



September 13, 2017

Ms. Kimberly Tisa
PCB Coordinator
U.S. Environmental Protection Agency Region 1
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Re: PCB Remediation Completion Report – Patterson and MacKimmie Concrete Pads
Southwest Concourse Area
University of Massachusetts – Amherst

Dear Ms. Tisa:

In accordance with EPA's May 5, 2017 Approval referencing the conditions of the August 30, 2010 PCB Cleanup and Disposal Approval granted under 40 CFR 761.61 (a) and (c) and 761.79 (h), Woodard & Curran has prepared this report to document the removal and off-site disposal of polychlorinated biphenyl (PCB) containing and PCB contaminated materials encountered during the installation of a new handicapped access ramp at the MacKimmie House and Patterson House within the Southwest Residential Area on the University of Massachusetts (UMass) campus in Amherst, Massachusetts.

Background

In preparation for the removal of concrete pads for installation of new handicapped access ramps, a survey of caulking within the removal areas was conducted. One type of caulking was observed within the removal areas. The caulking was present along approximately 20 linear feet (l.f.) of masonry joints at the subject concrete pad at MacKimmie House and approximately 35 l.f. of masonry joints at the subject concrete pad at Patterson House. Based on the known presence of \geq 50 ppm PCBs in previously remediated caulked joints within Southwest Concourse, UMass elected to proceed under the assumption that the caulking contains \geq 50 ppm PCBs and submitted a PCB Remediation Plan to EPA on March 15, 2017 for the remediation of the caulking under the existing EPA Approval (dated August 30, 2010). EPA approved the proposed plan modification via email on May 5, 2017.

Remedy Implementation and Verification

The remedial activities described in the PCB Remediation Plan commenced on May 23, 2017 and were completed with the shipment of PCB wastes for off-site disposal on August 7, 2017. A summary of the implementation and verification of the remediation activities is presented in the sections below.

Site Preparation and Controls

PCB remediation activities were conducted by Compass Restoration Services, Inc. Site preparations and controls were implemented as described in the PCB remediation plan and project specifications. These preparations included the development of a Health & Safety Plan and a Contractor Work Plan and the construction of fencing around the removal areas. Signs were posted on the outside of the work area and a single point of entry was established at the work area.

Results of dust monitoring collected during the soil excavation activities indicated that total dust levels were consistent with background concentrations. Dust monitoring as part of the PCB monitoring activities was not conducted during the initial saw cutting of the concrete as the cut line was established outside the limits of PCB impacts.



Pre-Removal Characterization Sampling – Concrete Decking

Prior to removals, verification samples were collected from the concrete decking at 12 inches from the caulked joints to verify the location of the waste segregation cut line (i.e., the extent of PCBs > 1 ppm). In accordance with the PCB Remediation Plan, samples were collected at a frequency of 1 sample per 10 linear feet for a total of two samples at MacKimmie and four samples at Patterson. Samples were collected using a rotary impact hammer drill to a depth of 0.5 inches and submitted for PCB analysis via USEPA method 8082 with Soxhlet Extraction (3540c).

Analytical results indicated that PCBs were either non-detect (2 samples at < 0.098 and < 0.099 ppm) or present at concentrations of 0.13, 0.19, 0.31, and 0.58 ppm. Based on these results, the waste segregation cut-line was verified at a distance of 12 inches from the caulked joints.

The locations of the characterization samples are depicted on Figures 1 and 2. The complete analytical laboratory reports are provided in Attachment A and a summary of the results is presented on Table 1.

Removal of PCB-Containing and PCB-impacted Materials

Upon establishing site containment and controls, concrete at a distance of 12 inches from the joints was cut using a concrete saw and removed using pneumatic tools and hand tools. Caulking materials within the concrete joints were removed with the concrete decking. Removed materials were transported from the work area to the roll-off container staged in the adjacent waste storage area pending off-site disposal.

Underlying soils within the decking cut line were assumed to be a PCB Remediation Waste > 50 ppm and were removed using hand tools to an initial depth of 12 inches below the bottom of the pad. Soils were transported from the work area to the roll-off container staged in the waste storage area pending off-site disposal.

The removal areas are depicted on Figures 1 and 2.



Typical Removal Area

Following removal of the caulking, concrete decking, and underlying soils, Woodard & Curran field personnel conducted visual inspections to confirm material removal was conducted in accordance with the remediation plan and Approval. Verification sampling of remaining masonry and the underlying soils was conducted in accordance with the PCB Remediation Plan, as described below.

Remaining Concrete and Granite Surfaces Above the Joint – Samples were collected from concrete and granite materials at a distance of 4 inches above the joint, a point corresponding to the planned installation height of the replacement pads. In accordance with the Approval, four samples were collected from each pad for a total of 8 samples. Analytical results indicated the following:

- Total PCBs were reported as non-detect in all three samples of granite;
- Total PCBs were reported as non-detect or ≤ 1 ppm in 3 of the 5 concrete samples; and
- Total PCBs were reported at concentrations of 1.09 ppm (Patterson) and 1.18 ppm (MacKimmie) in two of the concrete samples collected from the sides of the building foundations. At these two locations, additional samples were collected at a distance of 6 inches above the joint (corresponding to the corner of the top of the slab) and submitted for PCB analysis. Analytical results indicated that PCBs were < 0.097 ppm in one sample and present at a concentration of 0.18 ppm in the other sample.



Remaining Concrete and Granite Surfaces Below the Joint – Two samples of concrete were collected at a distance of 12 inches below the former joint at each pad area (the samples included concrete forms below the granite stairs). Analytical results indicated the following:

- MacKimmie – total PCBs were reported at a concentration of 0.19 ppm on the side of the concrete foundation and at a concentration of 7.3 ppm on the concrete form below the granite stairs. A follow-up sample was collected at a distance of 24 inches below the joint on the concrete form below the granite stairs and reported to contain PCBs at a concentration of 0.13 ppm.
- Patterson – total PCBs were reported at concentrations of 0.14 and 0.38 ppm.

Based on these results the following concrete and granite materials were determined to contain PCBs > 1 ppm and subject to encapsulation and long term monitoring as described below:

- Granite Stairs – materials formerly in direct contact with and to distances of 4 inches above and 2 inches below the former caulked joints (the entire vertical face of the stair).
- Concrete Form below Granite Stair – materials to a distance of 12 inches below the former joint at Patterson and 24 inches below the former joint at MacKimmie.
- Concrete Retaining Walls – materials formerly in direct contact with and to distances of 4 inches above and 12 inches below the former caulked joints.
- Concrete Foundation – materials formerly in direct contact with and to distances of 6 inches above and 12 inches below the former joint.

The locations of the concrete verification samples are depicted on Figures 1 and 2. The complete analytical laboratory reports are provided in Attachment A and a summary of the results is presented on Table 1.

Underlying Soils – Following excavation of soils to an initial depth of 12 inches below the concrete pad, verification samples were collected at a frequency of 1 sample per 10 l.f. of joints for a total of 2 samples from below the MacKimmie pad and 4 samples from below the Patterson pad. Soil samples were collected using hand tools from a depth of 0 to 3 inches below the base of the excavation and submitted for PCB analysis. Analytical results indicated the following:

- MacKimmie - Total PCBs were reported at concentrations ≤ 1 ppm in both samples (total PCBs reported at concentrations of 0.12 and 0.59 ppm).
- Patterson - Total PCBs were reported at concentrations ≤ 1 ppm in 2 of the 4 samples (0.68 and 0.99 ppm) and > 1 ppm in the other 2 samples (5.3 and 5.4 ppm).

Based on these results, an additional 12 inches of soil was excavated from representative locations at Patterson and follow up samples were collected. Results from the follow up samples indicated that PCBs were non-detect in one sample and that PCBs > 1 ppm were still present in soils below the granite stairs (2.22 ppm). An additional 6 inches of soil were removed from this area (total excavation depth of 30 inches). Analytical results from the follow up sample collected at this location indicated that PCBs were non-detect (< 0.010 ppm).

The locations of the soil verification samples are depicted on Figures 1 and 2. The complete analytical laboratory reports are provided in Attachment A and a summary of the results is presented on Table 2.

Encapsulation and Long-Term Monitoring

Concrete and granite materials scheduled to remain in place and determined to contain residual PCBs > 1 ppm were encapsulated with two coats of Sikagard 62 liquid epoxy coating. Following application, visual inspections were conducted to verify the application resulted in a smooth uniform coat over the entire surface. One baseline wipe sample was collected from encapsulated surfaces at each building. Wipe samples were collected using a hexane saturated gauze in accordance with the standard wipe test



procedure of 40 CFR 761.123 over a 100 cm² area. Analytical results indicated that PCBs were non-detect in both samples ($\leq 0.20 \mu\text{g}/100 \text{ cm}^2$). The locations of the wipe samples are depicted on Figures 1 and 2 and the complete analytical laboratory reports are included in Attachment A.

Concrete and granite materials containing residual PCBs and encapsulated will be incorporated into the annual long term monitoring program for the Southwest Concourse Area beginning with the 2018 annual event; however, these materials were covered by the replacement concrete pads and are inaccessible for visual inspection and follow-up sampling.

Waste Storage, Shipment and Disposal

All materials generated during the remediation activities, including caulking, concrete, soils, polyethylene sheeting, used PPE, and decontamination materials were placed directly into a lined and labeled roll-off container within the adjacent waste storage area. All PCB related waste materials were managed as a single waste stream for disposal as $\geq 50 \text{ ppm}$ PCB wastes with ACM and as a State of Massachusetts Hazardous Waste (MA02). A total of 9.6 tons of PCB waste were shipped off-site on August 7, 2017. The waste was transported under uniform hazardous waste manifest for disposal at Environmental Quality's Wayne Disposal landfill located in Belleville, Michigan. Copies of the signed hazardous waste manifest and certificate of disposal are included as Attachment B.

If you have any questions or require further information, please feel free to contact me by email at gfranklin@woodardcurran.com or at the number listed above.

Sincerely,

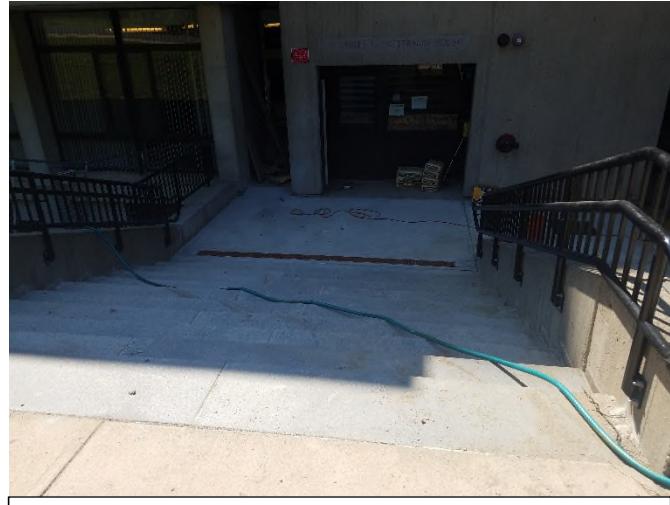
WOODARD & CURRAN INC.

A handwritten signature in blue ink, appearing to read "George J. Franklin".

George J. Franklin, CHMM
Technical Manager

Enclosures: Table 1 – Summary of Masonry Verification Sampling Results
Table 2 – Summary of Soil Verification Sampling Results
Figure 1 – MacKimmie House Concrete Pad Removal Area
Figure 2 – Patterson House Concrete Pad Removal Area
Attachments A and B

CC: Terri Wolejko, UMass



New Construction MacKimmie Pad



Tables

Table 1
Summary of Masonry Verification Sampling Results

Sample Type	Sample Identification	Sample Date	Material Sampled	Distance from Seam	Total PCBs (ppm)
MacKimmie House					
Concrete Pad Segregation	MH-CBC-001	5/15/2017	Concrete	1 foot	0.19
	MH-CBC-002	5/15/2017	Concrete	1 foot	< 0.099
Patterson House					
Concrete Pad Segregation	PH-CBC-008	5/15/2017	Concrete	1 foot	0.31
	PH-CBC-009	5/15/2017	Concrete	1 foot	< 0.098
	PH-CBC-014	5/15/2017	Concrete	1 foot	0.58
	PH-CBC-015	5/15/2017	Concrete	1 foot	0.13
Verification - Above the Joint	PH-VBC-010	5/15/2017	Concrete	4 inches	1.09
	PH-VBC-017	5/22/2017	Concrete	6 inches ⁽¹⁾	< 0.097
	PH-VBC-011	5/15/2017	Concrete	4 inches	0.61
	PH-VBC-012	5/15/2017	Concrete	4 inches	0.60
	PH-VBG-013	5/15/2017	Granite	4 inches	< 0.079
Verification - Below the Joint	PH-VBC-101	5/24/2017	Concrete	12 inches	0.14
	PH-VBC-102	5/24/2017	Concrete	12 inches	0.38

Notes:

All samples extracted by Soxhlet Method 3540C and analyzed for PCBs by USEPA Method 8082.

1. Samples collected immediately past the 90-degree angle (< 1 inch from corner on top of slab).

Table 2
Summary of Soil Verification Sampling Results

Sample Type	Sample Identification	Sample Date	Material Sampled	Depth	Total PCBs (ppm)
MacKimmie House					
Verification	MH-VBS-110	5/31/2017	Base of Excavation	12	0.59
	MH-VBS-112	5/31/2017	Base of Excavation	12	0.12
Patterson House					
Verification	PH-VBS-103	5/24/2017	Base of Excavation	12	0.99
	PH-VBS-104	5/24/2017	Base of Excavation	12	5.30
	PH-VBS-201	6/2/2017	Base of Excavation	24	<0.010
	PH-VBS-105	5/24/2017	Base of Excavation	12	0.68
	PH-VBS-106	5/24/2017	Base of Excavation	12	5.40
	PH-VBS-202	6/2/2017	Base of Excavation	24	2.22
	PH-VBS-301	6/9/2017	Base of Excavation	30	< 0.10

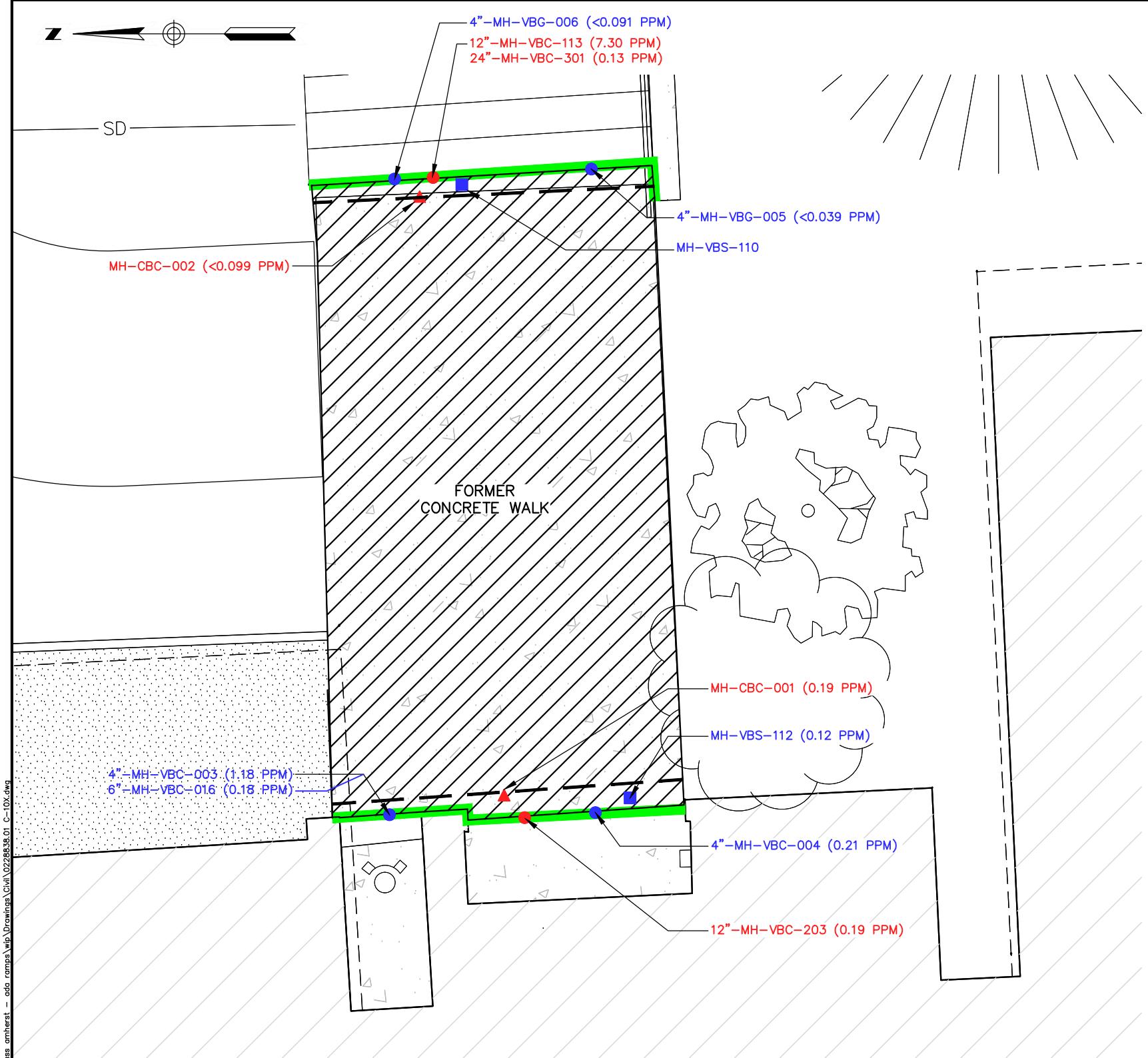
Notes:

All samples extracted by Soxhlet Method 3540C and analyzed for PCBs by USEPA Method 8082.

Bold and shaded results indicate total PCBs > 1 ppm.



Figures



5' 0 5' 10'
BAR SCALE
1" = 5'
CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF MASSACHUSETTS
360 CAMPUS CENTER WAY
AMHERST, MA

PCB REMEDIATION COMPLETION REPORT

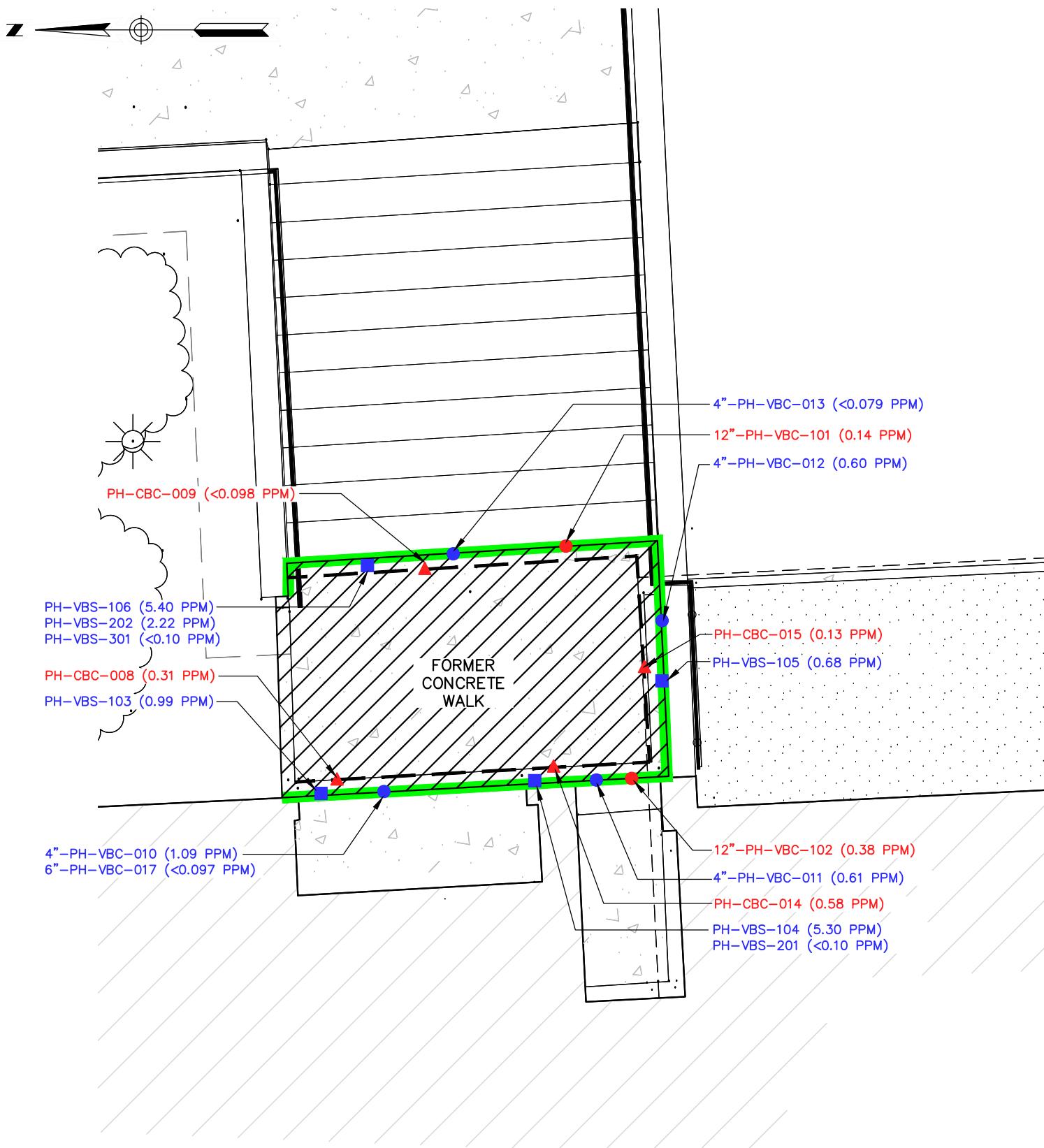
MACKIMIE HOUSE CONCRETE PAD REMOVAL AREA

DESIGNED BY:	DRAWN BY:	CHECKED BY:
BCM	0228838.01 CG-1000K&WG	

35 New England Business Center
Andover, Massachusetts 01810
866.702.6371 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

JOB NO: 0228838.03
DATE: AUGUST 2017
SCALE: 1"=5'

FIG. 1



SITE PLAN
SCALE: 1"=5'

LEGEND

SYMBOL
■ PH-VBS-105

DESCRIPTION
SOIL VERIFICATION SAMPLE LOCATION & IDENTIFIER

SYMBOL
▲ PH-CBC-014

DESCRIPTION
CONCRETE PAD WASTE SEGREGATION VERIFICATION SAMPLE LOCATION & IDENTIFIER

SYMBOL
● PH-VBC-011

DESCRIPTION
CONCRETE VERIFICATION SAMPLE LOCATION & IDENTIFIER – REMAINING SURFACES ABOVE THE CAULKED JOINTS

SYMBOL
● PH-VBC-102

DESCRIPTION
CONCRETE VERIFICATION SAMPLE LOCATION & IDENTIFIER – REMAINING SURFACES BELOW THE CAULKED JOINTS

SYMBOL
— — —

DESCRIPTION
CONCRETE PAD WASTE SEGREGATION CUT-LINES; 1 FOOT FROM CAULKED JOINTS

SYMBOL
— — —

DESCRIPTION
LOCATION OF ENCAPSULATED MATERIALS SUBJECT TO LONG TERM MONITORING; ALL ENCAPSULATED MATERIALS ARE COVERED WITH NEW CONCRETE & INACCESSIBLE

5' 0 5' 10'
BAR SCALE
1" = 5'
CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF MASSACHUSETTS
360 CAMPUS CENTER WAY
AMHERST, MA

PCB REMEDIATION PLAN

35 New England Business Center
Andover, Massachusetts 01810
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COMMITMENT & INTEGRITY DRIVE RESULTS

JOB NO: 0228838.03
DATE: FEBRUARY 2017
SCALE: 1"=5'

FIG. 2

PATTERSON HOUSE CONCRETE
PAD REMOVAL AREA

DESIGNED BY: BCM

DRAWN BY: BCM

CHECKED BY: 0228838.01 CG-1000KWMG

WOODARD
& CURRAN



ATTACHMENT A



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

May 17, 2017

George Franklin
Woodard & Curran - Andover, MA
40 Shattuck Road, Suite 110
Andover, MA 01810

Project Location: UMass Amherst
Client Job Number:
Project Number: 228838
Laboratory Work Order Number: 17E0706

Enclosed are results of analyses for samples received by the laboratory on May 15, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." sharing a common initial stroke, and "Kelley" following in a larger, more distinct script.

Meghan E. Kelley
Project Manager

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Woodard & Curran - Andover, MA
40 Shattuck Road., Suite 110
Andover, MA 01810
ATTN: George Franklin

REPORT DATE: 5/17/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 228838

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17E0706

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

PROJECT LOCATION: UMass Amherst

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MH-CBC-001	17E0706-01	Product/Solid		SW-846 8082A	
MH-CBC-002	17E0706-02	Product/Solid		SW-846 8082A	
MH-VBC-003	17E0706-03	Product/Solid		SW-846 8082A	
MH-VBC-004	17E0706-04	Product/Solid		SW-846 8082A	
MH-VBG-005	17E0706-05	Product/Solid		SW-846 8082A	
MH-VBG-006	17E0706-06	Product/Solid		SW-846 8082A	
MH-VBCD-007	17E0706-07	Product/Solid		SW-846 8082A	
PH-CBC-008	17E0706-08	Product/Solid		SW-846 8082A	
PH-CBC-009	17E0706-09	Product/Solid		SW-846 8082A	
PH-VBC-010	17E0706-10	Product/Solid		SW-846 8082A	
PH-VBC-011	17E0706-11	Product/Solid		SW-846 8082A	
PH-VBC-012	17E0706-12	Product/Solid		SW-846 8082A	
PH-VBG-013	17E0706-13	Product/Solid		SW-846 8082A	
PH-CBC-014	17E0706-14	Product/Solid		SW-846 8082A	
PH-CBC-015	17E0706-15	Product/Solid		SW-846 8082A	
EB-01	17E0706-16	Equipment Blank Water		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.

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

A handwritten signature in black ink that reads "Lisa A. Worthington". The signature is fluid and cursive, with "Lisa A." on the first line and "Worthington" on the second line.

Lisa A. Worthington
Project Manager



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-CBC-001

Sampled: 5/15/2017 10:02

Sample ID: 17E0706-01

Sample Matrix: Product/Solid

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	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1260 [1]	0.19	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:33	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	90.0		30-150					5/17/17 10:33	
Decachlorobiphenyl [2]	84.9		30-150					5/17/17 10:33	
Tetrachloro-m-xylene [1]	79.3		30-150					5/17/17 10:33	
Tetrachloro-m-xylene [2]	78.3		30-150					5/17/17 10:33	



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-CBC-002

Sampled: 5/15/2017 10:07

Sample ID: 17E0706-02

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1221 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1232 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1242 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1248 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1254 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1260 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1262 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Aroclor-1268 [1]	ND	0.099	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:45	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	94.6	30-150							5/17/17 10:45
Decachlorobiphenyl [2]	86.0	30-150							5/17/17 10:45
Tetrachloro-m-xylene [1]	76.9	30-150							5/17/17 10:45
Tetrachloro-m-xylene [2]	76.4	30-150							5/17/17 10:45



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-VBC-003

Sampled: 5/15/2017 10:11

Sample ID: 17E0706-03

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1221 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1232 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1242 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1248 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1254 [1]	0.96	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1260 [2]	0.22	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1262 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Aroclor-1268 [1]	ND	0.093	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 10:58	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	91.4	30-150							5/17/17 10:58
Decachlorobiphenyl [2]	88.3	30-150							5/17/17 10:58
Tetrachloro-m-xylene [1]	88.2	30-150							5/17/17 10:58
Tetrachloro-m-xylene [2]	84.4	30-150							5/17/17 10:58



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-VBC-004

Sampled: 5/15/2017 10:14

Sample ID: 17E0706-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1221 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1232 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1242 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1248 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1254 [1]	0.21	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1260 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1262 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Aroclor-1268 [1]	ND	0.070	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:10	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	92.7	30-150						5/17/17 11:10	
Decachlorobiphenyl [2]	87.8	30-150						5/17/17 11:10	
Tetrachloro-m-xylene [1]	82.8	30-150						5/17/17 11:10	
Tetrachloro-m-xylene [2]	81.6	30-150						5/17/17 11:10	



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-VBG-005

Sampled: 5/15/2017 10:17

Sample ID: 17E0706-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1221 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1232 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1242 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1248 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1254 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1260 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1262 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Aroclor-1268 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:22	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	89.5	30-150							5/17/17 11:22
Decachlorobiphenyl [2]	85.1	30-150							5/17/17 11:22
Tetrachloro-m-xylene [1]	78.7	30-150							5/17/17 11:22
Tetrachloro-m-xylene [2]	77.1	30-150							5/17/17 11:22



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-VBG-006

Sampled: 5/15/2017 10:20

Sample ID: 17E0706-06

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1221 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1232 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1242 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1248 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1254 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1260 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1262 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Aroclor-1268 [1]	ND	0.091	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:34	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	96.3	30-150							5/17/17 11:34
Decachlorobiphenyl [2]	91.5	30-150							5/17/17 11:34
Tetrachloro-m-xylene [1]	81.2	30-150							5/17/17 11:34
Tetrachloro-m-xylene [2]	79.7	30-150							5/17/17 11:34



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: MH-VBCD-007

Sampled: 5/15/2017 10:14

Sample ID: 17E0706-07

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1221 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1232 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1242 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1248 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1254 [1]	0.19	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1260 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1262 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Aroclor-1268 [1]	ND	0.082	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 11:46	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	89.6	30-150							5/17/17 11:46
Decachlorobiphenyl [2]	84.7	30-150							5/17/17 11:46
Tetrachloro-m-xylene [1]	79.1	30-150							5/17/17 11:46
Tetrachloro-m-xylene [2]	77.9	30-150							5/17/17 11:46



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-CBC-008

Sampled: 5/15/2017 10:30

Sample ID: 17E0706-08Sample Matrix: Product/Solid**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1221 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1232 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1242 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1248 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1254 [1]	0.31	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1260 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1262 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Aroclor-1268 [1]	ND	0.095	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:23	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	86.0	30-150						5/17/17 12:23	
Decachlorobiphenyl [2]	80.9	30-150						5/17/17 12:23	
Tetrachloro-m-xylene [1]	80.2	30-150						5/17/17 12:23	
Tetrachloro-m-xylene [2]	79.7	30-150						5/17/17 12:23	



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-CBC-009

Sampled: 5/15/2017 10:40

Sample ID: 17E0706-09

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1221 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1232 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1242 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1248 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1254 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1260 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1262 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Aroclor-1268 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:35	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	85.0	30-150							5/17/17 12:35
Decachlorobiphenyl [2]	80.0	30-150							5/17/17 12:35
Tetrachloro-m-xylene [1]	74.0	30-150							5/17/17 12:35
Tetrachloro-m-xylene [2]	73.9	30-150							5/17/17 12:35



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-VBC-010

Sampled: 5/15/2017 10:45

Sample ID: 17E0706-10

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1221 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1232 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1242 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1248 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1254 [1]	0.96	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1260 [1]	0.13	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1262 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Aroclor-1268 [1]	ND	0.090	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:47	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	93.8	30-150							5/17/17 12:47
Decachlorobiphenyl [2]	88.3	30-150							5/17/17 12:47
Tetrachloro-m-xylene [1]	83.1	30-150							5/17/17 12:47
Tetrachloro-m-xylene [2]	81.8	30-150							5/17/17 12:47



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-VBC-011

Sampled: 5/15/2017 10:47

Sample ID: 17E0706-11

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1221 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1232 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1242 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1248 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1254 [1]	0.61	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1260 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1262 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Aroclor-1268 [1]	ND	0.088	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 12:59	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	89.4	30-150						5/17/17 12:59	
Decachlorobiphenyl [2]	83.9	30-150						5/17/17 12:59	
Tetrachloro-m-xylene [1]	76.7	30-150						5/17/17 12:59	
Tetrachloro-m-xylene [2]	76.1	30-150						5/17/17 12:59	



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-VBC-012

Sampled: 5/15/2017 10:50

Sample ID: 17E0706-12

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1221 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1232 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1242 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1248 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1254 [1]	0.49	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1260 [2]	0.11	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1262 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Aroclor-1268 [1]	ND	0.076	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:12	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	89.0	30-150							5/17/17 13:12
Decachlorobiphenyl [2]	83.7	30-150							5/17/17 13:12
Tetrachloro-m-xylene [1]	75.8	30-150							5/17/17 13:12
Tetrachloro-m-xylene [2]	73.9	30-150							5/17/17 13:12



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-VBG-013

Sampled: 5/15/2017 10:54

Sample ID: 17E0706-13

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1221 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1232 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1242 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1248 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1254 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1260 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1262 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Aroclor-1268 [1]	ND	0.079	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:24	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	95.1	30-150							5/17/17 13:24
Decachlorobiphenyl [2]	89.4	30-150							5/17/17 13:24
Tetrachloro-m-xylene [1]	81.3	30-150							5/17/17 13:24
Tetrachloro-m-xylene [2]	79.8	30-150							5/17/17 13:24



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-CBC-014

Sampled: 5/15/2017 10:35

Sample ID: 17E0706-14

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1221 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1232 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1242 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1248 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1254 [1]	0.47	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1260 [2]	0.11	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1262 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Aroclor-1268 [1]	ND	0.089	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:36	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	93.3	30-150							5/17/17 13:36
Decachlorobiphenyl [2]	86.4	30-150							5/17/17 13:36
Tetrachloro-m-xylene [1]	80.3	30-150							5/17/17 13:36
Tetrachloro-m-xylene [2]	79.4	30-150							5/17/17 13:36



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: PH-CBC-015

Sampled: 5/15/2017 10:29

Sample ID: 17E0706-15

Sample Matrix: Product/Solid

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	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1254 [2]	0.13	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/15/17	5/17/17 13:48	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	98.0	30-150							5/17/17 13:48
Decachlorobiphenyl [2]	92.5	30-150							5/17/17 13:48
Tetrachloro-m-xylene [1]	87.4	30-150							5/17/17 13:48
Tetrachloro-m-xylene [2]	86.7	30-150							5/17/17 13:48



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E0706

Date Received: 5/15/2017

Field Sample #: EB-01

Sampled: 5/15/2017 12:45

Sample ID: 17E0706-16

Sample Matrix: Equipment Blank Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	5/15/17	5/17/17 13:20	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	91.1	30-150							5/17/17 13:20
Decachlorobiphenyl [2]	94.3	30-150							5/17/17 13:20
Tetrachloro-m-xylene [1]	87.4	30-150							5/17/17 13:20
Tetrachloro-m-xylene [2]	90.8	30-150							5/17/17 13:20



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

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17E0706-01 [MH-CBC-001]	B176913	2.00	10.0	05/15/17
17E0706-02 [MH-CBC-002]	B176913	2.02	10.0	05/15/17
17E0706-03 [MH-VBC-003]	B176913	2.14	10.0	05/15/17
17E0706-04 [MH-VBC-004]	B176913	2.85	10.0	05/15/17
17E0706-05 [MH-VBG-005]	B176913	2.25	10.0	05/15/17
17E0706-06 [MH-VBG-006]	B176913	2.20	10.0	05/15/17
17E0706-07 [MH-VBCD-007]	B176913	2.45	10.0	05/15/17
17E0706-08 [PH-CBC-008]	B176913	2.10	10.0	05/15/17
17E0706-09 [PH-CBC-009]	B176913	2.05	10.0	05/15/17
17E0706-10 [PH-VBC-010]	B176913	2.22	10.0	05/15/17
17E0706-11 [PH-VBC-011]	B176913	2.27	10.0	05/15/17
17E0706-12 [PH-VBC-012]	B176913	2.63	10.0	05/15/17
17E0706-13 [PH-VBG-013]	B176913	2.52	10.0	05/15/17
17E0706-14 [PH-CBC-014]	B176913	2.24	10.0	05/15/17
17E0706-15 [PH-CBC-015]	B176913	2.01	10.0	05/15/17

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17E0706-16 [EB-01]	B176923	1000	10.0	05/15/17



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QUALITY CONTROL**Polychlorinated Biphenyls By GC/ECD - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch B176923 - SW-846 3510C

Blank (B176923-BLK1)										Prepared: 05/15/17 Analyzed: 05/17/17
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	1.71		µg/L	2.00		85.4		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.74		µg/L	2.00		87.0		30-150		
Surrogate: Tetrachloro-m-xylene	1.75		µg/L	2.00		87.4		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.88		µg/L	2.00		93.9		30-150		

LCS (B176923-BS1)										Prepared: 05/15/17 Analyzed: 05/17/17
Aroclor-1016	0.48	0.20	µg/L	0.500		96.3		40-140		
Aroclor-1016 [2C]	0.48	0.20	µg/L	0.500		95.5		40-140		
Aroclor-1260	0.42	0.20	µg/L	0.500		83.4		40-140		
Aroclor-1260 [2C]	0.40	0.20	µg/L	0.500		80.2		40-140		
Surrogate: Decachlorobiphenyl	1.78		µg/L	2.00		88.9		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.82		µg/L	2.00		90.8		30-150		
Surrogate: Tetrachloro-m-xylene	1.72		µg/L	2.00		86.2		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.87		µg/L	2.00		93.6		30-150		

LCS Dup (B176923-BSD1)										Prepared: 05/15/17 Analyzed: 05/17/17
Aroclor-1016	0.50	0.20	µg/L	0.500		101		40-140	4.44	20
Aroclor-1016 [2C]	0.49	0.20	µg/L	0.500		98.7		40-140	3.22	20
Aroclor-1260	0.43	0.20	µg/L	0.500		86.8		40-140	4.09	20
Aroclor-1260 [2C]	0.42	0.20	µg/L	0.500		83.6		40-140	4.10	20
Surrogate: Decachlorobiphenyl	1.83		µg/L	2.00		91.5		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.92		µg/L	2.00		95.9		30-150		
Surrogate: Tetrachloro-m-xylene	1.77		µg/L	2.00		88.4		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.87		µg/L	2.00		93.7		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	RPD Limit	Notes
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Batch B176913 - SW-846 3540C

Blank (B176913-BLK1)					Prepared: 05/15/17 Analyzed: 05/17/17					
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	0.943		mg/Kg	1.00		94.3		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.888		mg/Kg	1.00		88.8		30-150		
Surrogate: Tetrachloro-m-xylene	0.818		mg/Kg	1.00		81.8		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.803		mg/Kg	1.00		80.3		30-150		

LCS (B176913-BS1)					Prepared: 05/15/17 Analyzed: 05/17/17					
Aroclor-1016	0.87	0.10	mg/Kg	1.00		87.1		40-140		
Aroclor-1016 [2C]	0.86	0.10	mg/Kg	1.00		86.2		40-140		
Aroclor-1260	0.83	0.10	mg/Kg	1.00		82.9		40-140		
Aroclor-1260 [2C]	0.75	0.10	mg/Kg	1.00		74.5		40-140		
Surrogate: Decachlorobiphenyl	0.961		mg/Kg	1.00		96.1		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.903		mg/Kg	1.00		90.3		30-150		
Surrogate: Tetrachloro-m-xylene	0.802		mg/Kg	1.00		80.2		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.786		mg/Kg	1.00		78.6		30-150		

LCS Dup (B176913-BSD1)					Prepared: 05/15/17 Analyzed: 05/17/17					
Aroclor-1016	0.89	0.10	mg/Kg	1.00		89.4		40-140	2.59	30
Aroclor-1016 [2C]	0.88	0.10	mg/Kg	1.00		88.5		40-140	2.54	30
Aroclor-1260	0.81	0.10	mg/Kg	1.00		80.9		40-140	2.41	30
Aroclor-1260 [2C]	0.75	0.10	mg/Kg	1.00		74.9		40-140	0.536	30
Surrogate: Decachlorobiphenyl	0.935		mg/Kg	1.00		93.5		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.877		mg/Kg	1.00		87.7		30-150		
Surrogate: Tetrachloro-m-xylene	0.813		mg/Kg	1.00		81.3		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.798		mg/Kg	1.00		79.8		30-150		



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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Limit Notes
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Batch B176913 - SW-846 3540C

Matrix Spike (B176913-MS1)		Source: 17E0706-01		Prepared: 05/15/17 Analyzed: 05/17/17					
Aroclor-1016	0.60	0.093	mg/Kg	0.926	ND	65.0	40-140		
Aroclor-1016 [2C]	0.60	0.093	mg/Kg	0.926	ND	65.2	40-140		
Aroclor-1260	0.63	0.093	mg/Kg	0.926	0.19	48.0	40-140		
Aroclor-1260 [2C]	0.58	0.093	mg/Kg	0.926	0.19	42.3	40-140		
Surrogate: Decachlorobiphenyl	0.851		mg/Kg	0.926		91.9	30-150		
Surrogate: Decachlorobiphenyl [2C]	0.802		mg/Kg	0.926		86.6	30-150		
Surrogate: Tetrachloro-m-xylene	0.746		mg/Kg	0.926		80.6	30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.736		mg/Kg	0.926		79.4	30-150		
Matrix Spike Dup (B176913-MSD1)		Source: 17E0706-01		Prepared: 05/15/17 Analyzed: 05/17/17					
Aroclor-1016	0.70	0.095	mg/Kg	0.948	ND	73.9	40-140	15.1	50
Aroclor-1016 [2C]	0.69	0.095	mg/Kg	0.948	ND	73.0	40-140	13.7	50
Aroclor-1260	0.70	0.095	mg/Kg	0.948	0.19	53.9	40-140	9.88	50
Aroclor-1260 [2C]	0.64	0.095	mg/Kg	0.948	0.19	48.0	40-140	10.4	50
Surrogate: Decachlorobiphenyl	0.925		mg/Kg	0.948		97.6	30-150		
Surrogate: Decachlorobiphenyl [2C]	0.872		mg/Kg	0.948		92.0	30-150		
Surrogate: Tetrachloro-m-xylene	0.799		mg/Kg	0.948		84.3	30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.792		mg/Kg	0.948		83.5	30-150		



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

MH-CBC-001

Lab Sample ID: 17E0706-01 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1260	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.19	0.0



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

MH-VBC-003

Lab Sample ID: 17E0706-03 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.96	
	2	0.000	0.000	0.000	0.90	6.5
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.22	9.5



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

MH-VBC-004

Lab Sample ID: 17E0706-04 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.21	
	2	0.000	0.000	0.000	0.16	27.0



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

MH-VBCD-007

Lab Sample ID: 17E0706-07 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.15	23.5



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

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-CBC-008

Lab Sample ID: 17E0706-08 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.31	
	2	0.000	0.000	0.000	0.30	3.3



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

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-VBC-010

Lab Sample ID: 17E0706-10 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.96	
	2	0.000	0.000	0.000	0.88	8.7
Aroclor-1260	1	0.000	0.000	0.000	0.13	
	2	0.000	0.000	0.000	0.11	16.7



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

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

PH-VBC-011

SW-846 8082A

Lab Sample ID: 17E0706-11 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.61	
	2	0.000	0.000	0.000	0.58	5.0



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

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-VBC-012

Lab Sample ID: 17E0706-12 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.49	
	2	0.000	0.000	0.000	0.47	4.2
Aroclor-1260	1	0.000	0.000	0.000	0.096	
	2	0.000	0.000	0.000	0.11	13.6



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-CBC-014

Lab Sample ID: 17E0706-14 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.43	8.9
Aroclor-1260	1	0.000	0.000	0.000	0.10	
	2	0.000	0.000	0.000	0.11	9.5



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

PH-CBC-015

SW-846 8082A

Lab Sample ID: 17E0706-15 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

Instrument ID (1): **1234567890** Instrument ID (2): **9876543210**

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.12	
	2	0.000	0.000	0.000	0.13	8.0



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS

Lab Sample ID: B176913-BS1 Date(s) Analyzed: 05/17/2017 05/17/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.87	
	2	0.000	0.000	0.000	0.86	1.2
Aroclor-1260	1	0.000	0.000	0.000	0.83	
	2	0.000	0.000	0.000	0.75	10.1



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B176913-BSD1 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.89	
	2	0.000	0.000	0.000	0.88	1.1
Aroclor-1260	1	0.000	0.000	0.000	0.81	
	2	0.000	0.000	0.000	0.75	7.7



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B176913-MS1 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.60	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.63	
	2	0.000	0.000	0.000	0.58	8.3



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B176913-MSD1 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

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

Instrument ID (2)

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.70	
	2	0.000	0.000	0.000	0.69	1.4
Aroclor-1260	1	0.000	0.000	0.000	0.70	
	2	0.000	0.000	0.000	0.64	9.0



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B176923-BS1 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.48	
	2	0.000	0.000	0.000	0.48	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.40	4.9



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B176923-BSD1 Date(s) Analyzed: 05/17/2017 05/17/2017

Date(s) Analyzed: 05/17/2017 05/17/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.50	
	2	0.000	0.000	0.000	0.49	2.0
Aroclor-1260	1	0.000	0.000	0.000	0.43	
	2	0.000	0.000	0.000	0.42	2.4



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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
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.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Product/Solid</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA



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

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

**CHAIN OF CUSTODY RECORD**

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com
www.contestlabs.com17E0706
Rev 04/05/1239 Spruce Street
East Longmeadow, MA 01028

Company Name: Woodard & Channing

A

Address:

40 Shattuck Rd Andover MA 01810

Client PO#

DATA DELIVERY (check all that apply)

 FAX EMAIL WEBSITE

Fax #

Email:

franklin@woodardchanning.com

Project Location:

Attention: George Franklin

Project Provided? (for billing purposes)

Sampled By: Greg Reynolds, George Franklin
proposal date
 Yes

Project #

228838

Telephone:

203 699 6116

ANALYSIS REQUESTED

Collection	Beginning Date/Time	Ending Date/Time	Composite	Grab Code	Matrix	Lane Code	Dissolved Metals	
							<input type="radio"/> Field Filtered	<input type="radio"/> Lab to Filter
1	11/15/17	1002	X	5	U	X		
2	11/15/17	1007				X		
3	11/15/17	1011				X		
4	11/15/17	1014				X		
5	11/15/17	1017				X		
6	11/15/17	1020				X		
7	11/15/17	1014				X		
8	11/15/17	1030				X		
9	11/15/17	1040				X		
10	11/15/17	1045	J	J		X		

Comments:
418 hr. rush. (pre-approved)

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

- H = High; M = Medium; L = Low; C = Clean; U = Unknown
- A = air
- S = soil/solid
- SL = sludge
- O = other

Is your project MCP or RCP?

- MCP Form Required
- RCP Form Required
- MA State DW Form Required PWSID # _____

Relinquished by: (signature)	Date/Time:	Turnaround	Detection Limit Requirements
	11/15/17	<input type="checkbox"/> 7-Day <input type="checkbox"/> 10-Day <input type="checkbox"/> Other _____	Massachusetts:
Received by: (signature)	Date/Time:	RUSH ¹	Connecticut:
	11/01/17	<input type="checkbox"/> 24-Hr <input checked="" type="checkbox"/> 48-Hr <input type="checkbox"/> 72-Hr <input type="checkbox"/> 4-Day	Other:
Inquired by: (signature)	Date/Time:		
Received by: (signature)	Date/Time:		

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.



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



Page 1 of 2

Sample Receipt Checklist

CLIENT NAME: Woodard & Curran RECEIVED BY: MG DATE: 05/15/17

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

2) Does the chain agree with the samples?
If not, explain:

3) Are all the samples in good condition?
If not, explain:

4) How were the samples received:

On Ice _____ Direct from Sampling Ambient _____ In Cooler(s) _____

Were the samples received in Temperature Compliance of (2-6°C)? Yes _____ No N/A _____

Temperature °C by Temp blank _____ # Temperature °C by Temp gun 23.4 ^{AC} / 17.0 # 7

5) Are there Dissolved samples for the lab to filter?

Who was notified _____ Date _____ Time _____

Yes _____ No

6) Are there any RUSH or SHORT HOLDING TIME samples?

Who was notified BLM Date 5/15/17 Time 1310

Yes No _____

7) Location where samples are stored:

LOGIN

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

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

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

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	1	16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber clear jar	<u>15</u>
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 _____

Page 2 of 2

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)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	F	
4) Cooler Temperature is acceptable.	T	Direct From Sample
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.	N/A	
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.	N/A	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements?

Date/Time:

Date/Time:

Doc #277 Rev. 4 August 2013

Log-In Technician Initials: MG



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

May 26, 2017

George Franklin
Woodard & Curran - Andover, MA
40 Shattuck Road, Suite 110
Andover, MA 01810

Project Location: UMass Amherst
Client Job Number:
Project Number: 228838
Laboratory Work Order Number: 17E1140

Enclosed are results of analyses for samples received by the laboratory on May 23, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." sharing a common initial stroke, and "Kelley" following below.

Meghan E. Kelley
Project Manager

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Woodard & Curran - Andover, MA
40 Shattuck Road., Suite 110
Andover, MA 01810
ATTN: George Franklin

REPORT DATE: 5/26/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 228838

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17E1140

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

PROJECT LOCATION: UMass Amherst

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MH-VBC-016	17E1140-01	Product/Solid		SW-846 8082A	
PH-VBC-017	17E1140-02	Product/Solid		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.

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

A handwritten signature in black ink, appearing to read "Tod E. Kopyscinski". The signature is fluid and cursive, with some variations in line thickness.

Tod E. Kopyscinski
Laboratory Director



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E1140

Date Received: 5/23/2017

Field Sample #: MH-VBC-016

Sampled: 5/22/2017 08:44

Sample ID: 17E1140-01

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1221 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1232 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1242 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1248 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1254 [1]	0.18	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1260 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1262 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Aroclor-1268 [1]	ND	0.098	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 13:52	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	101	30-150							5/25/17 13:52
Decachlorobiphenyl [2]	103	30-150							5/25/17 13:52
Tetrachloro-m-xylene [1]	99.0	30-150							5/25/17 13:52
Tetrachloro-m-xylene [2]	97.3	30-150							5/25/17 13:52



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E1140

Date Received: 5/23/2017

Field Sample #: PH-VBC-017

Sampled: 5/22/2017 08:51

Sample ID: 17E1140-02Sample Matrix: Product/Solid**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1221 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1232 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1242 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1248 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1254 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1260 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1262 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Aroclor-1268 [1]	ND	0.097	mg/Kg	1		SW-846 8082A	5/23/17	5/25/17 14:04	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	96.0	30-150							5/25/17 14:04
Decachlorobiphenyl [2]	97.8	30-150							5/25/17 14:04
Tetrachloro-m-xylene [1]	96.2	30-150							5/25/17 14:04
Tetrachloro-m-xylene [2]	94.2	30-150							5/25/17 14:04



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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17E1140-01 [MH-VBC-016]	B177623	2.04	10.0	05/23/17
17E1140-02 [PH-VBC-017]	B177623	2.05	10.0	05/23/17



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

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

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

Batch B177623 - SW-846 3540C

Blank (B177623-BLK1)					Prepared: 05/23/17 Analyzed: 05/25/17					
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	1.11	mg/Kg	1.00		111	30-150				
Surrogate: Decachlorobiphenyl [2C]	1.13	mg/Kg	1.00		113	30-150				
Surrogate: Tetrachloro-m-xylene	0.971	mg/Kg	1.00		97.1	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.983	mg/Kg	1.00		98.3	30-150				

LCS (B177623-BS1)					Prepared: 05/23/17 Analyzed: 05/25/17					
Aroclor-1016	1.1	0.10	mg/Kg	1.00		111	40-140			
Aroclor-1016 [2C]	1.1	0.10	mg/Kg	1.00		109	40-140			
Aroclor-1260	1.0	0.10	mg/Kg	1.00		101	40-140			
Aroclor-1260 [2C]	0.95	0.10	mg/Kg	1.00		95.4	40-140			
Surrogate: Decachlorobiphenyl	1.14	mg/Kg	1.00		114	30-150				
Surrogate: Decachlorobiphenyl [2C]	1.18	mg/Kg	1.00		118	30-150				
Surrogate: Tetrachloro-m-xylene	1.06	mg/Kg	1.00		106	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	1.07	mg/Kg	1.00		107	30-150				

LCS Dup (B177623-BSD1)					Prepared: 05/23/17 Analyzed: 05/25/17					
Aroclor-1016	1.1	0.10	mg/Kg	1.00		114	40-140	2.51	30	
Aroclor-1016 [2C]	1.1	0.10	mg/Kg	1.00		111	40-140	2.37	30	
Aroclor-1260	1.0	0.10	mg/Kg	1.00		100	40-140	0.913	30	
Aroclor-1260 [2C]	0.94	0.10	mg/Kg	1.00		93.9	40-140	1.56	30	
Surrogate: Decachlorobiphenyl	1.10	mg/Kg	1.00		110	30-150				
Surrogate: Decachlorobiphenyl [2C]	1.16	mg/Kg	1.00		116	30-150				
Surrogate: Tetrachloro-m-xylene	1.09	mg/Kg	1.00		109	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	1.09	mg/Kg	1.00		109	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	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	---------	-----------	-------

Batch B177623 - SW-846 3540C

Matrix Spike (B177623-MS1)	Source: 17E1140-02			Prepared: 05/23/17 Analyzed: 05/25/17					
Aroclor-1016	0.60	0.096	mg/Kg	0.957	ND	62.7	40-140		
Aroclor-1016 [2C]	0.59	0.096	mg/Kg	0.957	ND	61.6	40-140		
Aroclor-1260	0.63	0.096	mg/Kg	0.957	ND	66.1	40-140		
Aroclor-1260 [2C]	0.58	0.096	mg/Kg	0.957	ND	60.7	40-140		
Surrogate: Decachlorobiphenyl	0.829		mg/Kg	0.957		86.6	30-150		
Surrogate: Decachlorobiphenyl [2C]	0.866		mg/Kg	0.957		90.5	30-150		
Surrogate: Tetrachloro-m-xylene	0.834		mg/Kg	0.957		87.1	30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.825		mg/Kg	0.957		86.2	30-150		
Matrix Spike Dup (B177623-MSD1)	Source: 17E1140-02			Prepared: 05/23/17 Analyzed: 05/25/17					
Aroclor-1016	0.84	0.099	mg/Kg	0.990	ND	84.9	40-140	33.5	50
Aroclor-1016 [2C]	0.83	0.099	mg/Kg	0.990	ND	84.3	40-140	34.4	50
Aroclor-1260	0.82	0.099	mg/Kg	0.990	ND	83.1	40-140	26.2	50
Aroclor-1260 [2C]	0.76	0.099	mg/Kg	0.990	ND	76.8	40-140	26.7	50
Surrogate: Decachlorobiphenyl	0.975		mg/Kg	0.990		98.5	30-150		
Surrogate: Decachlorobiphenyl [2C]	1.01		mg/Kg	0.990		102	30-150		
Surrogate: Tetrachloro-m-xylene	1.01		mg/Kg	0.990		102	30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.991		mg/Kg	0.990		100	30-150		



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

MH-VBC-016

Lab Sample ID: 17E1140-01 Date(s) Analyzed: 05/25/2017 05/25/2017

Date(s) Analyzed: 05/25/2017 05/25/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.17	5.7



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

SW-846 8082A

Lab Sample ID: B177623-BS1 Date(s) Analyzed: 05/25/2017 05/25/2017

Date(s) Analyzed: 05/25/2017 05/25/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.1	
	2	0.000	0.000	0.000	1.1	0.0
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.95	5.1



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B177623-BSD1 Date(s) Analyzed: 05/25/2017 05/25/2017

Date(s) Analyzed: 05/25/2017 05/25/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.1	
	2	0.000	0.000	0.000	1.1	0.0
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.94	6.2



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B177623-MS1 Date(s) Analyzed: 05/25/2017 05/25/2017

Date(s) Analyzed: 05/25/2017 05/25/2017

Instrument ID (1): **1234567890** Instrument ID (2): **9876543210**

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.60	
	2	0.000	0.000	0.000	0.59	1.7
Aroclor-1260	1	0.000	0.000	0.000	0.63	
	2	0.000	0.000	0.000	0.58	8.3



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Up

Lab Sample ID: B177623-MSD1 Date(s) Analyzed: 05/25/2017 05/25/2017

Date(s) Analyzed: 05/25/2017 05/25/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.84	
	2	0.000	0.000	0.000	0.83	1.2
Aroclor-1260	1	0.000	0.000	0.000	0.82	
	2	0.000	0.000	0.000	0.76	7.6



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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.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Product/Solid</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA

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

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

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



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Sample Receipt Checklist

CLIENT NAME:	Woodard & Curran	RECEIVED BY:	JM	DATE:	5/23/17
1) Was the chain(s) of custody relinquished and signed?			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No COC Incl.
2) Does the chain agree with the samples?			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
If not, explain:					
3) Are all the samples in good condition?			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
If not, explain:					
4) How were the samples received:					
On Ice <input checked="" type="checkbox"/>	Direct from Sampling <input type="checkbox"/>	Ambient <input type="checkbox"/>	In Cooler(s) <input checked="" type="checkbox"/>		
Were the samples received in Temperature Compliance of (2-6°C)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>					
Temperature °C by Temp blank # Temperature °C by Temp gun 5.4 # 2					
5) Are there Dissolved samples for the lab to filter? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Who was notified _____ Date _____ Time _____					
6) Are there any RUSH or SHORT HOLDING TIME samples? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Who was notified _____ Date _____ Time _____					
7) Location where samples are stored: <i>Login</i>			Permission to subcontract samples? Yes <input type="checkbox"/> No <input type="checkbox"/> (Walk-in clients only) if not already approved Client Signature: _____		
8) Do all samples have the proper Acid pH: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>					
9) Do all samples have the proper Base pH: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>					
10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>					

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	2
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

Page 2 of 2

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

<u>Question</u>	<u>Answer (True/False)</u>	<u>Comment</u>
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	N/A	
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 at broken or leaking.	T N/A	
13) Air Cassettes are not broken/open.	T	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T N/A	
17) No headspace sample bottles are completely filled.	N/A	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements?

Date/Time:

Date/Time:

Doc #277 Rev. 4 August 2013

Log-In Technician Initials:

JM

5/23/17
1650



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

May 26, 2017

George Franklin
Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457

Project Location: Amherst, MA

Client Job Number:

Project Number: 228838.03

Laboratory Work Order Number: 17E1197

Enclosed are results of analyses for samples received by the laboratory on May 24, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." on the first line and "Kelley" on the second line.

Meghan E. Kelley
Project Manager

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Woodard & Curran - CT
213 Court Street, 4th Floor
Middletown, CT 06457
ATTN: George Franklin

REPORT DATE: 5/26/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 228838.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17E1197

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

PROJECT LOCATION: Amherst, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PH-VBC-101	17E1197-01	Product/Solid		SW-846 8082A	
PH-VBC-102	17E1197-02	Product/Solid		SW-846 8082A	
PH-VBS-103	17E1197-03	Soil		SM 2540G	
PH-VBS-104	17E1197-04	Soil		SW-846 8082A	
PH-VBS-105	17E1197-05	Soil		SM 2540G	
PH-VBS-106	17E1197-06	Soil		SW-846 8082A	
				SM 2540G	
				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.

[Login](#)

Qualifications:

T-04

Samples were received directly from the field at ambient temperature.

Analyte & Samples(s) Qualified:

17E1197-01[PH-VBC-101], 17E1197-02[PH-VBC-102], 17E1197-03[PH-VBS-103], 17E1197-04[PH-VBS-104], 17E1197-05[PH-VBS-105], 17E1197-06[PH-VBS-106]

SW-846 8082A

Qualifications:

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

17E1197-04[PH-VBS-104], 17E1197-06[PH-VBS-106]

Decachlorobiphenyl [2C]

17E1197-04[PH-VBS-104], 17E1197-06[PH-VBS-106]

Tetrachloro-m-xylene

17E1197-04[PH-VBS-104], 17E1197-06[PH-VBS-106]

Tetrachloro-m-xylene [2C]

17E1197-04[PH-VBS-104], 17E1197-06[PH-VBS-106]

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

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

Tod E. Kopyscinski
Laboratory Director



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

Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBC-101

Sampled: 5/24/2017 13:30

Sample ID: 17E1197-01

Sample Matrix: Product/Solid

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	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1254 [2]	0.14	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:29	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	82.1	30-150							5/26/17 10:29
Decachlorobiphenyl [2]	85.1	30-150							5/26/17 10:29
Tetrachloro-m-xylene [1]	79.8	30-150							5/26/17 10:29
Tetrachloro-m-xylene [2]	74.4	30-150							5/26/17 10:29



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBC-102

Sampled: 5/24/2017 13:45

Sample ID: 17E1197-02Sample Matrix: Product/Solid**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	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1254 [2]	0.38	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	5/24/17	5/26/17 10:41	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	82.2	30-150							5/26/17 10:41
Decachlorobiphenyl [2]	85.2	30-150							5/26/17 10:41
Tetrachloro-m-xylene [1]	81.2	30-150							5/26/17 10:41
Tetrachloro-m-xylene [2]	76.4	30-150							5/26/17 10:41



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-103

Sampled: 5/24/2017 13:50

Sample ID: 17E1197-03**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	5/24/17	5/26/17 10:11	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1254 [1]	0.99	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:11	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	98.1	30-150							5/26/17 10:11
Decachlorobiphenyl [2]	90.4	30-150							5/26/17 10:11
Tetrachloro-m-xylene [1]	96.6	30-150							5/26/17 10:11
Tetrachloro-m-xylene [2]	90.6	30-150							5/26/17 10:11



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-103

Sampled: 5/24/2017 13:50

Sample ID: 17E1197-03Sample 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	90.8		% Wt	1		SM 2540G	5/24/17	5/25/17 7:52	MRL



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-104

Sampled: 5/24/2017 13:55

Sample ID: 17E1197-04**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	5/24/17	5/26/17 11:00	KAL
Aroclor-1221 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1232 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1242 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1248 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1254 [1]	5.3	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1260 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1262 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Aroclor-1268 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:00	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	*		30-150		S-01			5/26/17 11:00	
Decachlorobiphenyl [2]	*		30-150		S-01			5/26/17 11:00	
Tetrachloro-m-xylene [1]	*		30-150		S-01			5/26/17 11:00	
Tetrachloro-m-xylene [2]	*		30-150		S-01			5/26/17 11:00	



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-104

Sampled: 5/24/2017 13:55

Sample ID: 17E1197-04Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.4		% Wt	1		SM 2540G	5/24/17	5/25/17 7:52	MRL



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-105

Sampled: 5/24/2017 14:00

Sample ID: 17E1197-05**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	5/24/17	5/26/17 10:36	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1254 [1]	0.68	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/24/17	5/26/17 10:36	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	97.6	30-150							5/26/17 10:36
Decachlorobiphenyl [2]	90.3	30-150							5/26/17 10:36
Tetrachloro-m-xylene [1]	94.0	30-150							5/26/17 10:36
Tetrachloro-m-xylene [2]	87.7	30-150							5/26/17 10:36



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-105

Sampled: 5/24/2017 14:00

Sample ID: 17E1197-05Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	5/24/17	5/25/17 7:52	MRL



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-106

Sampled: 5/24/2017 14:05

Sample ID: 17E1197-06Sample 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	5/24/17	5/26/17 11:12	KAL
Aroclor-1221 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1232 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1242 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1248 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1254 [1]	5.4	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1260 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1262 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Aroclor-1268 [1]	ND	1.1	mg/Kg dry	50		SW-846 8082A	5/24/17	5/26/17 11:12	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	*		30-150		S-01			5/26/17 11:12	
Decachlorobiphenyl [2]	*		30-150		S-01			5/26/17 11:12	
Tetrachloro-m-xylene [1]	*		30-150		S-01			5/26/17 11:12	
Tetrachloro-m-xylene [2]	*		30-150		S-01			5/26/17 11:12	



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Project Location: Amherst, MA

Sample Description:

Work Order: 17E1197

Date Received: 5/24/2017

Field Sample #: PH-VBS-106

Sampled: 5/24/2017 14:05

Sample ID: 17E1197-06Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.9		% Wt	1		SM 2540G	5/24/17	5/25/17 7:52	MRL



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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
17E1197-03 [PH-VBS-103]	B177713	05/24/17
17E1197-04 [PH-VBS-104]	B177713	05/24/17
17E1197-05 [PH-VBS-105]	B177713	05/24/17
17E1197-06 [PH-VBS-106]	B177713	05/24/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17E1197-01 [PH-VBC-101]	B177719	2.00	10.0	05/24/17
17E1197-02 [PH-VBC-102]	B177719	2.00	10.0	05/24/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17E1197-03 [PH-VBS-103]	B177714	10.0	10.0	05/24/17
17E1197-04 [PH-VBS-104]	B177714	10.0	10.0	05/24/17
17E1197-05 [PH-VBS-105]	B177714	10.0	10.0	05/24/17
17E1197-06 [PH-VBS-106]	B177714	10.0	10.0	05/24/17



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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	RPD Limit	Notes
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Batch B177714 - SW-846 3540C**Blank (B177714-BLK1)**

Prepared: 05/24/17 Analyzed: 05/26/17

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	0.206	mg/Kg wet	0.200	103	30-150
Surrogate: Decachlorobiphenyl [2C]	0.185	mg/Kg wet	0.200	92.3	30-150
Surrogate: Tetrachloro-m-xylene	0.187	mg/Kg wet	0.200	93.7	30-150
Surrogate: Tetrachloro-m-xylene [2C]	0.170	mg/Kg wet	0.200	85.1	30-150

LCS (B177714-BS1)

Prepared: 05/24/17 Analyzed: 05/26/17

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200	96.6	40-140
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200	89.3	40-140
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200	86.4	40-140
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200	76.0	40-140
Surrogate: Decachlorobiphenyl	0.197	mg/Kg wet	0.200	98.6	30-150	
Surrogate: Decachlorobiphenyl [2C]	0.176	mg/Kg wet	0.200	88.0	30-150	
Surrogate: Tetrachloro-m-xylene	0.178	mg/Kg wet	0.200	89.1	30-150	
Surrogate: Tetrachloro-m-xylene [2C]	0.162	mg/Kg wet	0.200	81.2	30-150	

LCS Dup (B177714-BSD1)

Prepared: 05/24/17 Analyzed: 05/26/17

Aroclor-1016	0.20	0.020	mg/Kg wet	0.200	102	40-140	5.51	30
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200	95.0	40-140	6.13	30
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200	93.0	40-140	7.36	30
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200	81.4	40-140	6.83	30
Surrogate: Decachlorobiphenyl	0.204	mg/Kg wet	0.200	102	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.183	mg/Kg wet	0.200	91.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.185	mg/Kg wet	0.200	92.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.168	mg/Kg wet	0.200	84.0	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	RPD Limit	Notes
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Batch B177719 - SW-846 3540C

Blank (B177719-BLK1)					Prepared: 05/24/17 Analyzed: 05/26/17					
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	0.879	mg/Kg	1.00		87.9	30-150				
Surrogate: Decachlorobiphenyl [2C]	0.881	mg/Kg	1.00		88.1	30-150				
Surrogate: Tetrachloro-m-xylene	0.869	mg/Kg	1.00		86.9	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.799	mg/Kg	1.00		79.9	30-150				

LCS (B177719-BS1)					Prepared: 05/24/17 Analyzed: 05/26/17					
Aroclor-1016	0.89	0.10	mg/Kg	1.00		88.7	40-140			
Aroclor-1016 [2C]	0.93	0.10	mg/Kg	1.00		93.1	40-140			
Aroclor-1260	0.83	0.10	mg/Kg	1.00		82.8	40-140			
Aroclor-1260 [2C]	0.86	0.10	mg/Kg	1.00		86.0	40-140			
Surrogate: Decachlorobiphenyl	1.03	mg/Kg	1.00		103	30-150				
Surrogate: Decachlorobiphenyl [2C]	0.943	mg/Kg	1.00		94.3	30-150				
Surrogate: Tetrachloro-m-xylene	0.947	mg/Kg	1.00		94.7	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.834	mg/Kg	1.00		83.4	30-150				

LCS Dup (B177719-BSD1)					Prepared: 05/24/17 Analyzed: 05/26/17					
Aroclor-1016	0.90	0.10	mg/Kg	1.00		89.7	40-140	1.13	30	
Aroclor-1016 [2C]	0.94	0.10	mg/Kg	1.00		94.3	40-140	1.27	30	
Aroclor-1260	0.85	0.10	mg/Kg	1.00		84.7	40-140	2.21	30	
Aroclor-1260 [2C]	0.87	0.10	mg/Kg	1.00		87.2	40-140	1.30	30	
Surrogate: Decachlorobiphenyl	1.04	mg/Kg	1.00		104	30-150				
Surrogate: Decachlorobiphenyl [2C]	0.952	mg/Kg	1.00		95.2	30-150				
Surrogate: Tetrachloro-m-xylene	0.955	mg/Kg	1.00		95.5	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.837	mg/Kg	1.00		83.7	30-150				



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

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

PH-VBC-101

Lab Sample ID: 17E1197-01 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.12	
	2	0.000	0.000	0.000	0.14	15.4



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-VBC-102

Lab Sample ID: 17E1197-02 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.33	
	2	0.000	0.000	0.000	0.38	14.1



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-VBS-103

Lab Sample ID: 17E1197-03 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.99	
	2	0.000	-0.030	0.030	0.89	10.6



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-VBS-104

Lab Sample ID: 17E1197-04 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	5.3	
	2	0.000	-0.030	0.030	4.9	7.8



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

PH-VBS-105

Lab Sample ID: 17E1197-05 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.68	
	2	0.000	-0.030	0.030	0.63	7.6



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

PH-VBS-106

SW-846 8082A

Lab Sample ID: 17E1197-06 Date(s) Analyzed: 05/26/2017 05/26/2017

Date(s) Analyzed: 05/26/2017 05/26/2017

Instrument ID (1): **1234567890** Instrument ID (2): **9876543210**

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	5.4	
	2	0.000	-0.030	0.030	4.8	11.8



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS

Lab Sample ID: B177714-BS1 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.15	12.5



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B177714-BSD1 Date(s) Analyzed: 05/26/2017 05/26/2017

Date(s) Analyzed: 05/26/2017 05/26/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.19	5.1
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.16	17.1



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS

Lab Sample ID: B177719-BS1 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.89	
	2	0.000	0.000	0.000	0.93	4.4
Aroclor-1260	1	0.000	0.000	0.000	0.83	
	2	0.000	0.000	0.000	0.86	3.6



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

SW-846 8082A

Lab Sample ID: B177719-BSD1 Date(s) Analyzed: 05/26/2017 05/26/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.90	
	2	0.000	0.000	0.000	0.94	4.4
Aroclor-1260	1	0.000	0.000	0.000	0.85	
	2	0.000	0.000	0.000	0.87	2.3



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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.

- 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.
- T-04 Samples were received directly from the field at ambient temperature.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Product/Solid</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA



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

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

**CHAIN OF CUSTODY RECORD**Phone: 413-525-2332
Fax: 413-525-6405Email: info@contestlabs.com
www.contestlabs.com
ANALYTICAL LABORATORYCompany Name: Woodard & CurranAddress: 213 Court StreetAttention: Middletown CT 06457Project Location: AmherstSampled By: Greg ReynoldsProject Proposal Provided? (for billing purposes)
 yes noTelephone: 203 271 0375Project # 228838.03Client PO# E

DATA DELIVERY (check all that apply)

 FAX EMAIL WEBSITEFax #: Email: gfranklin@woodardcurran.comFormat: PDF EXCEL GIS OTHERCollection "Enhanced Data Package"Beginning Date/Time 5/24/17Ending Date/Time 1330

Composite Grab

Matrix Code SConc/Cate U

X

X

X

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Rev 04.05.12

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ANALYSIS REQUESTED

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39 Spruce Street
East Longmeadow, MA 01028# 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=susanna can

T=tetraellar 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 Codes

GW= groundwater

WW= wastewater

DW= drinking water

A= air

S= soil/solid

SL= sludge

O= other

Comments: *Rush - Pre Approved.*

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) *[Signature]*Date/Time: 5/24/17Turnaround 7-Day 10-Day OtherRUSH 24-Hr 48-Hr 72-Hr 14-Day Require lab approval OtherReceived by: (signature) *[Signature]*Date/Time: 5/24/17Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Inquired by: (signature) *[Signature]*Date/Time: 5/24/17Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Inquired by: (signature) *[Signature]*Date/Time: 5/24/17Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615Date/Time: 1615

Is your project MCP or RCP?

MCP

RCP

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

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



Page 1 of 2

Sample Receipt Checklist

CLIENT NAME: Woodard + Curran RECEIVED BY: JM DATE: 5/24/17

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

2) Does the chain agree with the samples? Yes No _____

If not, explain:

3) Are all the samples in good condition? Yes No _____

If not, explain:

4) How were the samples received:

On Ice _____ Direct from Sampling Ambient In Cooler(s) _____

Were the samples received in Temperature Compliance of (2-6°C)? Yes _____ No N/A _____

Temperature °C by Temp blank _____ # _____ Temperature °C by Temp gun 21.9 # 7

5) Are there Dissolved samples for the lab to filter? Yes _____ No

Who was notified _____ Date _____ Time _____

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

Who was notified Mac Date 5/24/17 Time 1620

7) Location where samples are stored:

Login

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

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

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

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	<u>6</u>
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 _____	

Page 2 of 2

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)	Comment
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	F	
4) Cooler Temperature is acceptable.	F	Direct from sampling
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.	N/A	
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.	N/A	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
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:

JM

Date/Time:

5/24/17
1615



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

June 2, 2017

George Franklin
Woodard & Curran - Andover, MA
40 Shattuck Road, Suite 110
Andover, MA 01810

Project Location: UMass Amherst
Client Job Number:
Project Number: 228838
Laboratory Work Order Number: 17E1525

Enclosed are results of analyses for samples received by the laboratory on May 31, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." sharing a common initial stroke, and "Kelley" following below.

Meghan E. Kelley
Project Manager

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Woodard & Curran - Andover, MA
40 Shattuck Road., Suite 110
Andover, MA 01810
ATTN: George Franklin

REPORT DATE: 6/2/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 228838

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17E1525

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

PROJECT LOCATION: UMass Amherst

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MH-VBS-110	17E1525-01	Soil		SM 2540G SW-846 8082A	
MH-VBSD-111	17E1525-02	Soil		SM 2540G SW-846 8082A	
MH-VBS-112	17E1525-03	Soil		SM 2540G SW-846 8082A	
MH-VBC-113	17E1525-04	Product/Solid		SM 2540G 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.

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

A handwritten signature in black ink that reads "Lisa A. Worthington". The signature is fluid and cursive, with "Lisa A." on the first line and "Worthington" on the second line.

Lisa A. Worthington
Project Manager



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBS-110

Sampled: 5/31/2017 11:30

Sample ID: 17E1525-01Sample 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	5/31/17	6/2/17 9:34	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1248 [2]	0.27	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1254 [2]	0.32	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:34	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	88.4		30-150					6/2/17 9:34	
Decachlorobiphenyl [2]	101		30-150					6/2/17 9:34	
Tetrachloro-m-xylene [1]	83.7		30-150					6/2/17 9:34	
Tetrachloro-m-xylene [2]	91.0		30-150					6/2/17 9:34	



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBS-110

Sampled: 5/31/2017 11:30

Sample ID: 17E1525-01Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.6		% Wt	1		SM 2540G	5/31/17	6/1/17 7:25	MRL



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

Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBSD-111

Sampled: 5/31/2017 11:30

Sample ID: 17E1525-02Sample 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	5/31/17	6/2/17 9:46	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1248 [2]	0.30	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1254 [2]	0.25	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:46	JMB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	85.5	30-150							6/2/17 9:46
Decachlorobiphenyl [2]	97.7	30-150							6/2/17 9:46
Tetrachloro-m-xylene [1]	83.2	30-150							6/2/17 9:46
Tetrachloro-m-xylene [2]	91.2	30-150							6/2/17 9:46



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBSD-111

Sampled: 5/31/2017 11:30

Sample ID: 17E1525-02Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.7		% Wt	1		SM 2540G	5/31/17	6/1/17 7:25	MRL



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBS-112

Sampled: 5/31/2017 11:40

Sample ID: 17E1525-03Sample 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	5/31/17	6/2/17 9:59	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1254 [2]	0.12	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	5/31/17	6/2/17 9:59	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	92.5		30-150					6/2/17 9:59	
Decachlorobiphenyl [2]	106		30-150					6/2/17 9:59	
Tetrachloro-m-xylene [1]	89.9		30-150					6/2/17 9:59	
Tetrachloro-m-xylene [2]	99.0		30-150					6/2/17 9:59	



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBS-112

Sampled: 5/31/2017 11:40

Sample ID: 17E1525-03Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.8		% Wt	1		SM 2540G	5/31/17	6/1/17 7:25	MRL



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Project Location: UMass Amherst

Sample Description:

Work Order: 17E1525

Date Received: 5/31/2017

Field Sample #: MH-VBC-113

Sampled: 5/31/2017 12:04

Sample ID: 17E1525-04

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1221 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1232 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1242 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1248 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1254 [1]	7.3	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1260 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1262 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Aroclor-1268 [1]	ND	0.99	mg/Kg	10		SW-846 8082A	5/31/17	6/1/17 19:50	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	71.9		30-150					6/1/17 19:50	
Decachlorobiphenyl [2]	69.3		30-150					6/1/17 19:50	
Tetrachloro-m-xylene [1]	82.7		30-150					6/1/17 19:50	
Tetrachloro-m-xylene [2]	83.5		30-150					6/1/17 19:50	



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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
17E1525-01 [MH-VBS-110]	B178131	05/31/17
17E1525-02 [MH-VBSD-111]	B178131	05/31/17
17E1525-03 [MH-VBS-112]	B178131	05/31/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17E1525-04 [MH-VBC-113]	B178127	2.02	10.0	05/31/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17E1525-01 [MH-VBS-110]	B178128	10.0	10.0	05/31/17
17E1525-02 [MH-VBSD-111]	B178128	10.0	10.0	05/31/17
17E1525-03 [MH-VBS-112]	B178128	10.0	10.0	05/31/17



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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	RPD Limit	Notes
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Batch B178127 - SW-846 3540C**Blank (B178127-BLK1)**

Prepared: 05/31/17 Analyzed: 06/01/17

Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	0.779		mg/Kg	1.00		77.9		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.849		mg/Kg	1.00		84.9		30-150		
Surrogate: Tetrachloro-m-xylene	0.819		mg/Kg	1.00		81.9		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.933		mg/Kg	1.00		93.3		30-150		

LCS (B178127-BS1)

Prepared: 05/31/17 Analyzed: 06/01/17

Aroclor-1016	0.86	0.10	mg/Kg	1.00		86.1		40-140		
Aroclor-1016 [2C]	0.92	0.10	mg/Kg	1.00		92.2		40-140		
Aroclor-1260	0.77	0.10	mg/Kg	1.00		77.0		40-140		
Aroclor-1260 [2C]	0.78	0.10	mg/Kg	1.00		78.1		40-140		
Surrogate: Decachlorobiphenyl	0.772		mg/Kg	1.00		77.2		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.840		mg/Kg	1.00		84.0		30-150		
Surrogate: Tetrachloro-m-xylene	0.813		mg/Kg	1.00		81.3		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.934		mg/Kg	1.00		93.4		30-150		

LCS Dup (B178127-BSD1)

Prepared: 05/31/17 Analyzed: 06/01/17

Aroclor-1016	0.87	0.10	mg/Kg	1.00		86.9		40-140	0.930	30
Aroclor-1016 [2C]	0.93	0.10	mg/Kg	1.00		93.4		40-140	1.28	30
Aroclor-1260	0.79	0.10	mg/Kg	1.00		78.6		40-140	2.09	30
Aroclor-1260 [2C]	0.81	0.10	mg/Kg	1.00		80.8		40-140	3.49	30
Surrogate: Decachlorobiphenyl	0.800		mg/Kg	1.00		80.0		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.866		mg/Kg	1.00		86.6		30-150		
Surrogate: Tetrachloro-m-xylene	0.815		mg/Kg	1.00		81.5		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.935		mg/Kg	1.00		93.5		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	RPD Limit	Notes
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Batch B178128 - SW-846 3540C

Blank (B178128-BLK1)										Prepared: 05/31/17 Analyzed: 06/02/17
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.211		mg/Kg wet	0.200		105		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.196		mg/Kg wet	0.200		98.0		30-150		
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		92.0		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.158		mg/Kg wet	0.200		79.0		30-150		

LCS (B178128-BS1)										Prepared: 05/31/17 Analyzed: 06/02/17
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		91.8		40-140		
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		89.4		40-140		
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		84.8		40-140		
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		88.2		40-140		
Surrogate: Decachlorobiphenyl	0.216		mg/Kg wet	0.200		108		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.199		mg/Kg wet	0.200		99.7		30-150		
Surrogate: Tetrachloro-m-xylene	0.188		mg/Kg wet	0.200		93.9		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.160		mg/Kg wet	0.200		80.2		30-150		

LCS Dup (B178128-BSD1)										Prepared: 05/31/17 Analyzed: 06/02/17
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		81.2		40-140	12.2	30
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		81.1		40-140	9.72	30
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.6		40-140	10.1	30
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.1		40-140	9.63	30
Surrogate: Decachlorobiphenyl	0.192		mg/Kg wet	0.200		96.0		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.187		mg/Kg wet	0.200		93.5		30-150		
Surrogate: Tetrachloro-m-xylene	0.172		mg/Kg wet	0.200		85.8		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.150		mg/Kg wet	0.200		75.2		30-150		



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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Limit Notes
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Batch B178131 - % Solids

Duplicate (B178131-DUP1)	Source: 17E1525-01			Prepared: 05/31/17 Analyzed: 06/01/17				
% Solids	94.5		% Wt		94.6		0.106	20



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

MH-VBS-110

Lab Sample ID: 17E1525-01 Date(s) Analyzed: 06/02/2017 06/02/2017

Date(s) Analyzed: 06/02/2017 06/02/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	-0.030	0.030	0.24	
	2	0.000	-0.030	0.030	0.27	11.8
Aroclor-1254	1	0.000	-0.030	0.030	0.29	
	2	0.000	-0.030	0.030	0.32	9.8



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

MH-VBSD-111

Lab Sample ID: 17E1525-02 Date(s) Analyzed: 06/02/2017 06/02/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	-0.030	0.030	0.23	
	2	0.000	-0.030	0.030	0.30	26.4
Aroclor-1254	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.25	12.8



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

MH-VBC-113

Lab Sample ID: 17E1525-04 Date(s) Analyzed: 06/01/2017 06/01/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	7.3	
	2	0.000	0.000	0.000	7.2	2.7



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS

Lab Sample ID: B178127-BS1 Date(s) Analyzed: 06/01/2017 06/01/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.86	
	2	0.000	0.000	0.000	0.92	6.7
Aroclor-1260	1	0.000	0.000	0.000	0.77	
	2	0.000	0.000	0.000	0.78	1.3



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B178127-BSD1 Date(s) Analyzed: 06/01/2017 06/01/2017

Date(s) Analyzed: 06/01/2017 06/01/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.87	
	2	0.000	0.000	0.000	0.93	6.7
Aroclor-1260	1	0.000	0.000	0.000	0.79	
	2	0.000	0.000	0.000	0.81	2.5



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

SW-846 8082A

Lab Sample ID: B178128-BS1 Date(s) Analyzed: 06/02/2017 06/02/2017

Date(s) Analyzed: 06/02/2017 06/02/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.18	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.18	5.7



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B178128-BSD1 Date(s) Analyzed: 06/02/2017 06/02/2017

Date(s) Analyzed: 06/02/2017 06/02/2017

Instrument ID (1): **1234567890** Instrument ID (2): **9876543210**

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.16	6.5



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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
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.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Product/Solid</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA



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

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

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East Longmeadow, MA. 01028
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F: 413-525-6405
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Sample Receipt Checklist

CLIENT NAME: Woodcock & Curran RECEIVED BY: RLF DATE: 5/31/17

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

2) Does the chain agree with the samples? Yes No

If not, explain:

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

If not, explain:

4) How were the samples received:

On Ice Direct from Sampling _____ Ambient _____ In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ # _____ Temperature °C by Temp gun 4.1 # 2

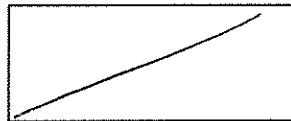
5) Are there Dissolved samples for the lab to filter? Yes No

Who was notified _____ Date _____ Time _____

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

Who was notified Brie Date 5/31 Time 1830

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

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

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

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber clear jar	<u>4</u>
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

Page 2 of 2

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

<u>Question</u>	<u>Answer (True/False)</u>	<u>Comment</u>
	T/F/NA	
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.	NA	
18) There is sufficient volume for all requested 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:

Date/Time:

RLF 5/31/17 1829



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June 6, 2017

George Franklin
Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457

Project Location: Amherst, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 17F0131

Enclosed are results of analyses for samples received by the laboratory on June 2, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." sharing a common initial stroke, and "Kelley" following below.

Meghan E. Kelley
Project Manager

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Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457
ATTN: George Franklin

REPORT DATE: 6/6/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17F0131

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

PROJECT LOCATION: Amherst, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PH-VBS-201	17F0131-01	Soil		SM 2540G SW-846 8082A	
PH-VBS-202	17F0131-02	Soil		SM 2540G SW-846 8082A	
MH-VBC-203	17F0131-05	Product/Solid		SW-846 8082A	
EB-01	17F0131-06	Equipment Blank Water		SW-846 8082A	
PH-DUP	17F0131-08	Soil		SM 2540G 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.

SW-846 8082A

Qualifications:

O-32

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

Analyte & Samples(s) Qualified:

17F0131-01[PH-VBS-201]

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington".

Lisa A. Worthington
Project Manager



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

Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: PH-VBS-201

Sampled: 6/2/2017 12:15

Sample ID: 17F0131-01Sample 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	6/2/17	6/5/17 14:53	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 14:53	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	99.1	30-150							6/5/17 14:53
Decachlorobiphenyl [2]	98.5	30-150							6/5/17 14:53
Tetrachloro-m-xylene [1]	97.7	30-150							6/5/17 14:53
Tetrachloro-m-xylene [2]	96.4	30-150							6/5/17 14:53



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: PH-VBS-201

Sampled: 6/2/2017 12:15

Sample ID: 17F0131-01Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.0		% Wt	1		SM 2540G	6/2/17	6/5/17 8:31	MRL



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: PH-VBS-202

Sampled: 6/2/2017 12:20

Sample ID: 17F0131-02Sample 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	6/2/17	6/5/17 15:07	KAL
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1248 [2]	0.92	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1254 [1]	1.3	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	6/2/17	6/5/17 15:07	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	97.3	30-150							6/5/17 15:07
Decachlorobiphenyl [2]	96.7	30-150							6/5/17 15:07
Tetrachloro-m-xylene [1]	96.6	30-150							6/5/17 15:07
Tetrachloro-m-xylene [2]	93.8	30-150							6/5/17 15:07



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: PH-VBS-202

Sampled: 6/2/2017 12:20

Sample ID: 17F0131-02Sample 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	6/2/17	6/5/17 8:31	MRL



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: MH-VBC-203

Sampled: 6/2/2017 13:20

Sample ID: 17F0131-05

Sample Matrix: Product/Solid

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1221 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1232 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1242 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1248 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1254 [1]	0.19	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1260 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1262 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Aroclor-1268 [1]	ND	0.087	mg/Kg wet	1		SW-846 8082A	6/2/17	6/5/17 15:20	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	101	30-150						6/5/17 15:20	
Decachlorobiphenyl [2]	95.2	30-150						6/5/17 15:20	
Tetrachloro-m-xylene [1]	72.5	30-150						6/5/17 15:20	
Tetrachloro-m-xylene [2]	63.6	30-150						6/5/17 15:20	



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: EB-01

Sampled: 6/2/2017 15:45

Sample ID: 17F0131-06

Sample Matrix: Equipment Blank Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	6/2/17	6/5/17 13:37	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	65.2	30-150							6/5/17 13:37
Decachlorobiphenyl [2]	65.5	30-150							6/5/17 13:37
Tetrachloro-m-xylene [1]	86.9	30-150							6/5/17 13:37
Tetrachloro-m-xylene [2]	96.4	30-150							6/5/17 13:37



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: PH-DUP

Sampled: 6/2/2017 12:20

Sample ID: 17F0131-08Sample 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	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1221 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1232 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1242 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1248 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1254 [1]	1.8	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1260 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1262 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Aroclor-1268 [1]	ND	0.56	mg/Kg dry	25		SW-846 8082A	6/2/17	6/6/17 10:45	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	104		30-150					6/6/17 10:45	
Decachlorobiphenyl [2]	111		30-150					6/6/17 10:45	
Tetrachloro-m-xylene [1]	86.5		30-150					6/6/17 10:45	
Tetrachloro-m-xylene [2]	98.6		30-150					6/6/17 10:45	



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0131

Date Received: 6/2/2017

Field Sample #: PH-DUP

Sampled: 6/2/2017 12:20

Sample ID: 17F0131-08Sample 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	89.9		% Wt	1		SM 2540G	6/2/17	6/5/17 8:31	MRL



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

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
17F0131-01 [PH-VBS-201]	B178340	06/02/17
17F0131-02 [PH-VBS-202]	B178340	06/02/17
17F0131-08 [PH-DUP]	B178340	06/02/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17F0131-01 [PH-VBS-201]	B178339	10.0	10.0	06/02/17
17F0131-02 [PH-VBS-202]	B178339	10.0	10.0	06/02/17
17F0131-05 [MH-VBC-203]	B178339	2.30	10.0	06/02/17
17F0131-08 [PH-DUP]	B178339	10.0	10.0	06/02/17

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0131-06 [EB-01]	B178336	1000	10.0	06/02/17



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

QUALITY CONTROL**Polychlorinated Biphenyls By GC/ECD - Quality Control**

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

Batch B178336 - SW-846 3510C

Blank (B178336-BLK1)										Prepared: 06/02/17 Analyzed: 06/05/17
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	1.87		µg/L	2.00		93.5		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.96		µg/L	2.00		98.0		30-150		
Surrogate: Tetrachloro-m-xylene	1.67		µg/L	2.00		83.3		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.85		µg/L	2.00		92.7		30-150		

LCS (B178336-BS1)										Prepared: 06/02/17 Analyzed: 06/05/17
Aroclor-1016	0.55	0.20	µg/L	0.500		110		40-140		
Aroclor-1016 [2C]	0.54	0.20	µg/L	0.500		107		40-140		
Aroclor-1260	0.49	0.20	µg/L	0.500		98.8		40-140		
Aroclor-1260 [2C]	0.45	0.20	µg/L	0.500		90.9		40-140		
Surrogate: Decachlorobiphenyl	1.81		µg/L	2.00		90.7		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.87		µg/L	2.00		93.5		30-150		
Surrogate: Tetrachloro-m-xylene	1.70		µg/L	2.00		84.9		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.91		µg/L	2.00		95.5		30-150		

LCS Dup (B178336-BSD1)										Prepared: 06/02/17 Analyzed: 06/05/17
Aroclor-1016	0.55	0.20	µg/L	0.500		111		40-140	0.890	20
Aroclor-1016 [2C]	0.54	0.20	µg/L	0.500		109		40-140	1.75	20
Aroclor-1260	0.50	0.20	µg/L	0.500		100		40-140	1.46	20
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.4		40-140	1.70	20
Surrogate: Decachlorobiphenyl	1.51		µg/L	2.00		75.7		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.56		µg/L	2.00		77.8		30-150		
Surrogate: Tetrachloro-m-xylene	1.68		µg/L	2.00		84.1		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.86		µg/L	2.00		92.8		30-150		



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch B178339 - SW-846 3540C

Blank (B178339-BLK1)										Prepared: 06/02/17 Analyzed: 06/05/17
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	0.221		mg/Kg wet	0.200		111		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.209		mg/Kg wet	0.200		105		30-150		
Surrogate: Tetrachloro-m-xylene	0.203		mg/Kg wet	0.200		101		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.173		mg/Kg wet	0.200		86.4		30-150		

LCS (B178339-BS1)										Prepared: 06/02/17 Analyzed: 06/05/17
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		96.8		40-140		
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		89.0		40-140		
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		88.2		40-140		
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.0		40-140		
Surrogate: Decachlorobiphenyl	0.215		mg/Kg wet	0.200		107		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.202		mg/Kg wet	0.200		101		30-150		
Surrogate: Tetrachloro-m-xylene	0.188		mg/Kg wet	0.200		93.9		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.163		mg/Kg wet	0.200		81.4		30-150		

LCS Dup (B178339-BSD1)										Prepared: 06/02/17 Analyzed: 06/05/17
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.7		40-140	1.89	30
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		97.9		40-140	9.51	30
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		88.6		40-140	0.422	30
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		83.4		40-140	0.669	30
Surrogate: Decachlorobiphenyl	0.209		mg/Kg wet	0.200		105		30-150		
Surrogate: Decachlorobiphenyl [2C]	0.198		mg/Kg wet	0.200		99.1		30-150		
Surrogate: Tetrachloro-m-xylene	0.200		mg/Kg wet	0.200		100		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	0.174		mg/Kg wet	0.200		87.1		30-150		



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

PH-VBS-202

Lab Sample ID: 17F0131-02 Date(s) Analyzed: 06/05/2017 06/05/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	-0.030	0.030	0.78	
	2	0.000	-0.030	0.030	0.92	16.5
Aroclor-1254	1	0.000	-0.030	0.030	1.3	
	2	0.000	-0.030	0.030	1.1	16.7



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

MH-VBS-203

SW-846 8082A

Lab Sample ID: 17F0131-05 Date(s) Analyzed: 06/05/2017 06/05/2017

Date(s) Analyzed: 06/05/2017 06/05/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.19	0.0



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

PH-DUP

Lab Sample ID: 17F0131-08

Date(s) Analyzed: 06/06/2017 06/06/2017

Instrument ID (1):

Instrument ID (2):

GC Column (1):

ID: (mm)

GC Column (2):

ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	1.8	
	2	0.000	-0.030	0.030	1.8	0.0



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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS

Lab Sample ID: B178336-BS1 Date(s) Analyzed: 06/05/2017 06/05/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.55	
	2	0.000	0.000	0.000	0.54	1.8
Aroclor-1260	1	0.000	0.000	0.000	0.49	
	2	0.000	0.000	0.000	0.45	8.5



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B178336-BSD1 Date(s) Analyzed: 06/05/2017 06/05/2017

Date(s) Analyzed: 06/05/2017 06/05/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.55	
	2	0.000	0.000	0.000	0.54	1.8
Aroclor-1260	1	0.000	0.000	0.000	0.50	
	2	0.000	0.000	0.000	0.46	8.3



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

SW-846 8082A

Lab Sample ID: B178339-BS1 Date(s) Analyzed: 06/05/2017 06/05/2017

Date(s) Analyzed: 06/05/2017 06/05/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

SW-846 8082A

Lab Sample ID: B178339-BSD1 Date(s) Analyzed: 06/05/2017 06/05/2017

Date(s) Analyzed: 06/05/2017 06/05/2017

Instrument ID (1): **1234567890** Instrument ID (2): **9876543210**

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.20	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7



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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.

O-32 A dilution was performed as part of the standard analytical procedure.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA



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

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

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



Page 1 of 2

Sample Receipt Checklist

CLIENT NAME: (longrightarrow) Curran RECEIVED BY: RLF DATE: 6/21/17

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

- 2) Does the chain agree with the samples? Yes No

If not, explain:

- 3) Are all the samples in good condition? Yes No

If not, explain:

- 4) How were the samples received:**

On Ice Direct from Sampling Ambient In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank # Temperature °C by Temp gun 25.6 # 7

- 5) Are there Dissolved samples for the lab to filter? Yes _____ No _____

Who was notified _____ Date _____ Time _____

- 6) Are there any RUSH or SHORT HOLDING TIME samples? Yes _____ No _____

Who was notified _____ Date _____ Time _____

- 7) Location where samples are stored: _____ (Walk-in clients only) if not already approved

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

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

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

Containers received at Con-Test

Containers received at Con-Test			
	# of containers		# of containers
1 Liter Amber	1	16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber /clear jar	7
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	

Doc# 277 # Bisulfate # DI Water

Rev. 4 August 2013 # Thiosulfate Unpreserved

Page 2 of 2

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)
 Any False statement will be brought to the attention of Client

<u>Question</u>	<u>Answer (True/False)</u>	<u>Comment</u>
	T/F/NA	
1) The cooler's custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	F	
4) Cooler Temperature is acceptable.	T	direct from sampling
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.	N/A	
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.	N/A	
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
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:

Date/Time:

RLF 6/21/17 1530



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

June 13, 2017

George Franklin
Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457

Project Location: Amherst, MA

Client Job Number:

Project Number: 228838.03

Laboratory Work Order Number: 17F0507

Enclosed are results of analyses for samples received by the laboratory on June 9, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." sharing a common initial stroke, and "Kelley" following below.

Meghan E. Kelley
Project Manager

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

Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457
ATTN: George Franklin

REPORT DATE: 6/13/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 228838.03

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17F0507

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

PROJECT LOCATION: Amherst, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PH-VBS-301	17F0507-01	Soil		SM 2540G	
MH-VBC-301	17F0507-02	Product/Solid		SW-846 8082A	
MH-VW-302	17F0507-03	Wipe		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.

SW-846 8082A

Qualifications:

O-32

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

Analyte & Samples(s) Qualified:

17F0507-01[PH-VBS-301]

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

A handwritten signature in black ink, appearing to read "Lisa A. Worthington".

Lisa A. Worthington
Project Manager



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

Project Location: Amherst, MA

Sample Description:

Work Order: 17F0507

Date Received: 6/9/2017

Field Sample #: PH-VBS-301

Sampled: 6/9/2017 14:50

Sample ID: 17F0507-01Sample 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	6/9/17	6/12/17 14:06	KAL
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	5		SW-846 8082A	6/9/17	6/12/17 14:06	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	79.8	30-150							6/12/17 14:06
Decachlorobiphenyl [2]	74.2	30-150							6/12/17 14:06
Tetrachloro-m-xylene [1]	101	30-150							6/12/17 14:06
Tetrachloro-m-xylene [2]	98.6	30-150							6/12/17 14:06



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0507

Date Received: 6/9/2017

Field Sample #: PH-VBS-301

Sampled: 6/9/2017 14:50

Sample ID: 17F0507-01Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.0		% Wt	1		SM 2540G	6/10/17	6/12/17 8:26	MRL



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0507

Date Received: 6/9/2017

Field Sample #: MH-VBC-301

Sampled: 6/9/2017 15:20

Sample ID: 17F0507-02

Sample Matrix: Product/Solid

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	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1221 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1232 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1242 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1248 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1254 [1]	0.13	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1260 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1262 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Aroclor-1268 [1]	ND	0.10	mg/Kg	1		SW-846 8082A	6/9/17	6/12/17 10:16	PJG
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	121	30-150							6/12/17 10:16
Decachlorobiphenyl [2]	110	30-150							6/12/17 10:16
Tetrachloro-m-xylene [1]	107	30-150							6/12/17 10:16
Tetrachloro-m-xylene [2]	102	30-150							6/12/17 10:16



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Project Location: Amherst, MA

Sample Description:

Work Order: 17F0507

Date Received: 6/9/2017

Field Sample #: MH-VW-302

Sampled: 6/9/2017 14:20

Sample ID: 17F0507-03

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1254 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/9/17	6/12/17 13:06	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	97.9	30-150						6/12/17 13:06	
Decachlorobiphenyl [2]	97.1	30-150						6/12/17 13:06	
Tetrachloro-m-xylene [1]	91.0	30-150						6/12/17 13:06	
Tetrachloro-m-xylene [2]	94.7	30-150						6/12/17 13:06	



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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
17F0507-01 [PH-VBS-301]	B178896	06/10/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17F0507-02 [MH-VBC-301]	B178862	2.00	10.0	06/09/17

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17F0507-01 [PH-VBS-301]	B178864	10.2	10.0	06/09/17

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

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
17F0507-03 [MH-VW-302]	B178885	1.00	10.0	06/09/17



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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	RPD Limit	Notes
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Batch B178862 - SW-846 3540C

Blank (B178862-BLK1)					Prepared: 06/09/17 Analyzed: 06/12/17					
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Surrogate: Decachlorobiphenyl	1.17	mg/Kg	1.00		117	30-150				
Surrogate: Decachlorobiphenyl [2C]	1.03	mg/Kg	1.00		103	30-150				
Surrogate: Tetrachloro-m-xylene	1.05	mg/Kg	1.00		105	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.984	mg/Kg	1.00		98.4	30-150				

LCS (B178862-BS1)					Prepared: 06/09/17 Analyzed: 06/12/17					
Aroclor-1016	1.0	0.10	mg/Kg	1.00		102	40-140			
Aroclor-1016 [2C]	0.99	0.10	mg/Kg	1.00		98.6	40-140			
Aroclor-1260	0.93	0.10	mg/Kg	1.00		92.7	40-140			
Aroclor-1260 [2C]	0.82	0.10	mg/Kg	1.00		81.7	40-140			
Surrogate: Decachlorobiphenyl	1.11	mg/Kg	1.00		111	30-150				
Surrogate: Decachlorobiphenyl [2C]	0.980	mg/Kg	1.00		98.0	30-150				
Surrogate: Tetrachloro-m-xylene	1.00	mg/Kg	1.00		100	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.938	mg/Kg	1.00		93.8	30-150				

LCS Dup (B178862-BSD1)					Prepared: 06/09/17 Analyzed: 06/12/17					
Aroclor-1016	1.0	0.10	mg/Kg	1.00		103	40-140	0.991	30	
Aroclor-1016 [2C]	1.0	0.10	mg/Kg	1.00		103	40-140	4.77	30	
Aroclor-1260	0.94	0.10	mg/Kg	1.00		93.7	40-140	1.12	30	
Aroclor-1260 [2C]	0.83	0.10	mg/Kg	1.00		83.3	40-140	1.91	30	
Surrogate: Decachlorobiphenyl	1.14	mg/Kg	1.00		114	30-150				
Surrogate: Decachlorobiphenyl [2C]	1.01	mg/Kg	1.00		101	30-150				
Surrogate: Tetrachloro-m-xylene	1.03	mg/Kg	1.00		103	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	0.969	mg/Kg	1.00		96.9	30-150				



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch B178864 - SW-846 3540C**Blank (B178864-BLK1)**

Prepared: 06/09/17 Analyzed: 06/12/17

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	0.203	mg/Kg wet	0.200	101	30-150
Surrogate: Decachlorobiphenyl [2C]	0.200	mg/Kg wet	0.200	99.9	30-150
Surrogate: Tetrachloro-m-xylene	0.182	mg/Kg wet	0.200	91.2	30-150
Surrogate: Tetrachloro-m-xylene [2C]	0.193	mg/Kg wet	0.200	96.5	30-150

LCS (B178864-BS1)

Prepared: 06/09/17 Analyzed: 06/12/17

Aroclor-1016	0.20	0.020	mg/Kg wet	0.200	102	40-140
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200	106	40-140
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200	97.4	40-140
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200	92.0	40-140
Surrogate: Decachlorobiphenyl	0.209	mg/Kg wet	0.200	105	30-150	
Surrogate: Decachlorobiphenyl [2C]	0.206	mg/Kg wet	0.200	103	30-150	
Surrogate: Tetrachloro-m-xylene	0.190	mg/Kg wet	0.200	95.2	30-150	
Surrogate: Tetrachloro-m-xylene [2C]	0.202	mg/Kg wet	0.200	101	30-150	

LCS Dup (B178864-BSD1)

Prepared: 06/09/17 Analyzed: 06/12/17

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200	92.7	40-140	9.35	30
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200	94.8	40-140	10.8	30
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200	91.5	40-140	6.23	30
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200	85.7	40-140	7.08	30
Surrogate: Decachlorobiphenyl	0.203	mg/Kg wet	0.200	102	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.195	mg/Kg wet	0.200	97.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.183	mg/Kg wet	0.200	91.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.192	mg/Kg wet	0.200	95.9	30-150			



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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Batch B178885 - SW-846 3540C

Blank (B178885-BLK1)					Prepared: 06/09/17 Analyzed: 06/12/17					
Aroclor-1016	ND	0.20	µg/Wipe							
Aroclor-1016 [2C]	ND	0.20	µg/Wipe							
Aroclor-1221	ND	0.20	µg/Wipe							
Aroclor-1221 [2C]	ND	0.20	µg/Wipe							
Aroclor-1232	ND	0.20	µg/Wipe							
Aroclor-1232 [2C]	ND	0.20	µg/Wipe							
Aroclor-1242	ND	0.20	µg/Wipe							
Aroclor-1242 [2C]	ND	0.20	µg/Wipe							
Aroclor-1248	ND	0.20	µg/Wipe							
Aroclor-1248 [2C]	ND	0.20	µg/Wipe							
Aroclor-1254	ND	0.20	µg/Wipe							
Aroclor-1254 [2C]	ND	0.20	µg/Wipe							
Aroclor-1260	ND	0.20	µg/Wipe							
Aroclor-1260 [2C]	ND	0.20	µg/Wipe							
Aroclor-1262	ND	0.20	µg/Wipe							
Aroclor-1262 [2C]	ND	0.20	µg/Wipe							
Aroclor-1268	ND	0.20	µg/Wipe							
Aroclor-1268 [2C]	ND	0.20	µg/Wipe							
Surrogate: Decachlorobiphenyl	2.04		µg/Wipe	2.00		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.01		µg/Wipe	2.00		101	30-150			
Surrogate: Tetrachloro-m-xylene	1.90		µg/Wipe	2.00		95.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.96		µg/Wipe	2.00		98.2	30-150			

LCS (B178885-BS1)					Prepared: 06/09/17 Analyzed: 06/12/17					
Aroclor-1016	0.54	0.20	µg/Wipe	0.500		107	40-140			
Aroclor-1016 [2C]	0.49	0.20	µg/Wipe	0.500		98.2	40-140			
Aroclor-1260	0.45	0.20	µg/Wipe	0.500		90.6	40-140			
Aroclor-1260 [2C]	0.44	0.20	µg/Wipe	0.500		88.2	40-140			
Surrogate: Decachlorobiphenyl	2.07		µg/Wipe	2.00		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.04		µg/Wipe	2.00		102	30-150			
Surrogate: Tetrachloro-m-xylene	1.93		µg/Wipe	2.00		96.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.00		µg/Wipe	2.00		99.8	30-150			

LCS Dup (B178885-BSD1)					Prepared: 06/09/17 Analyzed: 06/12/17					
Aroclor-1016	0.51	0.20	µg/Wipe	0.500		101	40-140	5.84	30	
Aroclor-1016 [2C]	0.48	0.20	µg/Wipe	0.500		96.7	40-140	1.54	30	
Aroclor-1260	0.44	0.20	µg/Wipe	0.500		88.3	40-140	2.59	30	
Aroclor-1260 [2C]	0.43	0.20	µg/Wipe	0.500		86.0	40-140	2.50	30	
Surrogate: Decachlorobiphenyl	1.99		µg/Wipe	2.00		99.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.97		µg/Wipe	2.00		98.5	30-150			
Surrogate: Tetrachloro-m-xylene	1.86		µg/Wipe	2.00		92.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.94		µg/Wipe	2.00		97.1	30-150			



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

MH-VBC-301

Lab Sample ID: 17F0507-02 Date(s) Analyzed 06/12/2017 06/12/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.13	
	2	0.000	0.000	0.000	0.13	0.0



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

SW-846 8082A

Lab Sample ID: B178862-BS1 Date(s) Analyzed 06/12/2017 06/12/2017

Date(s) Analyzed 06/12/2017 06/12/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.99	1.0
Aroclor-1260	1	0.000	0.000	0.000	0.93	
	2	0.000	0.000	0.000	0.82	12.6



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS.Dup

SW-846 8082A

Lab Sample ID: B178862-BSD1 Date(s) Analyzed 06/12/2017 06/12/2017

Date(s) Analyzed 06/12/2017 06/12/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	1.0	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.94	
	2	0.000	0.000	0.000	0.83	12.4



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B178864-BS1 Date(s) Analyzed 06/12/2017 06/12/2017

Date(s) Analyzed 06/12/2017 06/12/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.21	4.9
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	10.5



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS.Dup

SW-846 8082A

Lab Sample ID: B178864-BSD1 Date(s) Analyzed 06/12/2017 06/12/2017

Date(s) Analyzed 06/12/2017 06/12/2017

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

Instrument ID (2):

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.19	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

SW-846 8082A

Lab Sample ID: B178885-BS1 Date(s) Analyzed 06/12/2017 06/12/2017

Date(s) Analyzed 06/12/2017 06/12/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.54	
	2	0.000	0.000	0.000	0.49	9.7
Aroclor-1260	1	0.000	0.000	0.000	0.45	
	2	0.000	0.000	0.000	0.44	2.3



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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS.Dup

SW-846 8082A

Lab Sample ID: B178885-BSD1 Date(s) Analyzed 06/12/2017 06/12/2017

Date(s) Analyzed 06/12/2017 06/12/2017

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.51	
	2	0.000	0.000	0.000	0.48	6.1
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.43	2.3



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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.

O-32 A dilution was performed as part of the standard analytical procedure.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Product/Solid</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA



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

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

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

Client	<u>Woodard & Curran</u>	Date	<u>6/9/17</u>	Time	<u>1710</u>
Received By	<u>JM</u>	No Cooler	<u>T</u>	On Ice	<u></u>
How were the samples received?	In Cooler	No Cooler	<u>T</u>	On Ice	<u></u>
Were samples within Tempurature?	Within 2-6°C	Direct From Sample	<u>F</u>	Ambient	<u>T</u>
Was Custody Seal In tact?	<u>N/A</u>	By Gun #	<u>7</u>	Actual Temp -	<u>25.1</u>
Was COC Relinquished ?	<u>T</u>	By Blank #	<u></u>	Actual Temp -	<u></u>
Are there broken/leaking/loose caps on any samples?	<u>F</u>	Were Samples Tampered with?	<u>F</u>	Does Chain Agree With Samples?	<u>T</u>
Is COC in ink/ Legible?	<u>T</u>	Were samples received within holding time?	<u>T</u>		
Did COC include all pertinent Information?	Client? <u>T</u> Project? <u>T</u>	Analysis?	<u>T</u>	Sampler Name?	<u>T</u>
Are Sample labels filled out and legible?	<u>T</u>	ID's?	<u>T</u>	Collection Dates/Times?	<u>T</u>
Are there Lab to Filters?	<u>N/A</u>	Who was notified?	<u>Mac</u>		
Are there Rushes?	<u>T</u>	Who was notified?	<u>Mac</u>		
Are there Short Holds?	<u>N/A</u>	Who was notified?			
Samples are received within holding time?	<u>T</u>	Is there enough Volume?	<u>T</u>		
Is there Headspace where applicable?	<u>N/A</u>	MS/MSD?	<u>N/A</u>	splitting samples required	<u>N/A</u>
Proper Media/Containers Used?	<u>T</u>	On COC?	<u>N/A</u>		
Were trip blanks receive	<u>N/A</u>	Do All Samples Have the proper pH?	<u>N/A</u>	Acid	Base

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

Unused Media

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

Comments:



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June 21, 2017

George Franklin
Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457

Project Location: UMass
Client Job Number:
Project Number: 228838
Laboratory Work Order Number: 17F1032

Enclosed are results of analyses for samples received by the laboratory on June 19, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Meghan S. Kelley". The signature is fluid and cursive, with "Meghan" and "S." on the first line and "Kelley" on the second line.

Meghan E. Kelley
Project Manager

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Woodard & Curran - CT
213 Court Street., 4th Floor
Middletown, CT 06457
ATTN: George Franklin

REPORT DATE: 6/21/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 228838

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17F1032

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

PROJECT LOCATION: UMass

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MH-VW-401	17F1032-01	Wipe		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.

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

A handwritten signature in black ink that reads "Lisa A. Worthington". The signature is fluid and cursive, with "Lisa A." on the first line and "Worthington" on the second line.

Lisa A. Worthington
Project Manager



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

Project Location: UMass

Sample Description:

Work Order: 17F1032

Date Received: 6/19/2017

Field Sample #: MH-VW-401

Sampled: 6/19/2017 13:15

Sample ID: 17F1032-01

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1254 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	6/19/17	6/20/17 17:14	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	96.0	30-150							6/20/17 17:14
Decachlorobiphenyl [2]	88.5	30-150							6/20/17 17:14
Tetrachloro-m-xylene [1]	85.2	30-150							6/20/17 17:14
Tetrachloro-m-xylene [2]	79.2	30-150							6/20/17 17:14



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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
17F1032-01 [MH-VW-401]	B179603	1.00	10.0	06/19/17



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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	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	---------	-----------	-------

Batch B179603 - SW-846 3540C

Blank (B179603-BLK1)										Prepared: 06/19/17 Analyzed: 06/20/17
Aroclor-1016	ND	0.20	µg/Wipe							
Aroclor-1016 [2C]	ND	0.20	µg/Wipe							
Aroclor-1221	ND	0.20	µg/Wipe							
Aroclor-1221 [2C]	ND	0.20	µg/Wipe							
Aroclor-1232	ND	0.20	µg/Wipe							
Aroclor-1232 [2C]	ND	0.20	µg/Wipe							
Aroclor-1242	ND	0.20	µg/Wipe							
Aroclor-1242 [2C]	ND	0.20	µg/Wipe							
Aroclor-1248	ND	0.20	µg/Wipe							
Aroclor-1248 [2C]	ND	0.20	µg/Wipe							
Aroclor-1254	ND	0.20	µg/Wipe							
Aroclor-1254 [2C]	ND	0.20	µg/Wipe							
Aroclor-1260	ND	0.20	µg/Wipe							
Aroclor-1260 [2C]	ND	0.20	µg/Wipe							
Aroclor-1262	ND	0.20	µg/Wipe							
Aroclor-1262 [2C]	ND	0.20	µg/Wipe							
Aroclor-1268	ND	0.20	µg/Wipe							
Aroclor-1268 [2C]	ND	0.20	µg/Wipe							
Surrogate: Decachlorobiphenyl	1.89		µg/Wipe	2.00		94.5		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.75		µg/Wipe	2.00		87.4		30-150		
Surrogate: Tetrachloro-m-xylene	1.68		µg/Wipe	2.00		83.9		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.60		µg/Wipe	2.00		80.1		30-150		

LCS (B179603-BS1)										Prepared: 06/19/17 Analyzed: 06/20/17
Aroclor-1016	0.44	0.20	µg/Wipe	0.500		88.0		40-140		
Aroclor-1016 [2C]	0.45	0.20	µg/Wipe	0.500		90.7		40-140		
Aroclor-1260	0.40	0.20	µg/Wipe	0.500		80.5		40-140		
Aroclor-1260 [2C]	0.42	0.20	µg/Wipe	0.500		83.1		40-140		
Surrogate: Decachlorobiphenyl	1.95		µg/Wipe	2.00		97.7		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.78		µg/Wipe	2.00		89.1		30-150		
Surrogate: Tetrachloro-m-xylene	1.71		µg/Wipe	2.00		85.6		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.56		µg/Wipe	2.00		78.0		30-150		

LCS Dup (B179603-BSD1)										Prepared: 06/19/17 Analyzed: 06/20/17
Aroclor-1016	0.44	0.20	µg/Wipe	0.500		87.2		40-140	0.936	30
Aroclor-1016 [2C]	0.45	0.20	µg/Wipe	0.500		90.4		40-140	0.327	30
Aroclor-1260	0.42	0.20	µg/Wipe	0.500		84.4		40-140	4.70	30
Aroclor-1260 [2C]	0.44	0.20	µg/Wipe	0.500		88.7		40-140	6.49	30
Surrogate: Decachlorobiphenyl	2.00		µg/Wipe	2.00		99.9		30-150		
Surrogate: Decachlorobiphenyl [2C]	1.83		µg/Wipe	2.00		91.3		30-150		
Surrogate: Tetrachloro-m-xylene	1.70		µg/Wipe	2.00		85.2		30-150		
Surrogate: Tetrachloro-m-xylene [2C]	1.56		µg/Wipe	2.00		78.2		30-150		



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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.



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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
No certified Analyses included in this Report	

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

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

Client	<u>Woodard & Cumar</u>	Date	<u>6/19/17</u>	Time	<u>1643</u>
Received By	<u>JM</u>	No Cooler	<u>T</u>	On Ice	
How were the samples received?	In Cooler	No Cooler	<u>T</u>	No Ice	<u>T</u>
Were samples within Temperature? 2-6°C	<u>F</u>	Direct From Sample	<u>T</u>	Ambient	<u>T</u>
Was Custody Seal Intact?		By Gun #	<u>7</u>	Actual Temp -	<u>71.9</u>
Was COC Relinquished?		By Blank #		Actual Temp -	
Are there broken/leaking/loose caps on any samples?		<u>N/A</u>		Were Samples Tampered with?	<u>F</u>
Is COC in ink/ Legible?	<u>T</u>			Does Chain Agree With Samples?	<u>T</u>
Did COC include all pertinent Information?	Client?	<u>T</u>	Were samples received within holding time?	<u>T</u>	
	Project?	<u>T</u>	Analysis?	<u>T</u>	
Are Sample labels filled out and legible?		ID's?	<u>T</u>	Sampler Name?	<u>T</u>
Are there Lab to Filters?				Collection Dates/Times?	<u>T</u>
Are there Rushes?				Who was notified?	
Are there Short Holds?	<u>N/A</u>			Who was notified?	<u>Kyle</u>
Is there enough Volume?				Who was notified?	
Is there Headspace where applicable?		<u>N/A</u>	MS/MSD?	<u>N/A</u>	
Proper Media/Containers Used?			splitting samples required	<u>N/A</u>	
Were TB's received?			On COC?	<u>N/A</u>	
Do All Samples Have the proper pH?	<u>N/A</u>	Acid		Base	

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

Unused Media

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

Comments:



ATTACHMENT B

GENERATOR	1. Generator ID Number MA0000844870	2. Page 1 of 1	3. Emergency Response Phone 800-287-0300	4. Manifest Tracking Number 009771733 FLE					
	5. Generator's Name and Mailing Address University of Massachusetts - Amherst EHS Draper Hall, Room 328 40 Campus Center Way Amherst, MA 01003								
Generator's Site Address (if different than mailing address) University of Massachusetts - Amherst Patterson Hall Amherst, MA 01003									
Generator's Phone:									
6. Transporter 1 Company Name RED Technologies, LLC. (Portland)									
U.S. EPA ID Number CTR00503938									
7. Transporter 2 Company Name Tonawanda Tank Transport Service									
U.S. EPA ID Number NYD097644801									
8. Destination Facility Name and Site Address WHEELING INC. SHE # 2 Landfill 40350 N 1-94 Service Drive Bellville, MI 48111 800-592-5480									
U.S. EPA ID Number WED048000633									
Facility's Phone:									
TRANSPORTER INT'L	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) UN3432, White Polychlorinated biphenyls, solid, B, III, RG	10. Containers	11. Total Quantity	12. Unit Wt.Vol.	13. Waste Codes			
	X	No.	Type		K	MA02	PCB1		
		1	CM	15000					
		2.							
		3.							
	4.								
14. Special Handling Instructions and Additional Information Document Description Order 1030 SPC # 03-135 Weight is estimated, U.S. Units					8-7-17				
Unique ID # 1733									
1) PIPER JAFFRAY 170034 WDI PDS WASTE DOT ERG#171					Car 3049				
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.									
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Officer's Printed/Typed Name Mercy M. Wolak			Signature Mercy M. Wolak		Month	Day	Year		
					08	07	17		
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.					Port of entry/exit: _____				
Transporter signature (for exports only):					Date leaving U.S.: _____				
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Jordan Kelsey			Signature Jordan Kelsey		Month	Day	Year		
					08	27	17		
Transporter 2 Printed/Typed Name Sean Clear			Signature Sean Clear		Month	Day	Year		
					08	28	17		
18. Discrepancy									
18a. Discrepancy Indication Space <input checked="" type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Actual weight 8682 kgs per Ch. 1 Wnd. wsc. P1R of Tech 358/30117					Manifest Reference Number: _____				
18b. Alternate Facility (or Generator)					U.S. EPA ID Number				
Facility's Phone:					AIS				
18c. Signature of Alternate Facility (or Generator)									
					Month	Day	Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1. PCB		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name Mike Edward					Signature		Month	Day	Year
							08	30	17



US ECOLOGY CERTIFICATE OF DISPOSAL

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as QCD Solv's and specified on Manifest # 00977325E, Line Item 1 has been landfilled on

8/21/17, in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 800-592-5489

Fax: 800-593-5329

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: _____

