

2902801-1  
March 28, 2013



Randall Luther  
Tai Soo Kim Partners  
285 Farmington Avenue  
Hartford, CT 06105

Re: **Hazardous Building Material Screening Report  
Cheney School, Heating Plant and Fire House  
19, 39, and 41 School St, Manchester, CT**

Dear Mr. Luther:

In accordance with our proposal dated March 5, 2013, Tighe & Bond has completed a Hazardous Building Materials Screening (HBMS) for the Former Cheney School (41 School St), Boiler Plant (39 School St), and Fire House (19 School St). The purpose of the inspection was to determine if hazardous building materials (HBMs) are associated with building components that will be impacted during proposed renovation activities. These materials include but are not limited to; floors, walls, ceilings, roofs fields and window components. The inspection also included a visual evaluation for universal wastes and lead based paint.

## **Screening Summary**

The HBMS was conducted by State of Connecticut licensed inspectors, James Webb of Tighe & Bond on March 13 and 14, 2013. Copies of inspector licenses are included in Appendix A. The HBMS was limited to the large quantity building materials which included floors, walls, ceilings and window systems of the Cheney School, Boiler Plant and Fire House. A walk through and visual inspection was conducted at the Bennet School. According to information included in the 2008 Asbestos Hazard Emergency Response Act (AHERA) report for the Bennet School, all asbestos containing materials (ACM) were abated in 2007. Roof sampling for was not performed during this screening. Sampling of the roof fields should be done as part of a Supplemental Hazardous Building Materials Inspection (HBMI) if the project moves forward.

The inspection included sampling of suspect ACM, lead-based paint screening using an X-Ray Florescent (XRF) analyzer, sampling of caulking and glazing compound materials for analysis of polychlorinated biphenyls (PCBs), and a visual inspection for the presence of PCB, di (2-ethylhexyl) phthalate (DEHP), mercury, or chlorofluorocarbon containing equipment. The inspection was limited to visible and accessible materials. Minor selective demolition activities were conducted as part of this inspection. The following is a description of field activities conducted during the inspection:

## **Suspect Asbestos-Containing Material Sampling**

A total of 28 different types of suspect asbestos containing materials were observed and sampled including sheetrock, joint compound, floor tile and mastic, cove base and mastic, ceiling tiles, boiler insulation and boiler brick, wood window glazing compounds, window frame caulk, sink undercoating and other miscellaneous materials. Sampled materials are listed in Tables 1 and 2 (Appendix B). Up to two samples were collected of each suspect material as part of the asbestos identification screening. Samples were submitted to EMSL Laboratories in Wallingford, Connecticut for asbestos analysis via Polarized Light Microscopy (PLM) using EPA approved protocol in accordance with accreditation of the National Institute



of Standards and Technology (NIST). During inspection activities the sample locations, types of material, and quantities were recorded. Homogenous materials were noted when observed.

### **Lead-Based Paint Screening**

Lead based paint (LBP) screening was conducted using an Innov-X X-Ray Florescent (XRF) analyzer. The XRF is an instant read instrument that measures lead content of painted surfaces in milligrams per square centimeter. All of the painted building components such as walls, floors, and door systems for each target room were screened with the XRF and measurements were recorded as part of the inspection. Component and surface locations were identified by side designations represented by the letters "A", "B", "C", and "D". The "A" side is considered the door/entrance side to the data closets with the "B", "C", and "D" side following in a clockwise order.

### **PCB Sampling of Caulk and Glazing Compounds**

Samples were collected of caulking and glazing compounds observed during the inspection. Three different types of caulking and one type of glazing compound were observed. Up to two samples of each different type of material were collected as part of the PCB identification screening. These samples were submitted to Phoenix Laboratories of Manchester, Connecticut for analysis of PCBs utilizing the EPA 3540C Soxhlet Extraction and SW 846 8082 analytical method.

### **Visual Inspection for PCB/DEHP, Mercury, and Chlorofluorocarbon Containing Equipment**

A visual inspection for lighting ballasts, transformers, electrical switches, small electrical motor capacitors, and other items that could contain PCBs/DEHP was conducted. The inspection also included identification of mercury vapor lamps, other components known to contain mercury, and compressors with the potential to contain chlorofluorocarbons.

## **Findings and Conclusions**

### **Asbestos Sampling Results**

During the course of the inspection, a total of 29 bulk samples of suspect ACM were collected and 29 samples were analyzed. Some materials were found to be homogeneous to each room (i.e. sheetrock, floor tile, ceiling tiles, etc). USEPA defines any material containing more than 1% asbestos as an asbestos containing material. Five types of material were found to be asbestos containing materials (ACM) including floor tile and mastic, sink undercoating, window glazing compound, boiler insulation, and metal window glazing compound on doors. Additionally one sample was analyzed using the TEM NOB method. The TEM NOB analyses method confirmed the wood sash window glazing compound from the Fire House to be Non-ACM or <1% asbestos containing. Laboratory reports from EMSL are provided in Appendix C.

Previous sampling had been conducted at the Cheney School during prior AHERA inspections documented in 1990 and 1999. The following building materials were found to contain asbestos during those inspections; resilient floor tile and mastic, fire doors, pipe insulation and mudded pipe fittings, mastic behind wall boards and transite panels. Refer to Table 1 for a summary of asbestos containing materials previously sampled.

## **Lead-Based Paint Screening Results**

A total of 57 readings were collected during the lead-based paint screen of the Cheney Building, Power Plant and Fire House. Lead-based paint is typically defined as containing greater than 1.0 mg/cm<sup>2</sup> of lead. XRF readings were recorded ranging from 0.0 mg/cm<sup>2</sup> to >5.0 mg/cm<sup>2</sup> during the inspection.

A total of 40 readings were collected from the Cheney Building. High levels of lead based paint were identified on interior brick walls, interior foundations, interior and exterior wood window frames and sashes, structural steel, and plaster walls.

A total of 11 readings were collected from the Power Plant. High levels of lead based paint were identified on the exterior wood window/door frames and sashes and interior concrete walls of the Power Plant.

A total of 6 readings were collected from the Fire House. High levels of lead based paint were identified on the exterior wood window/door frames and sashes and interior brick walls of the Power Plant.

Due to the presence of high levels of lead based paint within the Cheney School, Power Plant, and Fire House further recommendations and planning will be required to address lead based paint removal or encapsulation.

US Department of Safety and Health Administration (OSHA) assumes any detectable level of lead in paint requires worker task specific exposure monitoring. If these surfaces identified to contain low levels of lead will be impacted by cutting, grinding or other dust generating activities a worker task specific exposure assessment should be conducted by the contractor in accordance with OSHA 29 CFR 1926.62 to confirm lead dust is not being generated. Refer to Table 3 for a detailed list of painted surfaces screened and XRF measurements recorded.

## **PCB Sample Results for Caulk, Putty, and Sealant Compounds**

A total of 10 samples were submitted for analysis of PCBs (four different types of materials). All of the samples analyzed were found to be Non-PCB containing. Concentrations detected ranged from <0.75 parts per million (ppm) to <0.82 ppm.

Materials containing PCBs at concentrations greater than 50 ppm and 1 ppm are regulated by EPA and the Connecticut Department of Energy and Environmental Protection (CTDEEP), respectively. Materials with PCB concentrations less than or equal to 1 ppm are not regulated and can be disposed of as general construction waste. Refer to Table 4 for a detailed list materials sampled for PCBs. Laboratory analytical reports for PCB sampling are provided in Appendix D.

## **Visual Inspection for PCB/DEHP, Mercury, and Chlorofluorocarbon Containing Equipment**

Each of the rooms, hallways, and waiting areas were observed to have fluorescent light fixtures. Each of these fixtures is assumed to contain ballasts that may contain PCBs and fluorescent tubes that contain mercury vapor. Additional universal wastes observed during the inspection included thermostats and emergency exit signs that may contain mercury vapor. If these fixtures are to be removed as part of renovation activities they should be properly handled and disposed in accordance with existing State and Federal regulations. An evaluation of existing electrical equipment for hazardous materials was not conducted as part of the inspection. No obvious signs of leaking PCB/DEHP containing equipment such as wet transformers, electrical switches, or small electrical motor capacitors were observed during the inspection. Furthermore, air conditioning units with the potential to contain

chlorofluorocarbons such as Freon was observed during the inspection. Refer to Table 5 for a summary of universal waste inventory.

## Limitations

Additional HBMI work will be required to determine actual materials and quantities for abatement and renovation, which was outside the scope of work for this HBMS. To meet EPA sampling identification standards, additional samples of suspect asbestos and suspect PCB containing materials is required before conducting any renovation activities.

We have developed a preliminary order of magnitude cost estimate of \$300,000 for abatement of HBMs that were identified during this Screening. This estimate includes a supplementary investigation of hazardous building materials, abatement design and specifications, abatement monitoring and the removal/disposal of universal wastes (refer to Table 6). Note, this cost estimate will increase if additional HBMs are found during the supplement investigation. We recommend technical specifications be developed to facilitate proper removal and disposal of these materials prior to renovation activities.

If you have any questions, please contact me at (860)704-4761 or [jtolsen@tighebond.com](mailto:jtolsen@tighebond.com).

Very truly yours,

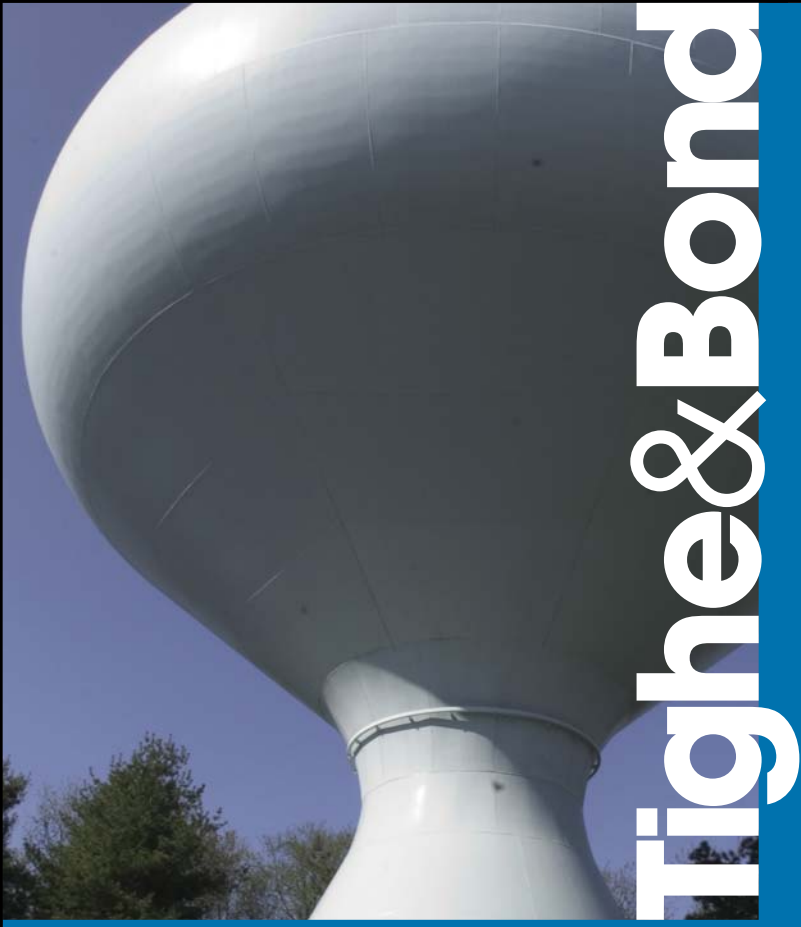
**TIGHE & BOND, INC.**



James T. Olsen, LEP  
Senior Project Manager, Associate

Enclosures:

- Appendix A - Inspector Licenses
- Appendix B - Table 1 Summary of Asbestos Containing Materials
- Table 2 Summary of Non-Asbestos Containing Materials
- Table 3 Summary of XRF Lead Screening Results
- Table 4 Summary of PCB Sampling Results
- Table 5 Summary of Universal Wastes
- Appendix C - EMSL Asbestos Laboratory Analytical Reports
- Appendix D - PCB Laboratory Analytical Reports





# Certificate of Training

Awarded to

**JAMES WEBB**

For successful completion of a 4 Hour, 1/2 Day  
**Asbestos Building Inspector  
Annual Refresher Training  
FEBRUARY 14, 2011**



This training was approved and given in accordance with the  
Regulations for Connecticut State Agencies  
RCSA 20 - 440 - 1-9 and RCSA 20 - 441 and meets the  
requirements of the EPA Revised MAP under TSCA Title II of 4/4/94.

*Presented by*

**Mystic Air Quality Consultants, Inc.**

**1204 North Road, Groton, CT 06340 (800) 247-7746**

Certificate Number: ABIRF19732

Exam Grade: 97

Exam Date: 02/14/2011

Expiration Date: 02/14/2012

*Christopher J. Eident*  
Christopher J. Eident, CIH, CSP, RS

*George Williamson*  
George Williamson, Training Director

*Richard Hatfey*  
Richard Hatfey, Training Director

WALLET CARD	
STATE OF CONNECTICUT	
DEPARTMENT OF PUBLIC HEALTH	
NAME	
JAMES J. WEBB	
LICENSE NO.	
000588	
CURRENT THROUGH	
08/31/13	
ASBESTOS CONSULTANT-INSPECTOR	
PROFESSION	
03-477034	
VALIDATION NO.	
03-477034	
SIGNATURE	
<i>James Webb</i>	
COMMISSIONER	



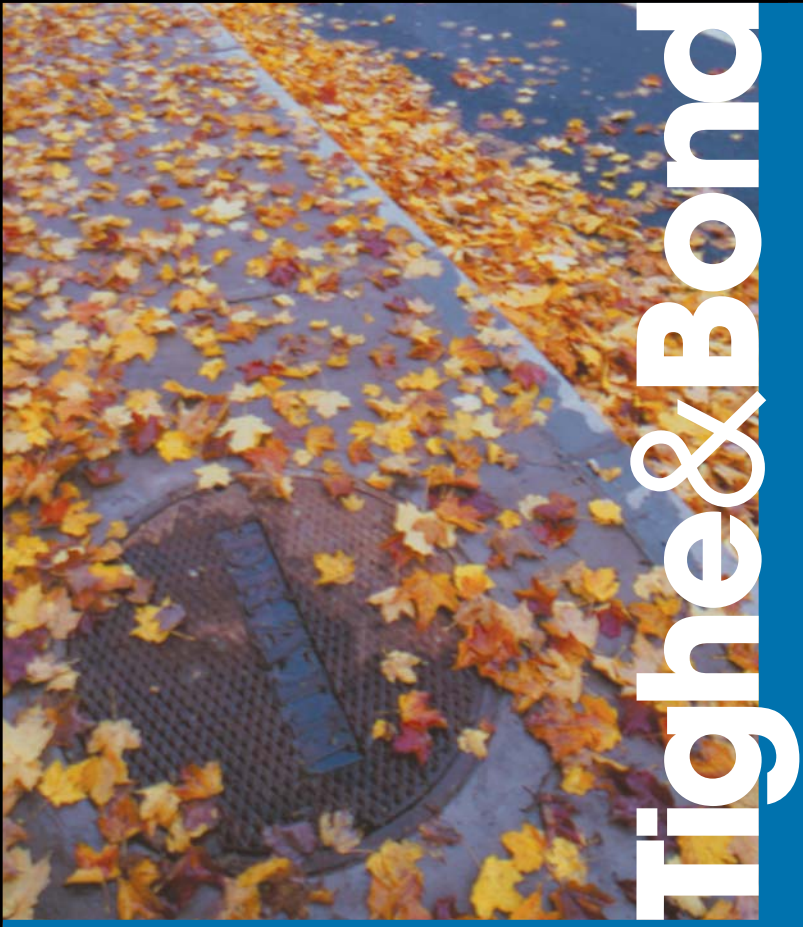


Table 1  
Summary of Asbestos Sampling Results  
Cheney Building  
Manchester, CT

**Asbestos Sampling Date: 3/13/2013**

Sample #	Material	Color	Description	Building	Quantity	Location	Result
3-13-JW-08	Black Mastic associated with 12" x 12" Floor tile	Black	Floor	Cheney Building	550	C2 Dark Room, South Stair Tower, 2nd Floor Faculty Restroom	5% Chrysotile
3-13-JW-15	Pink Sink Undercoating	Pink	Beneath Sink	Cheney Building	16 Sinks	2nd Floor	5% Chrysotile
3-13-JW-16	Black Metal Window glazing Compound	Black	Metal Doors	Cheney Building	20 Doors	Throughout	4% Chrysotile
3-13-JW-22	Wood Window Glazing Compound	White	Wood Window Sashes	Cheney Building	184 Sashes at 5'x4' each, 86 Sashes at	All Facades	5% Chrysotile
Assumed	Roof Fields	Black	Flat Roof Fields	Cheney Building	9,500 SF	Roof Fields	Assumed
Previously Sampled	Resilient Floor Tile and Mastic	Brown Tile and Black Mastic	Floor	Cheney Building	230 SF	Stairwell	Tested positive in 1999
Previously Sampled	Fire doors	White Core	Door	Cheney Building	9 Doors	Throughout	Tested positive in 1999
Previously Sampled	Pipe Insulation and Mudded Fittings	White/Grey	Behind Walls, Above Ceilings and exposed	Cheney Building	>6" = 293 LF, <6" = 387 LF	C1,C3,C4,C10,Kiln,C11,C13, Girls Lavatory, C12,C13	Tested positive in 1999
Previously Sampled	Roof Drain With Grey Layered Insulation	Grey	Exposed and Boxed in Chases	Cheney Building	50 LF	C3, Girls Room, C13, C23,	Tested positive in 1990
Previously Sampled	Mastic Behind Wallboard	Black	Walls	Cheney Building	170 SF	Front Hallway	Tested positive in 1999
Previously Sampled	Transite Panel	Grey	Wall	Cheney Building	240 SF	C23	Tested positive in 1999
3-18-JW-24	Boiler Insulation	White/Grey	Under Metal Boiler Jacket	Boiler Plant	1,400 SF	Boiler Room	75% Chrysotile
Assumed	Interior Boiler Components	Unknown	Interior Boiler, Insulations and Gaskets and Bricks	Boiler Plant	1 Boiler	Boiler Room	Assumed
Assumed	Roof Fields	Black	Flat Roof Fields	Boiler Plant	5,180 SF	Roof Fields	Assumed
Assumed	Roof Fields	Black	Flat Roof Fields	Fire House	1,200 SF	Roof Fields	Assumed

**LEGEND**

ACM = ASBESTOS CONTAINING MATERIAL  
LF = LINEAR FOOT  
PLM = POLARIZED LIGHT MICROSCOPY  
SF= SQUARE FOOT  
TEM = TRANSMISSION ELECTRON MICROSCOPY  
SHADED AREAS INDICATE A POSITIVE RESULT



**Asbestos Sampling Date: 3/13/2013**

Sample #	Material	Color	Description	Building	Result
3-13-JW-01	Vapor Barrier Paper	Brown	Floor	Cheney Building	None Detected
3-13-JW-02	2' x 2' Ceiling Tiles	Grey/White	Ceiling	Cheney Building	None Detected
3-13-JW-03	Vinyl Cove Base	Brown	Wall Base	Cheney Building	None Detected
3-13-JW-04	Vinyl Cove Base Adhesive	Tan/Brown	Wall Base	Cheney Building	None Detected
3-13-JW-05	1' x 1' Ceiling Tile	Grey/White	Ceiling	Cheney Building	None Detected
3-13-JW-06	Glue Daub Associated with Ceiling Tiles	Brown	Ceiling	Cheney Building	None Detected
3-13-JW-07	12"x12" Floor Tile	Tan/Brown/Pink	Floor	Cheney Building	None Detected
3-13-JW-08	Mastic Assoc. with Floor Tile	Black	Floor	Cheney Building	None Detected
3-13-JW-09	Smooth 1'X1' Ceiling Tile	Tan/White	Ceiling	Cheney Building	None Detected
3-13-JW-10	Textured Wall Paint	Grey/White	Wall	Cheney Building	None Detected
3-13-JW-11	Soft Concrete Floor	Grey/Tan	Floor	Cheney Building	None Detected
3-13-JW-12	12"x12" Floor Tile	Blue	Floor	Cheney Building	None Detected
3-13-JW-13	Vinyl Cove Base	Blue	Wall Base	Cheney Building	None Detected
3-13-JW-14	Vinyl Cove Base Adhesive	Cream	Wall Base	Cheney Building	None Detected
3-13-JW-15	Sink Undercoating	Pink	Sink	Cheney Building	None Detected
3-13-JW-16	Metal Window Glazing at Metal Door	Black	Door/Window	Cheney Building	None Detected
3-13-JW-17 to 18	Skim Coat on Sheetrock Wall	White	Wall	Cheney Building	None Detected
3-13-JW-19	Vapor Barrier Paper	Brown	Floor	Cheney Building	None Detected
3-13-JW-20	12" x 12" Floor Tile	Tan/White	Floor	Cheney Building	None Detected
3-13-JW-21	12" x 12" Floor Tile	Yellow	Floor	Cheney Building	None Detected
3-13-JW-22	Wood Window Glazing Compound	Grey	Window	Cheney Building	None Detected
Previously Sampled	1' x 1' Ceiling Tiles	White	Ceilings	Cheney Building	None Detected
Previously Sampled	Glue Duabs with 1' x 1' Ceiling Tiles	White	Ceilings	Cheney Building	None Detected
Previously Sampled	Suspended Ceiling Tiles	White	Ceilings	Cheney Building	None Detected
Previously Sampled	Tectum Ceiling Panels	White	Ceilings	Cheney Building	None Detected
Previously Sampled	Sheetrock	White	Walls and Ceilings	Cheney Building	None Detected
3-13-JW-28	Wood Window Glazing Compound	Grey/Tan	Window	Fire House	None Detected
Previously Sampled	Plaster Walls and Ceilings	White/Tan	Walls and Ceilings	Power Plant	None Detected

**LEGEND**

ACM = ASBESTOS CONTAINING MATERIAL  
LF = LINEAR FOOT  
PLM = POLARIZED LIGHT MICROSCOPY  
SF = SQUARE FOOT

Table 3  
Summary of XRF Lead Screening  
Cheney Building, Boiler Plant and Fire House  
Manchester, CT

**XRF Lead Screening Date:** 3/13/2013

Component	Room	Side	Paint Color	Substrate	XRF Result (mg/cm <sup>2</sup> )
Brick Wall	C-1	A	Cream	Brick	>2.63
Window Sash	C-1	A	Blue	Wood	0.10
Window Frame	C-1	A	Blue	Wood	0.21
Foundation	C-1	A	Cream	Cement	>2.16
Pipe Insulation	C-1	B	Cream	Asbestos	<0.01
Window Sash	C-1	B	Blue	Wood	>3.22
Window Frame	C-1	B	Blue	Wood	1.62
Structural Column	C-1	A + B	Blue	Steel	0.35
Block Wall	C-1	D	Cream	Concrete	<0.0
Steel I-Beam at Ceiling	C-1	Ceiling	White	Steel	<0.20
Wood Ceiling Decking	C-1	Ceiling	White	Wood	<0.38
Brickwall	C-3	D	Cream	Brick	1.84
Radiator	C-3	D	Brown	Steel	0.03
Steel Column	C-3	Middle	Blue	Steel	0.64
Door	C-3	A	Blue	Wood	0.00
Stairs	C-3	D	Brown	Wood	0.00
Stairwell	C-3	A	Satin	Wood	0.00
Stairwell Wall	C-3	D	Cream	Brick	1.00
Pipe Insulation	C-3	Middle	Blue	Asbestos	0.03

Table 3  
Summary of XRF Lead Screening  
Cheney Building, Boilder Plant and Fire House  
Manchester, CT

Component	Room	Side	Paint Color	Substrate	XRF Result (mg/cm <sup>2</sup> )
Wood Structures	C-3	Beam	White	Wood	<0.08
Brickwall	Lower Level Corridor	D	Blue	Brick	>1.34
Stairwell Drywall	Lower Level Corridor	D	Blue	Drywall	0.00
Stairwell Hand Rail	Lower Level Corridor	D	Brown	Wood	0.02
Corridor Wall	Lower Level Corridor	D	Blue	Cement	0.00
Steel Columns	C-4	Middle	White	Steel	>2.59
Brick Wall	C-4	C	White	Brick	>1.21
Ceiling	C-4	C	White	Drywall	0.00
Brick Wall	C-9	A	Cream	Brick	>1.64
Exterior Window Sash	C-9	A	Cream	Wood	>4.68
Exterior Window Frame	C-9	A	Cream	Wood	>5.00
Wall	C-10	C	Cream	Drywall	0.00
Wall	C-10	D	Cream	Brick	>3.0
Radiator	C-10	D	Brown	Metal	0.10
Wall	C-12 First Floor	C	Cream	Brick	>1.0
Radiator	C-12 First Floor	C	Brown	Metal	>1.0
Wall	C-25 2nd Floor/Exterior Aside	A	Blue	Brick	0.45
Window Sash	C-25 2nd Floor/Exterior Aside	A	Brown	Wood	>5.0
Window Frame	C-25 2nd Floor/Exterior Aside	A	Brown	Wood	>5.0

Table 3  
Summary of XRF Lead Screening  
Cheney Building, Boilder Plant and Fire House  
Manchester, CT

Component	Room	Side	Paint Color	Substrate	XRF Result (mg/cm <sup>2</sup> )
Exterior Window Sash	C-25 2nd Floor/Exterior Aside	A	White	Wood	>5.0
Exterior Windodw Frame	C-25 2nd Floor/Exterior Aside	A	White	Wood	>5.0
Exterior Wall A	Boiler Plant	A	White	Wood	>5.0
Exterior Window Sash	Boiler Plant	A	White	Wood	>5.0
Exterior Garage Door	Boiler Plant	C	Blue	Wood	0.84
Exterior Garage Door Frame	Boiler Plant	C	Blue	Wood	0.00
Equipment and Room	Boiler Room Upper/Lower Rooms	A	Blue	Block Wall	0.00
Wall	Boiler Room Upper/Lower Rooms	A	Blue	Brick	0.00
Wall	Boiler Room Upper/Lower Rooms	D	Brown	Metal	0.00
Wall	Boiler Room Upper/Lower Rooms	D	Brown	Metal	0.00
Lower Level Wall	Boiler Room Upper/Lower Rooms	D	White	concrete	0.00
Lower Level Wall	Boiler Room Upper/Lower Rooms	C	White	Steel Column	0.00
Lower Level Wall	Boiler Room Upper/Lower Rooms	B	Blue	Concrete Wall	4.18
Window Sash	Fire House Exterior	D	Tan	Wood	>1.40
Window Frame	Fire House Exterior	D	Tan	Wood	>1.64
Red Door	Fire House Exterior	D	Red	Metal	0.00
Red Decorative Trim	Fire House Exterior	A	Red	Wood	0.29
Brick Wall	Fire House Exterior	A	White/Tan	Brick	>1.0
Wall	Fire House Interior	B	White	Brick	>5.0



Table 3  
 Summary of XRF Lead Screening  
 Cheney Building, Boilder Plant and Fire House  
 Manchester, CT

Component	Room	Side	Paint Color	Substrate	XRF Result (mg/cm <sup>2</sup> )
Ceiling	Fire House Interior	Ceiling	White	Wood	0.10
Door	Fire House Interior	B	White	Wood	>4.65
Wall	Fire House Interior	C	White	Brick	>5.0

**Notes**

XRF = X-Ray Florescent Analyzer

mg/cm2 = milligrams per square centimeter

mg/kg = milligrams per kilogram

NS = Not Sampled

- = Not Applicable

Shading indicates a positive result for lead-based paint

Table 4  
Summary of PCB Sampling Results  
Cheney Building, Boiler Plant, and Fire House  
Manchester, CT

**PCB Sampling Date:** 3/14/2013

Sample #	Description	Location	Result (ppm)	Notes
PCB-1	Window Glazing Compound	Cheney Building	ND<0.77	Window Glazing Compound on Wood Sash
PCB-2	Window Glazing Compound	Cheney Building	ND<0.72	Window Glazing Compound on Wood Sash
PCB-3	Window Frame Caulk	Cheney Building	ND<0.82	Window Frame Caulk on Wood Sash
PCB-4	Window Frame Caulk	Cheney Building	ND<0.76	Window Frame Caulk on Wood Sash
PCB-5	Window Glazing Compound	Boiler Plant	ND<0.74	Window Glazing Compound on Wood Sash
PCB-6	Window Glazing Compound	Boiler Plant	ND<0.77	Window Glazing Compound on Wood Sash
PCB-7	Window Frame Caulk	Boiler Plant	ND<0.75	Window Frame Caulk on Wood Sash
PCB-8	Window Frame Caulk	Boiler Plant	ND<0.72	Window Frame Caulk on Wood Sash
PCB-9	Window Glazing Compound	Fire House	ND<0.74	Window Glazing Compound on Wood Sash
PCB-10	Window Frame Caulk	Fire House	ND<0.75	Window Frame Caulk on Wood Sash

**Notes**

ppm = parts per million

ND = not detected above laboratory detection limits

Table 4  
Summary of PCB Sampling Results  
Cheney Building, Boiler Plant, and Fire House  
Manchester, CT

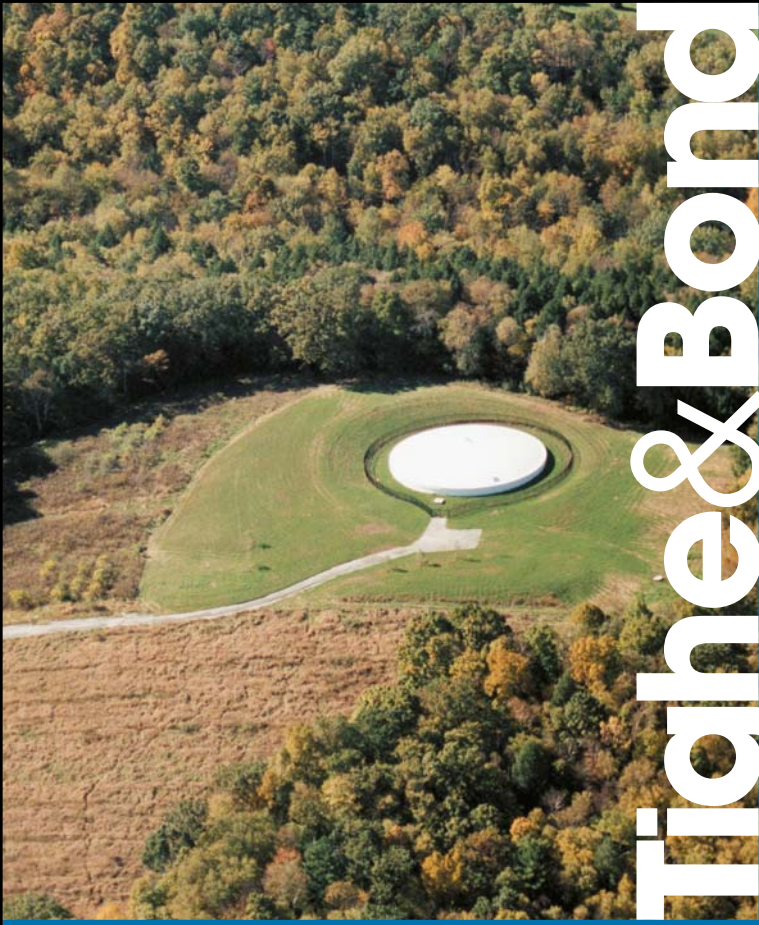
**PCB Sampling Date:** 3/14/2013

Sample #	Description	Location	Result (ppm)	Notes
PCB-1	Window Glazing Compound	Cheney Building	ND<0.77	Window Glazing Compound on Wood Sash
PCB-2	Window Glazing Compound	Cheney Building	ND<0.72	Window Glazing Compound on Wood Sash
PCB-3	Window Frame Caulk	Cheney Building	ND<0.82	Window Frame Caulk on Wood Sash
PCB-4	Window Frame Caulk	Cheney Building	ND<0.76	Window Frame Caulk on Wood Sash
PCB-5	Window Glazing Compound	Boiler Plant	ND<0.74	Window Glazing Compound on Wood Sash
PCB-6	Window Glazing Compound	Boiler Plant	ND<0.77	Window Glazing Compound on Wood Sash
PCB-7	Window Frame Caulk	Boiler Plant	ND<0.75	Window Frame Caulk on Wood Sash
PCB-8	Window Frame Caulk	Boiler Plant	ND<0.72	Window Frame Caulk on Wood Sash
PCB-9	Window Glazing Compound	Fire House	ND<0.74	Window Glazing Compound on Wood Sash
PCB-10	Window Frame Caulk	Fire House	ND<0.75	Window Frame Caulk on Wood Sash

**Notes**

ppm = parts per million

ND = not detected above laboratory detection limits



# Tighe & Bond



**EMSL Analytical, Inc.**

4 Fairfield Boulevard, Wallingford, CT 06492

Phone/Fax: 203-284-5948 / (203) 284-5978

<http://www.emsl.com>[wallingfordlab@emsl.com](mailto:wallingfordlab@emsl.com)

EMSL Order: 241300980

CustomerID: TIGH62

CustomerPO:

ProjectID:

Attn: **James Webb**  
**Tighe & Bond**  
**213 Court Street**  
**Suite 900**  
**Middletown, CT 06457**

Phone: (860) 704-4760  
Fax: (860) 704-4775  
Received: 03/18/13 8:00 AM  
Analysis Date: 3/22/2013  
Collected: 3/13/2013

Project: TSK - 2902801/Cheney School

**Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM**  
**via EPA/600/R-93/116 Section 2.5.5.1**

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
3-13-JW-28 241300980-0028	Fire House - wood window glazing compound	Gray / Tan Non-Fibrous Homogeneous	100	None	<0.25% Chrysotile

Analyst(s)

Edward Leary (1)

Gloria V. Oriol, Laboratory Manager  
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT

Initial report from 03/22/2013 11:28:00



# Tighe & Bond



Friday, March 22, 2013

Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

Project ID: TSKP-CHENEY SCHOOL  
Sample ID#s: BD48008 - BD48017

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller  
Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #MA-CT-007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

## Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

## Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

## Date

03/14/13  
03/18/13

## Time

0:00  
7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48008

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-01 CHENEY-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

## PCB (Soxhlet)

PCB-1016	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	770	ug/Kg	03/20/13	AW	3540C/8082

## QA/QC Surrogates

% DCBP	94	%	03/20/13	AW	30 - 150 %
% TCMX	95	%	03/20/13	AW	30 - 150 %



Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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Phyllis Shiller, Laboratory Director

March 22, 2013

Reviewed and Released by: Rashmi Makol, Project Manager



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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

03/14/13  
03/18/13

### Time

0:00  
7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48009

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-02 CHENEY-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	720	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	102	%	03/20/13	AW	30 - 150 %
% TCMX	96	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date      Time

03/14/13      0:00  
03/18/13      7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48010

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-03 CHENEY-W.F.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	820	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	820	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	94	%	03/20/13	AW	30 - 150 %
% TCMX	91	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**March 22, 2013**

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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

03/14/13  
03/18/13

### Time

0:00  
7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48011

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-04 CHENEY-W.F.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	760	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	760	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	101	%	03/20/13	AW	30 - 150 %
% TCMX	93	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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March 22, 2013

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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
03/14/13	0:00
03/18/13	7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48012

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-05 BOILER PLANT-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	740	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	91	%	03/20/13	AW	30 - 150 %
% TCMX	85	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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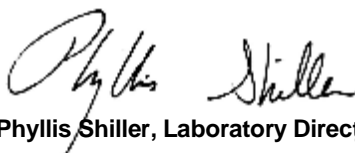
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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**Phyllis Shiller, Laboratory Director**

**March 22, 2013**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

03/14/13  
03/18/13

### Time

0:00  
7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48013

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-06 BOILER PLANT-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	770	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	770	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	96	%	03/20/13	AW	30 - 150 %
% TCMX	92	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
-----------	--------	------------	-------	-----------	----	-----------


RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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**March 22, 2013**

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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

03/14/13  
03/18/13

### Time

0:00  
7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48014

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-07 BOILER PLANT-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	750	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	107	%	03/20/13	AW	30 - 150 %
% TCMX	106	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**March 22, 2013**

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Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
03/14/13	0:00
03/18/13	7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48015

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-08 BOILER PLANT-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	720	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	720	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	108	%	03/20/13	AW	30 - 150 %
% TCMX	104	%	03/20/13	AW	30 - 150 %



Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
03/14/13	0:00
03/18/13	7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48016

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-09 FIREHOUSE-W.G.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	740	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	740	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	89	%	03/20/13	AW	30 - 150 %
% TCMX	75	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**March 22, 2013**

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## Analysis Report

March 22, 2013

FOR: Attn: Mr. James Webb  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOLID  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: 290.02801

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
03/14/13	0:00
03/18/13	7:57

## Laboratory Data

SDG ID: GBD48008  
Phoenix ID: BD48017

Project ID: TSKP-CHENEY SCHOOL  
Client ID: 3-14-PCB-10 FIREHOUSE-W.F.C.

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	100	1	%	03/18/13		E160.3
Caulk Extraction for PCB	Completed			03/18/13	PP/E	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1221	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1232	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1242	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1248	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1254	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1260	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1262	ND	750	ug/Kg	03/20/13	AW	3540C/8082
PCB-1268	ND	750	ug/Kg	03/20/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	89	%	03/20/13	AW	30 - 150 %
% TCMX	90	%	03/20/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

This report must not be reproduced except in full as defined by the attached chain of custody.



**Phyllis Shiller, Laboratory Director**

**March 22, 2013**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## QA/QC Report

March 22, 2013

### QA/QC Data

SDG I.D.: GBD48008

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 223785, QC Sample No: BD48008 (BD48008, BD48009, BD48010, BD48011, BD48012, BD48013, BD48014, BD48015, BD48016, BD48017)									
<u>Polychlorinated Biphenyls - Solid</u>									
PCB-1016	ND	89	90	1.1				40 - 140	30
PCB-1221	ND							40 - 140	30
PCB-1232	ND							40 - 140	30
PCB-1242	ND							40 - 140	30
PCB-1248	ND							40 - 140	30
PCB-1254	ND							40 - 140	30
PCB-1260	ND	93	89	4.4				40 - 140	30
PCB-1262	ND							40 - 140	30
PCB-1268	ND							40 - 140	30
% DCBP (Surrogate Rec)	91	92	87	5.6				30 - 150	30
% TCMX (Surrogate Rec)	87	84	85	1.2				30 - 150	30

**Comment:**

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate. There was insufficient sample for matrix spike and matrix spike duplicate analysis.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference

Phyllis Shiller, Laboratory Director  
March 22, 2013

Friday, March 22, 2013

Requested Criteria: None

State: CT

## Sample Criteria Exceedences Report

### GBD48008 - TIGHE

Page 1 of 1

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
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\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



# Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

**Laboratory Name:** Phoenix Environmental Labs, Inc. **Client:** TIGHE

**Project Location:** TSKP-CHENEY SCHOOL **Project Number:**

**Laboratory Sample ID(s):** BD48008, BD48009, BD48010, BD48011, BD48012, BD48013, BD48014, BD48015, BD48016, BD48017

**Sampling Date(s):** 3/14/2013

**RCP Methods Used:**

☐ 1311/1312    ☐ 6010    ☐ 7000    ☐ 7196    ☐ 7470/7471    ☐ 8081    ☐ EPH    ☐ TO15  
☒ 8082    ☐ 8151    ☐ 8260    ☐ 8270    ☐ ETPH    ☐ 9010/9012    ☐ VPH

1.	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1a.	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b.	EPH and VPH methods only: Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2.	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3.	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
4.	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5a.	Were reporting limits specified or referenced on the chain-of-custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5b.	Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
6.	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
7.	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

**Note:** For all questions to which the response was "No" (with the exception of question #5a, #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

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

Authorized  
Signature: \_\_\_\_\_



Date: Friday, March 22, 2013

Printed Name: Rashmi Makol

Position: Project Manager



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



# RCP Certification Report

March 22, 2013

SDG ID.: GBD48008

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## **PCB Narration**

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Au-ecd24 03/20/13-1 (BD48008, BD48009, BD48010, BD48011, BD48012, BD48013, BD48014, BD48015, BD48016, BD48017)

8082 Narration:

The initial calibration RSD for the compound list was less than 15% except for the following compounds: none

The continuing calibration standards were within acceptance criteria except for the following compounds: none

**Printed Name** Adam Werner

**Position:** Chemist

**Date:** 3/20/2013

**QC Comments:** QC Batch 223785 03/18/13 (BD48008, BD48009, BD48010, BD48011, BD48012, BD48013, BD48014, BD48015, BD48016, BD48017)

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate. There was insufficient sample for matrix spike and matrix spike duplicate analysis.

## **QC (Site Specific)**

----- Sample No: BD48008, QA/QC Batch: 223785 -----

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

## **Temperature Narration**

The samples in this delivery group were received at 7°C.

(Note acceptance criteria is above freezing up to 6°C)



# CHAIN OF CUSTODY RECORD

Temp 74C Pg 2 of 2



587 East Middle Turnpike, Manchester, CT 06040  
 Email: info@phoenixlabs.com Fax (860) 645-0823  
 Client Services (860) 645-8726

Data Delivery:  
☐ Fax #  
☒ Email

Customer: Tighe & Bond Project: ISKP - Cheney School Project P.O.: 2902801  
 Address: 213 Court St Report to: James Webb Phone #: 860-933-0622  
Middlebury, CT Invoice to: same Fax #: \_\_\_\_\_

Client Sample Information - Identification				Analysis Request	
Sampler's Signature	Customer Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
<u>[Signature]</u>	<u>3-14-PCB-07</u>	<u>Solid</u>	<u>3-14</u>	<u>7 AM</u>	<u>Soil Contaminant ( ) oz</u> <u>40 ml VOA Vial ( ) oz</u> <u>GL Soil container ( ) oz</u> <u>GL Amber 100ml ( ) HCl</u> <u>PL As is ( ) 250ml ( ) 500ml ( ) 1000ml</u> <u>PL H2SO4 ( ) 250ml ( ) 500ml ( ) 1000ml</u> <u>PL HNO3 250ml</u> <u>Beckman Bottle</u>
	<u>Boiler Plant - W.G.C.</u>				
	<u>3-14-PCB-08</u>	<u>S</u>	<u>3-14</u>	<u>PM</u>	
	<u>Boiler Plant - W.G.C.</u>				
	<u>3-14-PCB-09</u>	<u>S</u>	<u>3-14</u>	<u>PM</u>	
	<u>Fire House - W.G.C.</u>				
	<u>3-14-PCB-10</u>	<u>S</u>	<u>3-14</u>	<u>PM</u>	
	<u>Fire House - W.F.C.</u>				

Relinquished by: [Signature] Accepted by: Matthew Stager

Date: 3/18/10 Time: 7:57 PM

RI ☐ Direct Exposure (Residential) ☐ GW ☐ Other

CT ☐ RCP Cert ☐ GW Protection ☐ SW Protection ☐ GA Mobility ☐ GB Mobility ☐ Residential DEC ☐ I/C DEC ☐ Other

MA ☐ MCP Certification ☐ GW-1 ☐ GW-2 ☐ GW-3 ☐ S-1 ☐ S-2 ☐ S-3 ☐ MWRA eSMART ☐ Other

Data Format ☐ Excel ☐ PDF ☐ GIS/Key ☐ EQUIS ☐ Other

Data Package ☐ Tier II Checklist ☐ Full Data Package\* ☐ Phoenix Std Report ☐ Other

Turnaround: ☐ 1 Day\* ☐ 2 Days\* ☒ 3 Days\* ☐ Standard ☐ Other

\* SURCHARGE APPLIES

State where samples were collected: CT

\* SURCHARGE APPLIES

Comments, Special Requirements or Regulations: