



January 8, 2013

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**
Lederle Graduate Research Center – Tower A
University of Massachusetts, Amherst, Massachusetts

Dear Ms. Tisa:

On behalf of the University of Massachusetts, the attached letter report has been prepared to document the polychlorinated biphenyl (PCB) remediation activities conducted between February and August 2012 as part of the National Institute of Health (NIH) Grant Lab Renovation project at the Lederle Graduate Research Center Tower A on the University of Massachusetts (UMass) campus in Amherst, Massachusetts.

The PCB remediation activities were integrated into planned renovation activities including upgrades to the respective laboratory and lobby spaces of the third, seventh, and eighth floors of Tower A. PCB related activities performed during the renovation project included window removal and off-site disposal (with PCB-containing glazing sealant) and encapsulation of window glazing sealants at select locations.

Prior to implementation, notification of the activities was provided to the United States Environmental Protection Agency (EPA) in a letter dated December 8, 2011 submitted in accordance with the requirements of the Draft Consent Agreement/Final Order (CAFO) that was under negotiation between UMass and EPA at the time (the CAFO was subsequently finalized).

If you have any comments, questions, or require further information, please do not hesitate to e-mail or call me at the number listed above.

Sincerely,

WOODARD & CURRAN INC.

Jeffrey A. Hamel, LSP, LEP
Senior Vice President

JAH
201918

Enclosure(s)

cc: Theresa Wolejko, University of Massachusetts



December 17, 2012

Mr. Mitchell Goldman
Goldman Reindorf Architects
427 Watertown Street
Newton, Massachusetts 02458

Re: **PCB Remediation Activities – Completion Report**
NIH Renovation Project
Lederle Graduate Research Center – Tower A
University of Massachusetts, Amherst, Massachusetts

Woodard & Curran has prepared this letter to document the polychlorinated biphenyl (PCB) remediation activities conducted between February and August 2012 as part of the National Institute of Health (NIH) Grant Lab Renovation project at the Lederle Graduate Research Center Tower A on the University of Massachusetts (UMass) campus in Amherst, Massachusetts.

PCB related activities performed during the renovation project included window glazing sealant removal with off-site disposal and encapsulation of window glazing sealants at select locations. Prior to implementation, notification of the activities was provided to the United States Environmental Protection Agency (EPA) in a letter dated December 8, 2011 submitted in accordance with the requirements of the Draft Consent Agreement/Final Order (CAFO) that was under negotiation between UMass and EPA at the time (the CAFO was subsequently finalized).

The remediation project team consisted of the following parties:

- University of Massachusetts Amherst - Owner
- Goldman Reindorf Architects Inc. (GRA) – Project Designer and Architect
- D.A. Sullivan & Sons, Inc. (DAS) – General Contractor
- RM Technologies, Inc. (RMT) – PCB Remediation Subcontractor
- Woodard & Curran – PCB Remediation Consultant
- Con-Test Analytical Laboratory – Laboratory for PCB sample analysis

Activities associated with PCB-containing window glazing sealants included in the scope of the NIH renovation project included:

- Removal and replacement of 42 laboratory windows throughout the 3rd, 7th and 8th floors of Tower A. Following removal, the area was cleaned and inspected to verify removal; and
- Implementation of Interim Measures (i.e., encapsulation) associated with the elevator lobby window frames located on the 1st, 3rd, 7th and 8th floors of Tower A.

Summaries of the activities completed, results of visual inspections, and the results of verification sampling following remediation are presented in the sections below.



Laboratory Window Removal

As part of the NIH renovations, laboratory windows on the 3rd, 7th, and 8th floors of the Tower A high-rise were replaced. The window replacement activities were conducted in accordance with the project specifications and as summarized below.

Prior to removal, site preparations and controls were implemented and maintained as follows:

- The work was conducted within polyethylene containments established on each floor for the asbestos removal aspects of the project;
- HEPA filtration was established within each containment to establish negative pressure controls;
- Access to the active work areas was limited to authorized personnel only; and
- At the conclusion of each work day or following completion of work within an area, the work area, tools, and equipment were decontaminated by HEPA vacuuming and wet wiping using diesel fuel and cloth rags.



Polyethylene Containment

To remove the windows, RMT used reciprocating saws to cut the metal clips holding the window frames to the surrounding concrete. Following removal, window frames were double wrapped as a single unit in polyethylene sheeting within the work area containments. At the completion of each shift or when work was completed within an area, all wastes were transported to lined, labeled roll-off containers within the on-site waste storage area located in the courtyard area between the Tower A high rise and the LGRC low rise building for disposal as PCB Bulk Product Waste and Asbestos Containing Material (ACM).

Elevator Lobby Window Interim Measures

As indicated in the December 8, 2011 PCB Remediation Activity notification letter, interim measures were conducted in accordance with the PCB Interim Measures Plan and the project specifications on elevator lobby windows within the project work area given that window removal could not be conducted due to structural concerns with the building (these windows span several floors) and the extensive requirements to support their removal.

Prior to implementation of the interim measures, site controls were established through the placement of polyethylene sheeting on the floors surrounding the work areas and access to the areas was limited to authorized personnel through the posting of signs at the work area perimeter.

RMT personnel removed all loose glazing from the glass to metal frame joints located at the perimeter of each window using a HEPA vacuum. Following removal, the vacuumed surfaces and window frames and components (including glass) were decontaminated using Klean-Strip TSP Plus cleaner. Once the window cleaning step was completed, RMT removed all grate panels from the metal ventilation ductwork located at the base of each window and removed any debris and particulates with a HEPA vacuum. As a final step, the horizontal surfaces surrounding each window (tops of ventilation ducts and window ledges) were cleaned using a Klean-Strip TSP Plus cleaner.



At the conclusion of each work day or following completion of work within an area, the work area, tools, and equipment were decontaminated by wet wiping and vacuuming. All disposal cleaning materials, PPE, vacuum filter bags, and trash generated during the decontamination activities were placed in lined and labeled steel, open-top 55-gal drums in the designated hazardous waste storage area.

Elevator Lobby Window Glazing Encapsulation

Following completion of the window cleaning, a strip of aluminum foil tape (Carolina Tape Product # 957) was applied to the glazing sealants around the full perimeter of each window. A bead of black Dow 795 silicone caulking was then applied over the foil tape. Visual confirmation that all glazing sealants were covered by the tape and caulking was made by Woodard & Curran personnel.



Final Caulking Application

Verification Wipe Sampling

Following completion of the interim measures, verification wipe samples were collected by Woodard & Curran personnel as follows:

- Window Sills – One wipe sample was collected from the metal horizontal sills on each floor (total of four wipe samples) using hexane-saturated gauze wipes in accordance with the standard wipe test method under 40 CFR 761.123; and
- Encapsulated Surfaces – One wipe sample was collected from encapsulated surfaces on the 8th floor window using a hexane-saturated gauze wipe grasped with metal tweezers and passed across the installed silicone caulking surface.

All wipe samples were submitted to ConTest Analytical Laboratories under the standard chain of custody procedures. Samples were extracted via the 3540C soxhlet extraction and analyzed via EPA method 8082.

Analytical results of the wipe samples were as follows:

- Window Sills – Analytical results indicated that PCBs were below the high occupancy use clean up standard for non-porous surfaces of 10 $\mu\text{g}/100\text{cm}^2$ in the four samples (total PCBs reported at concentrations of 0.21, 0.57, 0.72 and 1.15 $\mu\text{g}/100\text{cm}^2$). Based on the results of the visual inspection and verification wipe sampling, no additional decontamination of the horizontal sills or ventilation duct within the project work areas is required; and
- Encapsulated Surfaces – Analytical results indicated that PCBs were present at a concentration of 1.5 $\mu\text{g}/100\text{cm}^2$ in the sample collected. Additional monitoring of these surfaces will be incorporated into the interim measures for the LGRC Tower A building.

A summary of the verification wipe sample results is presented on Table 1. The complete analytical laboratory reports are provided in Attachment 1.



Waste Management and Disposal

At the conclusion of the project, all waste materials were transferred off-site for disposal under nonhazardous waste manifests as PCB Bulk Product Waste and ACM. One 30-yard roll-off container and one 55-gallon drum of waste was shipped off site for disposal to the Minerva Enterprises Landfill in Waynesburg, Ohio. Copies of the waste documents for the above waste streams have been included as Attachment 2.

If you have any questions or require further information, please feel free to contact us via email or by phone at (978) 557-8150.

Sincerely,

WOODARD & CURRAN INC.

George J. Franklin, CHMM
Project Scientist

Jeffrey A. Hamel, LSP, LEP
Senior Vice President

cc: Joseph Balzano, University of Massachusetts
Terri Wolejko, University of Massachusetts
Peter Gray-Mullen, University of Massachusetts

Enclosures: Table 1
Attachments 1 and 2

Table 1
Summary of Verification Wipe Sampling Results

NIH Grant Renovations
LGRC Tower A - UMass Amherst

Location	Sample ID	Sample Date	Aroclor 1254 (µg/100cm ²)	Aroclor 1260 (µg/100cm ²)	Total PCBs (µg/100cm ²)	Location Description
Window Sill Verification Wipe Samples						
1st floor lobby	LGRT-VW-D	07/06/12	0.41	0.31	0.72	Metal sill, 3 inches from window at first window north of elevators
3rd floor lobby	LGRT-VW-C	07/06/12	0.21	< 0.20	0.21	Metal sill, 6 inches from window at 4th window south of elevator
7th floor lobby	LGRT-VW-B	07/06/12	0.29	0.28	0.57	Metal sill, 3 inches from window at southernmost window in western end of lobby
8th floor lobby	LGRT-VW-A	08/24/12	0.58	0.57	1.15	Metal sill, 4 inches from window at 1st window south of elevator
Encapsulation Surfaces Wipe Sample						
8th floor lobby	LGRC-PT-WP-051	10/09/12	1.50	< 0.20	1.50	Right vertical joint.

Notes:

Wipe samples collected from a 100cm² area using a hexan saturated gauze pad in accordance with the standard wipe test method of 40 CFR 761.123. Wipe sample collected from encapsulated surface collected using modified procedure due to narrow width of area. Total PCBs reported as Aroclor 1254 or 1260. No other Aroclors reported at concentrations above the minimum laboratory reporting limits.

ATTACHMENT 1

July 13, 2012

George Franklin
Woodard & Curran - Andover, MA
35 New England Business Center
Andover, MA 01810

Project Location: UMA LGRT High Rise
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 12G0197

Enclosed are results of analyses for samples received by the laboratory on July 6, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Meghan E. Kelley". The signature is written in a cursive, flowing style.

Meghan E. Kelley
Project Manager

Woodard & Curran - Andover, MA
35 New England Business Center
Andover, MA 01810
ATTN: George Franklin

REPORT DATE: 7/13/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12G0197

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

PROJECT LOCATION: UMA LGRT High Rise

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
LGRT-VW-A	12G0197-01	Wipe	8th Fl	SW-846 8082A	
LGRT-VW-B	12G0197-02	Wipe	7th Fl	SW-846 8082A	
LGRT-VW-C	12G0197-03	Wipe	3rd Fl	SW-846 8082A	

CASE NARRATIVE SUMMARY

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

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 "M. Erickson", is displayed on a light gray rectangular background.

Michael A. Erickson
Laboratory Director

Project Location: UMA LGRT High Rise

Sample Description: 8th Fl

Work Order: 12G0197

Date Received: 7/6/2012

Field Sample #: LGRT-VW-A

Sampled: 7/6/2012 14:20

Sample ID: 12G0197-01

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1254 [1]	0.58	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1260 [1]	0.57	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:44	JMB
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	104	30-150						7/12/12 5:44	
Decachlorobiphenyl [2]	81.6	30-150						7/12/12 5:44	
Tetrachloro-m-xylene [1]	84.7	30-150						7/12/12 5:44	
Tetrachloro-m-xylene [2]	86.6	30-150						7/12/12 5:44	

Project Location: UMA LGRT High Rise

Sample Description: 7th Fl

Work Order: 12G0197

Date Received: 7/6/2012

Field Sample #: LGRT-VW-B

Sampled: 7/6/2012 14:25

Sample ID: 12G0197-02

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1254 [2]	0.29	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1260 [1]	0.28	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 5:57	JMB
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	122	30-150							
Decachlorobiphenyl [2]	96.0	30-150							
Tetrachloro-m-xylene [1]	95.4	30-150							
Tetrachloro-m-xylene [2]	96.7	30-150							

Project Location: UMA LGRT High Rise

Sample Description: 3rd Fl

Work Order: 12G0197

Date Received: 7/6/2012

Field Sample #: LGRT-VW-C

Sampled: 7/6/2012 14:40

Sample ID: 12G0197-03

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1254 [2]	0.21	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/7/12	7/12/12 6:10	JMB
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	123	30-150							
Decachlorobiphenyl [2]	96.6	30-150							
Tetrachloro-m-xylene [1]	96.9	30-150							
Tetrachloro-m-xylene [2]	98.3	30-150							

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
12G0197-01 [LGRT-VW-A]	B054645	1.00	10.0	07/07/12
12G0197-02 [LGRT-VW-B]	B054645	1.00	10.0	07/07/12
12G0197-03 [LGRT-VW-C]	B054645	1.00	10.0	07/07/12

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 B054645 - SW-846 3540C
Blank (B054645-BLK1)

Prepared: 07/07/12 Analyzed: 07/12/12

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	2.44		µg/Wipe	2.00		122	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.91		µg/Wipe	2.00		95.6	30-150			
Surrogate: Tetrachloro-m-xylene	1.87		µg/Wipe	2.00		93.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.91		µg/Wipe	2.00		95.5	30-150			

LCS (B054645-BS1)

Prepared: 07/07/12 Analyzed: 07/12/12

Aroclor-1016	0.49	0.20	µg/Wipe	0.500		98.3	40-140			
Aroclor-1016 [2C]	0.51	0.20	µg/Wipe	0.500		103	40-140			
Aroclor-1260	0.52	0.20	µg/Wipe	0.500		104	40-140			
Aroclor-1260 [2C]	0.48	0.20	µg/Wipe	0.500		96.1	40-140			
Surrogate: Decachlorobiphenyl	2.34		µg/Wipe	2.00		117	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.83		µg/Wipe	2.00		91.6	30-150			
Surrogate: Tetrachloro-m-xylene	1.81		µg/Wipe	2.00		90.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.84		µg/Wipe	2.00		92.2	30-150			

LCS Dup (B054645-BSD1)

Prepared: 07/07/12 Analyzed: 07/12/12

Aroclor-1016	0.51	0.20	µg/Wipe	0.500		101	40-140	2.90	30	
Aroclor-1016 [2C]	0.53	0.20	µg/Wipe	0.500		106	40-140	3.13	30	
Aroclor-1260	0.53	0.20	µg/Wipe	0.500		107	40-140	2.37	30	
Aroclor-1260 [2C]	0.49	0.20	µg/Wipe	0.500		98.6	40-140	2.52	30	
Surrogate: Decachlorobiphenyl	2.40		µg/Wipe	2.00		120	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.86		µg/Wipe	2.00		93.2	30-150			
Surrogate: Tetrachloro-m-xylene	1.84		µg/Wipe	2.00		91.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.87		µg/Wipe	2.00		93.4	30-150			

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

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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No certified Analyses included in this Report

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012

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



Sample Receipt Checklist

CLIENT NAME: Ward & Curran RECEIVED BY: WF DATE: 7/6/12

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

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 5.0

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:

101

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 No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	<u>3</u>
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____

Time and Date Frozen:

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____ Unpreserved _____

12G0197-01 LGRT-VW-A

Analyte	Results		%RPD
Aroclor-1260	0.57	0.54369	4.72
Aroclor-1254	0.58	0.56497	2.63
Surrogates			
Decachlorobiphenyl	2.08	1.63181	24.1
Tetrachloro-m-xylene	1.69	1.73123	2.41

12G0197-02 LGRT-VW-B

Analyte	Results		%RPD
Aroclor-1254 [2C]	0.29	0.27806	4.2
Aroclor-1260	0.28	0.27237	2.76
Surrogates			
Decachlorobiphenyl	2.44	1.91942	23.9
Tetrachloro-m-xylene	1.91	1.93311	1.2

12G0197-03 LGRT-VW-C

Analyte	Results		%RPD
Aroclor-1254 [2C]	0.21	0.20515	2.34
Surrogates			
Tetrachloro-m-xylene	1.94	1.96625	1.34
Decachlorobiphenyl	2.47	1.93191	24.4

B054645-BLK1 Blank

Analyte	Results		%RPD
Surrogates			
Tetrachloro-m-xylene	1.87	1.90997	2.11
Decachlorobiphenyl	2.44	1.91266	24.2

B054645-BS1 LCS

Analyte	Results		%RPD
Aroclor-1016	0.49	0.51353	4.69
Aroclor-1260	0.52	0.48073	7.85
Surrogates			
Decachlorobiphenyl	2.34	1.83134	24.4
Tetrachloro-m-xylene	1.81	1.84446	1.89

B054645-BSD1 LCS Dup

Analyte	Results		%RPD
Aroclor-1016	0.51	0.52988	3.82
Aroclor-1260	0.53	0.49299	7.24
Surrogates			
Tetrachloro-m-xylene	1.84	1.86875	1.55
Decachlorobiphenyl	2.40	1.86351	25.2

August 30, 2012

George Franklin
Woodard & Curran - Andover, MA
35 New England Business Center
Andover, MA 01810

Project Location: LGRT NIH
Client Job Number:
Project Number: 210918
Laboratory Work Order Number: 12H0860

Enclosed are results of analyses for samples received by the laboratory on August 24, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

Woodard & Curran - Andover, MA
35 New England Business Center
Andover, MA 01810
ATTN: George Franklin

REPORT DATE: 8/30/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 210918

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12H0860

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

PROJECT LOCATION: LGRT NIH

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
LGRT-VW-D	12H0860-01	Wipe		SW-846 8082A	

CASE NARRATIVE SUMMARY

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

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 "M. Erickson", is displayed on a light gray rectangular background.

Michael A. Erickson
Laboratory Director

Project Location: LGRT NIH

Sample Description:

Work Order: 12H0860

Date Received: 8/24/2012

Field Sample #: LGRT-VW-D

Sampled: 8/24/2012 10:30

Sample ID: 12H0860-01

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1254 [1]	0.41	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1260 [2]	0.31	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	8/27/12	8/29/12 12:32	PJG
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	94.1	30-150							
Decachlorobiphenyl [2]	90.6	30-150							
Tetrachloro-m-xylene [1]	76.9	30-150							
Tetrachloro-m-xylene [2]	79.1	30-150							

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
12H0860-01 [LGRT-VW-D]	B057715	1.00	10.0	08/27/12

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 B057715 - SW-846 3540C
Blank (B057715-BLK1)

Prepared: 08/27/12 Analyzed: 08/29/12

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	2.12		µg/Wipe	2.00		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.01		µg/Wipe	2.00		100	30-150			
Surrogate: Tetrachloro-m-xylene	1.65		µg/Wipe	2.00		82.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.69		µg/Wipe	2.00		84.6	30-150			

LCS (B057715-BS1)

Prepared: 08/27/12 Analyzed: 08/29/12

Aroclor-1016	0.44	0.20	µg/Wipe	0.500		87.5	40-140			
Aroclor-1016 [2C]	0.49	0.20	µg/Wipe	0.500		98.4	40-140			
Aroclor-1260	0.48	0.20	µg/Wipe	0.500		95.7	40-140			
Aroclor-1260 [2C]	0.49	0.20	µg/Wipe	0.500		99.0	40-140			
Surrogate: Decachlorobiphenyl	2.15		µg/Wipe	2.00		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.04		µg/Wipe	2.00		102	30-150			
Surrogate: Tetrachloro-m-xylene	1.65		µg/Wipe	2.00		82.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.69		µg/Wipe	2.00		84.6	30-150			

LCS Dup (B057715-BSD1)

Prepared: 08/27/12 Analyzed: 08/29/12

Aroclor-1016	0.44	0.20	µg/Wipe	0.500		87.3	40-140	0.165	30	
Aroclor-1016 [2C]	0.48	0.20	µg/Wipe	0.500		96.7	40-140	1.73	30	
Aroclor-1260	0.47	0.20	µg/Wipe	0.500		94.4	40-140	1.45	30	
Aroclor-1260 [2C]	0.49	0.20	µg/Wipe	0.500		97.6	40-140	1.39	30	
Surrogate: Decachlorobiphenyl	2.07		µg/Wipe	2.00		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.97		µg/Wipe	2.00		98.6	30-150			
Surrogate: Tetrachloro-m-xylene	1.61		µg/Wipe	2.00		80.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.65		µg/Wipe	2.00		82.7	30-150			

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

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

CERTIFICATIONS**Certified Analyses included in this Report****Analyte****Certifications****No certified Analyses included in this Report**

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Woburn & Lupa

Address: 35 N.E. Burck Site 180

Attention: Andrew & Franklin & Richard

Project Location: LGRT N1H

Sampled By: Kim Richard

Project Proposal Provided? (for billing purposes)
☐ yes ☐ no

Con-Test Lab ID

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Composite

Grab

Matrix Code

Lab Code

Con-Test Lab ID

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Composite

Grab

Matrix Code

Lab Code

Telephone: _____

Project # 210918

Client PO# _____

DATA DELIVERY (check all that apply)
☐ FAX ☐ EMAIL ☐ WEBSITE

Ex # Woburn & Lupa

Email: gfranklin@woburn.com

Format: WORD EXCEL OGIS

☐ "Enhanced Data Package"

☐ OTHER

☐ OTHER

☐ OTHER

☐ OTHER

☐ OTHER

☐ OTHER

☐ OTHER

☐ OTHER

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of Containers

** Preservation

*** Container Code

Dissolved Metals

☐ Field Filtered

☐ Lab to Filter

*** Cont. Code:

A=amber glass

G=glass

P=plastic

ST=sterile

V=vial

S=Summa can

T=tedlar bag

O=Other

** Preservation

I=iced

H=HCL

M=Methanol

N=Nitric Acid

S=Sulfuric Acid

B=Sodium bisulfate

X=Na hydroxide

T=Na thiosulfate

O=Other

*** Matrix Code:

GW=groundwater

WW=wastewater

DW=drinking water

A=air

S=soil/solid

SL=sludge

O=other

W1=wipe

W2=wipe

W3=wipe

W4=wipe

W5=wipe

W6=wipe

W7=wipe

W8=wipe

W9=wipe

W10=wipe

W11=wipe

Comments: ① EPA 8082 PLUS via 3540C Soxhlet ② RL & 10g/wipe ③ 5 day for - thanks ④ LGRT N1H 1st fl, lobby

Relinquished by: (signature) [Signature]

Date/Time: 8/24/12 1735

Turnaround ^{††}

7-Day ☐ 10-Day ☐ Other ☒ 5-Day

Detection Limit Requirements

Massachusetts: _____

Received by: (signature) [Signature]

Date/Time: 8-24-12 740

Relinquished by: (signature) [Signature]

Date/Time: 8-24-12 1800

Received by: (signature) [Signature]

Date/Time: 8-24-12 1800

Relinquished by: (signature) [Signature]

Date/Time: 8-24-12 1800

Relinquished by: (signature) [Signature]

Date/Time: 8-24-12 1800

Received by: (signature) [Signature]

Date/Time: 8-24-12 1800

Received by: (signature) [Signature]

Date/Time: 8-24-12 1800

Relinquished by: (signature) [Signature]

Date/Time: 8-24-12 1800

Received by: (signature) [Signature]

Date/Time: 8-24-12 1800

TURNAROUND TIME (business days) 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 IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.



NELAC & AIHA Certified
WBE/DBE Certified

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



Sample Receipt Checklist

CLIENT NAME: Woodard & Curran RECEIVED BY: KKM DATE: 8-24-12

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

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 5.6

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:

19

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 No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	<u>1</u>
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
Doc# 277 # Bisulfate _____ # DI Water _____
Rev. 3 May 2012 # Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

12H0860-01**LGRT-VW-D**

Analyte	Results		%RPD
Aroclor-1260 [2C]	0.31	0.30101	2.94
Aroclor-1254	0.41	0.33947	18.8
Surrogates			
Tetrachloro-m-xylene	1.54	1.58284	2.74
Decachlorobiphenyl	1.88	1.81291	3.63

B057715-BLK1**Blank**

Analyte	Results		%RPD
Surrogates			
Tetrachloro-m-xylene	1.65	1.69152	2.49
Decachlorobiphenyl	2.12	2.00999	5.33

B057715-BS1**LCS**

Analyte	Results		%RPD
Aroclor-1260	0.48	0.49479	3.03
Aroclor-1016	0.44	0.49189	11.1
Surrogates			
Tetrachloro-m-xylene	1.65	1.69197	2.51
Decachlorobiphenyl	2.15	2.04137	5.18

B057715-BSD1**LCS Dup**

Analyte	Results		%RPD
Aroclor-1260	0.47	0.48795	3.75
Aroclor-1016	0.44	0.48344	9.41
Surrogates			
Tetrachloro-m-xylene	1.61	1.6542	2.71
Decachlorobiphenyl	2.07	1.97252	4.82

October 19, 2012

George Franklin
Woodard & Curran - Andover, MA
35 New England Business Center
Andover, MA 01810

Project Location: UMA LGRC Low Rise
Client Job Number:
Project Number: 210918
Laboratory Work Order Number: 12J0444

Enclosed are results of analyses for samples received by the laboratory on October 10, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Meghan E. Kelley". The signature is written in a cursive, flowing style.

Meghan E. Kelley
Project Manager

Woodard & Curran - Andover, MA
35 New England Business Center
Andover, MA 01810
ATTN: George Franklin

REPORT DATE: 10/19/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 210918

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12J0444

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

PROJECT LOCATION: UMA LGRC Low Rise

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
LGRC-PT-WP-041	12J0444-01	Wipe		SW-846 8082A	
LGRC-PT-WP-042	12J0444-02	Wipe		SW-846 8082A	
LGRC-PT-WP-043	12J0444-03	Wipe		SW-846 8082A	
LGRC-PT-WP-044	12J0444-04	Wipe		SW-846 8082A	
LGRC-PT-WP-045	12J0444-05	Wipe		SW-846 8082A	
LGRC-PT-WP-046	12J0444-06	Wipe		SW-846 8082A	
LGRC-PT-WP-047	12J0444-07	Wipe		SW-846 8082A	
LGRC-PT-WP-048	12J0444-08	Wipe		SW-846 8082A	
LGRC-PT-WP-049	12J0444-09	Wipe		SW-846 8082A	
LGRC-PT-WPD-050	12J0444-10	Wipe		SW-846 8082A	
LGRC-PT-WP-051	12J0444-11	Wipe		SW-846 8082A	

CASE NARRATIVE SUMMARY

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

SW-846 8082A**Qualifications:**

Surrogate recovery is outside of control limits on confirmatory column, but within control limits on primary column. Data validation is not affected.

Analyte & Samples(s) Qualified:**Decachlorobiphenyl [2C]**

12J0444-04[LGRC-PT-WP-044], 12J0444-06[LGRC-PT-WP-046]

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.



Michael A. Erickson
Laboratory Director

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-041

Sampled: 10/9/2012 09:50

Sample ID: 12J0444-01

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1221 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1232 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1242 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1248 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1254 [1]	32	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1260 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1262 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Aroclor-1268 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:19	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	131	30-150						10/19/12 9:19	
Decachlorobiphenyl [2]	134	30-150						10/19/12 9:19	
Tetrachloro-m-xylene [1]	123	30-150						10/19/12 9:19	
Tetrachloro-m-xylene [2]	125	30-150						10/19/12 9:19	

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-042

Sampled: 10/9/2012 09:55

Sample ID: 12J0444-02

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1221 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1232 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1242 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1248 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1254 [1]	11	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1260 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1262 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Aroclor-1268 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 9:32	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	119	30-150							
Decachlorobiphenyl [2]	117	30-150							
Tetrachloro-m-xylene [1]	121	30-150							
Tetrachloro-m-xylene [2]	123	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-043

Sampled: 10/9/2012 10:05

Sample ID: 12J0444-03

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1221 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1232 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1242 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1248 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1254 [2]	6.2	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1260 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1262 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Aroclor-1268 [1]	ND	1.0	µg/Wipe	5		SW-846 8082A	10/16/12	10/19/12 9:44	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	123	30-150							
Decachlorobiphenyl [2]	123	30-150							
Tetrachloro-m-xylene [1]	128	30-150							
Tetrachloro-m-xylene [2]	129	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-044

Sampled: 10/9/2012 10:10

Sample ID: 12J0444-04

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1221 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1232 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1242 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1248 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1254 [1]	23	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1260 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1262 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Aroclor-1268 [1]	ND	5.0	µg/Wipe	25		SW-846 8082A	10/16/12	10/19/12 9:56	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	138	30-150							
Decachlorobiphenyl [2]	158 *	30-150	S-12						
Tetrachloro-m-xylene [1]	135	30-150							
Tetrachloro-m-xylene [2]	137	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-045

Sampled: 10/9/2012 10:20

Sample ID: 12J0444-05

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1221 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1232 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1242 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1248 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1254 [1]	15	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1260 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1262 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Aroclor-1268 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 10:09	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	126	30-150							
Decachlorobiphenyl [2]	148	30-150							
Tetrachloro-m-xylene [1]	124	30-150							
Tetrachloro-m-xylene [2]	126	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-046

Sampled: 10/9/2012 10:25

Sample ID: 12J0444-06

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1221 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1232 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1242 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1248 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1254 [2]	13	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1260 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1262 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Aroclor-1268 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 10:21	MJC
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		137	30-150			10/19/12 10:21			
Decachlorobiphenyl [2]		158	*	30-150	S-12	10/19/12 10:21			
Tetrachloro-m-xylene [1]		138	30-150			10/19/12 10:21			
Tetrachloro-m-xylene [2]		140	30-150			10/19/12 10:21			

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-047

Sampled: 10/9/2012 10:35

Sample ID: 12J0444-07

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1221 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1232 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1242 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1248 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1254 [1]	37	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1260 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1262 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Aroclor-1268 [1]	ND	4.0	µg/Wipe	20		SW-846 8082A	10/16/12	10/19/12 12:24	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	124	30-150							
Decachlorobiphenyl [2]	121	30-150							
Tetrachloro-m-xylene [1]	122	30-150							
Tetrachloro-m-xylene [2]	123	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-048

Sampled: 10/9/2012 10:45

Sample ID: 12J0444-08

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1221 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1232 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1242 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1248 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1254 [1]	9.9	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1260 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1262 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Aroclor-1268 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 12:37	MJC
Surrogates	% Recovery		Recovery Limits		Flag				
Decachlorobiphenyl [1]	124		30-150				10/19/12 12:37		
Decachlorobiphenyl [2]	123		30-150				10/19/12 12:37		
Tetrachloro-m-xylene [1]	125		30-150				10/19/12 12:37		
Tetrachloro-m-xylene [2]	127		30-150				10/19/12 12:37		

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-049

Sampled: 10/9/2012 10:50

Sample ID: 12J0444-09

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1221 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1232 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1242 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1248 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1254 [1]	14	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1260 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1262 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Aroclor-1268 [1]	ND	1.6	µg/Wipe	8		SW-846 8082A	10/16/12	10/19/12 12:49	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	122	30-150							
Decachlorobiphenyl [2]	122	30-150							
Tetrachloro-m-xylene [1]	120	30-150							
Tetrachloro-m-xylene [2]	122	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WPD-050

Sampled: 10/9/2012 10:35

Sample ID: 12J0444-10

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1221 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1232 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1242 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1248 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1254 [1]	18	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1260 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1262 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Aroclor-1268 [1]	ND	2.0	µg/Wipe	10		SW-846 8082A	10/16/12	10/19/12 13:02	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	112	30-150							
Decachlorobiphenyl [2]	111	30-150							
Tetrachloro-m-xylene [1]	111	30-150							
Tetrachloro-m-xylene [2]	111	30-150							

Project Location: UMA LGRC Low Rise

Sample Description:

Work Order: 12J0444

Date Received: 10/10/2012

Field Sample #: LGRC-PT-WP-051

Sampled: 10/9/2012 11:05

Sample ID: 12J0444-11

Sample Matrix: Wipe

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1254 [1]	1.5	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	10/16/12	10/19/12 9:07	MJC
Surrogates	% Recovery	Recovery Limits	Flag						
Decachlorobiphenyl [1]	115	30-150							
Decachlorobiphenyl [2]	119	30-150							
Tetrachloro-m-xylene [1]	120	30-150							
Tetrachloro-m-xylene [2]	119	30-150							

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
12J0444-01 [LGRC-PT-WP-041]	B060906	1.00	10.0	10/16/12
12J0444-02 [LGRC-PT-WP-042]	B060906	1.00	10.0	10/16/12
12J0444-03 [LGRC-PT-WP-043]	B060906	1.00	10.0	10/16/12
12J0444-04 [LGRC-PT-WP-044]	B060906	1.00	10.0	10/16/12
12J0444-05 [LGRC-PT-WP-045]	B060906	1.00	10.0	10/16/12
12J0444-06 [LGRC-PT-WP-046]	B060906	1.00	10.0	10/16/12
12J0444-07 [LGRC-PT-WP-047]	B060906	1.00	10.0	10/16/12
12J0444-08 [LGRC-PT-WP-048]	B060906	1.00	10.0	10/16/12
12J0444-09 [LGRC-PT-WP-049]	B060906	1.00	10.0	10/16/12
12J0444-10 [LGRC-PT-WPD-050]	B060906	1.00	10.0	10/16/12
12J0444-11 [LGRC-PT-WP-051]	B060906	1.00	10.0	10/16/12

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 B060906 - SW-846 3540C
Blank (B060906-BLK1)

Prepared: 10/16/12 Analyzed: 10/18/12

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	2.07		µg/Wipe	2.00		104	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.19		µg/Wipe	2.00		109	30-150			
Surrogate: Tetrachloro-m-xylene	2.02		µg/Wipe	2.00		101	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.00		µg/Wipe	2.00		100	30-150			

LCS (B060906-BS1)

Prepared: 10/16/12 Analyzed: 10/18/12

Aroclor-1016	0.51	0.20	µg/Wipe	0.500		102	40-140			
Aroclor-1016 [2C]	0.53	0.20	µg/Wipe	0.500		105	40-140			
Aroclor-1260	0.59	0.20	µg/Wipe	0.500		118	40-140			
Aroclor-1260 [2C]	0.56	0.20	µg/Wipe	0.500		112	40-140			
Surrogate: Decachlorobiphenyl	2.18		µg/Wipe	2.00		109	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.31		µg/Wipe	2.00		116	30-150			
Surrogate: Tetrachloro-m-xylene	2.08		µg/Wipe	2.00		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.08		µg/Wipe	2.00		104	30-150			

LCS Dup (B060906-BSD1)

Prepared: 10/16/12 Analyzed: 10/18/12

Aroclor-1016	0.53	0.20	µg/Wipe	0.500		106	40-140	3.73	30	
Aroclor-1016 [2C]	0.54	0.20	µg/Wipe	0.500		108	40-140	3.13	30	
Aroclor-1260	0.60	0.20	µg/Wipe	0.500		119	40-140	1.42	30	
Aroclor-1260 [2C]	0.57	0.20	µg/Wipe	0.500		114	40-140	2.24	30	
Surrogate: Decachlorobiphenyl	2.20		µg/Wipe	2.00		110	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.33		µg/Wipe	2.00		117	30-150			
Surrogate: Tetrachloro-m-xylene	2.25		µg/Wipe	2.00		113	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.25		µg/Wipe	2.00		112	30-150			

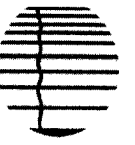
FLAG/QUALIFIER SUMMARY

*	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
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
S-12	Surrogate recovery is outside of control limits on confirmatory column, but within control limits on primary column. Data validation is not affected.

CERTIFICATIONS**Certified Analyses included in this Report****Analyte****Certifications****No certified Analyses included in this Report**

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012



con-test
ANALYTICAL LABORATORY

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

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 2

Company Name: Woodward & Lozano

Telephone: 1250444

Address: 35 N.E. Busch Drive Andover, MA

Project # 210918

Attention: J Hanel, G Franklin, & L Riordan

Project Location: UMA LGRC Low Rise

Sampled By: Kim Riordan

Project Proposal Provided? (for billing purposes)
☐ Yes ☐ No

Format: PDF EXCEL OGIS

Con-Test Lab ID

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Composite

Grab

*Matrix Code

Lane Code

Collection

"Enhanced Data Package"

DATA DELIVERY (check all that apply)
☐ FAX ☐ EMAIL ☐ WEBSITE

Email: jfranklin@woodwardlozano.com

Client PO#

Turnaround

Detection Limit Requirements

Is your project MCP or RCP?

Matrix Code

Preservation

Container Code

Disinfectant

Field Filtered

Lab to Filter

Cont. Code

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ANALYTICAL LABORATORY

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Email: info@contestlabs.com
www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 20 of 23 CRWPDF87

Company Name: Woods & Luce

Address:

Telephone: 210918

Attention:

Project Location:

Sampled By: Kim Rinal

Project Proposal Provided? (for billing purposes)
☐ Yes ☐ No proposal date

Con-Test Lab ID
(laboratory use only)

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Collection

Composite

Grab

11

USEC-FT-WF-051

10/11/12

1105

W1

U

EM-B002 / 35406

W1

Comments:

See pg #1

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)

08/11/12

Date/Time: 10/11/12 1530

Turnaround ☒ 7-Day

Detection Limit Requirements

Massachusetts:

Is your project MCP or RCP?

***Matrix Code:

Received by: (signature)

10/10/12

Date/Time: 10-10-12

Turnaround ☐ 10-Day

Detection Limit Requirements

Massachusetts:

Is your project MCP or RCP?

***Matrix Code:

Relinquished by: (signature)

10/10/12

Date/Time: 10-10-12

Turnaround ☐ 10-Day

Detection Limit Requirements

Massachusetts:

Is your project MCP or RCP?

***Matrix Code:

Received by: (signature)

10/10/12

Date/Time: 10-10-12

Turnaround ☐ 10-Day

Detection Limit Requirements

Massachusetts:

Is your project MCP or RCP?

***Matrix Code:

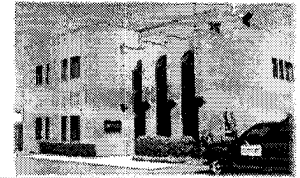
COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT



NELAC & AIHA Certified
WBE/DBE Certified

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



Sample Receipt Checklist

CLIENT NAME: Woodard & Curran RECEIVED BY: SD DATE: 10/10/12

1) Was the chain(s) of custody relinquished and signed? ☒ Yes ☐ No No CoC Included

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 4.6

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:

19

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 No ☒ N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	<u>11</u>
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
Bisulfate _____ # DI Water _____
Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Doc# 277

Rev. 3 May 2012

12J0444-01 LGRC-PT-WP-041

Analyte	Results		%RPD
Aroclor-1254	32	30.85375	3.65
Surrogates			
Decachlorobiphenyl	2.61	2.67025	2.28
Tetrachloro-m-xylene	2.47	2.5055	1.43

12J0444-02 LGRC-PT-WP-042

Analyte	Results		%RPD
Aroclor-1254	11	10.8458	1.41
Surrogates			
Decachlorobiphenyl	2.37	2.3356	1.46
Tetrachloro-m-xylene	2.42	2.4604	1.66

12J0444-03 LGRC-PT-WP-043

Analyte	Results		%RPD
Aroclor-1254 [2C]	6.2	5.9613	3.93
Surrogates			
Decachlorobiphenyl	2.46	2.4538	0.252
Tetrachloro-m-xylene	2.56	2.5824	0.871

12J0444-04 LGRC-PT-WP-044

Analyte	Results		%RPD
Aroclor-1254	23	21.19875	8.15
Surrogates			
Decachlorobiphenyl	2.76	3.16125	13.6
Tetrachloro-m-xylene	2.69	2.748	2.13

12J0444-05 LGRC-PT-WP-045

Analyte	Results		%RPD
Aroclor-1254	15	14.5618	2.96
Surrogates			
Decachlorobiphenyl	2.53	2.9638	15.8
Tetrachloro-m-xylene	2.47	2.5268	2.27

12J0444-06 LGRC-PT-WP-046

Analyte	Results		%RPD
Aroclor-1254 [2C]	13	13.17384	1.33
Surrogates			
Decachlorobiphenyl	2.74	3.15024	13.9
Tetrachloro-m-xylene	2.76	2.80912	1.76

12J0444-07 LGRC-PT-WP-047

Analyte	Results		%RPD
Aroclor-1254	37	35.6664	3.67
Surrogates			
Tetrachloro-m-xylene	2.44	2.4522	0.499
Decachlorobiphenyl	2.48	2.416	2.61

12J0444-08 LGRC-PT-WP-048

Analyte	Results		%RPD
Aroclor-1254	9.9	9.4671	4.47
Surrogates			
Tetrachloro-m-xylene	2.51	2.547	1.46
Decachlorobiphenyl	2.47	2.4578	0.495

12J0444-09 LGRC-PT-WP-049

Analyte	Results		%RPD
Aroclor-1254	14	14.00776	0.0554
Surrogates			
Decachlorobiphenyl	2.43	2.44032	0.424
Tetrachloro-m-xylene	2.40	2.44024	1.66

12J0444-10 LGRC-PT-WPD-050

Analyte	Results		%RPD
Aroclor-1254	18	17.621	2.13
Surrogates			
Decachlorobiphenyl	2.24	2.2164	1.06
Tetrachloro-m-xylene	2.22	2.2299	0.445

12J0444-11 LGRC-PT-WP-051

Analyte	Results		%RPD
Aroclor-1254	1.5	1.4733	1.8
Surrogates			
Decachlorobiphenyl	2.30	2.38198	3.5
Tetrachloro-m-xylene	2.39	2.37806	0.501

B060906-BLK1 Blank

Analyte	Results		%RPD
Surrogates			
Tetrachloro-m-xylene	2.02	2.00069	0.961
Decachlorobiphenyl	2.07	2.18609	5.46

B060906-BS1 LCS

Analyte	Results		%RPD
Aroclor-1016	0.51	0.52525	2.95
Aroclor-1260	0.59	0.5597	5.27
Surrogates			
Decachlorobiphenyl	2.18	2.31151	5.86
Tetrachloro-m-xylene	2.08	2.07965	0.0168

B060906-BSD1 LCS Dup

Analyte	Results		%RPD
Aroclor-1016	0.53	0.54196	2.23
Aroclor-1260	0.60	0.57237	4.71
Surrogates			
Tetrachloro-m-xylene	2.25	2.24512	0.217
Decachlorobiphenyl	2.20	2.33302	5.87

ATTACHMENT 2

SERVICE TRANSPORT GROUP, INC.

TR. 222 812

40

58 PYLES LANE, NEW CASTLE, DE 19720

PHONE: (877) 999-9559

NO 259850

WASTE SHIPMENT RECORD

S.T.G. # 42117

GENERATOR

1. Material Origin Site UMASS LEDEBERG LABORATORY TIO N. PLEASANT ST AMHERST, MA 01003		Generator: Name/Address UNIVERSITY OF MASSACHUSETTS 360 CAMPUS CENTER AMHERST, MA 01003		Generator: Phone # 413-545-1530	
2. Removal Contractor: Name/Address R. M. Technologies, Inc. 225 Essex Street, 4th Floor Lawrence, MA 01840				Contractor: Phone # 978-794-0006	
3. Responsible Agency: Name/Address U.S. EPA Region I One Congress Street, Ste. 1100 Boston, MA 02114-2620				4. US DOT Class - FRIABLE ASBESTOS ONLY RQ ASBESTOS, 9, NA 2212, PG III	
5. Description of Materials Specify Friable or Non-Friable PCB BULK PRODUCT WASTE AS PER PROFILE		Containers No		Total Quantity 15 CY	
IF Friable (enter required information)					
IF Non-Friable (check one): <input type="checkbox"/> Category I <input type="checkbox"/> Category II					
6. Special Handling Instructions 24-hour emergency spill response no. 800-424-9300					
7. Generator Certification: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport by highway according to the applicable regulations of the Department of Transportation, US E.P.A., and any other state government agency. I certify that the foregoing is true and correct to the best of my knowledge. If the waste shipment is not as I stated, I accept the RETURN of the COMPLETE LOAD to the generator's service location at the generator's expense.					
Printed/Typed Name & Title DANIEL J. GUZMAN		Signature [Signature]		Date 4/3/12	

TRANSPORTER

8. Transporter 1 (Acknowledgement of Receipt of Materials) *If blank, Transporter 2 serves as sole transporter.		
Company Name & Address		Signature: _____
		Printed Name: _____
		Title: _____
9. Transporter 2 (Acknowledgement of Receipt of Materials)		Signature: [Signature]
Company Name & Address Service Transport Group, Inc. 58 Pyles Lane New Castle, DE 19720		Printed Name: [Signature]
		Title: DRIVER
		Telephone No. 877-999-9559
		Date: 4/25/12

DISPOSAL SITE

10. Discrepancy Indication Space:		
11. Waste Disposal/Recycling Site Owner or Operator's Certification (Receipt of above Waste Except as Noted in 10)		
Minerva Landfill 9000 Minerva Rd. Waynesburg, OH 44688 330-866-3435 Permit # 15-1292		Signature: [Signature] Printed Name: [Signature] Title: _____
		Telephone No. 330-424-3739 Date: 4/11/12

SERVICE TRANSPORT GROUP, INC.

240535
237745

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58 PYLES LANE, NEW CASTLE, DE 19720

PHONE: (877) 999-9559

259736

WASTE SHIPMENT RECORD

S.T.G. # 44333

GENERATOR	1. Material Origin Site Hedden Building U-Mass 360 Campus Center Way Amherst MA 01003		Generator: Name/Address UNIVERSITY OF MASS 360 CAMPUS CENTER WAY AMHERST MA 01003		Generator: Phone # (413) 545-2662	
	2. Removal Contractor: Name/Address R. M. Technologies, Inc. 225 Essex Street, 4th Floor Lawrence, MA 01840				Contractor: Phone # 978-794-0006	
	3. Responsible Agency: Name/Address U.S. EPA Region I One Congress Street, Ste. 1100 Boston, MA 02114-2023				4. US DOT Class - FRIABLE ASBESTOS ONLY RQ ASBESTOS, 9, NA 2212, PG III RQ PCBs UN3432	
	5. Description of Materials Specify Friable or Non-Friable <u>Friable</u>		Containers No. PCB Bulk Waste		Total Quantity	
	IF Friable (enter required information)		55 GAL DRUM			
TRANSPORTER	IF Non-Friable (check one): <input type="checkbox"/> Category I <input type="checkbox"/> Category II					
	6. Special Handling Instructions 24-hour emergency spill response no. 800-424-9300					
	7. Generator Certification: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transport by highway according to the applicable regulations of the Department of Transportation, US E.P.A., and any other state government agency. I certify that the foregoing is true and correct to the best of my knowledge. If the waste shipment is not as I stated, I accept the RETURN of the COMPLETE LOAD to the generator's service location at the generator's expense.					
	Printed/Typed Name & Title DENNIS D. SAGNON		Signature <i>Dennis D. Sagon</i>		Date 8/29/12	
	8. Transporter 1 (Acknowledgement of Receipt of Materials) *If blank, Transporter 2 serves as sole transporter.					
DISPOSAL SITE	Company Name & Address R.M. TECHNOLOGIES 33 FRANKLIN ST LAWRENCE MA 01840		Signature: <i>[Signature]</i>		Telephone No. (978) 794-0006	
	Printed Name: <i>Bobby Gargas</i>		Title: <i>Driver</i>		Date:	
	9. Transporter 2 (Acknowledgement of Receipt of Materials) Company Name & Address Service Transport Group, Inc. 58 Pyles Lane New Castle, DE 19720		Signature: <i>[Signature]</i>		Telephone No. 877-999-9559	
	Printed Name: <i>Tom Douglas</i>		Title: <i>Driver</i>		Date: <i>10/2/12</i>	
	10. Discrepancy Indication Space:					
DISPOSAL SITE	11. Waste Disposal/Recycling Site Owner or Operator's Certification (Receipt of above Waste Except as Noted in 10)					
	Minerva Landfill 9000 Minerva Rd. Waynesburg, OH 44683 330-866-3435 Permit # 15-1292		Signature: <i>[Signature]</i>		Telephone No. 330-424-3739	
			Printed Name: <i>Sharon Dunne</i>		Date: <i>10.22.12</i>	