID: 16C0420-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.9		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-2
Sampled: 3/8/2016 14:06
Sample ID: 16C0420-07
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
Aldrin [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
alpha-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
beta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
delta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
gamma-BHC (Lindane) [1]	ND	0.043	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Chlordane [1]	ND	0.43	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
4,4'-DDD [1]	ND	0.087	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
4,4'-DDE [1]	ND	0.087	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
4,4'-DDT [1]	ND	0.087	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Dieldrin [1]	ND	0.087	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Endosulfan I [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Endosulfan II [1]	ND	0.17	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Endosulfan sulfate [1]	ND	0.17	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Endrin [1]	ND	0.17	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Endrin ketone [1]	ND	0.17	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Heptachlor [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Heptachlor epoxide [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Hexachlorobenzene [1]	ND	0.13	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB
Methoxychlor [1]	ND	1.1	mg/Kg dry	20		SW-846 8081B	3/9/16	3/11/16 7:01	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.1	30-150		3/11/16 7:01
Decachlorobiphenyl [2]	73.6	30-150		3/11/16 7:01
Tetrachloro-m-xylene [1]	85.9	30-150		3/11/16 7:01
Tetrachloro-m-xylene [2]	90.2	30-150		3/11/16 7:01

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-2
Sampled: 3/8/2016 14:06
Sample ID: 16C0420-07
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1254 [1]	0.35	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:40	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.9	30-150		3/11/16 0:40
Decachlorobiphenyl [2]	73.5	30-150		3/11/16 0:40
Tetrachloro-m-xylene [1]	91.2	30-150		3/11/16 0:40
Tetrachloro-m-xylene [2]	97.8	30-150		3/11/16 0:40

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-2
Sampled: 3/8/2016 14:06
Sample ID: 16C0420-07
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	37	22	mg/Kg dry	1		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
C19-C36 Aliphatics	200	22	mg/Kg dry	1		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Unadjusted C11-C22 Aromatics	220	43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
C11-C22 Aromatics	210	43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Acenaphthene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Acenaphthylene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Anthracene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Benzo(a)anthracene	0.78	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Benzo(a)pyrene	0.94	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Benzo(b)fluoranthene	1.1	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Benzo(g,h,i)perylene	0.77	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Benzo(k)fluoranthene	0.44	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Chrysene	1.0	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Dibenz(a,h)anthracene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Fluoranthene	1.6	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Fluorene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Indeno(1,2,3-cd)pyrene	0.56	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
2-Methylnaphthalene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Naphthalene	ND	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Phenanthrene	1.2	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS
Pyrene	1.6	0.43	mg/Kg dry	2		MADEP-EPH-04-1.1	3/10/16	3/11/16 9:33	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	56.4	40-140		3/11/16 9:33
o-Terphenyl (OTP)	73.0	40-140		3/11/16 9:33
2-Bromonaphthalene	90.5	40-140		3/11/16 9:33
2-Fluorobiphenyl	85.5	40-140		3/11/16 9:33

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-2
Sampled: 3/8/2016 14:06
Sample ID: 16C0420-07
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Arsenic	5.7	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Barium	31	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Beryllium	ND	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Cadmium	0.60	0.28	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Chromium	18	0.55	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Lead	59	0.83	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Mercury	0.51	0.13	mg/Kg dry	5		SW-846 7471B	3/10/16	3/11/16 15:48	JMP
Nickel	18	0.55	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Selenium	ND	5.5	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Silver	ND	0.55	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Vanadium	50	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME
Zinc	79	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:20	AME

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

Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: SSW-GT-2
Sampled: 3/8/2016 14:06
Sample ID: 16C0420-07
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.6		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-2
Sampled: 3/8/2016 14:03
Sample ID: 16C0420-08
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
Aldrin [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
alpha-BHC [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
beta-BHC [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
delta-BHC [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
gamma-BHC (Lindane) [1]	ND	0.022	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Chlordane [1]	ND	0.22	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
4,4'-DDD [1]	ND	0.044	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
4,4'-DDE [1]	ND	0.044	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
4,4'-DDT [1]	ND	0.044	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Dieldrin [1]	ND	0.044	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Endosulfan I [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Endosulfan II [1]	ND	0.088	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Endosulfan sulfate [1]	ND	0.088	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Endrin [1]	ND	0.088	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Endrin ketone [1]	ND	0.088	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Heptachlor [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Heptachlor epoxide [1]	ND	0.055	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Hexachlorobenzene [1]	ND	0.066	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB
Methoxychlor [1]	ND	0.55	mg/Kg dry	10		SW-846 8081B	3/9/16	3/11/16 7:25	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.4	30-150		3/11/16 7:25
Decachlorobiphenyl [2]	87.9	30-150		3/11/16 7:25
Tetrachloro-m-xylene [1]	93.9	30-150		3/11/16 7:25
Tetrachloro-m-xylene [2]	98.2	30-150		3/11/16 7:25

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-2
Sampled: 3/8/2016 14:03
Sample ID: 16C0420-08
Sample Matrix: Soil
Sample Flags: O-32

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	3/9/16	3/11/16 0:58	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.7	30-150		3/11/16 0:58
Decachlorobiphenyl [2]	86.3	30-150		3/11/16 0:58
Tetrachloro-m-xylene [1]	96.0	30-150		3/11/16 0:58
Tetrachloro-m-xylene [2]	101	30-150		3/11/16 0:58

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-2
Sampled: 3/8/2016 14:03
Sample ID: 16C0420-08
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
C19-C36 Aliphatics	31	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Unadjusted C11-C22 Aromatics	45	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
C11-C22 Aromatics	45	11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Acenaphthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Acenaphthylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Benzo(a)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Benzo(a)pyrene	0.11	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Benzo(b)fluoranthene	0.15	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Benzo(g,h,i)perylene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Benzo(k)fluoranthene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Chrysene	0.11	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Dibenz(a,h)anthracene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Fluoranthene	0.17	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Fluorene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Indeno(1,2,3-cd)pyrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
2-Methylnaphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Naphthalene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Phenanthrene	ND	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS
Pyrene	0.18	0.11	mg/Kg dry	1		MADEP-EPH-04-1.1	3/9/16	3/10/16 14:06	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	47.7	40-140		3/10/16 14:06
o-Terphenyl (OTP)	55.1	40-140		3/10/16 14:06
2-Bromonaphthalene	80.4	40-140		3/10/16 14:06
2-Fluorobiphenyl	80.2	40-140		3/10/16 14:06

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Project Location: Lowell
Sample Description:
Work Order: 16C0420
Date Received: 3/9/2016
Field Sample #: BTM-GT-2
Sampled: 3/8/2016 14:03
Sample ID: 16C0420-08
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Barium	27	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Beryllium	ND	0.27	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Cadmium	0.34	0.27	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Chromium	10	0.54	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Lead	41	0.81	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Mercury	0.095	0.026	mg/Kg dry	1		SW-846 7471B	3/10/16	3/11/16 15:33	JMP
Nickel	8.9	0.54	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Thallium	ND	2.7	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Vanadium	14	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME
Zinc	43	1.1	mg/Kg dry	1		SW-846 6010C/D	3/10/16	3/11/16 15:25	AME

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Project Location: Lowell
Sample Description:
Work Order: 16C0420

Date Received: 3/9/2016

Field Sample #: BTM-GT-2
Sampled: 3/8/2016 14:03

Sample ID: 16C0420-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.3		% Wt	1		SM 2540G	3/9/16	3/10/16 8:20	MRL

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Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0420-01 [NSW-GT-1]	B143900	20.1	2.00	03/09/16
16C0420-02 [ESW-GT-1]	B143900	20.2	2.00	03/09/16
16C0420-03 [SSW-GT-1]	B143900	20.0	2.00	03/09/16
16C0420-04 [BTM-GT-1]	B143900	20.0	2.00	03/09/16
16C0420-05 [NSW-GT-2]	B143900	20.2	2.00	03/09/16
16C0420-06 [WSW-GT-2]	B143900	20.1	2.00	03/09/16
16C0420-08 [BTM-GT-2]	B143900	20.2	2.00	03/09/16

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0420-07RE1 [SSW-GT-2]	B143912	10.2	2.00	03/10/16

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16C0420-01 [NSW-GT-1]	B143895	03/09/16
16C0420-02 [ESW-GT-1]	B143895	03/09/16
16C0420-03 [SSW-GT-1]	B143895	03/09/16
16C0420-04 [BTM-GT-1]	B143895	03/09/16
16C0420-05 [NSW-GT-2]	B143895	03/09/16
16C0420-06 [WSW-GT-2]	B143895	03/09/16
16C0420-07 [SSW-GT-2]	B143895	03/09/16
16C0420-08 [BTM-GT-2]	B143895	03/09/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0420-01 [NSW-GT-1]	B143921	1.07	50.0	03/10/16
16C0420-02 [ESW-GT-1]	B143921	1.02	50.0	03/10/16
16C0420-03 [SSW-GT-1]	B143921	1.00	50.0	03/10/16
16C0420-04 [BTM-GT-1]	B143921	0.996	50.0	03/10/16
16C0420-05 [NSW-GT-2]	B143921	1.01	50.0	03/10/16
16C0420-06 [WSW-GT-2]	B143921	1.02	50.0	03/10/16
16C0420-07 [SSW-GT-2]	B143921	1.00	50.0	03/10/16
16C0420-08 [BTM-GT-2]	B143921	1.02	50.0	03/10/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0420-01RE1 [NSW-GT-1]	B143935	0.619	50.0	03/10/16
16C0420-02RE1 [ESW-GT-1]	B143935	0.638	50.0	03/10/16
16C0420-03RE1 [SSW-GT-1]	B143935	0.617	50.0	03/10/16
16C0420-04RE1 [BTM-GT-1]	B143935	0.640	50.0	03/10/16
16C0420-05RE1 [NSW-GT-2]	B143935	0.610	50.0	03/10/16
16C0420-06RE1 [WSW-GT-2]	B143935	0.641	50.0	03/10/16
16C0420-07RE1 [SSW-GT-2]	B143935	0.627	50.0	03/10/16
16C0420-08RE1 [BTM-GT-2]	B143935	0.634	50.0	03/10/16

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0420-01 [NSW-GT-1]	B143899	10.1	10.0	03/09/16
16C0420-02 [ESW-GT-1]	B143899	10.2	10.0	03/09/16
16C0420-03 [SSW-GT-1]	B143899	10.0	10.0	03/09/16
16C0420-04 [BTM-GT-1]	B143899	10.1	10.0	03/09/16
16C0420-05 [NSW-GT-2]	B143899	10.2	10.0	03/09/16
16C0420-06 [WSW-GT-2]	B143899	10.2	10.0	03/09/16
16C0420-07 [SSW-GT-2]	B143899	10.2	10.0	03/09/16
16C0420-08 [BTM-GT-2]	B143899	10.1	10.0	03/09/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0420-01 [NSW-GT-1]	B143898	10.1	10.0	03/09/16
16C0420-02 [ESW-GT-1]	B143898	10.1	10.0	03/09/16
16C0420-03 [SSW-GT-1]	B143898	10.0	10.0	03/09/16
16C0420-04 [BTM-GT-1]	B143898	10.2	10.0	03/09/16
16C0420-05 [NSW-GT-2]	B143898	10.2	10.0	03/09/16
16C0420-06 [WSW-GT-2]	B143898	10.2	10.0	03/09/16
16C0420-07 [SSW-GT-2]	B143898	10.0	10.0	03/09/16
16C0420-08 [BTM-GT-2]	B143898	10.3	10.0	03/09/16

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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 B143899 - SW-846 3546										
Blank (B143899-BLK1)				Prepared: 03/09/16 Analyzed: 03/10/16						
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							
Surrogate: Decachlorobiphenyl	*0.206*		mg/Kg wet	0.200		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.209*		mg/Kg wet	0.200		104	30-150			
Surrogate: Tetrachloro-m-xylene	*0.197*		mg/Kg wet	0.200		98.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.210*		mg/Kg wet	0.200		105	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 B143899 - SW-846 3546										
LCS (B143899-BS1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Aldrin	0.11	0.0050	mg/Kg wet	0.100		109	40-140			
Aldrin [2C]	0.12	0.0050	mg/Kg wet	0.100		120	40-140			
alpha-BHC	0.11	0.0050	mg/Kg wet	0.100		109	40-140			
alpha-BHC [2C]	0.12	0.0050	mg/Kg wet	0.100		118	40-140			
beta-BHC	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
beta-BHC [2C]	0.12	0.0050	mg/Kg wet	0.100		118	40-140			
delta-BHC	0.11	0.0050	mg/Kg wet	0.100		109	40-140			
delta-BHC [2C]	0.12	0.0050	mg/Kg wet	0.100		118	40-140			
gamma-BHC (Lindane)	0.11	0.0020	mg/Kg wet	0.100		111	40-140			
gamma-BHC (Lindane) [2C]	0.12	0.0020	mg/Kg wet	0.100		124	40-140			
4,4'-DDD	0.12	0.0040	mg/Kg wet	0.100		119	40-140			
4,4'-DDD [2C]	0.12	0.0040	mg/Kg wet	0.100		124	40-140			
4,4'-DDE	0.12	0.0040	mg/Kg wet	0.100		118	40-140			
4,4'-DDE [2C]	0.13	0.0040	mg/Kg wet	0.100		125	40-140			
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		114	40-140			
4,4'-DDT [2C]	0.12	0.0040	mg/Kg wet	0.100		119	40-140			
Dieldrin	0.11	0.0040	mg/Kg wet	0.100		112	40-140			
Dieldrin [2C]	0.12	0.0040	mg/Kg wet	0.100		120	40-140			
Endosulfan I	0.11	0.0050	mg/Kg wet	0.100		111	40-140			
Endosulfan I [2C]	0.12	0.0050	mg/Kg wet	0.100		116	40-140			
Endosulfan II	0.11	0.0080	mg/Kg wet	0.100		113	40-140			
Endosulfan II [2C]	0.12	0.0080	mg/Kg wet	0.100		117	40-140			
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		113	40-140			
Endosulfan Sulfate [2C]	0.12	0.0080	mg/Kg wet	0.100		115	40-140			
Endrin	0.12	0.0080	mg/Kg wet	0.100		117	40-140			
Endrin [2C]	0.12	0.0080	mg/Kg wet	0.100		122	40-140			
Endrin Ketone	0.12	0.0080	mg/Kg wet	0.100		120	40-140			
Endrin Ketone [2C]	0.12	0.0080	mg/Kg wet	0.100		120	40-140			
Heptachlor	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
Heptachlor [2C]	0.12	0.0050	mg/Kg wet	0.100		118	40-140			
Heptachlor Epoxide	0.11	0.0050	mg/Kg wet	0.100		109	40-140			
Heptachlor Epoxide [2C]	0.11	0.0050	mg/Kg wet	0.100		113	40-140			
Hexachlorobenzene	0.095	0.0060	mg/Kg wet	0.100		94.6	40-140			
Hexachlorobenzene [2C]	0.10	0.0060	mg/Kg wet	0.100		102	40-140			
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		113	40-140			
Methoxychlor [2C]	0.12	0.050	mg/Kg wet	0.100		118	40-140			
Surrogate: Decachlorobiphenyl	*0.211*		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.214*		mg/Kg wet	0.200		107	30-150			
Surrogate: Tetrachloro-m-xylene	*0.190*		mg/Kg wet	0.200		95.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.211*		mg/Kg wet	0.200		105	30-150			
LCS Dup (B143899-BSD1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Aldrin	0.10	0.0050	mg/Kg wet	0.100		102	40-140	6.93	30	
Aldrin [2C]	0.11	0.0050	mg/Kg wet	0.100		112	40-140	6.96	30	
alpha-BHC	0.10	0.0050	mg/Kg wet	0.100		101	40-140	6.96	30	
alpha-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		110	40-140	7.01	30	
beta-BHC	0.099	0.0050	mg/Kg wet	0.100		99.1	40-140	6.29	30	
beta-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		110	40-140	6.70	30	
delta-BHC	0.10	0.0050	mg/Kg wet	0.100		102	40-140	6.67	30	
delta-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		110	40-140	7.35	30	
gamma-BHC (Lindane)	0.10	0.0020	mg/Kg wet	0.100		104	40-140	6.86	30	
gamma-BHC (Lindane) [2C]	0.11	0.0020	mg/Kg wet	0.100		115	40-140	7.31	30	

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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 B143899 - SW-846 3546										
LCS Dup (B143899-BSD1)				Prepared: 03/09/16 Analyzed: 03/10/16						
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		110	40-140	7.54	30	
4,4'-DDD [2C]	0.12	0.0040	mg/Kg wet	0.100		117	40-140	6.25	30	
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		110	40-140	6.30	30	
4,4'-DDE [2C]	0.12	0.0040	mg/Kg wet	0.100		117	40-140	6.62	30	
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		108	40-140	5.86	30	
4,4'-DDT [2C]	0.11	0.0040	mg/Kg wet	0.100		111	40-140	7.03	30	
Dieldrin	0.11	0.0040	mg/Kg wet	0.100		105	40-140	6.25	30	
Dieldrin [2C]	0.11	0.0040	mg/Kg wet	0.100		112	40-140	6.91	30	
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		103	40-140	7.26	30	
Endosulfan I [2C]	0.11	0.0050	mg/Kg wet	0.100		108	40-140	6.92	30	
Endosulfan II	0.11	0.0080	mg/Kg wet	0.100		106	40-140	6.85	30	
Endosulfan II [2C]	0.11	0.0080	mg/Kg wet	0.100		109	40-140	6.73	30	
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		107	40-140	6.04	30	
Endosulfan Sulfate [2C]	0.11	0.0080	mg/Kg wet	0.100		108	40-140	6.49	30	
Endrin	0.11	0.0080	mg/Kg wet	0.100		110	40-140	6.25	30	
Endrin [2C]	0.11	0.0080	mg/Kg wet	0.100		115	40-140	6.23	30	
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		112	40-140	7.13	30	
Endrin Ketone [2C]	0.11	0.0080	mg/Kg wet	0.100		112	40-140	6.90	30	
Heptachlor	0.099	0.0050	mg/Kg wet	0.100		99.4	40-140	6.91	30	
Heptachlor [2C]	0.11	0.0050	mg/Kg wet	0.100		110	40-140	6.79	30	
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		102	40-140	7.08	30	
Heptachlor Epoxide [2C]	0.11	0.0050	mg/Kg wet	0.100		106	40-140	7.23	30	
Hexachlorobenzene	0.087	0.0060	mg/Kg wet	0.100		87.3	40-140	7.95	30	
Hexachlorobenzene [2C]	0.094	0.0060	mg/Kg wet	0.100		93.7	40-140	8.25	30	
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		108	40-140	5.28	30	
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		112	40-140	5.29	30	
Surrogate: Decachlorobiphenyl	*0.190*		mg/Kg wet	0.200		94.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.196*		mg/Kg wet	0.200		97.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.170*		mg/Kg wet	0.200		85.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.189*		mg/Kg wet	0.200		94.3	30-150			
Matrix Spike (B143899-MS1)		**Source: 16C0420-02**		Prepared: 03/09/16 Analyzed: 03/11/16						
Aldrin	0.11	0.0057	mg/Kg dry	0.114	ND	93.3	30-150			
Aldrin [2C]	0.11	0.0057	mg/Kg dry	0.114	ND	101	30-150			
alpha-BHC	0.10	0.0057	mg/Kg dry	0.114	ND	89.0	30-150			
alpha-BHC [2C]	0.11	0.0057	mg/Kg dry	0.114	ND	94.4	30-150			
beta-BHC	0.097	0.0057	mg/Kg dry	0.114	ND	85.1	30-150			
beta-BHC [2C]	0.10	0.0057	mg/Kg dry	0.114	ND	88.7	30-150			
delta-BHC	0.098	0.0057	mg/Kg dry	0.114	ND	86.1	30-150			
delta-BHC [2C]	0.11	0.0057	mg/Kg dry	0.114	ND	93.5	30-150			
gamma-BHC (Lindane)	0.10	0.0023	mg/Kg dry	0.114	ND	87.9	30-150			
gamma-BHC (Lindane) [2C]	0.11	0.0023	mg/Kg dry	0.114	ND	98.6	30-150			
4,4'-DDD	0.11	0.0045	mg/Kg dry	0.114	ND	93.3	30-150			
4,4'-DDD [2C]	0.11	0.0045	mg/Kg dry	0.114	ND	94.4	30-150			
4,4'-DDE	0.11	0.0045	mg/Kg dry	0.114	ND	95.6	30-150			
4,4'-DDE [2C]	0.11	0.0045	mg/Kg dry	0.114	ND	101	30-150			
4,4'-DDT	0.11	0.0045	mg/Kg dry	0.114	ND	94.8	30-150			
4,4'-DDT [2C]	0.11	0.0045	mg/Kg dry	0.114	ND	94.0	30-150			
Dieldrin	0.11	0.0045	mg/Kg dry	0.114	ND	92.5	30-150			
Dieldrin [2C]	0.11	0.0045	mg/Kg dry	0.114	ND	99.1	30-150			
Endosulfan I	0.10	0.0057	mg/Kg dry	0.114	ND	90.6	30-150			
Endosulfan I [2C]	0.11	0.0057	mg/Kg dry	0.114	ND	94.8	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 B143899 - SW-846 3546										
Matrix Spike (B143899-MS1)		**Source: 16C0420-02**		Prepared: 03/09/16 Analyzed: 03/11/16						
Endosulfan II	0.099	0.0091	mg/Kg dry	0.114	ND	87.3	30-150			
Endosulfan II [2C]	0.11	0.0091	mg/Kg dry	0.114	ND	92.8	30-150			
Endosulfan Sulfate	0.094	0.0091	mg/Kg dry	0.114	ND	82.9	30-150			
Endosulfan Sulfate [2C]	0.092	0.0091	mg/Kg dry	0.114	ND	81.4	30-150			
Endrin	0.11	0.0091	mg/Kg dry	0.114	ND	101	30-150			
Endrin [2C]	0.12	0.0091	mg/Kg dry	0.114	ND	102	30-150			
Endrin Ketone	0.10	0.0091	mg/Kg dry	0.114	ND	91.4	30-150			
Endrin Ketone [2C]	0.10	0.0091	mg/Kg dry	0.114	ND	91.2	30-150			
Heptachlor	0.10	0.0057	mg/Kg dry	0.114	ND	92.1	30-150			
Heptachlor [2C]	0.12	0.0057	mg/Kg dry	0.114	ND	102	30-150			
Heptachlor Epoxide	0.10	0.0057	mg/Kg dry	0.114	ND	89.0	30-150			
Heptachlor Epoxide [2C]	0.11	0.0057	mg/Kg dry	0.114	ND	94.9	30-150			
Hexachlorobenzene	0.091	0.0068	mg/Kg dry	0.114	ND	80.4	30-150			
Hexachlorobenzene [2C]	0.097	0.0068	mg/Kg dry	0.114	ND	85.8	30-150			
Methoxychlor	0.11	0.057	mg/Kg dry	0.114	ND	92.7	30-150			
Methoxychlor [2C]	0.11	0.057	mg/Kg dry	0.114	ND	93.7	30-150			
Surrogate: Decachlorobiphenyl	*0.201*		mg/Kg dry	0.227		88.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.215*		mg/Kg dry	0.227		94.8	30-150			
Surrogate: Tetrachloro-m-xylene	*0.188*		mg/Kg dry	0.227		82.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.200*		mg/Kg dry	0.227		88.1	30-150			
Matrix Spike Dup (B143899-MSD1)		**Source: 16C0420-02**		Prepared: 03/09/16 Analyzed: 03/11/16						
Aldrin	0.11	0.0056	mg/Kg dry	0.111	ND	98.8	30-150	3.78	30	
Aldrin [2C]	0.12	0.0056	mg/Kg dry	0.111	ND	106	30-150	2.47	30	
alpha-BHC	0.11	0.0056	mg/Kg dry	0.111	ND	95.6	30-150	5.17	30	
alpha-BHC [2C]	0.11	0.0056	mg/Kg dry	0.111	ND	98.4	30-150	2.18	30	
beta-BHC	0.10	0.0056	mg/Kg dry	0.111	ND	91.5	30-150	5.28	30	
beta-BHC [2C]	0.10	0.0056	mg/Kg dry	0.111	ND	94.0	30-150	3.90	30	
delta-BHC	0.10	0.0056	mg/Kg dry	0.111	ND	92.4	30-150	5.13	30	
delta-BHC [2C]	0.11	0.0056	mg/Kg dry	0.111	ND	98.4	30-150	3.09	30	
gamma-BHC (Lindane)	0.11	0.0022	mg/Kg dry	0.111	ND	94.8	30-150	5.53	30	
gamma-BHC (Lindane) [2C]	0.12	0.0022	mg/Kg dry	0.111	ND	104	30-150	3.33	30	
4,4'-DDD	0.11	0.0045	mg/Kg dry	0.111	ND	98.9	30-150	3.88	30	
4,4'-DDD [2C]	0.11	0.0045	mg/Kg dry	0.111	ND	102	30-150	5.30	30	
4,4'-DDE	0.11	0.0045	mg/Kg dry	0.111	ND	100	30-150	2.96	30	
4,4'-DDE [2C]	0.12	0.0045	mg/Kg dry	0.111	ND	106	30-150	2.49	30	
4,4'-DDT	0.11	0.0045	mg/Kg dry	0.111	ND	100	30-150	3.67	30	
4,4'-DDT [2C]	0.11	0.0045	mg/Kg dry	0.111	ND	99.5	30-150	3.71	30	
Dieldrin	0.11	0.0045	mg/Kg dry	0.111	ND	98.0	30-150	3.75	30	
Dieldrin [2C]	0.12	0.0045	mg/Kg dry	0.111	ND	104	30-150	3.14	30	
Endosulfan I	0.11	0.0056	mg/Kg dry	0.111	ND	96.2	30-150	4.06	30	
Endosulfan I [2C]	0.11	0.0056	mg/Kg dry	0.111	ND	99.9	30-150	3.26	30	
Endosulfan II	0.10	0.0089	mg/Kg dry	0.111	ND	92.7	30-150	4.04	30	
Endosulfan II [2C]	0.11	0.0089	mg/Kg dry	0.111	ND	98.4	30-150	3.88	30	
Endosulfan Sulfate	0.096	0.0089	mg/Kg dry	0.111	ND	86.2	30-150	2.02	30	
Endosulfan Sulfate [2C]	0.094	0.0089	mg/Kg dry	0.111	ND	84.4	30-150	1.67	30	
Endrin	0.12	0.0089	mg/Kg dry	0.111	ND	107	30-150	3.72	30	
Endrin [2C]	0.12	0.0089	mg/Kg dry	0.111	ND	107	30-150	3.21	30	
Endrin Ketone	0.11	0.0089	mg/Kg dry	0.111	ND	95.7	30-150	2.64	30	
Endrin Ketone [2C]	0.11	0.0089	mg/Kg dry	0.111	ND	96.2	30-150	3.35	30	
Heptachlor	0.11	0.0056	mg/Kg dry	0.111	ND	97.3	30-150	3.51	30	
Heptachlor [2C]	0.12	0.0056	mg/Kg dry	0.111	ND	106	30-150	1.21	30	

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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 B143899 - SW-846 3546										
Matrix Spike Dup (B143899-MSD1)		**Source: 16C0420-02**		Prepared: 03/09/16 Analyzed: 03/11/16						
Heptachlor Epoxide	0.11	0.0056	mg/Kg dry	0.111	ND	95.5	30-150	5.06	30	
Heptachlor Epoxide [2C]	0.11	0.0056	mg/Kg dry	0.111	ND	101	30-150	4.26	30	
Hexachlorobenzene	0.096	0.0067	mg/Kg dry	0.111	ND	86.1	30-150	4.86	30	
Hexachlorobenzene [2C]	0.098	0.0067	mg/Kg dry	0.111	ND	88.3	30-150	0.847	30	
Methoxychlor	0.11	0.056	mg/Kg dry	0.111	ND	99.9	30-150	5.43	30	
Methoxychlor [2C]	0.11	0.056	mg/Kg dry	0.111	ND	100	30-150	4.69	30	
Surrogate: Decachlorobiphenyl	*0.212*		mg/Kg dry	0.223		95.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.220*		mg/Kg dry	0.223		98.8	30-150			
Surrogate: Tetrachloro-m-xylene	*0.195*		mg/Kg dry	0.223		87.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.201*		mg/Kg dry	0.223		90.2	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B143898 - SW-846 3540C										
Blank (B143898-BLK1)				Prepared: 03/09/16 Analyzed: 03/10/16						
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	*0.186*		mg/Kg wet	0.200		92.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.175*		mg/Kg wet	0.200		87.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.180*		mg/Kg wet	0.200		89.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.170*		mg/Kg wet	0.200		85.0	30-150			
LCS (B143898-BS1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Aroclor-1016	0.21	0.020	mg/Kg wet	0.200		104	40-140			
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		105	40-140			
Aroclor-1260	0.20	0.020	mg/Kg wet	0.200		101	40-140			
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		95.8	40-140			
Surrogate: Decachlorobiphenyl	*0.208*		mg/Kg wet	0.200		104	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.194*		mg/Kg wet	0.200		96.8	30-150			
Surrogate: Tetrachloro-m-xylene	*0.203*		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.191*		mg/Kg wet	0.200		95.6	30-150			
LCS Dup (B143898-BSD1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Aroclor-1016	0.21	0.020	mg/Kg wet	0.200		104	40-140	0.573	30	
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		104	40-140	1.08	30	
Aroclor-1260	0.20	0.020	mg/Kg wet	0.200		102	40-140	1.08	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		96.1	40-140	0.294	30	
Surrogate: Decachlorobiphenyl	*0.206*		mg/Kg wet	0.200		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg wet	0.200		95.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.198*		mg/Kg wet	0.200		98.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.186*		mg/Kg wet	0.200		93.1	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B143898 - SW-846 3540C											
Matrix Spike (B143898-MS1)		**Source: 16C0420-01**		Prepared: 03/09/16 Analyzed: 03/11/16							
Aroclor-1016	0.29	0.11	mg/Kg dry	0.223	ND	130		40-140			
Aroclor-1016 [2C]	0.30	0.11	mg/Kg dry	0.223	ND	135		40-140			
Aroclor-1260	2.2	0.11	mg/Kg dry	0.223	ND	**981**	*	40-140			MS-21
Aroclor-1260 [2C]	2.0	0.11	mg/Kg dry	0.223	ND	**882**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.192*		mg/Kg dry	0.223		86.4		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.213*		mg/Kg dry	0.223		95.6		30-150			
Surrogate: Tetrachloro-m-xylene	*0.199*		mg/Kg dry	0.223		89.5		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.193*		mg/Kg dry	0.223		86.5		30-150			
Matrix Spike Dup (B143898-MSD1)		**Source: 16C0420-01**		Prepared: 03/09/16 Analyzed: 03/11/16							
Aroclor-1016	0.29	0.11	mg/Kg dry	0.223	ND	131		40-140		50	
Aroclor-1016 [2C]	0.31	0.11	mg/Kg dry	0.223	ND	**141**	*	40-140		50	MS-22
Aroclor-1260	2.2	0.11	mg/Kg dry	0.223	ND	**1000**	*	40-140	2.36	50	MS-21
Aroclor-1260 [2C]	2.0	0.11	mg/Kg dry	0.223	ND	**894**	*	40-140	1.32	50	MS-21
Surrogate: Decachlorobiphenyl	*0.198*		mg/Kg dry	0.223		88.7		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.221*		mg/Kg dry	0.223		99.3		30-150			
Surrogate: Tetrachloro-m-xylene	*0.199*		mg/Kg dry	0.223		89.3		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.193*		mg/Kg dry	0.223		86.4		30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B143900 - SW-846 3546										
Blank (B143900-BLK1)				Prepared: 03/09/16 Analyzed: 03/10/16						
C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	*3.64*		mg/Kg wet	4.99		72.9	40-140			
Surrogate: o-Terphenyl (OTP)	*3.78*		mg/Kg wet	5.00		75.6	40-140			
Surrogate: 2-Bromonaphthalene	*4.26*		mg/Kg wet	5.00		85.2	40-140			
Surrogate: 2-Fluorobiphenyl	*4.31*		mg/Kg wet	5.00		86.2	40-140			
LCS (B143900-BS1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Acenaphthene	3.82	0.10	mg/Kg wet	5.00		76.4	40-140			
Acenaphthylene	3.72	0.10	mg/Kg wet	5.00		74.4	40-140			
Anthracene	4.25	0.10	mg/Kg wet	5.00		85.0	40-140			
Benzo(a)anthracene	4.11	0.10	mg/Kg wet	5.00		82.2	40-140			
Benzo(a)pyrene	4.00	0.10	mg/Kg wet	5.00		80.1	40-140			
Benzo(b)fluoranthene	4.03	0.10	mg/Kg wet	5.00		80.6	40-140			
Benzo(g,h,i)perylene	3.85	0.10	mg/Kg wet	5.00		77.0	40-140			
Benzo(k)fluoranthene	3.97	0.10	mg/Kg wet	5.00		79.5	40-140			
Chrysene	4.13	0.10	mg/Kg wet	5.00		82.6	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B143900 - SW-846 3546										
LCS (B143900-BS1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Dibenz(a,h)anthracene	4.08	0.10	mg/Kg wet	5.00		81.7	40-140			
Fluoranthene	4.23	0.10	mg/Kg wet	5.00		84.6	40-140			
Fluorene	3.97	0.10	mg/Kg wet	5.00		79.4	40-140			
Indeno(1,2,3-cd)pyrene	3.86	0.10	mg/Kg wet	5.00		77.2	40-140			
2-Methylnaphthalene	3.37	0.10	mg/Kg wet	5.00		67.5	40-140			
Naphthalene	3.19	0.10	mg/Kg wet	5.00		63.8	40-140			
Phenanthrene	4.19	0.10	mg/Kg wet	5.00		83.8	40-140			
Pyrene	4.24	0.10	mg/Kg wet	5.00		84.7	40-140			
n-Decane	2.69	0.10	mg/Kg wet	5.00		53.8	40-140			
n-Docosane	4.29	0.10	mg/Kg wet	5.00		85.8	40-140			
n-Dodecane	3.31	0.10	mg/Kg wet	5.00		66.1	40-140			
n-Eicosane	4.27	0.10	mg/Kg wet	5.00		85.4	40-140			
n-Hexacosane	3.99	0.10	mg/Kg wet	5.00		79.8	40-140			
n-Hexadecane	4.12	0.10	mg/Kg wet	5.00		82.4	40-140			
n-Hexatriacontane	4.15	0.10	mg/Kg wet	5.00		83.1	40-140			
n-Nonadecane	4.18	0.10	mg/Kg wet	5.00		83.5	40-140			
n-Nonane	1.92	0.10	mg/Kg wet	5.00		38.4	30-140			
n-Octacosane	3.99	0.10	mg/Kg wet	5.00		79.8	40-140			
n-Octadecane	4.17	0.10	mg/Kg wet	5.00		83.4	40-140			
n-Tetracosane	4.37	0.10	mg/Kg wet	5.00		87.4	40-140			
n-Tetradecane	3.78	0.10	mg/Kg wet	5.00		75.7	40-140			
n-Triacontane	3.97	0.10	mg/Kg wet	5.00		79.5	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*3.66*		mg/Kg wet	4.99		73.4	40-140			
Surrogate: o-Terphenyl (OTP)	*3.84*		mg/Kg wet	5.00		76.7	40-140			
Surrogate: 2-Bromonaphthalene	*4.35*		mg/Kg wet	5.00		86.9	40-140			
Surrogate: 2-Fluorobiphenyl	*4.42*		mg/Kg wet	5.00		88.4	40-140			
LCS Dup (B143900-BSD1)				Prepared: 03/09/16 Analyzed: 03/10/16						
Acenaphthene	3.96	0.10	mg/Kg wet	5.00		79.2	40-140	3.56	25	
Acenaphthylene	3.85	0.10	mg/Kg wet	5.00		76.9	40-140	3.40	25	
Anthracene	4.34	0.10	mg/Kg wet	5.00		86.9	40-140	2.23	25	
Benzo(a)anthracene	4.18	0.10	mg/Kg wet	5.00		83.7	40-140	1.72	25	
Benzo(a)pyrene	4.08	0.10	mg/Kg wet	5.00		81.6	40-140	1.87	25	
Benzo(b)fluoranthene	4.08	0.10	mg/Kg wet	5.00		81.6	40-140	1.20	25	
Benzo(g,h,i)perylene	3.91	0.10	mg/Kg wet	5.00		78.2	40-140	1.58	25	
Benzo(k)fluoranthene	4.06	0.10	mg/Kg wet	5.00		81.2	40-140	2.15	25	
Chrysene	4.21	0.10	mg/Kg wet	5.00		84.2	40-140	1.93	25	
Dibenz(a,h)anthracene	4.16	0.10	mg/Kg wet	5.00		83.3	40-140	1.93	25	
Fluoranthene	4.31	0.10	mg/Kg wet	5.00		86.1	40-140	1.77	25	
Fluorene	4.09	0.10	mg/Kg wet	5.00		81.8	40-140	2.96	25	
Indeno(1,2,3-cd)pyrene	3.93	0.10	mg/Kg wet	5.00		78.6	40-140	1.88	25	
2-Methylnaphthalene	3.52	0.10	mg/Kg wet	5.00		70.4	40-140	4.28	25	
Naphthalene	3.31	0.10	mg/Kg wet	5.00		66.2	40-140	3.67	25	
Phenanthrene	4.29	0.10	mg/Kg wet	5.00		85.9	40-140	2.39	25	
Pyrene	4.31	0.10	mg/Kg wet	5.00		86.2	40-140	1.74	25	
n-Decane	2.80	0.10	mg/Kg wet	5.00		56.0	40-140	3.98	25	
n-Docosane	4.40	0.10	mg/Kg wet	5.00		87.9	40-140	2.49	25	
n-Dodecane	3.48	0.10	mg/Kg wet	5.00		69.7	40-140	5.26	25	
n-Eicosane	4.25	0.10	mg/Kg wet	5.00		85.0	40-140	0.533	25	
n-Hexacosane	4.08	0.10	mg/Kg wet	5.00		81.5	40-140	2.15	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B143900 - SW-846 3546											
LCS Dup (B143900-BSD1)				Prepared: 03/09/16 Analyzed: 03/10/16							
n-Hexadecane	4.26	0.10	mg/Kg wet	5.00		85.1		40-140	3.17	25	
n-Hexatriacontane	4.25	0.10	mg/Kg wet	5.00		85.1		40-140	2.41	25	
n-Nonadecane	4.27	0.10	mg/Kg wet	5.00		85.5		40-140	2.31	25	
n-Nonane	1.97	0.10	mg/Kg wet	5.00		39.5		30-140	2.90	25	
n-Octacosane	4.08	0.10	mg/Kg wet	5.00		81.6		40-140	2.21	25	
n-Octadecane	4.29	0.10	mg/Kg wet	5.00		85.7		40-140	2.79	25	
n-Tetracosane	4.47	0.10	mg/Kg wet	5.00		89.4		40-140	2.29	25	
n-Tetradecane	3.94	0.10	mg/Kg wet	5.00		78.8		40-140	3.99	25	
n-Triacontane	4.06	0.10	mg/Kg wet	5.00		81.2		40-140	2.15	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00				0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00				0-5			
Surrogate: Chlorooctadecane (COD)	*3.62*		mg/Kg wet	4.99		72.5		40-140			
Surrogate: o-Terphenyl (OTP)	*3.86*		mg/Kg wet	5.00		77.3		40-140			
Surrogate: 2-Bromonaphthalene	*4.44*		mg/Kg wet	5.00		88.9		40-140			
Surrogate: 2-Fluorobiphenyl	*4.53*		mg/Kg wet	5.00		90.6		40-140			
Matrix Spike (B143900-MS1)		**Source: 16C0420-03**		Prepared: 03/09/16 Analyzed: 03/10/16							
C9-C18 Aliphatics	24.9	11	mg/Kg dry	33.5	10.1	44.2		40-140			
C19-C36 Aliphatics	41.0	11	mg/Kg dry	44.7	16.9	53.9		40-140			
Unadjusted C11-C22 Aromatics	89.4	11	mg/Kg dry	95.0	32.6	59.8		40-140			
Acenaphthene	3.45	0.11	mg/Kg dry	5.59	0.00	61.7		40-140			
Acenaphthylene	3.33	0.11	mg/Kg dry	5.59	0.00	59.6		40-140			
Anthracene	4.18	0.11	mg/Kg dry	5.59	0.00	74.8		40-140			
Benzo(a)anthracene	3.55	0.11	mg/Kg dry	5.59	0.111	61.6		40-140			
Benzo(a)pyrene	3.35	0.11	mg/Kg dry	5.59	0.242	55.6		40-140			
Benzo(b)fluoranthene	3.43	0.11	mg/Kg dry	5.59	0.309	55.9		40-140			
Benzo(g,h,i)perylene	2.95	0.11	mg/Kg dry	5.59	0.330	46.9		40-140			
Benzo(k)fluoranthene	3.38	0.11	mg/Kg dry	5.59	0.110	58.6		40-140			
Chrysene	3.61	0.11	mg/Kg dry	5.59	0.172	61.6		40-140			
Dibenz(a,h)anthracene	3.15	0.11	mg/Kg dry	5.59	0.00	56.4		40-140			
Fluoranthene	3.75	0.11	mg/Kg dry	5.59	0.191	63.6		40-140			
Fluorene	3.59	0.11	mg/Kg dry	5.59	0.00	64.3		40-140			
Indeno(1,2,3-cd)pyrene	2.96	0.11	mg/Kg dry	5.59	0.249	48.6		40-140			
2-Methylnaphthalene	2.86	0.11	mg/Kg dry	5.59	0.00	51.2		40-140			
Naphthalene	2.41	0.11	mg/Kg dry	5.59	0.00	43.1		40-140			
Phenanthrene	3.84	0.11	mg/Kg dry	5.59	0.242	64.4		40-140			
Pyrene	3.75	0.11	mg/Kg dry	5.59	0.189	63.8		40-140			
n-Nonane	0.944	0.11	mg/Kg dry	5.59	0.144	**14.3**	*	30-140			MS-07A
Surrogate: Chlorooctadecane (COD)	*2.82*		mg/Kg dry	5.58		50.5		40-140			
Surrogate: o-Terphenyl (OTP)	*3.62*		mg/Kg dry	5.59		64.8		40-140			
Surrogate: 2-Bromonaphthalene	*4.91*		mg/Kg dry	5.59		88.0		40-140			
Surrogate: 2-Fluorobiphenyl	*4.96*		mg/Kg dry	5.59		88.7		40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B143900 - SW-846 3546											
Matrix Spike Dup (B143900-MSD1)		**Source: 16C0420-03**		Prepared: 03/09/16 Analyzed: 03/10/16							
C9-C18 Aliphatics	23.6	11	mg/Kg dry	33.2	10.1	40.7		40-140	5.41	50	
C19-C36 Aliphatics	41.2	11	mg/Kg dry	44.3	16.9	54.8		40-140	0.388	50	
Unadjusted C11-C22 Aromatics	78.8	11	mg/Kg dry	94.0	32.6	49.1		40-140	12.6	50	
Acenaphthene	2.94	0.11	mg/Kg dry	5.53	0.00	53.2		40-140	15.7	50	
Acenaphthylene	2.88	0.11	mg/Kg dry	5.53	0.00	52.1		40-140	14.4	50	
Anthracene	3.56	0.11	mg/Kg dry	5.53	0.00	64.3		40-140	16.2	50	
Benzo(a)anthracene	3.11	0.11	mg/Kg dry	5.53	0.111	54.3		40-140	13.2	50	
Benzo(a)pyrene	3.00	0.11	mg/Kg dry	5.53	0.242	49.8		40-140	11.0	50	
Benzo(b)fluoranthene	3.08	0.11	mg/Kg dry	5.53	0.309	50.1		40-140	10.8	50	
Benzo(g,h,i)perylene	2.70	0.11	mg/Kg dry	5.53	0.330	42.8		40-140	8.85	50	
Benzo(k)fluoranthene	3.00	0.11	mg/Kg dry	5.53	0.110	52.2		40-140	12.1	50	
Chrysene	3.17	0.11	mg/Kg dry	5.53	0.172	54.2		40-140	13.1	50	
Dibenz(a,h)anthracene	2.83	0.11	mg/Kg dry	5.53	0.00	51.2		40-140	10.7	50	
Fluoranthene	3.27	0.11	mg/Kg dry	5.53	0.191	55.6		40-140	13.7	50	
Fluorene	3.05	0.11	mg/Kg dry	5.53	0.00	55.1		40-140	16.2	50	
Indeno(1,2,3-cd)pyrene	2.71	0.11	mg/Kg dry	5.53	0.249	44.5		40-140	8.95	50	
2-Methylnaphthalene	2.49	0.11	mg/Kg dry	5.53	0.00	45.1		40-140	13.7	50	
Naphthalene	2.17	0.11	mg/Kg dry	5.53	0.00	**39.3**	*	40-140	10.1	50	MS-22
Phenanthrene	3.31	0.11	mg/Kg dry	5.53	0.242	55.5		40-140	14.7	50	
Pyrene	3.27	0.11	mg/Kg dry	5.53	0.189	55.8		40-140	13.7	50	
n-Nonane	0.832	0.11	mg/Kg dry	5.53	0.144	**12.4**	*	30-140	12.6	50	MS-07A
Surrogate: Chlorooctadecane (COD)	*2.69*		mg/Kg dry	5.52		48.7		40-140			
Surrogate: o-Terphenyl (OTP)	*3.07*		mg/Kg dry	5.53		55.6		40-140			
Surrogate: 2-Bromonaphthalene	*4.57*		mg/Kg dry	5.53		82.7		40-140			
Surrogate: 2-Fluorobiphenyl	*4.65*		mg/Kg dry	5.53		84.0		40-140			
Batch B143912 - SW-846 3546											
Blank (B143912-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16							
C9-C18 Aliphatics	ND	10	mg/Kg wet								
C19-C36 Aliphatics	ND	10	mg/Kg wet								
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet								
C11-C22 Aromatics	ND	10	mg/Kg wet								
Acenaphthene	ND	0.10	mg/Kg wet								
Acenaphthylene	ND	0.10	mg/Kg wet								
Anthracene	ND	0.10	mg/Kg wet								
Benzo(a)anthracene	ND	0.10	mg/Kg wet								
Benzo(a)pyrene	ND	0.10	mg/Kg wet								
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet								
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet								
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet								
Chrysene	ND	0.10	mg/Kg wet								
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet								
Fluoranthene	ND	0.10	mg/Kg wet								
Fluorene	ND	0.10	mg/Kg wet								
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet								
2-Methylnaphthalene	ND	0.10	mg/Kg wet								
Naphthalene	ND	0.10	mg/Kg wet								
Phenanthrene	ND	0.10	mg/Kg wet								
Pyrene	ND	0.10	mg/Kg wet								
n-Decane	ND	0.10	mg/Kg wet								
n-Docosane	ND	0.10	mg/Kg wet								
n-Dodecane	ND	0.10	mg/Kg wet								

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B143912 - SW-846 3546										
Blank (B143912-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16						
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	*2.95*		mg/Kg wet	4.99		59.1	40-140			
Surrogate: o-Terphenyl (OTP)	*3.01*		mg/Kg wet	5.00		60.1	40-140			
Surrogate: 2-Bromonaphthalene	*3.93*		mg/Kg wet	5.00		78.6	40-140			
Surrogate: 2-Fluorobiphenyl	*3.96*		mg/Kg wet	5.00		79.2	40-140			
LCS (B143912-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Acenaphthene	3.40	0.10	mg/Kg wet	5.00		68.0	40-140			
Acenaphthylene	3.27	0.10	mg/Kg wet	5.00		65.4	40-140			
Anthracene	3.92	0.10	mg/Kg wet	5.00		78.4	40-140			
Benzo(a)anthracene	3.85	0.10	mg/Kg wet	5.00		77.0	40-140			
Benzo(a)pyrene	3.75	0.10	mg/Kg wet	5.00		75.0	40-140			
Benzo(b)fluoranthene	3.77	0.10	mg/Kg wet	5.00		75.4	40-140			
Benzo(g,h,i)perylene	3.64	0.10	mg/Kg wet	5.00		72.7	40-140			
Benzo(k)fluoranthene	3.72	0.10	mg/Kg wet	5.00		74.5	40-140			
Chrysene	3.88	0.10	mg/Kg wet	5.00		77.6	40-140			
Dibenz(a,h)anthracene	3.85	0.10	mg/Kg wet	5.00		77.1	40-140			
Fluoranthene	3.95	0.10	mg/Kg wet	5.00		78.9	40-140			
Fluorene	3.57	0.10	mg/Kg wet	5.00		71.4	40-140			
Indeno(1,2,3-cd)pyrene	3.60	0.10	mg/Kg wet	5.00		72.0	40-140			
2-Methylnaphthalene	2.99	0.10	mg/Kg wet	5.00		59.7	40-140			
Naphthalene	2.82	0.10	mg/Kg wet	5.00		56.5	40-140			
Phenanthrene	3.88	0.10	mg/Kg wet	5.00		77.5	40-140			
Pyrene	3.95	0.10	mg/Kg wet	5.00		79.0	40-140			
n-Decane	2.54	0.10	mg/Kg wet	5.00		50.8	40-140			
n-Docosane	4.09	0.10	mg/Kg wet	5.00		81.8	40-140			
n-Dodecane	2.98	0.10	mg/Kg wet	5.00		59.6	40-140			
n-Eicosane	4.07	0.10	mg/Kg wet	5.00		81.5	40-140			
n-Hexacosane	3.78	0.10	mg/Kg wet	5.00		75.7	40-140			
n-Hexadecane	3.88	0.10	mg/Kg wet	5.00		77.6	40-140			
n-Hexatriacontane	3.96	0.10	mg/Kg wet	5.00		79.1	40-140			
n-Nonadecane	3.98	0.10	mg/Kg wet	5.00		79.5	40-140			
n-Nonane	1.99	0.10	mg/Kg wet	5.00		39.7	30-140			
n-Octacosane	3.78	0.10	mg/Kg wet	5.00		75.7	40-140			
n-Octadecane	3.97	0.10	mg/Kg wet	5.00		79.5	40-140			
n-Tetracosane	4.15	0.10	mg/Kg wet	5.00		83.0	40-140			
n-Tetradecane	3.39	0.10	mg/Kg wet	5.00		67.7	40-140			
n-Triacontane	3.77	0.10	mg/Kg wet	5.00		75.3	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B143912 - SW-846 3546										
LCS (B143912-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Surrogate: Chlorooctadecane (COD)	*3.42*		mg/Kg wet	4.99		68.6	40-140			
Surrogate: o-Terphenyl (OTP)	*3.55*		mg/Kg wet	5.00		71.0	40-140			
Surrogate: 2-Bromonaphthalene	*4.29*		mg/Kg wet	5.00		85.7	40-140			
Surrogate: 2-Fluorobiphenyl	*4.42*		mg/Kg wet	5.00		88.5	40-140			
LCS Dup (B143912-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Acenaphthene	3.08	0.10	mg/Kg wet	5.00		61.5	40-140	9.96	25	
Acenaphthylene	2.98	0.10	mg/Kg wet	5.00		59.6	40-140	9.26	25	
Anthracene	3.67	0.10	mg/Kg wet	5.00		73.4	40-140	6.61	25	
Benzo(a)anthracene	3.66	0.10	mg/Kg wet	5.00		73.1	40-140	5.21	25	
Benzo(a)pyrene	3.56	0.10	mg/Kg wet	5.00		71.2	40-140	5.32	25	
Benzo(b)fluoranthene	3.57	0.10	mg/Kg wet	5.00		71.4	40-140	5.39	25	
Benzo(g,h,i)perylene	3.44	0.10	mg/Kg wet	5.00		68.8	40-140	5.62	25	
Benzo(k)fluoranthene	3.54	0.10	mg/Kg wet	5.00		70.9	40-140	4.96	25	
Chrysene	3.68	0.10	mg/Kg wet	5.00		73.7	40-140	5.21	25	
Dibenz(a,h)anthracene	3.66	0.10	mg/Kg wet	5.00		73.3	40-140	5.05	25	
Fluoranthene	3.72	0.10	mg/Kg wet	5.00		74.4	40-140	5.84	25	
Fluorene	3.26	0.10	mg/Kg wet	5.00		65.2	40-140	9.09	25	
Indeno(1,2,3-cd)pyrene	3.42	0.10	mg/Kg wet	5.00		68.3	40-140	5.25	25	
2-Methylnaphthalene	2.71	0.10	mg/Kg wet	5.00		54.2	40-140	9.77	25	
Naphthalene	2.60	0.10	mg/Kg wet	5.00		52.0	40-140	8.25	25	
Phenanthrene	3.60	0.10	mg/Kg wet	5.00		72.1	40-140	7.32	25	
Pyrene	3.74	0.10	mg/Kg wet	5.00		74.7	40-140	5.61	25	
n-Decane	2.29	0.10	mg/Kg wet	5.00		45.9	40-140	10.1	25	
n-Docosane	3.61	0.10	mg/Kg wet	5.00		72.2	40-140	12.5	25	
n-Dodecane	2.60	0.10	mg/Kg wet	5.00		52.0	40-140	13.6	25	
n-Eicosane	3.57	0.10	mg/Kg wet	5.00		71.4	40-140	13.2	25	
n-Hexacosane	3.34	0.10	mg/Kg wet	5.00		66.9	40-140	12.4	25	
n-Hexadecane	3.36	0.10	mg/Kg wet	5.00		67.1	40-140	14.4	25	
n-Hexatriacontane	3.52	0.10	mg/Kg wet	5.00		70.3	40-140	11.8	25	
n-Nonadecane	3.48	0.10	mg/Kg wet	5.00		69.6	40-140	13.4	25	
n-Nonane	1.84	0.10	mg/Kg wet	5.00		36.7	30-140	7.75	25	
n-Octacosane	3.35	0.10	mg/Kg wet	5.00		67.0	40-140	12.1	25	
n-Octadecane	3.47	0.10	mg/Kg wet	5.00		69.4	40-140	13.5	25	
n-Tetracosane	3.65	0.10	mg/Kg wet	5.00		73.0	40-140	12.8	25	
n-Tetradecane	2.91	0.10	mg/Kg wet	5.00		58.3	40-140	15.0	25	
n-Triacontane	3.35	0.10	mg/Kg wet	5.00		66.9	40-140	11.8	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*2.87*		mg/Kg wet	4.99		57.6	40-140			
Surrogate: o-Terphenyl (OTP)	*3.27*		mg/Kg wet	5.00		65.3	40-140			
Surrogate: 2-Bromonaphthalene	*3.99*		mg/Kg wet	5.00		79.8	40-140			
Surrogate: 2-Fluorobiphenyl	*4.05*		mg/Kg wet	5.00		81.0	40-140			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B143921 - SW-846 3050B											
Blank (B143921-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16							
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 (B143921-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16							
Antimony	83.0	5.0	mg/Kg wet	105		79.0		0-210.3			
Arsenic	88.9	5.0	mg/Kg wet	98.5		90.2		77.8-122.1			
Barium	259	5.0	mg/Kg wet	308		84.2		82-117.4			
Beryllium	61.4	0.50	mg/Kg wet	66.0		93.0		82.3-117.7			
Cadmium	128	0.50	mg/Kg wet	146		88.0		81.9-118.2			
Chromium	164	1.0	mg/Kg wet	182		89.9		78.7-120.6			
Lead	108	1.5	mg/Kg wet	130		82.8		82.4-117.8			
Nickel	126	1.0	mg/Kg wet	149		84.9		82.2-117.8			
Selenium	139	10	mg/Kg wet	154		90.0		77.1-122.3			
Silver	34.8	1.0	mg/Kg wet	40.9		85.1		74.3-125.4			
Thallium	157	5.0	mg/Kg wet	175		89.7		78.2-121.6			
Vanadium	81.9	2.0	mg/Kg wet	96.7		84.7		64.8-135.2			
Zinc	174	2.0	mg/Kg wet	191		90.9		79.7-120.8			
LCS Dup (B143921-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16							
Antimony	74.1	5.0	mg/Kg wet	105		70.6		0-210.3	11.3	30	
Arsenic	79.9	5.0	mg/Kg wet	98.5		81.1		77.8-122.1	10.6	30	
Barium	253	5.0	mg/Kg wet	308		82.0		82-117.4	2.57	30	
Beryllium	55.9	0.50	mg/Kg wet	66.0		84.7		82.3-117.7	9.35	30	
Cadmium	121	0.50	mg/Kg wet	146		83.1		81.9-118.2	5.73	30	
Chromium	149	1.0	mg/Kg wet	182		81.6		78.7-120.6	9.65	30	
Lead	105	1.5	mg/Kg wet	130		**81.0**	*	82.4-117.8	2.18	30	L-07
Nickel	123	1.0	mg/Kg wet	149		82.7		82.2-117.8	2.54	30	
Selenium	126	10	mg/Kg wet	154		81.9		77.1-122.3	9.38	30	
Silver	31.9	1.0	mg/Kg wet	40.9		77.9		74.3-125.4	8.89	30	
Thallium	152	5.0	mg/Kg wet	175		86.7		78.2-121.6	3.35	30	
Vanadium	74.5	2.0	mg/Kg wet	96.7		77.1		64.8-135.2	9.43	30	
Zinc	159	2.0	mg/Kg wet	191		83.2		79.7-120.8	8.88	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 B143921 - SW-846 3050B										
MRL Check (B143921-MRL1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Lead	0.623	0.75	mg/Kg wet	0.750		83.1	80-120			
Batch B143935 - SW-846 7471										
Blank (B143935-BLK2)				Prepared: 03/10/16 Analyzed: 03/11/16						
Mercury	ND	0.025	mg/Kg wet							
LCS (B143935-BS2)				Prepared: 03/10/16 Analyzed: 03/11/16						
Mercury	0.673	0.076	mg/Kg wet	0.710		94.7	73.7-126.3			
LCS Dup (B143935-BSD2)				Prepared: 03/10/16 Analyzed: 03/11/16						
Mercury	0.662	0.077	mg/Kg wet	0.710		93.3	73.7-126.3	1.52	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 B143895 - % Solids										
Duplicate (B143895-DUP4)		**Source: 16C0420-01**		Prepared: 03/09/16 Analyzed: 03/10/16						
% Solids	88.0		% Wt		88.0			0.00	20	

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BREAKDOWN REPORT

Lab Sample ID: **S010917-PEM1** **Analyzed:** **03/10/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	2.30
Endrin [1]	3.94

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	2.37
Endrin [2]	3.85

BREAKDOWN REPORT

Lab Sample ID: **S010917-PEM2** **Analyzed:** **03/11/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	2.56
Endrin [1]	3.64

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	2.72
Endrin [2]	3.43

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

NSW-GT-1

Lab Sample ID: 16C0420-01

Date(s) Analyzed: 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	-0.03	0.03	6.3	
	2	0.00	-0.03	0.03	6.2	1.3
Dieldrin	1	6.67	0.00	0.00	0.11	
	2	6.67	0.00	0.00	0.34	99.6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

NSW-GT-2

Lab Sample ID: 16C0420-05

Date(s) Analyzed: 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	-0.03	0.03	1.2	
	2	0.00	-0.03	0.03	1.2	2.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

WSW-GT-2

Lab Sample ID: 16C0420-06

Date(s) Analyzed: 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	-0.03	0.03	0.15	
	2	0.00	-0.03	0.03	0.16	9.2
Chlordane	1	0.00	0.00	0.00	0.045	
	2	0.00	0.00	0.00	0.042	6.0

con-test® ANALYTICAL LABORATORY

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

SSW-GT-2

Lab Sample ID: 16C0420-07

Date(s) Analyzed: 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1254	1	0.00	-0.03	0.03	0.35	
	2	0.00	-0.03	0.03	0.35	0.3

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B143898-BS1

Date(s) Analyzed: 03/10/2016 03/10/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.21	
	2	0.00	-0.03	0.03	0.21	0
Aroclor-1260	1	0.00	-0.03	0.03	0.20	
	2	0.00	-0.03	0.03	0.19	6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B143898-BSD1

Date(s) Analyzed: 03/10/2016 03/10/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.21	
	2	0.00	-0.03	0.03	0.21	1
Aroclor-1260	1	0.00	-0.03	0.03	0.20	
	2	0.00	-0.03	0.03	0.19	7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B143898-MS1

Date(s) Analyzed: 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.29	
	2	0.00	-0.03	0.03	0.30	4
Aroclor-1260	1	0.00	-0.03	0.03	2.2	
	2	0.00	-0.03	0.03	2.0	9

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B143898-MSD1 Date(s) Analyzed: 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.29	
	2	0.00	-0.03	0.03	0.31	6
Aroclor-1260	1	0.00	-0.03	0.03	2.2	
	2	0.00	-0.03	0.03	2.0	11

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B143899-BS1 Date(s) Analyzed: 03/10/2016 03/10/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	6.89	0.00	0.00	0.12	
	2	7.01	0.00	0.00	0.12	1
4,4'-DDE	1	6.47	0.00	0.00	0.12	
	2	6.58	0.00	0.00	0.13	10
4,4'-DDT	1	7.10	0.00	0.00	0.11	
	2	7.24	0.00	0.00	0.12	5
Aldrin	1	5.84	0.00	0.00	0.11	
	2	5.84	0.00	0.00	0.12	10
alpha-BHC	1	5.19	0.00	0.00	0.11	
	2	5.20	0.00	0.00	0.12	10
beta-BHC	1	5.42	0.00	0.00	0.11	
	2	5.45	0.00	0.00	0.12	12
delta-BHC	1	5.52	0.00	0.00	0.11	
	2	5.62	0.00	0.00	0.12	10
Dieldrin	1	6.66	0.00	0.00	0.11	
	2	6.68	0.00	0.00	0.12	7
Endosulfan I	1	6.50	0.00	0.00	0.11	
	2	6.49	0.00	0.00	0.12	8
Endosulfan II	1	6.99	0.00	0.00	0.11	
	2	7.06	0.00	0.00	0.12	6
Endosulfan Sulfate	1	7.63	0.00	0.00	0.11	
	2	7.53	0.00	0.00	0.12	6
Endrin	1	6.83	0.00	0.00	0.12	
	2	6.90	0.00	0.00	0.12	3
Endrin Ketone	1	7.85	0.00	0.00	0.12	
	2	7.94	0.00	0.00	0.12	0
gamma-BHC (Lindane)	1	5.37	0.00	0.00	0.11	
	2	5.40	0.00	0.00	0.12	8
Heptachlor	1	5.65	0.00	0.00	0.11	
	2	5.65	0.00	0.00	0.12	12
Heptachlor Epoxide	1	6.23	0.00	0.00	0.11	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B143899-BS1 Date(s) Analyzed: 03/10/2016 03/10/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.22	0.00	0.00	0.11	1
Hexachlorobenzene	1	5.09	0.00	0.00	0.095	
	2	5.11	0.00	0.00	0.10	6
Methoxychlor	1	7.48	0.00	0.00	0.11	
	2	7.80	0.00	0.00	0.12	6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B143899-BSD1 Date(s) Analyzed: 03/10/2016 03/10/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	6.89	0.00	0.00	0.11	
	2	7.01	0.00	0.00	0.12	9
4,4'-DDE	1	6.47	0.00	0.00	0.11	
	2	6.58	0.00	0.00	0.12	9
4,4'-DDT	1	7.10	0.00	0.00	0.11	
	2	7.24	0.00	0.00	0.11	2
Aldrin	1	5.84	0.00	0.00	0.10	
	2	5.85	0.00	0.00	0.11	8
alpha-BHC	1	5.19	0.00	0.00	0.10	
	2	5.20	0.00	0.00	0.11	9
beta-BHC	1	5.42	0.00	0.00	0.099	
	2	5.45	0.00	0.00	0.11	10
delta-BHC	1	5.52	0.00	0.00	0.10	
	2	5.62	0.00	0.00	0.11	8
Dieldrin	1	6.67	0.00	0.00	0.11	
	2	6.68	0.00	0.00	0.11	5
Endosulfan I	1	6.50	0.00	0.00	0.10	
	2	6.49	0.00	0.00	0.11	7
Endosulfan II	1	6.99	0.00	0.00	0.11	
	2	7.06	0.00	0.00	0.11	4
Endosulfan Sulfate	1	7.63	0.00	0.00	0.11	
	2	7.53	0.00	0.00	0.11	3
Endrin	1	6.83	0.00	0.00	0.11	
	2	6.90	0.00	0.00	0.11	0
Endrin Ketone	1	7.85	0.00	0.00	0.11	
	2	7.94	0.00	0.00	0.11	2
gamma-BHC (Lindane)	1	5.37	0.00	0.00	0.10	
	2	5.40	0.00	0.00	0.11	6
Heptachlor	1	5.65	0.00	0.00	0.099	
	2	5.65	0.00	0.00	0.11	10
Heptachlor Epoxide	1	6.23	0.00	0.00	0.10	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B143899-BSD1 Date(s) Analyzed: 03/10/2016 03/10/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.22	0.00	0.00	0.11	8
Hexachlorobenzene	1	5.09	0.00	0.00	0.087	
	2	5.11	0.00	0.00	0.094	7
Methoxychlor	1	7.48	0.00	0.00	0.11	
	2	7.80	0.00	0.00	0.11	2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B143899-MS1 Date(s) Analyzed: 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	6.89	0.00	0.00	0.11	
	2	7.01	0.00	0.00	0.11	4
4,4'-DDE	1	6.47	0.00	0.00	0.11	
	2	6.58	0.00	0.00	0.11	1
4,4'-DDT	1	7.10	0.00	0.00	0.11	
	2	7.24	0.00	0.00	0.11	2
Aldrin	1	5.84	0.00	0.00	0.11	
	2	5.85	0.00	0.00	0.11	4
alpha-BHC	1	5.19	0.00	0.00	0.10	
	2	5.20	0.00	0.00	0.11	9
beta-BHC	1	5.42	0.00	0.00	0.097	
	2	5.45	0.00	0.00	0.10	3
delta-BHC	1	5.52	0.00	0.00	0.098	
	2	5.62	0.00	0.00	0.11	12
Dieldrin	1	6.66	0.00	0.00	0.11	
	2	6.68	0.00	0.00	0.11	5
Endosulfan I	1	6.50	0.00	0.00	0.10	
	2	6.49	0.00	0.00	0.11	7
Endosulfan II	1	6.99	0.00	0.00	0.099	
	2	7.06	0.00	0.00	0.11	10
Endosulfan Sulfate	1	7.63	0.00	0.00	0.094	
	2	7.53	0.00	0.00	0.092	2
Endrin	1	6.83	0.00	0.00	0.11	
	2	6.90	0.00	0.00	0.12	4
Endrin Ketone	1	7.85	0.00	0.00	0.10	
	2	7.94	0.00	0.00	0.10	4
gamma-BHC (Lindane)	1	5.37	0.00	0.00	0.10	
	2	5.40	0.00	0.00	0.11	10
Heptachlor	1	5.65	0.00	0.00	0.10	
	2	5.65	0.00	0.00	0.12	13
Heptachlor Epoxide	1	6.23	0.00	0.00	0.10	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B143899-MS1 Date(s) Analyzed: 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.22	0.00	0.00	0.11	9
Hexachlorobenzene	1	5.09	0.00	0.00	0.091	
	2	5.11	0.00	0.00	0.097	6
Methoxychlor	1	7.48	0.00	0.00	0.11	
	2	7.80	0.00	0.00	0.11	5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B143899-MSD1 Date(s) Analyzed: 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	6.89	0.00	0.00	0.11	
	2	7.01	0.00	0.00	0.11	0
4,4'-DDE	1	6.47	0.00	0.00	0.11	
	2	6.58	0.00	0.00	0.12	7
4,4'-DDT	1	7.10	0.00	0.00	0.11	
	2	7.24	0.00	0.00	0.11	2
Aldrin	1	5.84	0.00	0.00	0.11	
	2	5.84	0.00	0.00	0.12	9
alpha-BHC	1	5.19	0.00	0.00	0.11	
	2	5.20	0.00	0.00	0.11	4
beta-BHC	1	5.42	0.00	0.00	0.10	
	2	5.45	0.00	0.00	0.10	2
delta-BHC	1	5.52	0.00	0.00	0.10	
	2	5.62	0.00	0.00	0.11	7
Dieldrin	1	6.66	0.00	0.00	0.11	
	2	6.68	0.00	0.00	0.12	10
Endosulfan I	1	6.50	0.00	0.00	0.11	
	2	6.48	0.00	0.00	0.11	3
Endosulfan II	1	6.99	0.00	0.00	0.10	
	2	7.06	0.00	0.00	0.11	7
Endosulfan Sulfate	1	7.63	0.00	0.00	0.096	
	2	7.53	0.00	0.00	0.094	2
Endrin	1	6.83	0.00	0.00	0.12	
	2	6.90	0.00	0.00	0.12	1
Endrin Ketone	1	7.85	0.00	0.00	0.11	
	2	7.94	0.00	0.00	0.11	4
gamma-BHC (Lindane)	1	5.37	0.00	0.00	0.11	
	2	5.40	0.00	0.00	0.12	13
Heptachlor	1	5.65	0.00	0.00	0.11	
	2	5.65	0.00	0.00	0.12	11
Heptachlor Epoxide	1	6.23	0.00	0.00	0.11	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B143899-MSD1 Date(s) Analyzed: 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.22	0.00	0.00	0.11	4
Hexachlorobenzene	1	5.09	0.00	0.00	0.096	
	2	5.11	0.00	0.00	0.098	2
Methoxychlor	1	7.48	0.00	0.00	0.11	
	2	7.80	0.00	0.00	0.11	1

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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
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-03	Elevated reporting limit due to matrix.
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.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possiblity of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
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.
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.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Soil	
C9-C18 Aliphatics	CT,NC,WA,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,NH-P
Acenaphthene	CT,NC,WA,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,NH-P
Anthracene	CT,NC,WA,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,NH-P
Chrysene	CT,NC,WA,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,NH-P
Fluoranthene	CT,NC,WA,ME,NH-P
Fluorene	CT,NC,WA,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME
Naphthalene	CT,NC,WA,ME,NH-P
Phenanthrene	CT,NC,WA,ME,NH-P
Pyrene	CT,NC,WA,ME,NH-P
SW-846 6010C/D 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	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

con-test® ANALYTICAL LABORATORY

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

39 Spruce Street
East longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

16C0420

Rev 04.05.12

Company Name: GEC
Address: 60 Brooks
Attention: A. Foley
Project Location: Lowell
Sampled By:

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Telephone:
Project # 1785-5060
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email: afoley@gold
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

ANALYSIS REQUESTED

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	EPH w/ Tungsten MA DEP	~~VPH w/ Targets MA DEP~~	PCBs 8082 w/ Soxhlet	MA 14 metals	pesticides 8081
01	NSW-GT-1 3/8/16		2:40		X			X		X	X	X
02	ESW-GT-1		3:15		X							
03	SSW-GT-1		3:18		X							
04	BTM-GT-1		3:05	X								
05	NSW-GT-2		2:00		X							
06	WSW-GT-2		12:15		X							
07	SSW-GT-2		2:06		X							
08	BTM-GT-2		2:03	X								

# of Containers
** Preservation
***Container Code

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other _____

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
[signature] 3/8/16	18:00
Received by: (signature) [signature] 3-9-16	Date/Time: 1550
Relinquished by: (signature) [signature] 3-9-16	Date/Time: 1935
Received by: (signature) [signature] 3/9/16	Date/Time: 1935

Turnaround ††
☐ 7-Day
☐ 10-Day
☐ Other ~~Sat~~
RUSH †
☐ †24-Hr ☒ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: GEC **RECEIVED BY**: JDL **DATE**: 3/9/2016

1) Was the chain(s) of custody relinquished and signed? **Yes** X **No** ____ **No COC Incl.**

2) Does the chain agree with the samples? **Yes** X **No** ____

If not, explain:

3) Are all the samples in good condition? **Yes** X **No** ____

If not, explain:

4) How were the samples received:

On Ice X Direct from Sampling ____ Ambient ____ In Cooler(s) X

Were the samples received in Temperature Compliance of (2-6℃)? **Yes** **X** **No** ____ **N/A** ____

Temperature ℃ by Temp blank ____ Temperature ℃ by Temp gun 4.8

5) Are there Dissolved samples for the lab to filter? **Yes** ____ **No** X

Who was notified ____ Date ____ Time ____

6) Are there any RUSH or SHORT HOLDING TIME samples? **Yes** **RUSH** **No** ____

Who was notified ____ Date ____ Time ____

7) Location where samples are stored:

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) Do all samples have the proper Acid pH: **Yes** ____ **No** ____ **N/A** X

9) Do all samples have the proper Base pH: **Yes** ____ **No** ____ **N/A** X

10) Was the PC notified of any discrepancies with the CoC vs the samples: **Yes** ____ **N/A** X

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	16
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials:	# HCl		# Methanol	**Time and Date Frozen:**
Doc# 277	# Bisulfate		# DI Water	
Rev. 4 August 2013	# Thiosulfate		Unpreserved	

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** JDL **3/9/16 1935**

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 16C0420
Project Location: Lowell	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

16C0420-01 thru 16C0420-08

Matrices: Soil

CAM Protocol (check all that below)

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

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☑ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

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

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski Position: Laboratory Director

Printed Name: Tod E. Kopyscinski Date: 03/11/16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

March 15, 2016

Andrew Foley
Goldman Environmental
60 Brooks Drive
Braintree, MA 02184

Project Location: Lowell
Client Job Number:
Project Number: 1785-5060
Laboratory Work Order Number: 16C0454

Enclosed are results of analyses for samples received by the laboratory on March 10, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James M. Georgantas
Project Manager

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con-test® ANALYTICAL LABORATORY

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

Goldman Environmental
60 Brooks Drive
Braintree, MA 02184
ATTN: Andrew Foley

REPORT DATE: 3/15/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1785-5060

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16C0454

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

PROJECT LOCATION: Lowell

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
NSW-GT-1	16C0454-01	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
SSW-GT-1	16C0454-02	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
ESW-GT-1	16C0454-03	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
BTM-GT-1	16C0454-04	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
NSW-GT-2	16C0454-05	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
SSW-GT-2	16C0454-06	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
WSW-GT-2	16C0454-07	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
BTM-GT-2	16C0454-08	Soil		MADEP-VPH-04-1.1	
				SM 2540G	
FO-1-TP (0-1')	16C0454-09	Soil		SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
FO-1-TP (1-2')	16C0454-10	Soil		SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
FO-1-TP (2-3')	16C0454-11	Soil		SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
FO-1 (3')	16C0454-12	Soil		MADEP-EPH-04-1.1	
				MADEP-VPH-04-1.1	
				SM 2540G	
				SW-846 6010C/D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	

con-test® ANALYTICAL LABORATORY

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CASE NARRATIVE SUMMARY

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

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MADEP-VPH-04-1.1

Qualifications:

O-01

Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.

Analyte & Samples(s) Qualified:

16C0454-01[NSW-GT-1], 16C0454-03[ESW-GT-1], 16C0454-04[BTM-GT-1], 16C0454-05[NSW-GT-2], 16C0454-07[WSW-GT-2], 16C0454-12[FO-1 (3')]

SW-846 6010C/D

Qualifications:

DL-04

Elevated reporting limit due to high concentration of an interfering analyte(s).

Analyte & Samples(s) Qualified:

Silver
16C0454-09[FO-1-TP (0-1')]

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:

Lead
B143754-BS1

SW-846 8081B

Qualifications:

DL-04

Elevated reporting limit due to high concentration of an interfering analyte(s).

Analyte & Samples(s) Qualified:

16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

P-08

Sample RPD between primary and confirmatory analysis exceeded 100%. 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
16C0454-10[FO-1-TP (1-2')]

4,4'-DDT
16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

Dieldrin
16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

SW-846 8082A

Qualifications:

MS-21

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1260
B143995-MS1, B143995-MSD1

Aroclor-1260 [2C]
B143995-MS1, B143995-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Aroclor-1016 [2C]
B143995-MSD1

con-test® ANALYTICAL LABORATORY

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O-32

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

Analyte & Samples(s) Qualified:

16C0454-12[FO-1 (3')]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

Decachlorobiphenyl [2C]
16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

Tetrachloro-m-xylene
16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

Tetrachloro-m-xylene [2C]
16C0454-09[FO-1-TP (0-1')], 16C0454-10[FO-1-TP (1-2')], 16C0454-11[FO-1-TP (2-3')]

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:

Dichlorodifluoromethane (Freon 1
16C0454-12[FO-1 (3')], B144055-BLK1, B144055-BS1, B144055-BSD1

V-05

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

Analyte & Samples(s) Qualified:

Bromomethane
16C0454-12[FO-1 (3')], B144055-BLK1, B144055-BS1, B144055-BSD1

Chloromethane
16C0454-12[FO-1 (3')], B144055-BLK1, B144055-BS1, B144055-BSD1

Methylene Chloride
16C0454-12[FO-1 (3')], B144055-BLK1, B144055-BS1, B144055-BSD1

Tetrahydrofuran
16C0454-12[FO-1 (3')], B144055-BLK1, B144055-BS1, B144055-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
16C0454-12[FO-1 (3')], B144055-BLK1, B144055-BS1, B144055-BSD1

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:

3,3-Dichlorobenzidine
B144018-BS1

S-07

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

Analyte & Samples(s) Qualified:

p-Terphenyl-d14
B144018-BLK1

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MADEP-EPH-04-1.1

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

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly in methanol with a soil/methanol ratio of 1:1 +/- 25% completely covered by methanol in the proper containers specified on the chain-of-custody form unless specified in this narrative.

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

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

SW-846 8100 Modified

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

SW-846 8260C

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

SW-846 8270D

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

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: NSW-GT-1
Sampled: 3/9/2016 10:15
Sample ID: 16C0454-01
Sample Matrix: Soil

Sample Flags: O-01
Soil/Methanol Preservation Ratio: 1.56

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
C5-C8 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
Unadjusted C9-C12 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
C9-C12 Aliphatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
C9-C10 Aromatics	ND	8.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
Benzene	ND	0.043	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
Ethylbenzene	ND	0.043	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.043	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
Naphthalene	ND	0.22	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
Toluene	0.14	0.043	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
m+p Xylene	ND	0.086	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH
o-Xylene	ND	0.043	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 15:50	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	120	70-130		3/14/16 15:50
2,5-Dibromotoluene (PID)	116	70-130		3/14/16 15:50

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Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: NSW-GT-1
Sampled: 3/9/2016 10:15

Sample ID: 16C0454-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.0		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: SSW-GT-1
Sampled: 3/9/2016 10:18
Sample ID: 16C0454-02
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.24

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
C5-C8 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
C9-C12 Aliphatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
C9-C10 Aromatics	ND	10	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
Benzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
Ethylbenzene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
Toluene	0.25	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
m+p Xylene	ND	0.10	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH
o-Xylene	ND	0.052	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 16:26	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	125	70-130		3/14/16 16:26
2,5-Dibromotoluene (PID)	122	70-130		3/14/16 16:26

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Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: SSW-GT-1
Sampled: 3/9/2016 10:18

Sample ID: 16C0454-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: ESW-GT-1
Sampled: 3/9/2016 10:21
Sample ID: 16C0454-03
Sample Matrix: Soil

Sample Flags: O-01
Soil/Methanol Preservation Ratio: 1.35

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.5	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
C5-C8 Aliphatics	ND	9.5	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
Unadjusted C9-C12 Aliphatics	ND	9.5	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
C9-C12 Aliphatics	ND	9.5	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
C9-C10 Aromatics	ND	9.5	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
Benzene	0.15	0.047	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
Ethylbenzene	ND	0.047	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.047	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
Naphthalene	ND	0.24	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
Toluene	0.23	0.047	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
m+p Xylene	ND	0.095	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH
o-Xylene	ND	0.047	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:02	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	107	70-130		3/14/16 17:02
2,5-Dibromotoluene (PID)	113	70-130		3/14/16 17:02

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: ESW-GT-1
Sampled: 3/9/2016 10:21
Sample ID: 16C0454-03
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: BTM-GT-1
Sampled: 3/9/2016 10:24
Sample ID: 16C0454-04
Sample Matrix: Soil

Sample Flags: O-01
Soil/Methanol Preservation Ratio: 1.48

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
C5-C8 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
Unadjusted C9-C12 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
C9-C12 Aliphatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
C9-C10 Aromatics	ND	9.6	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
Benzene	0.10	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
Ethylbenzene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
Naphthalene	ND	0.24	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
Toluene	0.60	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
m+p Xylene	ND	0.096	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH
o-Xylene	ND	0.048	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 17:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	110	70-130		3/14/16 17:38
2,5-Dibromotoluene (PID)	108	70-130		3/14/16 17:38

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Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: BTM-GT-1
Sampled: 3/9/2016 10:24

Sample ID: 16C0454-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: NSW-GT-2
Sampled: 3/9/2016 10:30
Sample ID: 16C0454-05
Sample Matrix: Soil

Sample Flags: O-01
Soil/Methanol Preservation Ratio: 1.58

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.3	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
C5-C8 Aliphatics	ND	8.3	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
Unadjusted C9-C12 Aliphatics	ND	8.3	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
C9-C12 Aliphatics	ND	8.3	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
C9-C10 Aromatics	ND	8.3	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
Benzene	ND	0.042	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
Ethylbenzene	ND	0.042	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.042	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
Naphthalene	ND	0.21	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
Toluene	ND	0.042	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
m+p Xylene	ND	0.083	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH
o-Xylene	ND	0.042	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:14	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	116	70-130		3/14/16 18:14
2,5-Dibromotoluene (PID)	124	70-130		3/14/16 18:14

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Project Location: Lowell | Sample Description: | Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: NSW-GT-2 | Sampled: 3/9/2016 10:30

Sample ID: 16C0454-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: SSW-GT-2
Sampled: 3/9/2016 10:34
Sample ID: 16C0454-06
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.22

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
C5-C8 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
Unadjusted C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
C9-C12 Aliphatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
C9-C10 Aromatics	ND	11	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
Benzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
Ethylbenzene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
Naphthalene	ND	0.26	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
Toluene	0.087	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
m+p Xylene	ND	0.11	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH
o-Xylene	ND	0.053	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	109	70-130		3/14/16 20:38
2,5-Dibromotoluene (PID)	102	70-130		3/14/16 20:38

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Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: SSW-GT-2
Sampled: 3/9/2016 10:34

Sample ID: 16C0454-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.9		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: WSW-GT-2
Sampled: 3/9/2016 10:38
Sample ID: 16C0454-07
Sample Matrix: Soil

Sample Flags: O-01
Soil/Methanol Preservation Ratio: 1.55

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	8.2	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
C5-C8 Aliphatics	ND	8.2	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
Unadjusted C9-C12 Aliphatics	ND	8.2	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
C9-C12 Aliphatics	ND	8.2	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
C9-C10 Aromatics	ND	8.2	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
Benzene	ND	0.041	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
Ethylbenzene	ND	0.041	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.041	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
Naphthalene	ND	0.20	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
Toluene	ND	0.041	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
m+p Xylene	ND	0.082	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH
o-Xylene	ND	0.041	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 18:50	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	115	70-130		3/14/16 18:50
2,5-Dibromotoluene (PID)	122	70-130		3/14/16 18:50

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Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: WSW-GT-2
Sampled: 3/9/2016 10:38

Sample ID: 16C0454-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.6		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: BTM-GT-2
Sampled: 3/9/2016 10:42
Sample ID: 16C0454-08
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 1.25

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	9.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
C5-C8 Aliphatics	ND	9.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
Unadjusted C9-C12 Aliphatics	ND	9.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
C9-C12 Aliphatics	ND	9.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
C9-C10 Aromatics	ND	9.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
Benzene	0.058	0.050	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
Ethylbenzene	ND	0.050	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
Naphthalene	ND	0.25	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
Toluene	0.32	0.050	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
m+p Xylene	ND	0.099	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH
o-Xylene	ND	0.050	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 19:26	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	129	70-130		3/14/16 19:26
2,5-Dibromotoluene (PID)	111	70-130		3/14/16 19:26

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: BTM-GT-2
Sampled: 3/9/2016 10:42
Sample ID: 16C0454-08
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.3		% Wt	1		SM 2540G	3/15/16	3/15/16 9:27	JMG

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Project Location: Lowell | Sample Description: | Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: FO-1-TP (0-1') | Sampled: 3/9/2016 14:15

Sample ID: 16C0454-09

Sample Matrix: Soil

Sample Flags: DL-04

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
alpha-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
beta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
delta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
gamma-BHC (Lindane) [1]	ND	0.046	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Chlordane [1]	ND	0.46	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
4,4'-DDD [1]	ND	0.092	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
4,4'-DDE [1]	ND	0.092	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
4,4'-DDT [1]	0.15	0.092	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Dieldrin [1]	0.16	0.092	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Endosulfan I [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Endosulfan II [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Endosulfan sulfate [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Endrin [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Endrin ketone [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Heptachlor [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Heptachlor epoxide [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Hexachlorobenzene [1]	ND	0.14	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG
Methoxychlor [1]	ND	1.1	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 6:39	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.2	30-150		3/12/16 6:39
Decachlorobiphenyl [2]	55.5	30-150		3/12/16 6:39
Tetrachloro-m-xylene [1]	71.4	30-150		3/12/16 6:39
Tetrachloro-m-xylene [2]	73.6	30-150		3/12/16 6:39

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (0-1')
Sampled: 3/9/2016 14:15
Sample ID: 16C0454-09
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1221 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1232 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1242 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1248 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1254 [2]	13	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1260 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1262 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL
Aroclor-1268 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:12	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	3/12/16 14:12
Decachlorobiphenyl [2]	*	30-150	S-01	3/12/16 14:12
Tetrachloro-m-xylene [1]	*	30-150	S-01	3/12/16 14:12
Tetrachloro-m-xylene [2]	*	30-150	S-01	3/12/16 14:12

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (0-1')
Sampled: 3/9/2016 14:15
Sample ID: 16C0454-09
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	3.0	2.8	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Arsenic	19	2.8	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Barium	140	2.8	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Beryllium	0.68	0.28	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Cadmium	1.4	0.28	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Chromium	36	0.57	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Lead	340	0.85	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Mercury	0.68	0.14	mg/Kg dry	5		SW-846 7471B	3/12/16	3/14/16 14:09	TGW
Nickel	32	0.57	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Selenium	ND	5.7	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Silver	ND	1.1	mg/Kg dry	2	DL-04	SW-846 6010C/D	3/11/16	3/14/16 10:09	AME
Thallium	ND	2.8	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Vanadium	160	1.1	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP
Zinc	250	1.1	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:17	AMP

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (0-1')
Sampled: 3/9/2016 14:15
Sample ID: 16C0454-09
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.4		% Wt	1		SM 2540G	3/10/16	3/11/16 13:33	MJR

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (1-2')
Sampled: 3/9/2016 14:30
Sample ID: 16C0454-10
Sample Matrix: Soil
Sample Flags: DL-04

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
alpha-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
beta-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
delta-BHC [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
gamma-BHC (Lindane) [1]	ND	0.046	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Chlordane [1]	ND	0.46	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
4,4'-DDD [1]	ND	0.093	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
4,4'-DDE [1]	0.093	0.093	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 7:03	PJG
4,4'-DDT [1]	0.13	0.093	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Dieldrin [1]	0.19	0.093	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Endosulfan I [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Endosulfan II [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Endosulfan sulfate [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Endrin [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Endrin ketone [1]	ND	0.19	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Heptachlor [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Heptachlor epoxide [1]	ND	0.12	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Hexachlorobenzene [1]	ND	0.14	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG
Methoxychlor [1]	ND	1.2	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:03	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	70.1	30-150		3/12/16 7:03
Decachlorobiphenyl [2]	60.2	30-150		3/12/16 7:03
Tetrachloro-m-xylene [1]	76.2	30-150		3/12/16 7:03
Tetrachloro-m-xylene [2]	76.2	30-150		3/12/16 7:03

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (1-2')
Sampled: 3/9/2016 14:30
Sample ID: 16C0454-10
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1221 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1232 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1242 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1248 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1254 [1]	12	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1260 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1262 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL
Aroclor-1268 [1]	ND	2.3	mg/Kg dry	100		SW-846 8082A	3/10/16	3/12/16 14:25	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	3/12/16 14:25
Decachlorobiphenyl [2]	*	30-150	S-01	3/12/16 14:25
Tetrachloro-m-xylene [1]	*	30-150	S-01	3/12/16 14:25
Tetrachloro-m-xylene [2]	*	30-150	S-01	3/12/16 14:25

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (1-2')
Sampled: 3/9/2016 14:30
Sample ID: 16C0454-10
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Arsenic	14	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Barium	95	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Beryllium	0.39	0.29	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Cadmium	0.98	0.29	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Chromium	31	0.59	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Lead	1100	0.88	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Mercury	0.93	0.15	mg/Kg dry	5		SW-846 7471B	3/12/16	3/14/16 14:11	TGW
Nickel	22	0.59	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Selenium	ND	5.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Silver	ND	0.59	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Vanadium	96	1.2	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP
Zinc	160	1.2	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 19:22	AMP

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (1-2')
Sampled: 3/9/2016 14:30
Sample ID: 16C0454-10
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.5		% Wt	1		SM 2540G	3/10/16	3/11/16 13:33	MJR

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (2-3')
Sampled: 3/9/2016 14:45
Sample ID: 16C0454-11
Sample Matrix: Soil
Sample Flags: DL-04

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
alpha-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
beta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
delta-BHC [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
gamma-BHC (Lindane) [1]	ND	0.045	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Chlordane [1]	ND	0.45	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
4,4'-DDD [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
4,4'-DDE [1]	ND	0.090	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
4,4'-DDT [1]	0.13	0.090	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Dieldrin [1]	0.16	0.090	mg/Kg dry	20	P-08	SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Endosulfan I [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Endosulfan II [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Endosulfan sulfate [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Endrin [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Endrin ketone [1]	ND	0.18	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Heptachlor [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Heptachlor epoxide [1]	ND	0.11	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Hexachlorobenzene [1]	ND	0.14	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG
Methoxychlor [1]	ND	1.1	mg/Kg dry	20		SW-846 8081B	3/10/16	3/12/16 7:27	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.6	30-150		3/12/16 7:27
Decachlorobiphenyl [2]	58.4	30-150		3/12/16 7:27
Tetrachloro-m-xylene [1]	74.2	30-150		3/12/16 7:27
Tetrachloro-m-xylene [2]	76.1	30-150		3/12/16 7:27

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (2-3')
Sampled: 3/9/2016 14:45
Sample ID: 16C0454-11
Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1221 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1232 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1242 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1248 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1254 [1]	7.8	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1260 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1262 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL
Aroclor-1268 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	3/10/16	3/12/16 14:37	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	3/12/16 14:37
Decachlorobiphenyl [2]	*	30-150	S-01	3/12/16 14:37
Tetrachloro-m-xylene [1]	*	30-150	S-01	3/12/16 14:37
Tetrachloro-m-xylene [2]	*	30-150	S-01	3/12/16 14:37

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (2-3')
Sampled: 3/9/2016 14:45
Sample ID: 16C0454-11
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Arsenic	18	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Barium	130	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Beryllium	1.9	0.29	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Cadmium	1.3	0.29	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Chromium	37	0.57	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Lead	220	0.86	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Mercury	0.84	0.14	mg/Kg dry	5		SW-846 7471B	3/12/16	3/14/16 14:16	TGW
Nickel	29	0.57	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Selenium	ND	5.7	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Silver	ND	0.57	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Thallium	ND	2.9	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Vanadium	140	1.1	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP
Zinc	190	1.1	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:16	AMP

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1-TP (2-3')
Sampled: 3/9/2016 14:45
Sample ID: 16C0454-11
Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.9		% Wt	1		SM 2540G	3/10/16	3/11/16 13:33	MJR

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Bromoform	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Bromomethane	ND	0.0074	mg/Kg dry	1	V-05	SW-846 8260C	3/11/16	3/11/16 8:25	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Chlorodibromomethane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Chloroethane	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Chloromethane	ND	0.0074	mg/Kg dry	1	V-05	SW-846 8260C	3/11/16	3/11/16 8:25	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2-Dibromoethane (EDB)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0074	mg/Kg dry	1	R-05	SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,3-Dichloropropane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
cis-1,3-Dichloropropene	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
trans-1,3-Dichloropropene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Diethyl Ether	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Diisopropyl Ether (DIPE)	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,4-Dioxane	ND	0.074	mg/Kg dry	1	V-16	SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Methylene Chloride	ND	0.0074	mg/Kg dry	1	V-05	SW-846 8260C	3/11/16	3/11/16 8:25	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Naphthalene	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1,2,2-Tetrachloroethane	ND	0.00074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Tetrahydrofuran	ND	0.0074	mg/Kg dry	1	V-05	SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2,3-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2,4-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
Vinyl Chloride	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/11/16	3/11/16 8:25	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	91.6	70-130		3/11/16 8:25
Toluene-d8	94.2	70-130		3/11/16 8:25
4-Bromofluorobenzene	98.8	70-130		3/11/16 8:25

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Aniline	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
Pyridine	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	3/10/16	3/11/16 15:10	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	75.2	30-130		3/11/16 15:10
Phenol-d6	77.5	30-130		3/11/16 15:10
Nitrobenzene-d5	80.2	30-130		3/11/16 15:10
2-Fluorobiphenyl	81.7	30-130		3/11/16 15:10
2,4,6-Tribromophenol	70.3	30-130		3/11/16 15:10
p-Terphenyl-d14	91.6	30-130		3/11/16 15:10

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
alpha-BHC [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
beta-BHC [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
delta-BHC [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
gamma-BHC (Lindane) [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Chlordane [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
4,4'-DDD [1]	ND	0.0041	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
4,4'-DDE [1]	ND	0.0041	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
4,4'-DDT [1]	ND	0.0041	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Dieldrin [1]	ND	0.0041	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Endosulfan I [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Endosulfan II [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Endosulfan sulfate [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Endrin [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Endrin ketone [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Heptachlor [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Heptachlor epoxide [1]	ND	0.0051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Hexachlorobenzene [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG
Methoxychlor [1]	ND	0.051	mg/Kg dry	1		SW-846 8081B	3/10/16	3/12/16 6:15	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.9	30-150		3/12/16 6:15
Decachlorobiphenyl [2]	84.7	30-150		3/12/16 6:15
Tetrachloro-m-xylene [1]	79.7	30-150		3/12/16 6:15
Tetrachloro-m-xylene [2]	79.9	30-150		3/12/16 6:15

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil
Sample Flags: O-32

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	3/10/16	3/11/16 17:28	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.0	30-150		3/11/16 17:28
Decachlorobiphenyl [2]	86.5	30-150		3/11/16 17:28
Tetrachloro-m-xylene [1]	96.3	30-150		3/11/16 17:28
Tetrachloro-m-xylene [2]	95.0	30-150		3/11/16 17:28

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Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10

Sample ID: 16C0454-12

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.7	mg/Kg dry	1		SW-846 8100 Modified	3/11/16	3/14/16 10:32	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
o-Terphenyl	79.2	40-140		3/14/16 10:32

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
C19-C36 Aliphatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
C11-C22 Aromatics	ND	10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Acenaphthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Acenaphthylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Benzo(a)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Benzo(a)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Benzo(b)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Benzo(g,h,i)perylene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Benzo(k)fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Chrysene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Dibenz(a,h)anthracene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Fluoranthene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Fluorene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
2-Methylnaphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Naphthalene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Phenanthrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS
Pyrene	ND	0.10	mg/Kg dry	1		MADEP-EPH-04-1.1	3/11/16	3/11/16 14:14	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	66.9	40-140		3/11/16 14:14
o-Terphenyl (OTP)	67.6	40-140		3/11/16 14:14
2-Bromonaphthalene	83.1	40-140		3/11/16 14:14
2-Fluorobiphenyl	83.2	40-140		3/11/16 14:14

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Sample Flags: O-01
Soil/Methanol Preservation Ratio: 1.41

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
C5-C8 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
Unadjusted C9-C12 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
C9-C12 Aliphatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
C9-C10 Aromatics	ND	7.9	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
Benzene	ND	0.040	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
Ethylbenzene	ND	0.040	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.040	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
Naphthalene	ND	0.20	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
Toluene	ND	0.040	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
m+p Xylene	ND	0.079	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH
o-Xylene	ND	0.040	mg/Kg dry	1		MADEP-VPH-04-1.1	3/11/16	3/14/16 20:02	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,5-Dibromotoluene (FID)	94.8	70-130		3/14/16 20:02
2,5-Dibromotoluene (PID)	111	70-130		3/14/16 20:02

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Project Location: Lowell
Sample Description:
Work Order: 16C0454
Date Received: 3/10/2016
Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10
Sample ID: 16C0454-12
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.6	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Arsenic	15	2.6	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Barium	32	2.6	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Beryllium	0.63	0.26	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Cadmium	0.51	0.26	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Chromium	25	0.52	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Lead	7.0	0.78	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	3/12/16	3/14/16 13:27	TGW
Nickel	20	0.52	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Thallium	ND	2.6	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Vanadium	32	1.0	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP
Zinc	23	1.0	mg/Kg dry	1		SW-846 6010C/D	3/11/16	3/12/16 20:20	AMP

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

Project Location: Lowell
Sample Description:
Work Order: 16C0454

Date Received: 3/10/2016

Field Sample #: FO-1 (3')
Sampled: 3/9/2016 15:10

Sample ID: 16C0454-12

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.5		% Wt	1		SM 2540G	3/10/16	3/11/16 13:33	MJR

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

Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-12 [FO-1 (3')]	B144026	20.0	2.00	03/11/16

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-01 [NSW-GT-1]	B144047	23.4	17.8	03/11/16
16C0454-02 [SSW-GT-1]	B144047	18.6	17.2	03/11/16
16C0454-03 [ESW-GT-1]	B144047	20.2	17.1	03/11/16
16C0454-04 [BTM-GT-1]	B144047	22.2	18.2	03/11/16
16C0454-05 [NSW-GT-2]	B144047	23.7	17.6	03/11/16
16C0454-06 [SSW-GT-2]	B144047	18.2	17.0	03/11/16
16C0454-07 [WSW-GT-2]	B144047	23.2	17.2	03/11/16
16C0454-08 [BTM-GT-2]	B144047	18.7	16.8	03/11/16
16C0454-12 [FO-1 (3')]	B144047	21.2	16.0	03/11/16

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16C0454-01 [NSW-GT-1]	B143895	03/15/16
16C0454-02 [SSW-GT-1]	B143895	03/15/16
16C0454-03 [ESW-GT-1]	B143895	03/15/16
16C0454-04 [BTM-GT-1]	B143895	03/15/16
16C0454-05 [NSW-GT-2]	B143895	03/15/16
16C0454-06 [SSW-GT-2]	B143895	03/15/16
16C0454-07 [WSW-GT-2]	B143895	03/15/16
16C0454-08 [BTM-GT-2]	B143895	03/15/16

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16C0454-09 [FO-1-TP (0-1')]	B144002	03/10/16
16C0454-10 [FO-1-TP (1-2')]	B144002	03/10/16
16C0454-11 [FO-1-TP (2-3')]	B144002	03/10/16
16C0454-12 [FO-1 (3')]	B144002	03/10/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-09 [FO-1-TP (0-1')]	B143754	1.03	50.0	03/11/16
16C0454-10 [FO-1-TP (1-2')]	B143754	0.992	50.0	03/11/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-11 [FO-1-TP (2-3')]	B143755	1.01	50.0	03/11/16
16C0454-12 [FO-1 (3')]	B143755	1.00	50.0	03/11/16

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-09 [FO-1-TP (0-1')]	B143996	0.631	50.0	03/12/16
16C0454-10 [FO-1-TP (1-2')]	B143996	0.604	50.0	03/12/16
16C0454-11 [FO-1-TP (2-3')]	B143996	0.607	50.0	03/12/16
16C0454-12 [FO-1 (3')]	B143996	0.632	50.0	03/12/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-09 [FO-1-TP (0-1')]	B144017	10.2	10.0	03/10/16
16C0454-10 [FO-1-TP (1-2')]	B144017	10.1	10.0	03/10/16
16C0454-11 [FO-1-TP (2-3')]	B144017	10.3	10.0	03/10/16
16C0454-12 [FO-1 (3')]	B144017	10.2	10.0	03/10/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-09 [FO-1-TP (0-1')]	B143995	10.0	10.0	03/10/16
16C0454-10 [FO-1-TP (1-2')]	B143995	10.1	10.0	03/10/16
16C0454-11 [FO-1-TP (2-3')]	B143995	10.2	10.0	03/10/16
16C0454-12 [FO-1 (3')]	B143995	10.2	10.0	03/10/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-12 [FO-1 (3')]	B144024	30.0	1.00	03/11/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-12 [FO-1 (3')]	B144055	7.05	10.0	03/11/16

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16C0454-12 [FO-1 (3')]	B144018	30.1	1.00	03/10/16

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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 B144055 - SW-846 5035										
Blank (B144055-BLK1)				Prepared & Analyzed: 03/11/16						
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	0.010	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-05
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	0.0040	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							R-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0040	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							V-05
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.010	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B144055 - SW-846 5035											
Blank (B144055-BLK1)				Prepared & Analyzed: 03/11/16							
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-05	
Toluene	ND	0.0020	mg/Kg wet								
1,2,3-Trichlorobenzene	ND	0.0040	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.0040	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	*0.0449*		mg/Kg wet	0.0500		89.8	70-130				
Surrogate: Toluene-d8	*0.0470*		mg/Kg wet	0.0500		94.1	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0487*		mg/Kg wet	0.0500		97.4	70-130				
LCS (B144055-BS1)				Prepared & Analyzed: 03/11/16							
Acetone	0.249	0.10	mg/Kg wet	0.200		124	40-160				†
tert-Amyl Methyl Ether (TAME)	0.0180	0.0010	mg/Kg wet	0.0200		90.2	70-130				
Benzene	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130				
Bromobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130				
Bromochloromethane	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130				
Bromodichloromethane	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130				
Bromoform	0.0217	0.010	mg/Kg wet	0.0200		108	70-130				
Bromomethane	0.00826	0.010	mg/Kg wet	0.0200		41.3	40-160			L-14, V-05	†
2-Butanone (MEK)	0.197	0.040	mg/Kg wet	0.200		98.4	40-160				†
n-Butylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130				
sec-Butylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130				
tert-Butylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130				
tert-Butyl Ethyl Ether (TBEE)	0.0180	0.0010	mg/Kg wet	0.0200		90.0	70-130				
Carbon Disulfide	0.0158	0.0060	mg/Kg wet	0.0200		78.8	70-130				
Carbon Tetrachloride	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130				
Chlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130				
Chlorodibromomethane	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130				
Chloroethane	0.0180	0.010	mg/Kg wet	0.0200		90.2	70-130				
Chloroform	0.0185	0.0040	mg/Kg wet	0.0200		92.6	70-130				
Chloromethane	0.0114	0.010	mg/Kg wet	0.0200		57.0	40-160			L-14, V-05	†
2-Chlorotoluene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130				
4-Chlorotoluene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0162	0.0040	mg/Kg wet	0.0200		81.0	70-130				
1,2-Dibromoethane (EDB)	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130				
Dibromomethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130				
1,2-Dichlorobenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130				
1,3-Dichlorobenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130				
1,4-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B144055 - SW-846 5035											
LCS (B144055-BS1)				Prepared & Analyzed: 03/11/16							
Dichlorodifluoromethane (Freon 12)	0.0125	0.010	mg/Kg wet	0.0200		62.6	40-160			L-14, R-05	†
1,1-Dichloroethane	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130				
1,2-Dichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130				
1,1-Dichloroethylene	0.0159	0.0040	mg/Kg wet	0.0200		79.4	70-130				
cis-1,2-Dichloroethylene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130				
trans-1,2-Dichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130				
1,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130				
1,3-Dichloropropane	0.0190	0.0010	mg/Kg wet	0.0200		95.1	70-130				
2,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130				
1,1-Dichloropropene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130				
cis-1,3-Dichloropropene	0.0185	0.0010	mg/Kg wet	0.0200		92.4	70-130				
trans-1,3-Dichloropropene	0.0184	0.0040	mg/Kg wet	0.0200		92.0	70-130				
Diethyl Ether	0.0171	0.010	mg/Kg wet	0.0200		85.7	70-130				
Diisopropyl Ether (DIPE)	0.0157	0.0010	mg/Kg wet	0.0200		78.4	70-130				
1,4-Dioxane	0.179	0.10	mg/Kg wet	0.200		89.6	40-160			V-16	†
Ethylbenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130				
Hexachlorobutadiene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130				
2-Hexanone (MBK)	0.194	0.020	mg/Kg wet	0.200		96.9	40-160				†
Isopropylbenzene (Cumene)	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130				
p-Isopropyltoluene (p-Cymene)	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0178	0.0040	mg/Kg wet	0.0200		89.2	70-130				
Methylene Chloride	0.0151	0.010	mg/Kg wet	0.0200		75.4	70-130			V-05	
4-Methyl-2-pentanone (MIBK)	0.164	0.020	mg/Kg wet	0.200		82.0	40-160				†
Naphthalene	0.0160	0.010	mg/Kg wet	0.0200		80.1	70-130				
n-Propylbenzene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130				
Styrene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130				
1,1,1,2-Tetrachloroethane	0.0249	0.0020	mg/Kg wet	0.0200		125	70-130				
1,1,2,2-Tetrachloroethane	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130				
Tetrachloroethylene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130				
Tetrahydrofuran	0.0167	0.010	mg/Kg wet	0.0200		83.3	70-130			V-05	
Toluene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130				
1,2,3-Trichlorobenzene	0.0178	0.0040	mg/Kg wet	0.0200		88.9	70-130				
1,2,4-Trichlorobenzene	0.0181	0.0040	mg/Kg wet	0.0200		90.7	70-130				
1,1,1-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130				
1,1,2-Trichloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				
Trichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130				
Trichlorofluoromethane (Freon 11)	0.0173	0.010	mg/Kg wet	0.0200		86.6	70-130				
1,2,3-Trichloropropane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130				
1,2,4-Trimethylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130				
1,3,5-Trimethylbenzene	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130				
Vinyl Chloride	0.0149	0.010	mg/Kg wet	0.0200		74.3	70-130				
m+p Xylene	0.0454	0.0040	mg/Kg wet	0.0400		113	70-130				
o-Xylene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0447*		mg/Kg wet	0.0500		89.3	70-130				
Surrogate: Toluene-d8	*0.0474*		mg/Kg wet	0.0500		94.8	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0526*		mg/Kg wet	0.0500		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 B144055 - SW-846 5035											
LCS Dup (B144055-BSD1)				Prepared & Analyzed: 03/11/16							
Acetone	0.250	0.10	mg/Kg wet	0.200		125	40-160	0.521	20		†
tert-Amyl Methyl Ether (TAME)	0.0169	0.0010	mg/Kg wet	0.0200		84.6	70-130	6.41	20		
Benzene	0.0176	0.0020	mg/Kg wet	0.0200		87.9	70-130	3.69	20		
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.83	20		
Bromochloromethane	0.0171	0.0020	mg/Kg wet	0.0200		85.3	70-130	5.81	20		
Bromodichloromethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	0.605	20		
Bromoform	0.0210	0.010	mg/Kg wet	0.0200		105	70-130	3.38	20		
Bromomethane	0.00974	0.010	mg/Kg wet	0.0200		48.7	40-160	16.4	20	L-14, V-05	†
2-Butanone (MEK)	0.197	0.040	mg/Kg wet	0.200		98.4	40-160	0.0610	20		†
n-Butylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	1.94	20		
sec-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	0.639	20		
tert-Butylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	3.31	20		
tert-Butyl Ethyl Ether (TBEE)	0.0172	0.0010	mg/Kg wet	0.0200		85.8	70-130	4.78	20		
Carbon Disulfide	0.0149	0.0060	mg/Kg wet	0.0200		74.4	70-130	5.74	20		
Carbon Tetrachloride	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	3.37	20		
Chlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	2.62	20		
Chlorodibromomethane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	1.85	20		
Chloroethane	0.0172	0.010	mg/Kg wet	0.0200		85.9	70-130	4.88	20		
Chloroform	0.0176	0.0040	mg/Kg wet	0.0200		88.2	70-130	4.87	20		
Chloromethane	0.0108	0.010	mg/Kg wet	0.0200		53.8	40-160	5.78	20	L-14, V-05	†
2-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	2.32	20		
4-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.65	20		
1,2-Dibromo-3-chloropropane (DBCP)	0.0148	0.0040	mg/Kg wet	0.0200		74.2	70-130	8.76	20		
1,2-Dibromoethane (EDB)	0.0217	0.0010	mg/Kg wet	0.0200		108	70-130	2.90	20		
Dibromomethane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	1.56	20		
1,2-Dichlorobenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	0.282	20		
1,3-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	1.23	20		
1,4-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	1.47	20		
Dichlorodifluoromethane (Freon 12)	0.00816	0.010	mg/Kg wet	0.0200		40.8	40-160	**42.2** *	20	L-14, R-05	†
1,1-Dichloroethane	0.0176	0.0020	mg/Kg wet	0.0200		88.0	70-130	4.66	20		
1,2-Dichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	0.710	20		
1,1-Dichloroethylene	0.0158	0.0040	mg/Kg wet	0.0200		79.1	70-130	0.379	20		
cis-1,2-Dichloroethylene	0.0164	0.0020	mg/Kg wet	0.0200		81.8	70-130	7.42	20		
trans-1,2-Dichloroethylene	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130	1.40	20		
1,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	3.61	20		
1,3-Dichloropropane	0.0189	0.0010	mg/Kg wet	0.0200		94.3	70-130	0.845	20		
2,2-Dichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		88.9	70-130	7.58	20		
1,1-Dichloropropene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130	3.04	20		
cis-1,3-Dichloropropene	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130	4.76	20		
trans-1,3-Dichloropropene	0.0182	0.0040	mg/Kg wet	0.0200		91.0	70-130	1.09	20		
Diethyl Ether	0.0165	0.010	mg/Kg wet	0.0200		82.7	70-130	3.56	20		
Diisopropyl Ether (DIPE)	0.0147	0.0010	mg/Kg wet	0.0200		73.4	70-130	6.59	20		
1,4-Dioxane	0.151	0.10	mg/Kg wet	0.200		75.3	40-160	17.4	20	V-16	†
Ethylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130	3.64	20		
Hexachlorobutadiene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	0.430	20		
2-Hexanone (MBK)	0.194	0.020	mg/Kg wet	0.200		96.8	40-160	0.0723	20		†
Isopropylbenzene (Cumene)	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	2.52	20		
p-Isopropyltoluene (p-Cymene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	0.887	20		
Methyl tert-Butyl Ether (MTBE)	0.0178	0.0040	mg/Kg wet	0.0200		88.8	70-130	0.449	20		
Methylene Chloride	0.0144	0.010	mg/Kg wet	0.0200		72.1	70-130	4.47	20	V-05	
4-Methyl-2-pentanone (MIBK)	0.163	0.020	mg/Kg wet	0.200		81.7	40-160	0.330	20		†
Naphthalene	0.0165	0.010	mg/Kg wet	0.0200		82.7	70-130	3.19	20		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144055 - SW-846 5035										
LCS Dup (B144055-BSD1)				Prepared & Analyzed: 03/11/16						
n-Propylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	3.66	20	
Styrene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	0.0864	20	
1,1,1,2-Tetrachloroethane	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130	4.09	20	
1,1,2,2-Tetrachloroethane	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130	4.12	20	
Tetrachloroethylene	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130	3.05	20	
Tetrahydrofuran	0.0151	0.010	mg/Kg wet	0.0200		75.7	70-130	9.56	20	V-05
Toluene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	2.78	20	
1,2,3-Trichlorobenzene	0.0187	0.0040	mg/Kg wet	0.0200		93.3	70-130	4.83	20	
1,2,4-Trichlorobenzene	0.0192	0.0040	mg/Kg wet	0.0200		96.0	70-130	5.68	20	
1,1,1-Trichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	4.34	20	
1,1,2-Trichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	6.73	20	
Trichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	3.61	20	
Trichlorofluoromethane (Freon 11)	0.0166	0.010	mg/Kg wet	0.0200		82.9	70-130	4.37	20	
1,2,3-Trichloropropane	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130	4.14	20	
1,2,4-Trimethylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	0.183	20	
1,3,5-Trimethylbenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130	1.54	20	
Vinyl Chloride	0.0143	0.010	mg/Kg wet	0.0200		71.6	70-130	3.70	20	
m+p Xylene	0.0444	0.0040	mg/Kg wet	0.0400		111	70-130	2.23	20	
o-Xylene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	3.56	20	
Surrogate: 1,2-Dichloroethane-d4	*0.0445*		mg/Kg wet	0.0500		88.9	70-130			
Surrogate: Toluene-d8	*0.0483*		mg/Kg wet	0.0500		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0517*		mg/Kg wet	0.0500		103	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144018 - SW-846 3546										
Blank (B144018-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16						
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							
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							
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 (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B144018 - SW-846 3546												
Blank (B144018-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16								
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	*5.94*		mg/Kg wet	6.67		89.1		30-130				
Surrogate: Phenol-d6	*6.30*		mg/Kg wet	6.67		94.5		30-130				
Surrogate: Nitrobenzene-d5	*3.15*		mg/Kg wet	3.33		94.5		30-130				
Surrogate: 2-Fluorobiphenyl	*3.37*		mg/Kg wet	3.33		101		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.40*		mg/Kg wet	6.67		95.9		30-130				
Surrogate: p-Terphenyl-d14	*4.52*		mg/Kg wet	3.33		**136**	*	30-130			S-07	
LCS (B144018-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16								
Acenaphthene	1.24	0.17	mg/Kg wet	1.67		74.4		40-140				
Acenaphthylene	1.27	0.17	mg/Kg wet	1.67		76.3		40-140				
Acetophenone	1.20	0.34	mg/Kg wet	1.67		72.3		40-140				
Aniline	0.809	0.34	mg/Kg wet	1.67		48.5		40-140				
Anthracene	1.30	0.17	mg/Kg wet	1.67		77.9		40-140				
Benzo(a)anthracene	1.31	0.17	mg/Kg wet	1.67		78.4		40-140				
Benzo(a)pyrene	1.30	0.17	mg/Kg wet	1.67		77.7		40-140				
Benzo(b)fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.2		40-140				
Benzo(g,h,i)perylene	1.35	0.17	mg/Kg wet	1.67		80.9		40-140				
Benzo(k)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.7		40-140				
Bis(2-chloroethoxy)methane	1.34	0.34	mg/Kg wet	1.67		80.6		40-140				
Bis(2-chloroethyl)ether	1.26	0.34	mg/Kg wet	1.67		75.8		40-140				
Bis(2-chloroisopropyl)ether	1.23	0.34	mg/Kg wet	1.67		73.5		40-140				
Bis(2-Ethylhexyl)phthalate	1.50	0.34	mg/Kg wet	1.67		90.0		40-140				
4-Bromophenylphenylether	1.34	0.34	mg/Kg wet	1.67		80.5		40-140				
Butylbenzylphthalate	1.50	0.34	mg/Kg wet	1.67		89.7		40-140				
4-Chloroaniline	0.822	0.66	mg/Kg wet	1.67		49.3		15-140				†
2-Chloronaphthalene	1.25	0.34	mg/Kg wet	1.67		74.8		40-140				
2-Chlorophenol	1.20	0.34	mg/Kg wet	1.67		71.9		30-130				
Chrysene	1.28	0.17	mg/Kg wet	1.67		76.8		40-140				
Dibenz(a,h)anthracene	1.32	0.17	mg/Kg wet	1.67		79.3		40-140				
Dibenzofuran	1.29	0.34	mg/Kg wet	1.67		77.5		40-140				
Di-n-butylphthalate	1.33	0.34	mg/Kg wet	1.67		79.8		40-140				
1,2-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.3		40-140				
1,3-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.6		40-140				
1,4-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.0		40-140				
3,3-Dichlorobenzidine	0.646	0.17	mg/Kg wet	1.67		**38.7**	*	40-140			L-07	
2,4-Dichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.8		30-130				
Diethylphthalate	1.33	0.34	mg/Kg wet	1.67		79.9		40-140				
2,4-Dimethylphenol	1.28	0.34	mg/Kg wet	1.67		77.0		30-130				
Dimethylphthalate	1.33	0.34	mg/Kg wet	1.67		80.1		40-140				
2,4-Dinitrophenol	0.489	0.66	mg/Kg wet	1.67		29.3		15-140				†
2,4-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.67		79.4		40-140				
2,6-Dinitrotoluene	1.41	0.34	mg/Kg wet	1.67		84.9		40-140				
Di-n-octylphthalate	1.50	0.34	mg/Kg wet	1.67		89.8		40-140				
1,2-Diphenylhydrazine (as Azobenzene)	1.40	0.34	mg/Kg wet	1.67		84.1		40-140				
Fluoranthene	1.22	0.17	mg/Kg wet	1.67		73.2		40-140				
Fluorene	1.32	0.17	mg/Kg wet	1.67		79.3		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
Batch B144018 - SW-846 3546										
LCS (B144018-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Hexachlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.8	40-140			
Hexachlorobutadiene	1.22	0.34	mg/Kg wet	1.67		73.1	40-140			
Hexachloroethane	1.15	0.34	mg/Kg wet	1.67		69.1	40-140			
Indeno(1,2,3-cd)pyrene	1.30	0.17	mg/Kg wet	1.67		78.2	40-140			
Isophorone	1.38	0.34	mg/Kg wet	1.67		82.6	40-140			
2-Methylnaphthalene	1.28	0.17	mg/Kg wet	1.67		76.8	40-140			
2-Methylphenol	1.23	0.34	mg/Kg wet	1.67		74.0	30-130			
3/4-Methylphenol	1.27	0.34	mg/Kg wet	1.67		76.2	30-130			
Naphthalene	1.19	0.17	mg/Kg wet	1.67		71.4	40-140			
Nitrobenzene	1.24	0.34	mg/Kg wet	1.67		74.1	40-140			
2-Nitrophenol	1.20	0.34	mg/Kg wet	1.67		71.8	30-130			
4-Nitrophenol	1.27	0.66	mg/Kg wet	1.67		76.2	15-140			†
Pentachlorophenol	1.04	0.34	mg/Kg wet	1.67		62.5	30-130			
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.9	40-140			
Phenol	1.19	0.34	mg/Kg wet	1.67		71.1	15-140			†
Pyrene	1.43	0.17	mg/Kg wet	1.67		85.9	40-140			
Pyridine	0.855	0.34	mg/Kg wet	1.67		51.3	30-140			†
1,2,4-Trichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.5	40-140			
2,4,5-Trichlorophenol	1.21	0.34	mg/Kg wet	1.67		72.7	30-130			
2,4,6-Trichlorophenol	1.26	0.34	mg/Kg wet	1.67		75.7	30-130			
Surrogate: 2-Fluorophenol	*5.09*		mg/Kg wet	6.67		76.4	30-130			
Surrogate: Phenol-d6	*5.26*		mg/Kg wet	6.67		78.9	30-130			
Surrogate: Nitrobenzene-d5	*2.73*		mg/Kg wet	3.33		81.8	30-130			
Surrogate: 2-Fluorobiphenyl	*2.92*		mg/Kg wet	3.33		87.5	30-130			
Surrogate: 2,4,6-Tribromophenol	*5.71*		mg/Kg wet	6.67		85.7	30-130			
Surrogate: p-Terphenyl-d14	*3.45*		mg/Kg wet	3.33		103	30-130			
LCS Dup (B144018-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Acenaphthene	1.42	0.17	mg/Kg wet	1.67		85.2	40-140	13.6	30	
Acenaphthylene	1.46	0.17	mg/Kg wet	1.67		87.4	40-140	13.5	30	
Acetophenone	1.32	0.34	mg/Kg wet	1.67		79.1	40-140	9.01	30	
Aniline	0.908	0.34	mg/Kg wet	1.67		54.5	40-140	11.6	30	
Anthracene	1.45	0.17	mg/Kg wet	1.67		87.1	40-140	11.2	30	
Benzo(a)anthracene	1.47	0.17	mg/Kg wet	1.67		88.1	40-140	11.6	30	
Benzo(a)pyrene	1.50	0.17	mg/Kg wet	1.67		90.2	40-140	14.8	30	
Benzo(b)fluoranthene	1.47	0.17	mg/Kg wet	1.67		88.2	40-140	14.7	30	
Benzo(g,h,i)perylene	1.57	0.17	mg/Kg wet	1.67		94.2	40-140	15.1	30	
Benzo(k)fluoranthene	1.46	0.17	mg/Kg wet	1.67		87.8	40-140	14.8	30	
Bis(2-chloroethoxy)methane	1.49	0.34	mg/Kg wet	1.67		89.3	40-140	10.2	30	
Bis(2-chloroethyl)ether	1.39	0.34	mg/Kg wet	1.67		83.1	40-140	9.26	30	
Bis(2-chloroisopropyl)ether	1.33	0.34	mg/Kg wet	1.67		79.6	40-140	7.89	30	
Bis(2-Ethylhexyl)phthalate	1.69	0.34	mg/Kg wet	1.67		102	40-140	12.1	30	
4-Bromophenylphenylether	1.52	0.34	mg/Kg wet	1.67		91.1	40-140	12.4	30	
Butylbenzylphthalate	1.68	0.34	mg/Kg wet	1.67		101	40-140	11.7	30	
4-Chloroaniline	0.981	0.66	mg/Kg wet	1.67		58.8	15-140	17.6	30	†
2-Chloronaphthalene	1.37	0.34	mg/Kg wet	1.67		82.0	40-140	9.11	30	
2-Chlorophenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130	9.43	30	
Chrysene	1.45	0.17	mg/Kg wet	1.67		86.8	40-140	12.3	30	
Dibenz(a,h)anthracene	1.52	0.17	mg/Kg wet	1.67		91.4	40-140	14.1	30	
Dibenzofuran	1.49	0.34	mg/Kg wet	1.67		89.3	40-140	14.2	30	
Di-n-butylphthalate	1.50	0.34	mg/Kg wet	1.67		90.2	40-140	12.2	30	
1,2-Dichlorobenzene	1.23	0.34	mg/Kg wet	1.67		73.8	40-140	9.19	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 B144018 - SW-846 3546										
LCS Dup (B144018-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16						
1,3-Dichlorobenzene	1.20	0.34	mg/Kg wet	1.67		72.2	40-140	9.52	30	
1,4-Dichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.6	40-140	9.55	30	
3,3-Dichlorobenzidine	0.756	0.17	mg/Kg wet	1.67		45.4	40-140	15.8	30	
2,4-Dichlorophenol	1.40	0.34	mg/Kg wet	1.67		84.1	30-130	13.1	30	
Diethylphthalate	1.52	0.34	mg/Kg wet	1.67		91.0	40-140	13.0	30	
2,4-Dimethylphenol	1.50	0.34	mg/Kg wet	1.67		89.8	30-130	15.4	30	
Dimethylphthalate	1.49	0.34	mg/Kg wet	1.67		89.6	40-140	11.3	30	
2,4-Dinitrophenol	0.458	0.66	mg/Kg wet	1.67		27.5	15-140	6.47	30	†
2,4-Dinitrotoluene	1.50	0.34	mg/Kg wet	1.67		90.2	40-140	12.8	30	
2,6-Dinitrotoluene	1.63	0.34	mg/Kg wet	1.67		97.9	40-140	14.3	30	
Di-n-octylphthalate	1.69	0.34	mg/Kg wet	1.67		101	40-140	12.1	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.57	0.34	mg/Kg wet	1.67		94.0	40-140	11.1	30	
Fluoranthene	1.39	0.17	mg/Kg wet	1.67		83.5	40-140	13.1	30	
Fluorene	1.50	0.17	mg/Kg wet	1.67		89.8	40-140	12.4	30	
Hexachlorobenzene	1.51	0.34	mg/Kg wet	1.67		90.8	40-140	14.2	30	
Hexachlorobutadiene	1.36	0.34	mg/Kg wet	1.67		81.8	40-140	11.2	30	
Hexachloroethane	1.25	0.34	mg/Kg wet	1.67		75.1	40-140	8.35	30	
Indeno(1,2,3-cd)pyrene	1.52	0.17	mg/Kg wet	1.67		91.2	40-140	15.3	30	
Isophorone	1.55	0.34	mg/Kg wet	1.67		93.1	40-140	11.9	30	
2-Methylnaphthalene	1.42	0.17	mg/Kg wet	1.67		85.2	40-140	10.3	30	
2-Methylphenol	1.35	0.34	mg/Kg wet	1.67		80.9	30-130	8.90	30	
3/4-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.2	30-130	7.55	30	
Naphthalene	1.33	0.17	mg/Kg wet	1.67		79.8	40-140	11.0	30	
Nitrobenzene	1.40	0.34	mg/Kg wet	1.67		83.8	40-140	12.3	30	
2-Nitrophenol	1.35	0.34	mg/Kg wet	1.67		81.0	30-130	12.0	30	
4-Nitrophenol	1.44	0.66	mg/Kg wet	1.67		86.7	15-140	12.9	30	†
Pentachlorophenol	1.11	0.34	mg/Kg wet	1.67		66.8	30-130	6.65	30	
Phenanthrene	1.49	0.17	mg/Kg wet	1.67		89.5	40-140	12.6	30	
Phenol	1.32	0.34	mg/Kg wet	1.67		79.4	15-140	10.9	30	†
Pyrene	1.60	0.17	mg/Kg wet	1.67		95.7	40-140	10.8	30	
Pyridine	0.944	0.34	mg/Kg wet	1.67		56.6	30-140	9.90	30	†
1,2,4-Trichlorobenzene	1.35	0.34	mg/Kg wet	1.67		80.7	40-140	10.7	30	
2,4,5-Trichlorophenol	1.41	0.34	mg/Kg wet	1.67		84.5	30-130	14.9	30	
2,4,6-Trichlorophenol	1.42	0.34	mg/Kg wet	1.67		85.1	30-130	11.6	30	
Surrogate: 2-Fluorophenol	*5.56*		mg/Kg wet	6.67		83.4	30-130			
Surrogate: Phenol-d6	*5.75*		mg/Kg wet	6.67		86.3	30-130			
Surrogate: Nitrobenzene-d5	*3.12*		mg/Kg wet	3.33		93.5	30-130			
Surrogate: 2-Fluorobiphenyl	*3.15*		mg/Kg wet	3.33		94.5	30-130			
Surrogate: 2,4,6-Tribromophenol	*6.32*		mg/Kg wet	6.67		94.7	30-130			
Surrogate: p-Terphenyl-d14	*3.72*		mg/Kg wet	3.33		111	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
Batch B144017 - SW-846 3546										
Blank (B144017-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16						
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							
Surrogate: Decachlorobiphenyl	*0.198*		mg/Kg wet	0.200		99.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.199*		mg/Kg wet	0.200		99.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.192*		mg/Kg wet	0.200		96.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.202*		mg/Kg wet	0.200		101	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 B144017 - SW-846 3546										
LCS (B144017-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Aldrin	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
Aldrin [2C]	0.12	0.0050	mg/Kg wet	0.100		115	40-140			
alpha-BHC	0.11	0.0050	mg/Kg wet	0.100		107	40-140			
alpha-BHC [2C]	0.12	0.0050	mg/Kg wet	0.100		116	40-140			
beta-BHC	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
beta-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		110	40-140			
delta-BHC	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
delta-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		111	40-140			
gamma-BHC (Lindane)	0.11	0.0020	mg/Kg wet	0.100		108	40-140			
gamma-BHC (Lindane) [2C]	0.12	0.0020	mg/Kg wet	0.100		119	40-140			
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		109	40-140			
4,4'-DDD [2C]	0.11	0.0040	mg/Kg wet	0.100		114	40-140			
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		108	40-140			
4,4'-DDE [2C]	0.12	0.0040	mg/Kg wet	0.100		117	40-140			
4,4'-DDT	0.10	0.0040	mg/Kg wet	0.100		103	40-140			
4,4'-DDT [2C]	0.11	0.0040	mg/Kg wet	0.100		106	40-140			
Dieldrin	0.11	0.0040	mg/Kg wet	0.100		106	40-140			
Dieldrin [2C]	0.11	0.0040	mg/Kg wet	0.100		111	40-140			
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		105	40-140			
Endosulfan I [2C]	0.11	0.0050	mg/Kg wet	0.100		108	40-140			
Endosulfan II	0.11	0.0080	mg/Kg wet	0.100		106	40-140			
Endosulfan II [2C]	0.11	0.0080	mg/Kg wet	0.100		108	40-140			
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		106	40-140			
Endosulfan Sulfate [2C]	0.11	0.0080	mg/Kg wet	0.100		107	40-140			
Endrin	0.11	0.0080	mg/Kg wet	0.100		110	40-140			
Endrin [2C]	0.11	0.0080	mg/Kg wet	0.100		113	40-140			
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		111	40-140			
Endrin Ketone [2C]	0.11	0.0080	mg/Kg wet	0.100		111	40-140			
Heptachlor	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
Heptachlor [2C]	0.11	0.0050	mg/Kg wet	0.100		113	40-140			
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
Heptachlor Epoxide [2C]	0.11	0.0050	mg/Kg wet	0.100		107	40-140			
Hexachlorobenzene	0.093	0.0060	mg/Kg wet	0.100		93.4	40-140			
Hexachlorobenzene [2C]	0.099	0.0060	mg/Kg wet	0.100		98.6	40-140			
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		101	40-140			
Methoxychlor [2C]	0.10	0.050	mg/Kg wet	0.100		103	40-140			
Surrogate: Decachlorobiphenyl	*0.203*		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.204*		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	*0.195*		mg/Kg wet	0.200		97.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.213*		mg/Kg wet	0.200		106	30-150			
LCS Dup (B144017-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Aldrin	0.11	0.0050	mg/Kg wet	0.100		105	40-140	0.501	30	
Aldrin [2C]	0.11	0.0050	mg/Kg wet	0.100		114	40-140	0.913	30	
alpha-BHC	0.11	0.0050	mg/Kg wet	0.100		106	40-140	0.769	30	
alpha-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		112	40-140	4.04	30	
beta-BHC	0.10	0.0050	mg/Kg wet	0.100		103	40-140	1.33	30	
beta-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		111	40-140	0.603	30	
delta-BHC	0.11	0.0050	mg/Kg wet	0.100		106	40-140	1.81	30	
delta-BHC [2C]	0.11	0.0050	mg/Kg wet	0.100		112	40-140	0.591	30	
gamma-BHC (Lindane)	0.11	0.0020	mg/Kg wet	0.100		108	40-140	0.149	30	
gamma-BHC (Lindane) [2C]	0.12	0.0020	mg/Kg wet	0.100		117	40-140	2.35	30	

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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 B144017 - SW-846 3546										
LCS Dup (B144017-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16						
4,4'-DDD	0.11	0.0040	mg/Kg wet	0.100		112	40-140	2.60	30	
4,4'-DDD [2C]	0.12	0.0040	mg/Kg wet	0.100		117	40-140	2.78	30	
4,4'-DDE	0.11	0.0040	mg/Kg wet	0.100		112	40-140	3.77	30	
4,4'-DDE [2C]	0.12	0.0040	mg/Kg wet	0.100		119	40-140	1.94	30	
4,4'-DDT	0.11	0.0040	mg/Kg wet	0.100		107	40-140	3.04	30	
4,4'-DDT [2C]	0.11	0.0040	mg/Kg wet	0.100		110	40-140	3.93	30	
Dieldrin	0.11	0.0040	mg/Kg wet	0.100		107	40-140	1.77	30	
Dieldrin [2C]	0.11	0.0040	mg/Kg wet	0.100		114	40-140	1.84	30	
Endosulfan I	0.11	0.0050	mg/Kg wet	0.100		106	40-140	1.25	30	
Endosulfan I [2C]	0.11	0.0050	mg/Kg wet	0.100		110	40-140	1.29	30	
Endosulfan II	0.11	0.0080	mg/Kg wet	0.100		108	40-140	1.90	30	
Endosulfan II [2C]	0.11	0.0080	mg/Kg wet	0.100		111	40-140	2.46	30	
Endosulfan Sulfate	0.11	0.0080	mg/Kg wet	0.100		109	40-140	2.29	30	
Endosulfan Sulfate [2C]	0.11	0.0080	mg/Kg wet	0.100		110	40-140	2.49	30	
Endrin	0.11	0.0080	mg/Kg wet	0.100		111	40-140	1.54	30	
Endrin [2C]	0.12	0.0080	mg/Kg wet	0.100		116	40-140	1.88	30	
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		114	40-140	2.33	30	
Endrin Ketone [2C]	0.11	0.0080	mg/Kg wet	0.100		114	40-140	2.53	30	
Heptachlor	0.10	0.0050	mg/Kg wet	0.100		103	40-140	0.153	30	
Heptachlor [2C]	0.11	0.0050	mg/Kg wet	0.100		112	40-140	1.16	30	
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		105	40-140	1.20	30	
Heptachlor Epoxide [2C]	0.11	0.0050	mg/Kg wet	0.100		108	40-140	0.560	30	
Hexachlorobenzene	0.092	0.0060	mg/Kg wet	0.100		92.0	40-140	1.52	30	
Hexachlorobenzene [2C]	0.095	0.0060	mg/Kg wet	0.100		95.4	40-140	3.27	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		104	40-140	3.27	30	
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		107	40-140	3.85	30	
Surrogate: Decachlorobiphenyl	*0.204*		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.203*		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.196*		mg/Kg wet	0.200		98.1	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B143995 - SW-846 3540C										
Blank (B143995-BLK1)				Prepared: 03/10/16 Analyzed: 03/11/16						
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	*0.181*		mg/Kg wet	0.200		90.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.194*		mg/Kg wet	0.200		97.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.199*		mg/Kg wet	0.200		99.4	30-150			
LCS (B143995-BS1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		97.2	40-140			
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		93.8	40-140			
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		93.8	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		90.3	40-140			
Surrogate: Decachlorobiphenyl	*0.181*		mg/Kg wet	0.200		90.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.195*		mg/Kg wet	0.200		97.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.188*		mg/Kg wet	0.200		93.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.201*		mg/Kg wet	0.200		100	30-150			
LCS Dup (B143995-BSD1)				Prepared: 03/10/16 Analyzed: 03/11/16						
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		97.7	40-140	0.539	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		94.4	40-140	0.632	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		94.2	40-140	0.396	30	
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		90.7	40-140	0.369	30	
Surrogate: Decachlorobiphenyl	*0.177*		mg/Kg wet	0.200		88.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.190*		mg/Kg wet	0.200		94.8	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.198*		mg/Kg wet	0.200		99.0	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B143995 - SW-846 3540C											
Matrix Spike (B143995-MS1)		**Source: 16C0454-09**		Prepared: 03/10/16 Analyzed: 03/11/16							
Aroclor-1016	0.21	0.12	mg/Kg dry	0.232	ND	92.1		40-140			
Aroclor-1016 [2C]	0.28	0.12	mg/Kg dry	0.232	ND	122		40-140			
Aroclor-1260	2.0	0.12	mg/Kg dry	0.232	ND	**850**	*	40-140			MS-21
Aroclor-1260 [2C]	2.3	0.12	mg/Kg dry	0.232	ND	**993**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.129*		mg/Kg dry	0.232		55.6		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.176*		mg/Kg dry	0.232		75.7		30-150			
Surrogate: Tetrachloro-m-xylene	*0.154*		mg/Kg dry	0.232		66.3		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.155*		mg/Kg dry	0.232		66.6		30-150			
Matrix Spike Dup (B143995-MSD1)		**Source: 16C0454-09**		Prepared: 03/10/16 Analyzed: 03/11/16							
Aroclor-1016	0.27	0.12	mg/Kg dry	0.234	ND	117		40-140		50	
Aroclor-1016 [2C]	0.36	0.12	mg/Kg dry	0.234	ND	**153**	*	40-140		50	MS-22
Aroclor-1260	2.6	0.12	mg/Kg dry	0.234	ND	**1130**	*	40-140	28.8	50	MS-21
Aroclor-1260 [2C]	3.1	0.12	mg/Kg dry	0.234	ND	**1310**	*	40-140	28.8	50	MS-21
Surrogate: Decachlorobiphenyl	*0.145*		mg/Kg dry	0.234		62.1		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.207*		mg/Kg dry	0.234		88.3		30-150			
Surrogate: Tetrachloro-m-xylene	*0.175*		mg/Kg dry	0.234		74.7		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.177*		mg/Kg dry	0.234		75.4		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 B144024 - SW-846 3546										
Blank (B144024-BLK1)				Prepared: 03/11/16 Analyzed: 03/14/16						
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	*2.57*		mg/Kg wet	3.33		77.2	40-140			
LCS (B144024-BS1)				Prepared: 03/11/16 Analyzed: 03/14/16						
TPH (C9-C36)	20.5	8.3	mg/Kg wet	33.3		61.5	40-140			
Surrogate: o-Terphenyl	*2.35*		mg/Kg wet	3.33		70.4	40-140			
LCS Dup (B144024-BSD1)				Prepared: 03/11/16 Analyzed: 03/14/16						
TPH (C9-C36)	25.4	8.3	mg/Kg wet	33.3		76.3	40-140	21.4	30	
Surrogate: o-Terphenyl	*2.77*		mg/Kg wet	3.33		83.1	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144026 - SW-846 3546										
Blank (B144026-BLK1)				Prepared & Analyzed: 03/11/16						
C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	*3.44*		mg/Kg wet	4.99		69.0	40-140			
Surrogate: o-Terphenyl (OTP)	*3.65*		mg/Kg wet	5.00		72.9	40-140			
Surrogate: 2-Bromonaphthalene	*4.06*		mg/Kg wet	5.00		81.2	40-140			
Surrogate: 2-Fluorobiphenyl	*4.25*		mg/Kg wet	5.00		85.0	40-140			
LCS (B144026-BS1)				Prepared & Analyzed: 03/11/16						
Acenaphthene	3.93	0.10	mg/Kg wet	5.00		78.7	40-140			
Acenaphthylene	3.72	0.10	mg/Kg wet	5.00		74.4	40-140			
Anthracene	4.70	0.10	mg/Kg wet	5.00		93.9	40-140			
Benzo(a)anthracene	4.19	0.10	mg/Kg wet	5.00		83.9	40-140			
Benzo(a)pyrene	4.13	0.10	mg/Kg wet	5.00		82.6	40-140			
Benzo(b)fluoranthene	4.13	0.10	mg/Kg wet	5.00		82.6	40-140			
Benzo(g,h,i)perylene	4.02	0.10	mg/Kg wet	5.00		80.4	40-140			
Benzo(k)fluoranthene	4.16	0.10	mg/Kg wet	5.00		83.2	40-140			
Chrysene	4.23	0.10	mg/Kg wet	5.00		84.7	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144026 - SW-846 3546										
LCS (B144026-BS1)				Prepared & Analyzed: 03/11/16						
Dibenz(a,h)anthracene	4.29	0.10	mg/Kg wet	5.00		85.8	40-140			
Fluoranthene	4.23	0.10	mg/Kg wet	5.00		84.5	40-140			
Fluorene	3.93	0.10	mg/Kg wet	5.00		78.7	40-140			
Indeno(1,2,3-cd)pyrene	3.93	0.10	mg/Kg wet	5.00		78.5	40-140			
2-Methylnaphthalene	3.45	0.10	mg/Kg wet	5.00		69.0	40-140			
Naphthalene	3.33	0.10	mg/Kg wet	5.00		66.7	40-140			
Phenanthrene	4.13	0.10	mg/Kg wet	5.00		82.6	40-140			
Pyrene	4.24	0.10	mg/Kg wet	5.00		84.8	40-140			
n-Decane	2.48	0.10	mg/Kg wet	5.00		49.5	40-140			
n-Docosane	3.63	0.10	mg/Kg wet	5.00		72.6	40-140			
n-Dodecane	2.97	0.10	mg/Kg wet	5.00		59.4	40-140			
n-Eicosane	3.74	0.10	mg/Kg wet	5.00		74.8	40-140			
n-Hexacosane	3.90	0.10	mg/Kg wet	5.00		78.1	40-140			
n-Hexadecane	3.53	0.10	mg/Kg wet	5.00		70.7	40-140			
n-Hexatriacontane	3.87	0.10	mg/Kg wet	5.00		77.4	40-140			
n-Nonadecane	3.69	0.10	mg/Kg wet	5.00		73.8	40-140			
n-Nonane	1.85	0.10	mg/Kg wet	5.00		37.0	30-140			
n-Octacosane	3.95	0.10	mg/Kg wet	5.00		78.9	40-140			
n-Octadecane	3.67	0.10	mg/Kg wet	5.00		73.4	40-140			
n-Tetracosane	4.13	0.10	mg/Kg wet	5.00		82.5	40-140			
n-Tetradecane	3.27	0.10	mg/Kg wet	5.00		65.3	40-140			
n-Triacontane	4.03	0.10	mg/Kg wet	5.00		80.5	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*3.42*		mg/Kg wet	4.99		68.5	40-140			
Surrogate: o-Terphenyl (OTP)	*4.13*		mg/Kg wet	5.00		82.6	40-140			
Surrogate: 2-Bromonaphthalene	*4.68*		mg/Kg wet	5.00		93.7	40-140			
Surrogate: 2-Fluorobiphenyl	*4.57*		mg/Kg wet	5.00		91.4	40-140			
LCS Dup (B144026-BSD1)				Prepared & Analyzed: 03/11/16						
Acenaphthene	3.96	0.10	mg/Kg wet	5.00		79.3	40-140	0.760	25	
Acenaphthylene	3.74	0.10	mg/Kg wet	5.00		74.9	40-140	0.686	25	
Anthracene	4.73	0.10	mg/Kg wet	5.00		94.6	40-140	0.757	25	
Benzo(a)anthracene	4.31	0.10	mg/Kg wet	5.00		86.3	40-140	2.81	25	
Benzo(a)pyrene	4.29	0.10	mg/Kg wet	5.00		85.8	40-140	3.79	25	
Benzo(b)fluoranthene	4.28	0.10	mg/Kg wet	5.00		85.7	40-140	3.74	25	
Benzo(g,h,i)perylene	4.22	0.10	mg/Kg wet	5.00		84.4	40-140	4.79	25	
Benzo(k)fluoranthene	4.29	0.10	mg/Kg wet	5.00		85.8	40-140	3.08	25	
Chrysene	4.35	0.10	mg/Kg wet	5.00		87.0	40-140	2.67	25	
Dibenz(a,h)anthracene	4.50	0.10	mg/Kg wet	5.00		90.0	40-140	4.87	25	
Fluoranthene	4.26	0.10	mg/Kg wet	5.00		85.3	40-140	0.893	25	
Fluorene	3.97	0.10	mg/Kg wet	5.00		79.3	40-140	0.820	25	
Indeno(1,2,3-cd)pyrene	4.14	0.10	mg/Kg wet	5.00		82.9	40-140	5.41	25	
2-Methylnaphthalene	3.46	0.10	mg/Kg wet	5.00		69.2	40-140	0.316	25	
Naphthalene	3.33	0.10	mg/Kg wet	5.00		66.6	40-140	0.183	25	
Phenanthrene	4.16	0.10	mg/Kg wet	5.00		83.2	40-140	0.726	25	
Pyrene	4.27	0.10	mg/Kg wet	5.00		85.4	40-140	0.707	25	
n-Decane	2.65	0.10	mg/Kg wet	5.00		53.0	40-140	6.74	25	
n-Docosane	4.26	0.10	mg/Kg wet	5.00		85.2	40-140	16.0	25	
n-Dodecane	3.23	0.10	mg/Kg wet	5.00		64.7	40-140	8.48	25	
n-Eicosane	4.28	0.10	mg/Kg wet	5.00		85.6	40-140	13.4	25	
n-Hexacosane	4.50	0.10	mg/Kg wet	5.00		90.1	40-140	14.3	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144026 - SW-846 3546										
LCS Dup (B144026-BSD1)				Prepared & Analyzed: 03/11/16						
n-Hexadecane	3.99	0.10	mg/Kg wet	5.00		79.9	40-140	12.2	25	
n-Hexatriacontane	4.38	0.10	mg/Kg wet	5.00		87.7	40-140	12.5	25	
n-Nonadecane	4.20	0.10	mg/Kg wet	5.00		84.0	40-140	12.9	25	
n-Nonane	1.93	0.10	mg/Kg wet	5.00		38.6	30-140	4.25	25	
n-Octacosane	4.54	0.10	mg/Kg wet	5.00		90.7	40-140	13.9	25	
n-Octadecane	4.18	0.10	mg/Kg wet	5.00		83.7	40-140	13.1	25	
n-Tetracosane	4.78	0.10	mg/Kg wet	5.00		95.5	40-140	14.6	25	
n-Tetradecane	3.63	0.10	mg/Kg wet	5.00		72.5	40-140	10.4	25	
n-Triacontane	4.61	0.10	mg/Kg wet	5.00		92.1	40-140	13.4	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*3.87*		mg/Kg wet	4.99		77.5	40-140			
Surrogate: o-Terphenyl (OTP)	*4.14*		mg/Kg wet	5.00		82.7	40-140			
Surrogate: 2-Bromonaphthalene	*4.39*		mg/Kg wet	5.00		87.9	40-140			
Surrogate: 2-Fluorobiphenyl	*4.38*		mg/Kg wet	5.00		87.7	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144047 - MA VPH										
Blank (B144047-BLK1)				Prepared: 03/11/16 Analyzed: 03/14/16						
Unadjusted C5-C8 Aliphatics	ND	10	mg/Kg wet							
C5-C8 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C12 Aliphatics	ND	10	mg/Kg wet							
C9-C10 Aromatics	ND	10	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Butylcyclohexane	ND	0.050	mg/Kg wet							
Decane	ND	0.050	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet							
2-Methylpentane	ND	0.050	mg/Kg wet							
Naphthalene	ND	0.25	mg/Kg wet							
Nonane	ND	0.050	mg/Kg wet							
Pentane	ND	0.050	mg/Kg wet							
Toluene	ND	0.050	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg wet							
2,2,4-Trimethylpentane	ND	0.050	mg/Kg wet							
m+p Xylene	ND	0.10	mg/Kg wet							
o-Xylene	ND	0.050	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	*0.0436*		mg/Kg wet	0.0400		109	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	*0.0403*		mg/Kg wet	0.0400		101	70-130			
LCS (B144047-BS1)				Prepared: 03/11/16 Analyzed: 03/14/16						
Benzene	0.0977	0.0010	mg/Kg wet	0.100		97.7	70-130			
Butylcyclohexane	0.0805	0.0010	mg/Kg wet	0.100		80.5	70-130			
Decane	0.0908	0.0010	mg/Kg wet	0.100		90.8	70-130			
Ethylbenzene	0.104	0.0010	mg/Kg wet	0.100		104	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0902	0.0010	mg/Kg wet	0.100		90.2	70-130			
2-Methylpentane	0.101	0.0010	mg/Kg wet	0.100		101	70-130			
Naphthalene	0.109	0.0050	mg/Kg wet	0.100		109	70-130			
Nonane	0.0800	0.0010	mg/Kg wet	0.100		80.0	30-130			
Pentane	0.106	0.0010	mg/Kg wet	0.100		106	70-130			
Toluene	0.0984	0.0010	mg/Kg wet	0.100		98.4	70-130			
1,2,4-Trimethylbenzene	0.112	0.0010	mg/Kg wet	0.100		112	70-130			
2,2,4-Trimethylpentane	0.0858	0.0010	mg/Kg wet	0.100		85.8	70-130			
m+p Xylene	0.218	0.0020	mg/Kg wet	0.200		109	70-130			
o-Xylene	0.107	0.0010	mg/Kg wet	0.100		107	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	*0.0500*		mg/Kg wet	0.0400		125	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	*0.0483*		mg/Kg wet	0.0400		121	70-130			
LCS Dup (B144047-BSD1)				Prepared: 03/11/16 Analyzed: 03/14/16						
Benzene	0.0948	0.0010	mg/Kg wet	0.100		94.8	70-130	2.93	25	
Butylcyclohexane	0.0796	0.0010	mg/Kg wet	0.100		79.6	70-130	1.05	25	
Decane	0.0906	0.0010	mg/Kg wet	0.100		90.6	70-130	0.278	25	
Ethylbenzene	0.101	0.0010	mg/Kg wet	0.100		101	70-130	3.32	25	
Methyl tert-Butyl Ether (MTBE)	0.0910	0.0010	mg/Kg wet	0.100		91.0	70-130	0.851	25	
2-Methylpentane	0.0946	0.0010	mg/Kg wet	0.100		94.6	70-130	6.35	25	
Naphthalene	0.109	0.0050	mg/Kg wet	0.100		109	70-130	0.682	25	
Nonane	0.0799	0.0010	mg/Kg wet	0.100		79.9	30-130	0.0338	25	
Pentane	0.0860	0.0010	mg/Kg wet	0.100		86.0	70-130	20.5	25	
Toluene	0.0955	0.0010	mg/Kg wet	0.100		95.5	70-130	3.01	25	
1,2,4-Trimethylbenzene	0.108	0.0010	mg/Kg wet	0.100		108	70-130	3.52	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B144047 - MA VPH										
LCS Dup (B144047-BSD1)				Prepared: 03/11/16 Analyzed: 03/14/16						
2,2,4-Trimethylpentane	0.0798	0.0010	mg/Kg wet	0.100		79.8	70-130	7.21	25	
m+p Xylene	0.211	0.0020	mg/Kg wet	0.200		105	70-130	3.24	25	
o-Xylene	0.103	0.0010	mg/Kg wet	0.100		103	70-130	3.16	25	
Surrogate: 2,5-Dibromotoluene (FID)	*0.0462*		mg/Kg wet	0.0400		115	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	*0.0461*		mg/Kg wet	0.0400		115	70-130			

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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 B143754 - SW-846 3050B											
Blank (B143754-BLK1)				Prepared: 03/11/16 Analyzed: 03/12/16							
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 (B143754-BS1)				Prepared: 03/11/16 Analyzed: 03/12/16							
Antimony	88.1	5.0	mg/Kg wet	105		83.9		0-210.3			
Arsenic	89.4	5.0	mg/Kg wet	98.5		90.8		77.8-122.1			
Barium	268	5.0	mg/Kg wet	308		86.9		82-117.4			
Beryllium	61.6	0.50	mg/Kg wet	66.0		93.4		82.3-117.7			
Cadmium	132	0.50	mg/Kg wet	146		90.3		81.9-118.2			
Chromium	160	0.99	mg/Kg wet	182		87.6		78.7-120.6			
Lead	105	1.5	mg/Kg wet	130		**80.8**	*	82.4-117.8			L-07
Nickel	129	0.99	mg/Kg wet	149		86.4		82.2-117.8			
Selenium	136	9.9	mg/Kg wet	154		88.0		77.1-122.3			
Silver	33.0	0.99	mg/Kg wet	40.9		80.6		74.3-125.4			
Thallium	157	5.0	mg/Kg wet	175		89.7		78.2-121.6			
Vanadium	82.8	2.0	mg/Kg wet	96.7		85.6		64.8-135.2			
Zinc	170	2.0	mg/Kg wet	191		88.9		79.7-120.8			
LCS Dup (B143754-BSD1)				Prepared: 03/11/16 Analyzed: 03/12/16							
Antimony	94.3	5.0	mg/Kg wet	105		89.8		0-210.3	6.79	30	
Arsenic	92.9	5.0	mg/Kg wet	98.5		94.3		77.8-122.1	3.84	30	
Barium	274	5.0	mg/Kg wet	308		88.8		82-117.4	2.11	30	
Beryllium	65.7	0.50	mg/Kg wet	66.0		99.5		82.3-117.7	6.31	30	
Cadmium	138	0.50	mg/Kg wet	146		94.8		81.9-118.2	4.89	30	
Chromium	168	1.0	mg/Kg wet	182		92.6		78.7-120.6	5.45	30	
Lead	109	1.5	mg/Kg wet	130		84.1		82.4-117.8	3.97	30	
Nickel	137	1.0	mg/Kg wet	149		92.2		82.2-117.8	6.48	30	
Selenium	144	10	mg/Kg wet	154		93.2		77.1-122.3	5.69	30	
Silver	34.0	1.0	mg/Kg wet	40.9		83.0		74.3-125.4	2.92	30	
Thallium	163	5.0	mg/Kg wet	175		92.9		78.2-121.6	3.50	30	
Vanadium	88.0	2.0	mg/Kg wet	96.7		91.0		64.8-135.2	6.10	30	
Zinc	180	2.0	mg/Kg wet	191		94.2		79.7-120.8	5.76	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 B143754 - SW-846 3050B										
MRL Check (B143754-MRL1)				Prepared: 03/11/16 Analyzed: 03/12/16						
Lead	0.687	0.73	mg/Kg wet	0.730		94.0	80-120			
Batch B143755 - SW-846 3050B										
Blank (B143755-BLK1)				Prepared: 03/11/16 Analyzed: 03/12/16						
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 (B143755-BS1)				Prepared: 03/11/16 Analyzed: 03/12/16						
Antimony	87.6	5.0	mg/Kg wet	105		83.5	0-210.3			
Arsenic	85.7	5.0	mg/Kg wet	98.5		87.0	77.8-122.1			
Barium	277	5.0	mg/Kg wet	308		90.0	82-117.4			
Beryllium	62.7	0.50	mg/Kg wet	66.0		95.0	82.3-117.7			
Cadmium	134	0.50	mg/Kg wet	146		92.0	81.9-118.2			
Chromium	164	0.99	mg/Kg wet	182		90.2	78.7-120.6			
Lead	117	1.5	mg/Kg wet	130		89.8	82.4-117.8			
Nickel	136	0.99	mg/Kg wet	149		91.0	82.2-117.8			
Selenium	124	9.9	mg/Kg wet	154		80.7	77.1-122.3			
Silver	36.0	0.99	mg/Kg wet	40.9		87.9	74.3-125.4			
Thallium	168	5.0	mg/Kg wet	175		95.7	78.2-121.6			
Vanadium	86.5	2.0	mg/Kg wet	96.7		89.4	64.8-135.2			
Zinc	166	2.0	mg/Kg wet	191		87.1	79.7-120.8			
LCS Dup (B143755-BSD1)				Prepared: 03/11/16 Analyzed: 03/12/16						
Antimony	86.8	5.0	mg/Kg wet	105		82.7	0-210.3	0.899	30	
Arsenic	89.9	5.0	mg/Kg wet	98.5		91.2	77.8-122.1	4.71	30	
Barium	293	5.0	mg/Kg wet	308		95.0	82-117.4	5.46	30	
Beryllium	65.1	0.50	mg/Kg wet	66.0		98.6	82.3-117.7	3.75	30	
Cadmium	143	0.50	mg/Kg wet	146		98.2	81.9-118.2	6.49	30	
Chromium	174	0.99	mg/Kg wet	182		95.3	78.7-120.6	5.57	30	
Lead	112	1.5	mg/Kg wet	130		86.4	82.4-117.8	3.93	30	
Nickel	141	0.99	mg/Kg wet	149		94.7	82.2-117.8	4.00	30	
Selenium	131	9.9	mg/Kg wet	154		85.1	77.1-122.3	5.29	30	
Silver	37.6	0.99	mg/Kg wet	40.9		92.0	74.3-125.4	4.57	30	
Thallium	181	5.0	mg/Kg wet	175		104	78.2-121.6	7.87	30	
Vanadium	91.5	2.0	mg/Kg wet	96.7		94.7	64.8-135.2	5.71	30	
Zinc	175	2.0	mg/Kg wet	191		91.8	79.7-120.8	5.20	30	

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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
Batch B143755 - SW-846 3050B										
MRL Check (B143755-MRL1)				Prepared: 03/11/16 Analyzed: 03/12/16						
Lead	0.780	0.73	mg/Kg wet	0.731		107	80-120			
Batch B143996 - SW-846 7471										
Blank (B143996-BLK1)				Prepared: 03/12/16 Analyzed: 03/14/16						
Mercury	ND	0.025	mg/Kg wet							
LCS (B143996-BS1)				Prepared: 03/12/16 Analyzed: 03/14/16						
Mercury	6.73	0.79	mg/Kg wet	7.10		94.7	73.7-126.3			
LCS Dup (B143996-BSD1)				Prepared: 03/12/16 Analyzed: 03/14/16						
Mercury	7.17	0.79	mg/Kg wet	7.10		101	73.7-126.3	6.46	30	

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BREAKDOWN REPORT

Lab Sample ID: **S010929-PEM1** **Analyzed:** **03/11/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	2.97
Endrin [1]	3.73

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	3.47
Endrin [2]	3.81

BREAKDOWN REPORT

Lab Sample ID: **S010929-PEM2** **Analyzed:** **03/12/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	3.68
Endrin [1]	4.25

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	4.12
Endrin [2]	4.28

BREAKDOWN REPORT

Lab Sample ID: **S010929-PEM3** **Analyzed:** **03/12/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	4.02
Endrin [1]	3.75

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BREAKDOWN REPORT

Lab Sample ID:	**S010929-PEM3**	**Analyzed:**	**03/12/2016**

Column Number: **2**

Analyte	**% Breakdown**
4,4'-DDT [2]	4.40
Endrin [2]	3.74

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

FO-1-TP (0-1')

Lab Sample ID: 16C0454-09 Date(s) Analyzed 03/12/2016 03/12/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDT	1	7.08	0.00	0.00	0.15	
	2	7.23	0.00	0.00	0.63	125.0
Aroclor-1254	1	0.00	-0.03	0.03	13	
	2	0.00	-0.03	0.03	13	3.0
Dieldrin	1	6.67	0.00	0.00	0.16	
	2	6.67	0.00	0.00	0.52	106.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

FO-1-TP (1-2')

Lab Sample ID: 16C0454-10 Date(s) Analyzed 03/12/2016 03/12/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDE	1	6.49	0.00	0.00	0.093	
	2	6.59	0.00	0.00	0.36	118.0
4,4'-DDT	1	7.08	0.00	0.00	0.13	
	2	7.23	0.00	0.00	0.73	141.0
Aroclor-1254	1	0.00	-0.03	0.03	12	
	2	0.00	-0.03	0.03	11	4.4
Dieldrin	1	6.67	0.00	0.00	0.19	
	2	6.67	0.00	0.00	0.59	102.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

FO-1-TP (2-3')

Lab Sample ID: 16C0454-11 Date(s) Analyzed 03/12/2016 03/12/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDT	1	7.08	0.00	0.00	0.13	
	2	7.23	0.00	0.00	0.61	131.0
Aroclor-1254	1	0.00	-0.03	0.03	7.8	
	2	0.00	-0.03	0.03	7.7	0.9
Dieldrin	1	6.67	0.00	0.00	0.16	
	2	6.67	0.00	0.00	0.52	105.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B143995-BS1

Date(s) Analyzed 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.19	
	2	0.00	-0.03	0.03	0.19	2
Aroclor-1260	1	0.00	-0.03	0.03	0.19	
	2	0.00	-0.03	0.03	0.18	4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B143995-BSD1

Date(s) Analyzed 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.20	
	2	0.00	-0.03	0.03	0.19	3
Aroclor-1260	1	0.00	-0.03	0.03	0.19	
	2	0.00	-0.03	0.03	0.18	4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B143995-MS1

Date(s) Analyzed 03/11/2016 03/11/2016

Instrument ID (1):

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.21	
	2	0.00	-0.03	0.03	0.28	27
Aroclor-1260	1	0.00	-0.03	0.03	2.0	
	2	0.00	-0.03	0.03	2.3	16

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B143995-MSD1 Date(s) Analyzed 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	-0.03	0.03	0.27	
	2	0.00	-0.03	0.03	0.36	27
Aroclor-1260	1	0.00	-0.03	0.03	2.6	
	2	0.00	-0.03	0.03	3.1	16

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B144017-BS1 Date(s) Analyzed 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	6.89	0.00	0.00	0.11	
	2	7.00	0.00	0.00	0.11	1
4,4'-DDE	1	6.47	0.00	0.00	0.11	
	2	6.58	0.00	0.00	0.12	11
4,4'-DDT	1	7.10	0.00	0.00	0.10	
	2	7.24	0.00	0.00	0.11	7
Aldrin	1	5.84	0.00	0.00	0.11	
	2	5.84	0.00	0.00	0.12	12
alpha-BHC	1	5.19	0.00	0.00	0.11	
	2	5.19	0.00	0.00	0.12	12
beta-BHC	1	5.42	0.00	0.00	0.10	
	2	5.45	0.00	0.00	0.11	6
delta-BHC	1	5.52	0.00	0.00	0.10	
	2	5.62	0.00	0.00	0.11	6
Dieldrin	1	6.66	0.00	0.00	0.11	
	2	6.68	0.00	0.00	0.11	4
Endosulfan I	1	6.49	0.00	0.00	0.10	
	2	6.48	0.00	0.00	0.11	5
Endosulfan II	1	6.99	0.00	0.00	0.11	
	2	7.06	0.00	0.00	0.11	4
Endosulfan Sulfate	1	7.63	0.00	0.00	0.11	
	2	7.53	0.00	0.00	0.11	4
Endrin	1	6.83	0.00	0.00	0.11	
	2	6.90	0.00	0.00	0.11	0
Endrin Ketone	1	7.84	0.00	0.00	0.11	
	2	7.94	0.00	0.00	0.11	1
gamma-BHC (Lindane)	1	5.37	0.00	0.00	0.11	
	2	5.39	0.00	0.00	0.12	11
Heptachlor	1	5.65	0.00	0.00	0.10	
	2	5.65	0.00	0.00	0.11	6
Heptachlor Epoxide	1	6.23	0.00	0.00	0.10	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B144017-BS1

Date(s) Analyzed 03/11/2016 03/11/2016

Instrument ID (1): ECD6

Instrument ID (2): ECD6

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.22	0.00	0.00	0.11	6
Hexachlorobenzene	1	5.09	0.00	0.00	0.093	
	2	5.11	0.00	0.00	0.099	6
Methoxychlor	1	7.47	0.00	0.00	0.10	
	2	7.80	0.00	0.00	0.10	1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B144017-BSD1 Date(s) Analyzed 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	6.89	0.00	0.00	0.11	
	2	7.00	0.00	0.00	0.12	7
4,4'-DDE	1	6.47	0.00	0.00	0.11	
	2	6.58	0.00	0.00	0.12	7
4,4'-DDT	1	7.10	0.00	0.00	0.11	
	2	7.24	0.00	0.00	0.11	3
Aldrin	1	5.83	0.00	0.00	0.11	
	2	5.84	0.00	0.00	0.11	5
alpha-BHC	1	5.19	0.00	0.00	0.11	
	2	5.20	0.00	0.00	0.11	4
beta-BHC	1	5.42	0.00	0.00	0.10	
	2	5.45	0.00	0.00	0.11	7
delta-BHC	1	5.52	0.00	0.00	0.11	
	2	5.62	0.00	0.00	0.11	4
Dieldrin	1	6.66	0.00	0.00	0.11	
	2	6.68	0.00	0.00	0.11	3
Endosulfan I	1	6.50	0.00	0.00	0.11	
	2	6.48	0.00	0.00	0.11	4
Endosulfan II	1	6.99	0.00	0.00	0.11	
	2	7.06	0.00	0.00	0.11	2
Endosulfan Sulfate	1	7.63	0.00	0.00	0.11	
	2	7.53	0.00	0.00	0.11	1
Endrin	1	6.83	0.00	0.00	0.11	
	2	6.90	0.00	0.00	0.12	8
Endrin Ketone	1	7.84	0.00	0.00	0.11	
	2	7.94	0.00	0.00	0.11	4
gamma-BHC (Lindane)	1	5.37	0.00	0.00	0.11	
	2	5.39	0.00	0.00	0.12	11
Heptachlor	1	5.65	0.00	0.00	0.10	
	2	5.65	0.00	0.00	0.11	7
Heptachlor Epoxide	1	6.23	0.00	0.00	0.10	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B144017-BSD1 Date(s) Analyzed 03/11/2016 03/11/2016

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	6.22	0.00	0.00	0.11	5
Hexachlorobenzene	1	5.09	0.00	0.00	0.092	
	2	5.11	0.00	0.00	0.095	3
Methoxychlor	1	7.47	0.00	0.00	0.10	
	2	7.80	0.00	0.00	0.11	6

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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
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-04	Elevated reporting limit due to high concentration of an interfering analyte(s).
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
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-01	Soil/methanol ratio does not meet method specifications. Excess amount of soil. Sample was completely covered with methanol, but with less than the method-specified amount.
O-32	A dilution was performed as part of the standard analytical procedure.
P-08	Sample RPD between primary and confirmatory analysis exceeded 100%. 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.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

con-test® ANALYTICAL LABORATORY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Soil	
C9-C18 Aliphatics	CT,NC,WA,ME,NH-P
C19-C36 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,WA,ME,NH-P
C11-C22 Aromatics	CT,NC,WA,ME,NH-P
Acenaphthene	CT,NC,WA,ME,NH-P
Acenaphthylene	CT,NC,WA,ME,NH-P
Anthracene	CT,NC,WA,ME,NH-P
Benzo(a)anthracene	CT,NC,WA,ME,NH-P
Benzo(a)pyrene	CT,NC,WA,ME,NH-P
Benzo(b)fluoranthene	CT,NC,WA,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,WA,ME,NH-P
Benzo(k)fluoranthene	CT,NC,WA,ME,NH-P
Chrysene	CT,NC,WA,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,WA,ME,NH-P
Fluoranthene	CT,NC,WA,ME,NH-P
Fluorene	CT,NC,WA,ME
Indeno(1,2,3-cd)pyrene	CT,NC,WA,ME,NH-P
2-Methylnaphthalene	CT,NC,WA,ME
Naphthalene	CT,NC,WA,ME,NH-P
Phenanthrene	CT,NC,WA,ME,NH-P
Pyrene	CT,NC,WA,ME,NH-P
MADEP-VPH-04-1.1 in Soil	
Unadjusted C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
C5-C8 Aliphatics	CT,NC,WA,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C12 Aliphatics	CT,NC,WA,ME,NH-P
C9-C10 Aromatics	CT,NC,WA,ME,NH-P
Benzene	CT,NC,WA,ME,NH-P
Ethylbenzene	CT,NC,WA,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,WA,ME,NH-P
Naphthalene	CT,NC,WA,ME,NH-P
Toluene	CT,NC,WA,ME,NH-P
m+p Xylene	CT,NC,WA,ME,NH-P
o-Xylene	CT,NC,WA,ME,NH-P
SW-846 6010C/D 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

con-test® ANALYTICAL LABORATORY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C/D in Soil	
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	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
SW-846 8081B in Water	
Aldrin	CT,NC,NH,NY,ME,VA
Aldrin [2C]	CT,NC,NH,NY,ME,VA

con-test® ANALYTICAL LABORATORY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
alpha-BHC	CT,NC,NH,NY,ME,VA
alpha-BHC [2C]	CT,NC,NH,NY,ME,VA
beta-BHC	CT,NC,NH,NY,ME,VA
beta-BHC [2C]	CT,NC,NH,NY,ME,VA
delta-BHC	CT,NC,NH,NY,ME,VA
delta-BHC [2C]	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane)	CT,NC,NH,NY,ME,VA
gamma-BHC (Lindane) [2C]	CT,NC,NH,NY,ME,VA
Chlordane	CT,NC,NH,NY,ME,VA
Chlordane [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDD	CT,NC,NH,NY,ME,VA
4,4'-DDD [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDE	CT,NC,NH,NY,ME,VA
4,4'-DDE [2C]	CT,NC,NH,NY,ME,VA
4,4'-DDT	CT,NC,NH,NY,ME,VA
4,4'-DDT [2C]	CT,NC,NH,NY,ME,VA
Dieldrin	CT,NC,NH,NY,ME,VA
Dieldrin [2C]	CT,NC,NH,NY,ME,VA
Endosulfan I	CT,NC,NH,NY,ME,VA
Endosulfan I [2C]	CT,NC,NH,NY,ME,VA
Endosulfan II	CT,NC,NH,NY,ME,VA
Endosulfan II [2C]	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate	CT,NC,NH,NY,ME,VA
Endosulfan Sulfate [2C]	CT,NC,NH,NY,ME,VA
Endrin	CT,NC,NH,NY,ME,VA
Endrin [2C]	CT,NC,NH,NY,ME,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NC,NH,NY,ME,VA
Heptachlor [2C]	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide	CT,NC,NH,NY,ME,VA
Heptachlor Epoxide [2C]	CT,NC,NH,NY,ME,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NC,NH,NY,ME,VA
Methoxychlor [2C]	CT,NC,NH,NY,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA

con-test® ANALYTICAL LABORATORY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
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
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

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

CERTIFICATIONS

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Analyte	Certifications
SW-846 8260C in Soil	
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)	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
1,2,4-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

con-test® ANALYTICAL LABORATORY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
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	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
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Email: info@contestlabs.com
www.contestlabs.com

CHAIN OF CUSTODY RECORD

16C0454

Rev 04.05.12

39 Spruce Street
East longmeadow, MA 01028

Company Name: GEC
Address: 60 Brooks
Attention: A. Foley
Project Location: Lowell
Sampled By: A. Foley

Telephone:
Project # 1785-5060
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email: afoley@gold
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	VOC w/ Tagged
01	NSW - GT-1	3/9/16	10:15		X	S	U	X
02	SSW - GT-1		10:18					X
03	ESW - GT-1		10:21					X
04	BTM - GT-1		10:24					X
05	NSW - GT-2		10:30					X
06	SSW - GT-2		10:34					X
07	WSW - GT-2		10:38					X
08	BTM - GT-2		10:42					X

ANALYSIS REQUESTED

# of Containers
** Preservation
***Container Code

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other_____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other_____

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
Chris Foley 3/9/16	1830
Received by: (signature) 3/10/16	Date/Time: 12:00
Relinquished by: (signature) 3/10/16	Date/Time: 2:25
Received by: (signature) 4.9 3/10/16	Date/Time: 1425

Turnaround ††
☐ 7-Day
☐ 10-Day
☐ Other _____
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certifie

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

16C0454

Rev 04.05.12

Company Name: Goldman
Address:
Attention: A Foley
Project Location: Lowell
Sampled By: A. Foley

Telephone:
Project # 1765-5060
Client PO# 1

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email: adolmy@goldman
Format: ☑ PDF ☑ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	Pesticide 8081	PCB 8082 w/ Soxhlet	MA PH metals	PCB 8082	VOC w/ Targets	SVOC	TPH	VPH w/ Targets	EPH w/ Targets		
								3				3	7		1			
												MB V	~~AE~~ A		M V			
09	F01-TP (0-1')	3/9/16	2:15		X	S	U	X	X	X	X							
10	F01-TP (1-2')	↓	2:30		X	S	U	X	X	X	X							
11	F01-TP (2-3')	↓	2:45		X	S	U	X	X	X	X							
12	F0-1 (3')	↓	3:10		X	S	U	X	X	X	X	X	X	X	X	X		

# of Containers
** Preservation
***Container Code

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other

Comments:
20 X Rule

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
[signature] 3/9/16	18:30
Received by: (signature) [signature] 3/10/16	12:00
Relinquished by: (signature) [signature] 3/10/16	2:25
Received by: (signature) [signature] 4.9 3/10/16	1425

Turnaround ††
☐ 7-Day
☐ 10-Day
☐ Other
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certifie

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: GEC **RECEIVED BY**: JDL **DATE**: 3/10/2016

1) Was the chain(s) of custody relinquished and signed? **Yes** X **No** ____ **No COC Incl.**

2) Does the chain agree with the samples? **Yes** X **No** ____

If not, explain:

3) Are all the samples in good condition? **Yes** X **No** ____

If not, explain:

4) How were the samples received:

On Ice X Direct from Sampling ____ Ambient ____ In Cooler(s) X

Were the samples received in Temperature Compliance of (2-6℃)? **Yes** X **No** ____ **N/A** ____

Temperature ℃ by Temp blank ____ Temperature ℃ by Temp gun 4.9

5) Are there Dissolved samples for the lab to filter? **Yes** ____ **No** X

Who was notified ____ Date ____ Time ____

6) Are there any RUSH or SHORT HOLDING TIME samples? **Yes** **RUSH** **No** ____

Who was notified ____ Date ____ Time ____

7) Location where samples are stored:

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) Do all samples have the proper Acid pH: **Yes** ____ **No** ____ **N/A** X

9) Do all samples have the proper Base pH: **Yes** ____ **No** ____ **N/A** X

10) Was the PC notified of any discrepancies with the CoC vs the samples: **Yes** ____ **N/A** X

Containers received at Con-Test

	# of containers			# of containers
1 Liter Amber			16 oz amber	
500 mL Amber			8 oz amber/clear jar	5
250 mL Amber (8oz amber)			4 oz amber/clear jar	
1 Liter Plastic			2 oz amber/clear jar	
500 mL Plastic			Plastic Bag / Ziploc	
250 mL plastic			SOC Kit	
40 mL Vial - type listed below	12		Perchlorate Kit	
Colisure / bacteria bottle			Flashpoint bottle	
Dissolved Oxygen bottle			Other glass jar	
Encore			Other	

No % Solids jars for samples 1 through 8.

40 mL vials:	# HCl		# Methanol	10	**Time and Date Frozen:**
Doc# 277	# Bisulfate	2	# DI Water		
Rev. 4 August 2013	# Thiosulfate		Unpreserved		

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Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	F	No % Solids sample for 01-08.
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** JDL **3/10/16 1425**

Massachusetts Department of Environmental Protection
Bureau of Air & Waste
Underground Storage Tank (UST) Program
UST1 – Cover Sheet/Certification

UST Facility

UST Facility ID #

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Notes:

- If this is a new facility registration, MassDEP will provide you with a Facility Account Number
- A New Facility must be registered within 30 days of the tank(s) receiving regulated product.
- A New Owner must be registered within 30 days of taking ownership.

Check the appropriate category(s). Complete and attach ONLY the required forms.

Register a New Facility and/or Owner

- ☐ UST2–Owner/Operator & Facility Registration Attached
- ☐ UST3–Financial Responsibility Registration Attached
- ☐ UST4–Tank, Piping & Component Registration Attached

Register a New UST System & Components

- ☐ UST4–Tank, Piping & Component Registration Attached

Register a Change of Tank Status/Product

- ☐ UST5–Change of Tank Status/Product Attached

Register a UST System Removal/Closure & Assessment

- ☑ UST 6–UST System Removal/Closure in Place Attached

Update Existing Owner/Operator/Facility Information
(Not a New Owner)

- ☐ UST2–Owner/Operator/Facility Registration Attached

Update Financial Responsibility Information

- ☐ UST3–Financial Responsibility Registration Attached

Update Existing UST System/Component Information

- ☐ UST4–Tank, Piping & Component Registration Attached

A. Legal Owner Of UST(s)

a. Individual/Entity Name: Joe Mullins, Massachusetts Mills III Ltd Partnership

b. Contact Name:

c. Contact Email Address:

d. Address 1 – Note: Enter Mailing Address of the Owner Contact: 31 Saint James Ave

e. Address 2:

f. City/Town: BOSTON

g. State: MA

h. Zip Code: 02116

B. UST Facility Information

a. Facility Name: Mass Mills III

b. Address 1 – Note: Enter Physical Street Address (No P.O. Boxes): 150 mass mills Dr

c. Address 2:

d. City/Town: Lowell

e. State: MA

f. Zip Code: 01852

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Massachusetts Department of Environmental Protection
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Underground Storage Tank (UST) Program

UST1 – Cover Sheet/Certification

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Notes:

- The Owner must retain a copy of the registration until the UST system is removed or permanently closed in accordance with 310 CMR 80.43(2) or (3).
- Forms may be scanned and submitted electronically to dep.ust@state.ma.us or mailed to:

MassDEP
UST Program
P.O. Box 120-165
Boston, MA 02112-0165

C. Certification Statement

Important: A new Facility registration and new Owner registration must be certified only by the Owner. The Owner may designate the Operator to certify updated registration submittals.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

I am the Facility's ☒ Owner ☐ Operator

1. Print Name: Joseph R Mullins
2. Owner/Operator Entity Name: Massachusetts Mills III LP
3. Signature: Joseph R Mullins
4. Date Signed (MM/DD/YYYY): 7/11/2016

5. Source of Signatory Authority (check only one box below):

If a Corporation or Non-Profit Corporation:

a. ☐ President
b. ☐ Secretary
c. ☐ Treasurer
d. ☐ Vice President (if authorized to bind the corporation)
e. ☐ Employee of the Corporation (if authorized to bind the corporation)

If a Limited Liability Company (LLC):

f. ☐ Person authorized to bind the company

If a Partnership:

g. ☒ General Partner (if authorized to bind the partnership)

If a Sole Proprietorship:

h. ☐ Proprietor

If a Municipality or Public Agency:

i. ☐ Principal Executive Officer
j. ☐ Ranking Elected Official (if authorized to bind the municipality or public agency)

If a Trust:

k. ☐ Trustee or Other Person authorized to bind the trust

Massachusetts Department of Environmental Protection

Bureau of Air & Waste
Underground Storage Tank (UST) Program

UST6 – System Removal/Closure in Place

UST Facility Name

UST Facility ID #

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Notes:

- Make additional copies as needed.
- If you are replacing a removed tank with a new tank in the same location at the facility, you must register the new tank with MassDEP.
- For abandoned or unregistered tanks, answer the questions in the appropriate sections. There will be no UST Facility Number assigned to tank systems found at unregistered facilities.

Check the appropriate action(s) below. Complete ONLY the appropriate section(s) and submit with the UST1-Cover Sheet/Certification Form.

- ☐ UST System Removal/Closure Sections A.1.& B.
- ☒ Removal of Abandoned/Unregistered UST System Sections A.1., A.3. & B.
- ☐ UST System Permanent Closure in Place Sections A.2. & B
- ☐ Permanent Closure of Abandoned/Unregistered UST System Sections A.2., A.3. & B

A. UST System Removal/Closure

1. UST System Removal

	GT 1 Tank ID	GT 2 Tank ID	Tank ID	Tank ID
a. Date of tank removal:	03/08/2016 MM/DD/YYYY	03/08/2016 MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
b. Were all regulated substances removed from the tank managed per applicable requirements?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
c. Was the tank system rendered inert per 310 CMR 80.47?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
d. Were all openings secured?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Was all piping removed?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
f. Capacity of Tank:	~2500 Gallons	~1000 Gallons	Gallons	Gallons

2. UST System Permanent Closure in Place

	Tank ID	Tank ID	Tank ID	Tank ID
a. Date of closure in place:	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY	MM/DD/YYYY
b. Has a registered professional civil or structural engineer determined that the tank cannot be removed without endangering the structural integrity of another UST system, structure, underground piping or underground utilities, per 310 CMR 80.43(3)(a)(1)?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
c. Were all regulated substances removed from the tank managed per applicable requirements?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
d. Was the tank system rendered inert per 310 CMR 80.47?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
e. Was the tank filled with appropriate material (e.g. concrete slurry mix or approved inert material)?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
f. Capacity of Tank:	Gallons	Gallons	Gallons	Gallons

UST6 – System Removal/Closure in Place

UST Facility Name

UST Facility ID #

A. UST Removal/Closure (continued)

Notes:

- Make additional copies as needed.
- Removal/closure of a **consumptive use** tank with a capacity of greater than 1,100 gallons must comply with the requirements of 310 CMR 80.43 & 80.47

3. Removal/Permanent Closure of Abandoned/Unregistered UST System				
	Tank 1	**Tank 2**	**Tank 3**	**Tank 4**
If unregistered, where was this tank located?	-71.303478° Longitude 42.645826 Latitude	-71.303478 Longitude 42.645826 Latitude	Longitude Latitude	Longitude Latitude

B. Assessment of Release at Removal or Closure

	GT-1 **Tank ID**	GT-2 **Tank ID**	**Tank ID**	**Tank ID**
Was an assessment conducted in accordance with 310 CMR 80.43(4) within 24 hours of the removal or before the closure in place was completed?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No