## **Fairfield Public Schools**

Fairfield, CT 06825

TO:

Dr. David Title and Members of the Board of Education

FROM:

Thomas P. Cullen

DATE:

August 20, 2012

RE:

Tomlinson Middle School Façade and Cornice Repair Project

Polychlorinated Biphenyl (PCB) Testing Results

This letter is to notify you that the Fairfield Public School district has been working on the Tomlinson Middle School Façade and Cornice Repair Project this summer. As part of this project the seven sets of exterior doors slated to be replaced required Polychlorinated Biphenyl (PCB) testing for the caulking around the doors. Our consultant on this project is Hygenix, Inc. We have received the laboratory results for the PCB testing of the seven sets of doors and I am happy to report that the bulk sampling documented the presence of PCBs in the caulking but at levels below the 50 mg/Kg regulated by the Connecticut Department of Energy and Environmental Protection.

Our consultant will be working with the contractor on site to properly remove all exterior doors including state regulated PCB caulking. Attached is the environmental consultant's letter. All test results are posted on the Fairfield Public Schools' website. The central office administration and the Tomlinson Middle School administrator will keep PCB test reports on file per state regulations.

If you have any questions or concerns regarding the PCB testing, please feel free to contact me at (203) 255-8373.

Thank you.



49 Woodside Street Stamford, CT 06902

Burea 165 C	Department of Education au of School Facilities capitol Avenue, Room 258 ord, CT 06106	July 27, 2012
Subje	ct: PCB Testing Facility Name: Tomlinson Middle School (200 Unquowa Road, Fair State Project No.:	field, CT)
respor Agend detern	undersigned, certify that I have made a reasonable investigation of the noted nse to the requirements of CFR 40, Part 761, and based on U.S. Environme by (EPA) recommendations that if there is renovation or demolition being permination should be made as to what PCB-containing material is present, so the rly managed and disposed.	ntal Protection formed, then a
[ch	heck the box adjacent to the applicable statement(s), either statement(s) 1 and/or 2, or	statement 3]
1. 🗆	Test results yielding concentrations in excess of 50 mg/Kg of PCBs are de PCB contaminated, and work shall adhere to the EPA regulations. Therefore upon the above criteria, a PCB Cleanup and Disposal Approval from the required for the above noted project, and an application has been made to office of the Environmental Protection Agency. (copy attached)	ore, based ne EPA is
2. <u>X</u>	Test results yielding concentrations in excess of 1 mg/Kg of PCBs, but less mg/Kg of PCBs shall adhere to the State DEP regulations (22a-463 throug unless the material is a PCB remediation waste and/or a PCB bulk product such it is included in the EPA PCB Cleanup and Disposal Approval). A not been made to the state office of the Department of Environmental Protectic Materials Management and Compliance Assurance Storage Tank and PCE Unit. (copy attached)	h 22a-469), waste (as ification has on, Bureau of
3.	After conducting thorough testing of building materials in the proposed project results have yielded no concentration of PCBs in excess of 1 mg/Kg. At these findings no PCB Remediation Plan is required for this project.	ect area(s), \s a result of
nviro	nmental Professional or Design Professional	

cc: Superintendent of Schools/District

Attachments

Professional Seal here

### PCB SAMPLING OF DOOR CAULKING

**INSPECTION SITE:** 

Tomlinson Middle School

200 Unquowa Road

Fairfield, CT

CLIENT:

Fairfield Public Schools

Attn: Dave Fryer 501 Kings Hwy East Fairfield, CT 06825

INSPECTOR:

Robert C. Brown, MS, CIH

**INSPECTION DATE:** 

June 27, 2012

SITE INFORMATION:

Middle School

#### **BACKGROUND**

Several exterior doors are slated for replacement at the Tomlinson Middle School. Sampling was conducted by Hygenix Inc. to determine the PCB (polychlorinated biphenyl) content of the caulking around the door jambs and casings. This report describes the protocol for sampling and analysis, and summarizes the results of the testing.

#### SAMPLING PROTOCOL

Hygenix Inc. was provided with a copy of Drawing A1.0, prepared by Philip H. Cerrone III, Architect, and dated May 25, 2012. Highlighted on the drawing were five locations where exterior doors were scheduled for replacement. The locations were inspected by Robert Brown on June 27, 2012. The dimensions of each door opening were recorded and photographs were taken of the interior and exterior caulking materials on the door casings and jambs. Exterior caulking was found on all five door locations, and interior caulking was found on three of the doors.

Representative samples of the caulk were collected. New blades were used to collect each sample, and as an added precaution against contamination, each blade was cleaned with reagent grade hexane before use. Samples were placed in unused glass sample jars, labeled and kept refrigerated until pick-up by the laboratory courier. Eleven caulk samples, including one duplicate/spike sample for quality control, were hand-delivered to Con-Test Analytical Laboratory.

As shown in the attached laboratory reports, the caulk samples were prepared by Soxhlet extraction and analyzed for PCB by GC/ECD.

## **PCB TEST RESULTS**

Reported PCB concentrations are summarized as follows:

Table 1 – Reported PCB Concentrations, Door Caulk

Sample #	Location / Description	Contact surfaces	PCB content					
062712-1	2 <sup>nd</sup> floor, northeast exterior	Wood, granite stoop	ND (< 1 ppm)					
062712-2	2 <sup>nd</sup> floor, north center exterior Brick, cement stoop N							
062712-3	2 <sup>nd</sup> floor, north center exterior (duplicate of #062712-3)	Brick, cement stoop	< 35 ppm *					
062712-4	1 <sup>st</sup> floor, northwest exterior	Brick, steel lintel, cement stoop	ND (< 1 ppm)					
062712-5	Auditorium, west exterior (left door of 3-door cluster)	Wood, granite stoop	ND (< 1 ppm)					
062712-6	Auditorium, west exterior (middle door of 3-door cluster) Wood, granite stoop ND (<1 ppm)							
062712-7	Auditorium, west exterior (right door of 3-door cluster) Wood, granite stoop ND (< 1 ppm)							
062712-8	1st floor, west exterior Brick, steel lintel, cement stoop < 37 ppm **							
062712-9	1 <sup>st</sup> floor, west interior	Cement block	ND (< 1 ppm)					
062712-10	2 <sup>nd</sup> floor, north center interior	Caulk on header only	1.4 ppm					
062712-11	2 <sup>nd</sup> floor, northeast interior	Drywall, caulk on left side only	ND (< 1 ppm)					
Notes:	* Matrix interference prevented lower detection limit in Sar		#062712-2 is a					
	duplicate analysis of this sample and the PCB concentration							
	** Matrix interference prevented a lower detection limit tha	n 37 ppm in Sample #062712-8. B	ased on the					
	reported test result, this caulk is assumed to have a PCB of	concentration greater than 1ppm ar	nd less than 50					
	ppm.							

## **DISCUSSION**

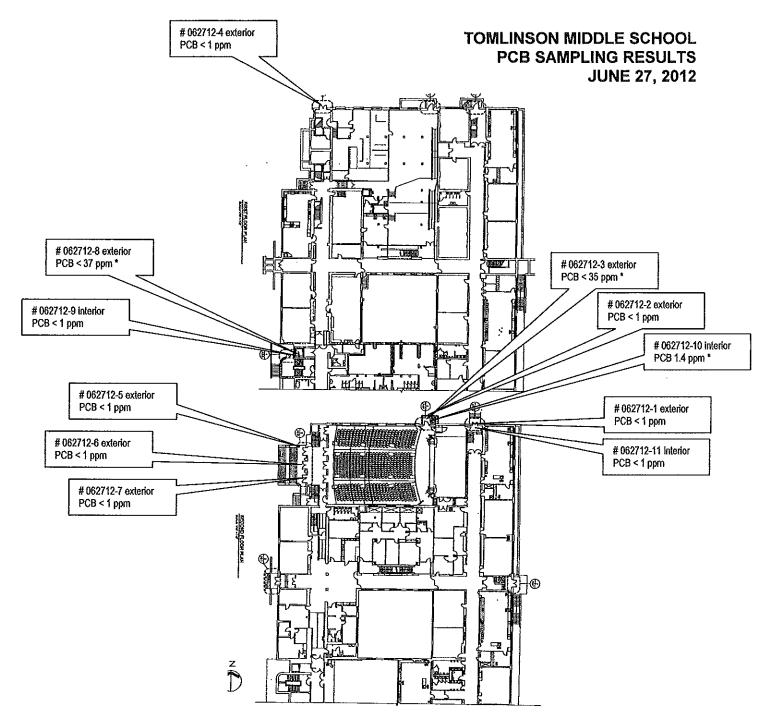
The PCB concentration of the caulk does not exceed the allowable PCB levels under 40 CFR 761.20(a) 761.61, and 761.62. Accordingly, the caulk is an "excluded product", and is not covered by regulations enforced by the US EPA.

However, the caulk at two locations has PCB concentrations between 1 ppm and 50 ppm, and its handling and removal are regulated by CT Department of Environmental Protection in accordance with CT RSCA 22a 463-469.

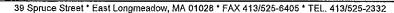
Robert C. Brown, MS, CIH

Report Date

7-28-12



\* Notes: The interior caulking on one door had a PCB result of 1.4 ppm. Exterior caulking on two doors had PCB readings with interfering compounds - the lab reported that the PCB readings at on these two doors was less than 50 ppm (the EPA regulatory threshold), but they could not determine whether the PCB concentrations were less than 1 ppm (the CT DEP regulatory threshold)





July 17, 2012

Robert Brown Hygenix, Inc. 49 Woodside Street Stamford, CT 06905

Project Location: Tomlinson Middle School

Client Job Number: Project Number: [none]

Laboratory Work Order Number: 12F1007

Lua Wasshugten

Enclosed are results of analyses for samples received by the laboratory on June 28, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa A. Worthington Project Manager



Hygenix, Inc. 49 Woodside Street Stamford, CT 06905 ATTN: Robert Brown REPO

REPORT DATE: 7/17/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER:

[none]

## ANALYTICAL SUMMARY

WORK ORDER NUMBER:

12F1007

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

PROJECT LOCATION:

Tomlinson Middle School

FIELD SAMPLE#	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
062712-1	12F1007-01	Caulk	Main fir NE exterior	SW-846 8082A	
062712-2	12F1007-02	Caulk	Main fir NCtr exterior	SW-846 8082A	
062712-3	12F1007-03	Caulk	Main fir NCtr exterior	SW-846 8082A	
062712-4	12F1007-04	Caulk	Lower Ivl NW exterior	SW-846 8082A	
062712-5	12F1007-05	Caulk	Auditorium W exterior	SW-846 8082A	
062712-6	12F1007-06	Caulk	Auditorium W exterior	SW-846 8082A	
062712-7	12F1007-07	Caulk	Auditorium W exterior	SW-846 8082A	
062712-8	12F1007-08	Caulk	Lower Ivl W exterior	SW-846 8082A	
062712-9	12F1007-09	Caulk	Lower IvI W Interior	SW-846 8082A	
062712-10	12F1007-10	Caulk	Main flr NCtr interior	SW-846 8082A	
062712-11	12F1007-11	Caulk	Main flr NE interior	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:

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

12F1007-03[062712-3], 12F1007-08[062712-8]

Con-Test Analytical laboratory's enhanced Florisil clean-up was performed on this sample.

Analyte & Samples(s) Qualified:

12F1007-02[062712-2], 12F1007-03[062712-3], 12F1007-08[062712-8]

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, Decachlorobiphenyl [2C], Tetrachloro-m-xylene, Tetrachloro-m-xylene [2C] 12F1007-03[062712-3], 12F1007-08[062712-8]

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

Analyte & Samples(s) Qualified:

Aroclor-1016 [2C] B054310-BLK1

Continuing calibration verification was outside of control limits on the confirmation column, but within control limits on the primary column. All sample results are reported from the column within control criteria.

Analyte & Samples(s) Qualified:

Aroclor-1016 [2C]

B054310-BS1, B054310-BSD1

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.

Daren J. Damboragian Laboratory Manager



Project Location: Tomlinson Middle School

Sample Description:

Main flr NE exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-1

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-01 Sample Matrix: Caulk

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	МЈС
Aroclor-1221 [1]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	МЈС
Aroclor-1232 [1]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Arocfor-1242 [1]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Aroclor-1248 [I]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Aroclor-1254 [I]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Aroclor-1260 [I]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Aroclor-1262 [1]	ND	0.87	mg∕Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Aroclor-1268 [1]	ND	0.87	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:43	MJC
Surrogates		% Recovery	Recovery Limits	;	Flag				<del></del>
Decachlorobiphenyl [1]		54.6	30-150					7/2/12 18:43	
Decachlorobiphenyl [2]		69.5	30-150					7/2/12 18:43	
Tetrachloro-m-xylene [1]		103	30-150					7/2/12 18:43	
Tetrachloro-m-xylene [2]		126	30-150					7/2/12 18:43	



Project Location: Tomlinson Middle School

Sample Description:

Main fir NCtr exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-2

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-02
Sample Matrix: Caulk

Sample Flags: O-27

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 [1:3]	PJG
Aroclor-1221 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1232 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1242 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1248 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1254 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1260 [1]	ND	0.95	nig/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1262 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Aroclor-1268 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/12/12 11:31	PJG
Surrogates		% Recovery	Recovery Limits	ı	Flag				
Decachforobiphenyl [1]		88.0	30-150	"			,	7/12/12 11:31	
Decachlorobiphenyl [2]		97.1	30-150					7/12/12 11:31	
Tetrachloro-m-xylene [1]		103	30-150					7/12/12 11:31	
Tetrachloro-m-xylene [2]		113	30-150					7/12/12 11:31	



Project Location: Tomlinson Middle School

Sample Description:

Main flr NCtr exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-3

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-03 Sample Matrix: Caulk

Samol	•	Finge:	DL-03.	0.27
Oumpi	C	LINES.	レレーリン。	0.27

Polychlorinated Biphenyls with 3540 Soxhlet Extraction
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Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1221 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1232 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1242 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1248 [1]	ИD	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1254 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1260 [1]	ИD	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1262 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Aroclor-1268 [1]	ND	35	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:33	MJC
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		*	30-150		S-01			7/2/12 21:33	
Decachlorobiphenyl [2]		*	30-150		S-01			7/2/12 21:33	
Tetrachloro-m-xylene [1]		#	30-150		S-01			7/2/12 21:33	
Tetrachloro-m-xylene [2]		•	30-150		S-01			7/2/12 21:33	



Project Location: Tomlinson Middle School

Analyte

Sample Description:

Lower lvl NW exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-4

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-04 Sample Matrix: Caulk

Aroclor-1016 [1]

Aroclor-1221 [1]

Aroclor-1232 [1]

Aroclor-1242 [1]

Aroclor-1248 [1]

Aroclor-1254 [1]

Aroctor-1260 [1]

Aroclor-1262 [1]

Aroclor-1268 [1]

	Polychlori	nated Biphenyls wil	th 3540 Soxhl	et Extraction				
Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MIC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	МЈС
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
ND	0.85	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:09	MJC
	% Recovery	Recovery Limits		Flag	, , , , , , , , , , , , , , , , , , , ,			
	65.6	20.150						

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	65.6	30-150		7/3/12 10:09
Decachlorobiphenyl [2]	71.0	30-150		7/3/12 10:09
Tetrachloro-m-xylene [1]	105	30-150		7/3/12 10:09
Tetrachloro-m-xylene [2]	105	30-150		7/3/12 10:09



Project Location: Tomlinson Middle School

Sample Description:

126

Auditorium W exterior

Work Order: 12F1007

7/2/12 18:56

Date Received: 6/28/2012 Field Sample #: 062712-5

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-05 Sample Matrix: Caulk

Tetrachloro-m-xylene [2]

		Polychlori	nated Biphenyls wit	h 3540 Soxhle	et Extraction				
Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Arocler-1221 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Aroclor-1232 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MIC
Aroclor-1242 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Arocler-1248 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Aroclor-1254 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Aroclor-1260 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Aroclor-1262 [1]	ND	0.90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Aroclor-1268 [1]	ND	0,90	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 18:56	MJC
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		57.0	30-150					7/2/12 18:56	
Decachlorobiphenyl [2]		71.9	30-150					7/2/12 18:56	
Tetrachloro-m-xylene [1]		103	30-150					7/2/12 18:56	

30-150



Project Location: Tomlinson Middle School

Analyte

Sample Description:

Auditorium W exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-6

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-06 Sample Matrix: Caulk

Aroclor-1016 [1] Aroclor-1221 [1] Aroclor-1232 [1] Aroclor-1242 [1] Aroclor-1248 [1] Aroclor-1254 [1] Aroclor-1260 [1] Aroclor-1262 [1] Aroclor-1268 [1]

	Polychlori	nated Biphenyls wit	h 3540 Soxhle	et Extraction				
Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
ND	0.93	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0.93	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0.93	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MIC
ND	0.93	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0,93	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0,93	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0.93	nig/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0,93	nıg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
ND	0.93	nig/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:09	MJC
	% Recovery	Recovery Limits		Flag				



Project Location: Tomlinson Middle School

Sample Description:

Auditorium W exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-7

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-07
Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction												
Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst			
Arocler-1016 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MJC			
Arocler-1221 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	NDC			
Aroclor-1232 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MIC			
Aroclor-1242 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MJC			
Aroclor-1248 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MJC			
Aroclor-1254 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MJC			
Aroclor-1260 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MIC			
Aroclor-1262 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MJC			
Aroctor-1268 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:22	MJC			
Surrogates		% Recovery	Recovery Limits		Flag							
Decachlorobiphenyl [1]		53,4	30-150					7/2/12 19:22				
Decachlorobiphenyl [2]		70.5	30-150					7/2/12 19:22				
Tetrachioro-m-xylene [1]		91.4	30-150					7/2/12 19:22				
Tetrachloro-m-xylene [2]		112	30-150					7/2/12 19:22				



Project Location: Tomlinson Middle School

Sample Description:

Lower Ivl W exterior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-8

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-08
Sample Matrix: Caulk

Polychlorinated	I Rinhenvic	with 35.10	Saxblet	Extraction
LOLL CHILD LIBRIC	I DIBHERINS	い ロロ フライリ	SOMME	EXITACTION

Analyte	Results	RL	Units	Dilution	Fiag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MJC
Aroclor-1221 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MJC
Aroclor-1232 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MJC
Aroclor-1242 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MJC
Aroclor-1248 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	МЈС
Aroclor-1254 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MJC
Aroclor-1260 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MIC
Aroclor-1262 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	MJC
Aroclor-1268 [1]	ND	37	mg/Kg	200		SW-846 8082A	6/29/12	7/2/12 21:46	мэс
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		*	30-150		10-2			7/2/12 21:46	
Decachlorobiphenyl [2]		*	30-150		S-01			7/2/12 21:46	
Tetrachloro-m-xylene [1]		*	30-150		S-01			7/2/12 21:46	
Tetrachloro-m-xylene [2]		*	30-150		S-01			7/2/12 21:46	



Project Location: Tomfinson Middle School

Sample Description:

Lower Ivl W interior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-9

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-09
Sample Matrix: Caulk

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	МЈС
Arocior-1221 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Aroclor-1232 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Aroclor-1242 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Aroclor-1248 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Aroclor-1254 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Aroclor-1260 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	МЈС
Aroclor-1262 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Aroclor-1268 [1]	ND	0.86	mg/Kg	5		SW-846 8082A	6/29/12	7/3/12 10:22	MJC
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		87,2	30-150					7/3/12 10:22	•
Decachlorobiphenyl [2]		93.9	30-150					7/3/12 10:22	
Tetrachloro-m-xylene [1]		97.8	30-150					7/3/12 10:22	
Tetrachloro-m-xylene [2]		99.8	30-150					7/3/12 10:22	



Project Location: Tomlinson Middle School

Sample Description:

Main flr NCtr interior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-10

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-10
Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.89	mg/Kg	S		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Aroclor-1221 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Aroclor-1232 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Aroclor-1242 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Arocier-1248 [2]	1,4	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Aroclor-1254 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Aroclor-1260 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	NIJC
Aroclor-1262 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Aroclor-1268 [1]	ND	0.89	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:36	MJC
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		56.7	30-150					7/2/12 19:36	
Decachlorobiphenyl [2]		74.9	30-150					7/2/12 19:36	
Tetrachloro-m-xylene [1]		99.4	30-150					7/2/12 19:36	
Tetrachloro-m-xylene [2]		121	30-150					7/2/12 19:36	



Project Location: Tomlinson Middle School

Sample Description:

Main flr NE interior

Work Order: 12F1007

Date Received: 6/28/2012 Field Sample #: 062712-11

Sampled: 6/27/2012 00:00

Sample ID: 12F1007-11
Sample Matrix: Caulk

		Polychlori	nated Biphenyls wi	th 3540 Soxhl	et Extraction				
Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analys
Aroclor-1016 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	MJC
Aroclor-1221 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	МЈС
Aroclor-1232 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	MJC
Aroclor-1242 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	MJC
Aroclor-1248 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	МЈС
Aroclor-1254 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	MJC
Aroclor-1260 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	MJC
Aroclor-1262 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	МЈС
Aroclor-1268 [1]	ND	0.95	mg/Kg	5		SW-846 8082A	6/29/12	7/2/12 19:49	МЈС
Surrogates		% Recovery	Recovery Limits	3	Flag				
Decachlorobiphenyl [1]		60.5	30-150					7/2/12 19:49	
Decachlorobiphenyl [2]		76.2	30-150					7/2/12 19:49	
Tetrachloro-m-xylene [1]		102	30-150					7/2/12 19:49	
Tetrachloro-m-xylene [2]		125	30-150					7/2/12 19:49	



# 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 Limit	Notes
Batch B054310 - SW-846 3540C										
Blank (B054310-BLK1)				Prepared: 06	5/29/12 Anal	yzed: 07/02/	12			
Arocler-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							V-20
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Arocior-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0,20	mg/Kg							
Aroclor-1254	ND	0,20	mg/Kg							
Aroclor-1254 [2C]	ИD	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0,20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Arocior-1268 [2C]	ИD	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	1,90		mg/Kg	4.00		47.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.67		mg/Kg	4.00		66.8	30-150			
Surrogate: Tetrachloro-m-xylene	3.69		mg/Kg	4.00		92.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	4.53		mg/Kg	4,00		113	30-150			
LCS (B054310-BS1)				Prepared: 06	/29/12 Analy	zed: 07/02/	12			
Aroclor-1016	3.2	0.20	mg/Kg	4.00		80,5	40-140			
Aroclor-1016 [2C]	4.0	0.20	mg/Kg	4.00		99.8	40-140			V-24
Aroclor-1260	2.3	0.20	mg/Kg	4.00		56.6	40-140			
Aroclor-1260 [2C]	2.8	0.20	mg/Kg	4.00		68,9	40-140			
Surrogate: Decachlorobiphenyl	1.96		mg/Kg	4.00		49.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.71		mg/Kg	4.00		67.7	30-150			
Surrogate: Tetrachloro-m-xylene	3.81		mg/Kg	4.00		95.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	4.64		mg/Kg	4,00		116	30-150			
LCS Dup (B054310-BSD1)				Prepared: 06	/29/12 Analy	rzed: 07/02/	12			
Aroclor-1016	3.3	0.20	mg/Kg	4.00		82.5	40-140	2.49	30	
Aroclor-1016 [2C]	3.9	0.20	mg/Kg	4.00		98.6	40-140	1.26	30	V-24
Aroclor-1260	2,5	0.20	mg/Kg	4.00		62.1	40-140	9.33	30	
Aroclor-1260 [2C]	3.0	0.20	mg/Kg	4.00		75.0	40-140	8.38	30	
Surrogate: Decachlorobiphenyl	1.98		mg/Kg	4.00		49.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.76		mg/Kg	4.00		69.1	30-150			
Surrogate: Tetrachloro-m-xylene	3.65		mg/Kg	4.00		91.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	4,44		mg/Kg	4,00		111	30-150			



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

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
DL-03	Elevated reporting limit due to matrix.
O-27	Con-Test Analytical laboratory's enhanced Florisil clean-up was performed on this sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is no affected since sample result was "not detected" for this compound.
V-24	Continuing calibration verification was outside of control limits on the confirmation column, but within control limits on the primary column. All sample results are reported from the column within control criteria.



## 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 Publifc 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

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CHAIN OF CUSTODY RECORD

East longmeadow, MA 01028 39 Spruce Street

B = Sodium bisulfate DW= drinking water \*\*\*Container Code Dissolved Metals GW= groundwater NELAC & AIHA-LAP, LLC WW= wastewater O Field Fittered
O Lab to Fitter T = Na thiosulfate X = Na hydroxide # of Containers \*\* Preservation S = Sulfuric Acid \*\*\*Cont. Code: \*\*Preservation A=amber glass \*Matrix Code: O = other caux N = Nitric Acid M = Methanol 5≃summa can S = soil/solid T=tedlar bag St. = sludge Accredited o = Other ST=sterile P=plastic D=Other G=glass H= HG |= |Ced A=air V= vial O MA State DW Form Required PWSID#\_ Please use the following codes to let Con-Test know if a specific sample is your project MCP or RCP? may be high in concentration in Mattix/Conc. Code Box H - High; M - Medium; L - Low; C - Clean; U - Unknown ANALYSIS REQUESTED O MCP Form Required O RCP Form Required AIRA LAP, LLC SULTATION CATALOGY require 1.0 mg/kg detection **Detection Limit Requirements** дәӷцход **b**CB Conc Code £ 6.V rbrown@hygenix.com 2 O "Enhanced Data Package" Rev 04.05.12 @PDF OEXCEL OGIS Watrix Code O 0 0 0 0 0 0 0 0 DATA DELIVERY (check all that apply 203-324-3876 SEMAIL OWEBSITE Telephone: 203-324-2222 Grab 12F100 Massachusetts: Tomlinson Connecticut: Composite O OTHER Client PO# Project # Date/Time Ending OFAX Format: Other 10-Day O 172-Hr O 14-Day Email: 0 t24-Hr 0 t48-Hr Fax# Turnaround Email: Info@contestlabs.com Collection 7-Day RUSH <sup>†</sup> 062712-10 main flr NCtr interior | 6/27/12 062712-1 main fir NE exterior | 6/27/12 062712-2 main fir NCtr exterior | 6/27/12 062712-3 main fir NCtr exterior | 6/27/12 062712-4 lower IvI NW exterior | 6/27/12 062712-5 auditorium W exterior | 6/27/12 062712-6 auditorium W exterior | 6/27/12 062712-7 auditorium W exterior | 5/27/12 062712-8 lower lvl W exterior 6/27/12 062712-9 lower IVI W interior | 6/27/12 www.confestlabs.com Beginning Date/Time O 182 Client Sample ID / Description Date/Time: Date/Time: 6/27/12 Project Location: Tomlinson Middle School Stamford, CT 06902 ANALYTICAL LABORATORY Project Proposal Provided? (for billing purposes) 49 Woodside Street Robert Brown Company Name: Hygenix Inc. Robert Brown eceiyed by: (sighteure) Con-Test Lab ID Ф О 0 80 S 0 9 S 8 б 50 Relinquished/bv: Sampled By: Attention: Comments Address:

WWW. AND AND THE STARTS AT 9:08 AM, THE DAY AT TER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

Date/Time:

sceived

WBE/DBE Certified

5

Page

CON FEST FAX: 413-525-2332

CHAIN OF CUSTODY RECORD

39 Spruce Street

East longmeadow, MA 01028

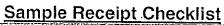
WBE/DBE Certified B = Sodium bisulfate DW= drinking water Dissolved Metals \*\*\*Container Code GW= groundwater NELAC & AIHA-LAP, LLC O Field Filtered
O Lab to Filter T = Na thiosulfate WW= wastewater X = Na hydroxide # of Containers \*\* Preservation \*\*\*Cont. Code: S = Sulfuric Acid \*\*Preservation \*Matrix Code: 0 = other cauck A=amber glass M = Methanol N = Nitric Acid S=summa can S = soil/softd WEDBE CEI
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 T=tedlar bag St = sludge o = Other Accredited ST=sterile P=plastic 0=Other G=glass l ≈ Iced H= HC V= vial A≕air O MCP Form Required
O RCP Form Required
O MA State DW Form Required PWSID #\_\_ Please use the following codes to let Con-Test know if a specific sample Is your project MCP or RCP? may be high in concentration in Matrix/Conc. Code Box: H - High; M - Medium; L - Low; C - Clean; U - Unknown **ANALYSIS REQUESTED** AHALAP, U.C. require 1.0 mg/kg detection **Detection Limit Requirements** goxyjer **b**CB D Conc Code rbrown@hygenix.com "Enhanced Data Package" Rev 04.05.12 OGIS "Hatrix Coda o DATA DELIVERY (check all that apply) 203-324-3876 Telephone: 203-324-2222 O FAX SEMAIL OWEBSITE **⊕ POF** ○ EXCEL Grab Vassachusetts: 12F 100-Project # Tomlinson Connecticut: Composite O OTHER Client PO# Date/Time Ending Other Format Email: 10-Day C 172-Hr C 14-Day Fax # Turnaround D 124-H1 D 148-H1 Collection 7-Day Email: Info@contestlabs.com RUSH 6/27/12 www.contestlabs.com Beginning Date/Time Date/Time: 062712-11 main fir NE interior Client Sample ID / Description Date/Linus: Date/Time: Date/Time: 6/27/12 Project Location: Tomlinson Middle School ANALYTICAL LABORATORY Stamford, CT 06902 49 Woodside Street Project Proposal Provided? (for billing purposes) proposal date Robert Brown Company Name: Hygenix Inc. Robert Brown MILLIAAA )ature) śignature) : (sjgnature) (signature) Con-Test Lab ID Sampled By: O yes Attention: Address: Comments: Relinquisty

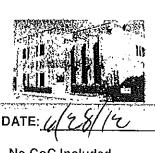
IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

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







CLIENT NAME:	HY GENT	<u>X</u>	RECEIV	ED BY:	VF DA	TE: 4/28/12	
1) Was the chain(	s) of custody relir	quished and sig	ned?		Yes No N	o CoC Included	
2) Does the chain					Yes No	o oo maada	
3) Are all the sam	•	ition?			Yes No		
4) How were the s	samples received:						
On Ice	Direct from Samp	olina 🗀	Ambient	☐ In	Cooler(s)		
Were the samples					<b>~</b> ) · · · <b>~</b>	· · ·	
Temperature °C by				iture °C by T	emp gun	3.9	
5) Are there Disso	olved samples for	the lab to filter?		•	res No		
	tified		Tim				
6) Are there any F					res No		
	tified		-				
7) Location where s	(0	Permission to subcontra (Walk-in clients only) if Client Signature:			į.		
8) Do all samples	have the proper A	cid pH: Yes	No (N)				
9) Do all samples		•	No N/	<del>-  </del> -	<del></del>		
		•	<u> </u>	<del></del>			
10) Was the PC no		27.724	14 15 14 14 1 14 1 14 1 1 1 1 1 1 1 1 1		A SECTION OF STREET	N/A	
	Con	tainers rec	eived	at Con	-lest		
		# of containers				# of containers	
1 Liter Amber				8 oz amber/clear jar			
500 mL Amber				4 oz amber/clear jar			
250 mL Amber (8oz amber)				2 oz amber/clear jar			
1 Liter Plastic				Air Cassette			
500 mL Plastic			1973% 1960	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			\$15-32.924		'Tubes_		
Flashpoint bottle Perchlorate Kit				st Container			
Other		10,000		glass jar			
aboratory Commer	·			Ol	her		
40 mL vials:	40 mL vials: # HCI # Meth		anol		Tim	Time and Date Frozen:	
Doc# 277	# Bisulfate	# DI Water					
	<del></del>				<del> </del>		
Rev. 3 May 2012	# Thiosulfate	Unpres	serve <u>d</u>			Page 22 of 23	

## ABATEMENT OF PCB CONTAINING CAULK-SEALANT MATERIALS

## **PART 1 - GENERAL**

#### 1.1 SUMMARY

- 1.1.1 Work Included: Remove and dispose of polychlorinated biphenyls (PCB) containing caulking materials (>1 PPM <50PPM) in accordance with the Contract Document and the Connecticut General Statutes 22a-467. The Work of this Section shall include, but not be limited to the following:
  - 1.1.1.1 Furnish all labor, materials, facilities, equipment, installation services, employee training, notifications, permits, licenses, certifications, agreements and incidentals necessary to perform the specified work.
  - 1.1.1.2 Removal of PCB containing caulk from two exterior doors. The two doors correspond with sample locations #062712-8 and #062712-10, as shown on the drawing provided with the attached PCB inspection letter dated June 27, 2012 (See Appendix A).
  - 1.1.1.3 Supply containers for temporary storage of PCB-containing waste materials at the site
  - 1.1.1.4 Transportation of PCB-containing waste materials to an approved disposal facility by a properly licensed waste hauler.
  - 1.1.1.5 Dispose of PCB-containing waste materials at one of the following facilities:
    - A solid waste landfill permitted under RCRA title D (for CT facilities, a special waste authorization may be required):
    - Bulky waste landfill (for CT facilities, a special waste authorization may be required);
    - Facilities permitted to manage non-hazardous waste subject to 40 CFR 257.5-257.30
    - A RCRA hazardous waste landfill
  - 1.1.2 Related Work: Work of this Section is part of a project involving other environmental remediation and the complete demolition of all buildings. The contractor shall coordinate the work of this Section with work specified elsewhere.

## 1.2 REFERENCES

1.2.1 Applicable Regulations

The contractor shall comply with all applicable federal and state requirements including, but not limited to the following. Where the regulations specify conflicting requirements, the contractor shall follow the stricter requirement.

1.2.1.1 American National Standards Institute (ANSI)

ANSI.Z89.1 Personal Protective Equipment-Protective Headwear for Industrial Workers Requirements (latest revision)
ANSI.Z87

## 1.2.1.2 Code of Federal Regulations (CFR)

- Hazardous Waste Operations and Emergency Response (29 CFR 1910.120)
- Respiratory Protection Standard (29 CFR 1910.134)
- Hazard Communication (29 CFR 1910.1200)
- General Health and Safety Provisions (29 CFR 1926.20)
- Ventilation (29 CFR 1926.57)
- Hazard Communication Program (29 CFR 1926.59)
- Hazardous Waste Operations and Emergency Response (29 CFR 1926.65)
- Criteria for Personal Protective Equipment (29 CFR 1926.95)
- Materials Handling, Storage and Use (29 CFR 1926, Subpart H)
- Scaffolding (29 CFR 1926, Subpart L)
- Fall Protection (29 CFR 1926, Subpart M)
- Ladders (29 CFR 1926, Subpart X)
- Toxic and Hazardous Substances (29 CFR 1926, Subpart Z)
- National Primary and Secondary Ambient Air Quality Standards for Particulate Matter (40 CFR 50.6)
- General Information, Regulations and Definitions (49 CFR 171)
- Shippers-General Requirements for Shipments and Packaging (49 CFR 173)
- Carriage by Public Highway (49 CFR 177)

## 1.2.1.3 National Institute for Occupational Safety and Health (NIOSH)

- Respiratory Decision Logic (Publication #87-108)
- Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH Publication 85-115)

## 1.2.1.4 Connecticut Department of Environmental Protection (CT DEP)

Regulations of Connecticut State Agencies (22a-133k-1 through 22a-133k-3)

#### 1.3 DEFINITIONS

## 1.3.1 Authorized Personnel

Owner or the Owner's Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.

## 1.3.2 Containment

The enclosure on the interior and/or exterior of the building which establishes a contaminated area and surrounds the location where hazardous material remediation is taking place and establishes a Controlled Work Area.

#### 1.3.3 Clearance Criteria

A Visual Inspection of all removal surfaces, performed by the independent testing lab employed by the Owner's, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references.

## 1.3.4 Fixed Object

Mechanical equipment, electrical equipment, fire detection systems, alarms, and all other fixed equipment, fixtures or other items which cannot be removed from the work area.

#### 1.3.5 HEPA

High Efficiency Particulate Absolute filtration efficiency of 99.97 percent down to 0.3 microns. Filtration provided on specialized vacuums and air filtration devices to trap particles.

### 1.3.6 PCB Containing Material

Any material containing greater than 1 mg/kg of PCBs.

#### 1.3.7 PPE

Personal Protective Equipment.

#### 1.4 REQUIREMENTS

#### 1.4.1 General

The Contractor shall furnish all labor, materials, facilities, equipment, installation services, employee training, notifications, permits, licenses, certifications, agreements and incidentals necessary to perform the specified work. Work shall be performed in accordance with the contract documents, the latest regulations from the Occupational Safety and Health Administration (OSHA), the State of Connecticut and all other applicable federal, state and local agencies.

#### 1.4.2 Notification

The Contractor shall be responsible for submitting project notification and any applicable fees as required by the Connecticut Department of Environmental & Energy Protection (DEEP). The contractor shall be responsible for securing any and all required permits and variances for the project.

## 1.4.3 Training

All general project personnel engaged in the work covered under this section shall have been trained with OSHA 10-hour Construction Outreach Training and all Foreman and Site Supervisors shall be training in OSHA 30 hour Construction Outreach Training. In addition, all workers must receive additional training on specific hazards of the job.

#### 1.4.4 Project Health and Safety

- 1.4.4.1 The contractor is responsible and liable for the health and safety of all onsite personnel and the off-site community affected by the project. All onsite workers and other persons entering the abatement work areas, decontamination areas or waste handling and staging areas shall be knowledgeable of and comply with the requirements of the site-specific Health and Safety Plan (HASP) at all times. The contractor's HASP shall comply with all applicable federal, state and local regulations protecting human health and the environment from the hazards posed by the work performed under this project.
- 1.4.4.2 Consistent disregard for the provisions of the HASP shall be deemed sufficient cause for the immediate stoppage of work and termination of

- the Contract or any Subcontracts without compromise or prejudice to the rights of the Owner
- 1.4.4.3 In addition to exposure concerns relating to the presence of PCBs, other health and safety considerations will apply to this project. The contractor shall be responsible for the health and safety of contractor employees at all times. It is the contractor's responsibility to comply with all applicable health and safety regulations.
- 1.4.5 Project Health and Safety Officer
  - 1.4.4.1 The Contractor shall designate a full-time Project Health & Safety Officer who shall meet the following qualifications:
    - The Project Health & Safety Officer shall be trained in OSHA 30 hour Construction Outreach Training and have additional training on specific hazards of the job.
    - The Project Health & Safety Officer shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of two (2) years experience as a supervisor over PCB related work.
    - The Project Health & Safety Officer must be able to read and write English fluently, as well as communicate in the primary language of the Workers.
  - 1.4.4.2 If the Project Health & Safety Officer is not on-site at any time whatsoever, all work shall be stopped. The Project Health & Safety Officer shall remain on-site until the Project is complete. The Project Health & Safety Officer cannot be removed from the Project without written consent of the Owner and the Project Monitor. The Project Health & Safety Officer shall be removed from the Project if so requested by the Owner.
  - 1.4.4.3 The Project Health & Safety Officer shall maintain the bound Daily Project Log that also includes the entry/exit logs and the Waste Disposal Log.
  - 1.4.4.4 The Project Health & Safety Officer shall be responsible for ensuring that project personnel and site visitors are informed of and comply with the provisions of the HASP at all times during the project. Review of the HASP shall be acknowledged and documented by obtaining the name, signature and affiliation of all persons reviewing the HASP.
  - 1.4.4.5 The Project Health & Safety Officer shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Health & Safety Officer shall be the primary point of contact for the Owner and Project Monitor.
- 1.4.6 Respiratory Protection Program

Establish and implement a respirator program as required by ANSI Z88.2, 29 CFR 1926.1101, and 29 CFR 1926.103. Submit a written description of the program, including copies of personal air monitoring data for similar, previously-completed projects, to the Project Monitor. If previous data is not available the contractor will be required to perform an initial exposure assessment with a minimum of three (3) days of monitoring.

#### 1.4.6 Hazard Communication

Adhere to all parts of 29 CFR Part 1926.59, and provide the Project Monitor with a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site.

## 1.5 SUBMITTALS

The following documents shall be submitted to the Owner or Owner's representative prior to commencement of abatement work:

## 1.5.1 Manufacturer's Catalog Data

Catalog sheets, specifications and application instructions for any removal products, if used.

#### 1.5.2 Abatement Plan

Submit an abatement plan that clearly describes the procedures to be used for the removal of the caulk, including the plan to protect workers and prevent PCB contamination from migrating outside of the regulated areas. The abatement plan shall include, but not be limited to, a drawing indicating the location, size, and details of PCB Collection Areas, staging areas for PCB removal from identified area, location and details of containment, decontamination facilities, sequencing of removal, work procedures, types of equipment, crew size, and emergency procedures for fire and medical emergencies.

## 1.5.3 Health and Safety Pan (HASP)

Submit a detailed, site-specific plan of the safety precautions and OSHA compliance program for the project. The HASP shall govern all work conducted at the site during the abatement of caulk and related debris, waste handling, sampling, management and waste transportation. Any discrepancies between the contractor's HASP and these specifications or federal and state regulations shall be resolved in favor of the more stringent requirements that provide the highest degree of protection to the project personnel and the surrounding community and environment. The plan shall include, but not be limited to the following:

- Health and Safety Organization
- Site Description and Hazard Assessment
- Training
- Medical Surveillance
- Work Areas
- Personal Protective Equipment
- Personal Hygiene and Documentation
- Standard Operating Procedures and Engineering Controls
- Emergency Equipment and First Aid Provisions
- Equipment Decontamination
- Air Monitoring
- Telephone List
- Emergency Response and Evacuation Procedures and Routes
- Site Control
- Spill Prevention & Containment Plan
- Heat and Cold Stress
- Record Keeping
- Community Protection Plan

#### 1.5.4 Worker's Qualifications Data

Documentation of training for all employees and subcontractors to be used for the abatement work shall be submitted. Persons performing PCB abatement and their supervisor shall have site specific training for PCB abatement work. The site supervisor and the health and safety officer shall have been regularly employed by a company performing PCB abatement for a minimum of 2 years.

### 1.5.5 PCB Disposal Plan

Submit a detailed plan for the transportation and disposal of PCB-containing wastes generated during the project which identifies the following:

- Waste packaging, labeling, placarding and manifest procedures
- The name, address and 24-hour contact number for the proposed treatment or disposal facility or facilities to which waste generated during the project will be transported.
- The name, address, contact person(s) and state-specific permit numbers for proposed waste transporters, and EPA identification numbers for firms that will transport hazardous waste.
- The route(s) by which the waste will be transported to the designated disposal facility, and states or territories through which the waste will pass and the waste is to be disposed of outside of the State of Connecticut.

## 1.5.6 PCB Work Closeout Submittals

Submit the following documents to the Owner or Owner's representative with in thirty (30) days of the waste being removed from the site:

- Waste profile sheets
- Pre-disposal analysis test results (If required by disposal facility)
- Signed manifests from the disposal facility
- Tipping receipts provided by the disposal facility
- Certification of the final treatment/disposal signed by the responsible disposal facility official.

#### 1.6 PRE-CONSTRUCTION MEETING

1.6.1 Prior to the commencement of the Work, the contractor shall meet with the Owner and the Owner's representatives for the purpose of reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.

#### **PART 2 - PRODUCTS**

All products delivered to the site shall be in the original packages, containers, etc. with the name of the manufacturer and the brand name on them.

#### 2.1 ABATEMENT PRODUCTS

#### 2.1.1 Disposal Containers

Metal or other approved containers, with warning labels as required by OSHA and/or CTDEP.

## 2.1.2 Respirators

Approved by the National Institute for Occupational Safety and Health (NIOSH).

#### 2.1.3 Vacuum Cleaners

Vacuums equipped with HEPA filters.

#### 2.1.4 Plastic Sheets

- Minimum 6 mil., opaque, fire retardant polyethylene sheets.
- Floor Protective Layer: Minimum 10 mil., reinforced polyethylene sheets.

#### 2.2 GENERAL PRODUCTS

### 2.2.1 Decontamination Equipment

A sufficient supply of disposable mops, rags, and sponges for work area decontamination shall be available.

#### 2.2.2 General Tools

A sufficient supply of scaffolding, ladders, lifts, and hand tools, (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed.

## 2.3 PERSONNEL PROTECTIVE EQUIPMENT

The contractor shall provide to all workers and authorized visitors, in sufficient quantity the appropriate safety equipment for this project (e.g., hard hats meeting the requirements of ANSI Standard Z89.1-1981, eye protection meeting the requirements of ANSI Standard Z87.1-1979, safety shoes meeting the requirements of ANSI Standard Z41.1- 1967, disposable PVC gloves or other work gloves, and disposal coveralls with full foot covers).

#### 2.4 EMERGENCY PRODUCTS

#### 2.4.1 Fire Extinguishers

The contractor shall provide a minimum of one fire extinguisher for each abatement/work area with a minimum 20-pound Class ABC dry fire extinguisher with Underwriter Laboratory approval per 29 CFR 1910.157

### 2.4.2 First Aid Kit

The contractor shall supply a minimum of one first aid kit meeting the requirements of 29 CFR 1910.151 for the site.

#### **PART 3 - EXECUTION**

#### 3.1 EQUIPMENT

At all times, provide the Owner, Owner's Representative, Authorized Visitors and employees with at least two complete sets of personal protective equipment (including disposable coveralls), as required for entry to and inspection of the abatement areas.

## 3.1.1 Respirators

Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH).

## 3.1.1.1 Respirators for Handling PCBs

Provide personnel engaged in pre-cleaning, cleanup, handling, removal and demolition of PCB materials with a minimum of half-face respirator with HEPA filter cartridge for all projects. Respiratory protection shall be in accordance with OSHA regulation 1910.134 and ANSI Z88.2.

## 3.1.2 Exterior Whole Body Protection

#### 3.1.2.1 Outer Protective Clothing

Provide personnel exposed to PCBs with whole body outer protective clothing, head coverings, gloves, and foot coverings that are made of Tyvek or equivalent material. Provide Nitrile or equivalent disposable work gloves. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by use of tape. Provide disposable undergarments for wear under the outer protective clothing. All protective clothing shall be disposed of as PCB waste each time a worker exits the regulated work area.

## 3.1.2.2 Hard Hats, Eye Protection, Footwear

Hard hats, eye protection, rubber boots shall be provided by the contractor as required for workers and authorized visitors. Safety shoes and hard hats shall comply with ANSI Z89.1 (1969) and ANSI Z41.1 (1967)

## 3.1.3 Protective Clothing Disposal

All contaminated protective clothing, respirator cartridges and disposable protective items must be placed in proper containers for transport and proper disposal with the PCB waste.

## 3.1.4 Warning Signs and Labels

Provide bilingual warning signs printed in English and Spanish (and the prevailing language spoken by employees) at all approaches to the control areas. Locate signs at such a distance that personnel may read the sign and take the necessary

protective steps required before entering the area. Provide labels and affix to all materials, scrap, waste, debris, and other products contaminated with PCBs.

### 3.1.4.1 Warning Signs

Provide a vertical format with a minimum 20-in x 14-in displaying the following legend:

WARNING:
REGULATED WORK AREA
PCBS-POISON
NO SMOKING, EATING OR DRINKING
AUTHORIZED PERSONNEL ONLY
PROTECTIVE CLOTHING IS REQUIRED IN THIS AREA

## 3.1.4.2 Warning Labels

All waste containers must be properly labeled in accordance with CTDEEP.

#### 3.1.6 Tools

Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to ANSI Z9.2 and UL 586. Do not use power tools to remove PCB containing materials unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation systems and full negative pressure containment is installed around the work area. Proper decontamination of all tools is required prior to removal from the site.

#### 3.2 WORK PROCEDURE

Perform PCB related work in accordance with all applicable federal, state and local regulations. If mechanical measures are required for removal the Contractor must employ a negative pressure HEPA filtered enclosure.

Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, chewing gum, tobacco, or applying cosmetics shall not be permitted in the work or control areas. Personnel of other trades not engaged in the removal and demolition of PCB containing materials shall not be exposed at any time to airborne concentrations of PCBs unless all the personnel protection and training provisions of this section are complied with by the trade personnel.

If any PCB release or spill occurs outside of the regulated area, stop work immediately, correct the condition to the satisfaction of the Owner's representative prior to resuming work.

#### 3.2.1 Protection of Adjacent Building Areas

Perform work without damage or contamination of adjacent building areas. Where such areas are damaged or contaminated as verified by the Owner's representative using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the contractor at no expense to the owner as deemed appropriate by the Owner's representative. This includes inadvertent spill of dirt, dust, liquid or debris in which it is reasonable to conclude that PCBs may exist. When these spills occur, stop work immediately. Then clean up the

spill. When satisfactory visual inspection and sampling results are obtained from the Owner's representative, PCB abatement work may be resumed.

#### 3.2.2 PCB Work Areas

The following requirements apply to the PCB work area:

#### 3.2.2.1 Abatement Zone

The abatement zone shall consist of all areas where abatement or waste handling and staging activities are ongoing and the immediate surrounding area that may be contaminated. Each zone shall be delineated with a minimum of orange construction fencing and restricted from access by all persons except those directly necessary to the completion of each abatement task. The abatement zones shall be relocated and delineated as necessary as work progresses from one portion of the project site to another. Access shall be controlled at the periphery of the abatement zones to regulate the flow of personnel and equipment into and out of each zone and to ensure that proper procedures for entering and exiting are followed.

#### 3,2,2,2 Decontamination Zone

The decontamination zone is the transition zone between the abatement area and the clean support zone of the site, and is intended to reduce the potential for contaminants from being dispersed from the abatement zone to the clean areas. The decontamination zone shall consist of a buffer area surrounding the abatement zone through which the transfer of equipment, materials, personnel and containerized waste products will occur and in which decontamination of equipment, personnel and clothing will occur. The decontamination zone shall be clearly delineated with a minimum of orange construction fencing and labeled with proper signage. There shall also be a decontamination station within this zone where personnel and tool decontamination will occur. The station will consist of a minimum of 6-mil re-enforced plastic sheeting on the ground with raised edges, a HEPA vacuum for removal of gross debris and a wash station where workers can clean exposed body parts and small tools/equipment. All emergency response and first aid equipment shall be maintained in this zone and all protective equipment and clothing shall be removed or decontaminated in this zone prior to removal into the clean areas.

### 3.2.2.3 Support Zone

The support zone will consist of all areas outside of the decontamination zones.

#### 3.3 PCB CAULK REMOVAL

3.3.1 Once the proper containment zones and decontamination facilities have been established the ground beneath below all opening locations where PCB containing materials are to be removed shall have a layer of reinforced polyethylene sheeting installed to collect debris from removal operation. Ground plastic must be secured to the building by duct tape and other suitable materials and must extend away from the building a minimum of ten (10) feet for ground level abatement and twenty (20) feet for second and third floor abatement. Additional protection, i.e.

- wood sheeting shall be used directly under any lifts or other machinery that will be placed on the plastic sheeting to prevent tearing.
- 3.3.3 Remove all identified caulk from the building using hand tools and scrapers only. Caulk shall be completely removed and pass a visual inspection by the Owner's representative. The building substrate in direct contact with the PCB containing caulk can be removed and disposed of as PCB waste in lieu of scraping the caulk from the surface. When removing these surfaces from elevated locations, an additional layer of plastic shall be secured to the lift and to the building below the unit to catch any materials that may fall to prevent them from dropping to the ground below. The window frame must be removed to ensure all caulk is removed from the building opening. Caulk may be scraped from the window unit so the unit may be disposed of as general construction waste.
- 3.3.4 Immediately containerize all waste generated for proper disposal.

#### 3.4 CLEANING AND DECONTAMINATION

The Contractor shall be responsible for the complete cleaning and decontamination of the Abatement Zone upon completion of the work. HEPA vacuum and wet cleaning methods shall be used to remove all visible dust and debris from all surfaces within the work area.

- 3.4.1 Rags and other disposable cleaning materials shall be properly disposed of with the PCB wastes.
- 3.4.2 Equipment used in the remediation of PCBs shall be decontaminated prior to leaving the site. Equipment, tools and machinery that are visibly clean will be swabbed with solvent solution containing d-limonene. Grimy non-porous surfaces will be decontaminated following a double wash/rinse procedure.
- 3.4.3 Wash water and decontamination liquids shall be captured and containerized for off-site disposal.

#### 3.5 CERTIFICATION OF ABATEMENT

- 3.5.1 Schedule visual clearance inspection with the Owner's Representative at the site, when work is completed.
- 3.5.2 The Owner's Representative will employ the services of an independent testing/monitoring lab to perform the visual clearance inspection. Visual Clearance Criteria requirements are as follows:
  - 3.5.2.1 Containment barriers and floor plastic are intact and warning signs are in place.
  - 3.5.2.2 Decontamination facilities are in place and tools used for abatement have been properly cleaned and decontaminated.
  - 3.5.2.3 Caulk has been removed and placed in appropriate disposal containers. Waste containers are sealed, posted, and secured.
  - 3.5.4.4 Work area contains no waste or visible debris from abatement work.

    Trash, extraneous plastic sheeting, used disposable PPE and floor plastic have been removed from the area and placed in PCB waste container.

- 3.5.3 After the area has passed the visual inspection the independent testing/monitoring lab will perform the clearance wipe and air sampling. Clearance Criteria requirements for wipe samples are as follows:
  - 3.5.3.1 A sample shall be collected from the floor inside the building where the window is removed, after the containment has been decontaminated and before it is removed to verify the effectiveness of the containment procedures. A single sample for verification will be collected, plus 1 blank sample, 1 duplicate and 1 side-by-side sample.
  - 3.5.3.2 The laboratory shall be an accredited laboratory for PCB analysis. All samples will be extracted using USEPA Method 3540C and analyzed for PCBs using ESEPA Method 8082.
  - 3.5.3.3 Analytical results of ≤1 µg/100cm² will be considered in compliance with the State of Connecticut Department of Public Health and EPA recommended limit.
- 3.5.4 After the area has passed the visual inspection the independent testing/monitoring lab will perform the clearance wipe and air sampling. Clearance Criteria requirements for air samples are as follows:
  - 3.5.4.1 Upon completion of work and prior to the removal of containment barriers the Owner's representative will collect interior air samples.
  - 3.5.4.2 Air samples will be collected in accordance with EPA Method TO-10A. Sufficient sample volume will be collected to ensure a detection limit that allows quantification of the data relative to the EPA action concentration of 300 ng/m³ for children ages 6 to 12 in schools.
  - 3.5.4.3 Samples shall be collected from representative locations as follows:
    - A single sample inside the window location where removal occurred.
    - A single sample in a remote location from where the window is removed.
    - One blank sample
  - 3.5.4.4 The laboratory shall be an accredited laboratory for PCB analysis. All samples will be analyzed by USEPA Method TO-10A and evaluated using EPA SW846 Chapter 9 for statistical accuracy.
- 3.5.5 The remediation contractor shall be responsible for achieving all aspects of the Visual Inspection, Wipe and Air Clearance Criteria to the satisfaction of the Owner. Any costs associated with unsatisfactory visual, wipe or air clearance criteria shall be borne by the Contractor.
- 3.5.6 Bulk samples of adjacent building materials and soil samples from the perimeter edge of the buildings have already been collected. Samples of all of these materials were identified as containing <1 PPM of PCBs. No additional samples of these materials will be collected after the removal is complete and it has passed a visual inspection by the Owner's representative.</p>

#### 3.6 MARKING OF WASTE CONTAINERS

- 3.6.1 All waste containers containing PCB Waste, used PPE, personal and equipment wash water and decontamination fluids, or other wastes generated during the abatement work shall be labeled per local, State and Federal requirements.
- 3.6.2 All markings must be durable, in English and printed on or affixed to the surface of the package or on a label, tag or sign; displayed on a background of sharply contrasting color; un-obscured by labels or attachments and located away from any other markings that could substantially reduce its effectiveness.

#### 3.7 WASTE MANAGEMENT AND DISPOSAL

- 3.7.1 Properly containerized waste must be transported by a licensed hauler and shipped to one of the following facilities:
  - A solid waste landfill permitted under RCRA title D (for CT facilities, a special waste authorization may be required):
  - Bulky waste landfill (for CT facilities, a special waste authorization may be required);
  - Facilities permitted to manage non-hazardous waste subject to 40 CFR 257.5-257.30
  - A RCRA hazardous waste landfill

Waste manifests must show chain of custody. Provide one copy of the waste manifests to the Owner. In cases where caulk is also asbestos containing, the Contractor must confirm that the disposal facility will accept the dual waste.

- 3.7.2 All contaminated waste shall be carefully loaded on trucks or other appropriate vehicles for transport. Before and during transport, care shall be exercised to insure that no unauthorized persons have access to the material.
- 3.7.3 Transporters of the waste are prohibited from "back hauling" any freight after the disposition of the Owner's waste stream until decontamination of the vehicle and/or trailer is assured.
- 3.7.4 The Contractor shall be responsible for all packaging, labeling, transport, disposal and record-keeping associated with PCB waste in accordance with all federal, state and local regulations.
- 3.7.5 The Contractor shall ensure that the person transporting the waste holds a valid permit issued in accordance with appropriate federal, state, and local regulations.
- 3.7.6 The Contractor shall provide to the transporter at the time of transfer appropriate shipping records as required by the federal, state and local regulations with a copy to the project engineer.
- 3.7.7 Contractor shall maintain proper follow up procedures to assure that waste materials have been received by the designated waste site in a timely manner and in accordance with all federal, state and local regulations.

#### **END OF SECTION**

## **APPENDIX A**

PCB INSPECTION LETTER (July 27, 2012)