

Fairfield Public Schools
Fairfield, CT 06825

TO: Dr. David Title and Members of the Board of Education

FROM: Thomas P. Cullen

DATE: August 29, 2012

RE: **FLHS Window Replacement Project – PCB Testing Update**

This letter is to notify you that the Fairfield Public School, Central Office Administration has been working with our consultant, AMC Environmental LLC, all summer performing testing and inspecting of Polychlorinated Biphenyls (PCBs) of the window caulking at the Fairfield Ludlowe High School. This work is helping us to build a history of hazardous material related to the window project, so that we may develop a remediation plan to submit to the US EPA, CT DEEP, CT DPH, and the local health director. This work is also required so that we may build a funding request for submission to the town bodies to replace the windows (as identified by Wiles Architect last year while working with the Town Facilities Commission).

The attached testing report is a summary which includes the testing and reporting from last October of 2011, as well as all the new testing from this past summer. The new test results identify that, in fact, there is elevated PCBs in some of the exterior bulk sampling of caulking around the windows. This is to be expected with a building like FLHS with so many different age additions and renovations and the number of different style of windows throughout the building. FLHS is a very large building with many types of windows and, therefore, our consultant required more time to execute their work plan.

The new test results also identify that there are elevated PCBs in some interior bulk samples of caulking around the windows. Our consultant has informed us that the results of the sampling were consistent with the concentrations and locations previously identified during the first round of testing back in October of 2011. All three building eras within the school documented variable concentrations of PCBs in caulking in and around portions of the building. Once all source materials are identified and organized, a substrate sampling plan can be developed. These PCB samples are consistent with the previous samples performed in October of 2011 and are consistent with the air and wipe samples reported. No new air and wipe samples are required at this time.

Presently, AMC Environmental LLC is still collecting substrate samples in the school to complete their work. Substrate samples are comprised of testing masonry materials that are in direct contact with the caulking. The consultant performs this work by drilling into the masonry materials to collect the dust samples which are then sent to a laboratory for testing. The point here is to identify if any PCBs have leaked into masonry materials.

Once clearly defined, all the data collected will be developed into a remediation/action plan and submitted to the US EPA, CT DEEP, CT DPH, and the local health director.

If you have any concerns regarding the PCB testing, please feel free to contact me.

Thank you.

c: Beverly Dyer
Central Office Administration
Sands Cleary



ENVIRONMENTAL, LLC

August 27, 2012

Mr. Sal Morabito
Fairfield Board of Education
501 Kings Highway East
Fairfield, CT 06824

RE: Ludlowe High School

Dear Mr. Morabito:

On October 3 and 17, 2011 AMC Environmental was retained by Wiles Architectural Firm to proceed with a pre-renovation hazardous materials inspection at Ludlowe High School located at 785 Unquowa Road in Fairfield, CT. The purpose of the inspection was to properly identify and characterize potential environmental hazards that may be encountered during an anticipated window replacement project. Included in this assessment were lead-based paint, asbestos, and PCB's. Interior and exterior window caulking and glazing was tested from each building era and material type throughout the school. The school is constructed of three building dates; 1950's, 1961-62, and 1971-72. Additionally, approximately 30 different types of windows were identified throughout the building that need replacing. Based on these factors, building materials (i.e. caulking and glazing) were sorted into homogeneous groups and sampled appropriately. Preliminary data reports that PCB's do exist in both the caulking and glazing on the interior and exterior of the building. Concentrations both greater and less than the EPA regulatory limit of 50 ppm were identified. A report of these finding was issued on October 21, 2011. The table below lists the results of the PCB samples.

Sample Number	Location	Year	Component	Int/Ext	Results mg/Kg
October 3, 2011 Initial PCB Bulk Samples					
PCB-01	Room 114		Window Glazing Compound	Int.	4.4
PCB-02	Room 121		Window Glazing Compound	Int.	23
PCB-03	Room 128		Window Frame Caulk	Int.	17
PCB-04	Room 201 & 301		Window Glazing Compound	Int.	21
PCB-05	Room 203		Window Frame Caulk	Int.	280
PCB-06	Room 204 & 302		Window Glazing Compound	Int.	26
PCB-07	Room 220		Window Frame Caulk	Int.	920
PCB-08	Room 238		Window Glazing Compound	Int.	49
PCB-09	Room 282 & 286		Window Glazing Compound	Int.	3.4
PCB-10	Room 291 & 292		Window Glazing Compound	Int.	25
PCB-11	Room 321 & 329		Window Glazing Compound	Int.	23

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Sample Number	Location	Year	Component	Int/ Ext	Results mg/Kg
October 17, 2011					
Initial PCB Bulk Samples					
PCB-01	Room 215		Window Frame Caulk	Ext.	20,000
PCB-02	Façade A		Window Frame Caulk	Ext.	58,000
PCB-03	Façade C		Window Wrap	Ext.	74
PCB-04	Room 274		Window Frame Caulk	Ext.	1.8
April 17, 2012					
Follow-Up PCB Bulk Samples (Interior)					
PCB-01	Room 004	1971-72	Metal window frame caulk	Int	ND
PCB-02	Room 004	1971-72	Metal gray window frame caulk	In.	1.4
PCB-03	Room 015	1961-62	Metal window glazing compound	Int	72
PCB-04	Room 024	1961-62	Window glazing compound	Int	28
PCB-05	Room 030	1961-62	Window glazing compound	Int	20
PCB-06	Room 121	1961-62	Window glazing compound	Int	22
PCB-07	Room 121	1961-62	Window frame caulk	Int	1,000
PCB-08	Room 122	1961-62	Window glazing compound	Int	50
PCB-09	Room 115	1961-62	Window frame caulk	Int	12
PCB-10	Room 116	1961-62	Black window glazing compound	Int	3.1
PCB-11	Room 136 Corridor (rooms 129)	1950	Gray window frame caulk	Int	ND
PCB-12	Room 122 (rooms 129)	1950	White window frame caulk	Int	5
PCB-13	Room 149 corridor	1950	Brittle metal window frame caulk	Int	11
PCB-14	Room 149 corridor	1950	Brown metal window glazing compound	Int.	3.5
PCB-15	Room 149 corridor	1950	Soft gray window glazing compound	Int	5.1
PCB-16	Room 163 corridor	1961-62	Gray window glazing compound	Int	16
PCB-17	Room 132 (rooms 135)	1961-62	Hard brown window glazing compound	Int	3.8
PCB-18	Room 138A, B, C & E	1961-62	Soft gray window glazing compound composite rooms 138 A, B, C & E	Int	12
PCB-19	Room 142 (rooms 145, 146, 147, 148, 149)	1971-72	Hard gray compound b/w metal sash & stone sill	Int	6.8

Sample Number	Location	Year	Component	Int/Ext	Results mg/Kg
April 17, 2012 - continued Follow-Up PCB Bulk Samples (Interior)					
PCB-20	Room 202 (rooms 203, 204, 205, 211, 214, stair 4 o/s 211, 225, 224, 216, 293, 313)	1961-62	Grey soft metal window glazing compound	Int	4.7
PCB-21	Room 203	1961-62	White window frame caulk	Int	840
PCB-22	Room 213 & 225 (rooms 214, stair 4 o/s 211, 225, 224, 226, 227, 228, 230, 232, 233, 242, 234, 235, 237, 216)	1961-62	Brown brittle caulk behind metal window casing cover – composite	Int	4,900
PCB-23	Room 226, 227 & 233 (rooms 228, 230, 232, 242, 234, 235, 237, 258 corridor)	1961-62	Brittle grey metal window glazing compound – composite	Int	32
PCB-24	Room 239 & 241	1961-62	Soft grey window glazing compound	Int	19
PCB-25	Room 219 & 218	1961-62	Grey window frame caulk – composite	Int	650
PCB-26	Room 282D (rooms 282C, 284, 285E, 285D, 283, 282B, 281, 282, 287A, 288, 289, 280, 276, 275)	1950	Brittle window glazing compound	Int	2.7
PCB-27(a)	Room 252 corridor, & 293 (rooms 291, 292, 266B)	1950	Window glazing compound – composite	Int	7.3
PCB-27(b)	Room 269 & 266 A	1950	Brittle white window glazing compound – composite	Int	3
PCB-28	Room 266B corridor	1950	Soft gray window glazing compound	Int	40
PCB-29	Room 243 (rooms 244, 245, 245C, 240, 247B, 247C, 247D, 249, 263, 262, 250, 251, 252, 253, 356, 254, 255, 342A, C, D, 343, 344, 378 corridor, stairwell 9, 345, 349)	1971-72	Brown metal window frame caulk	Int	24

Sample Number	Location	Year	Component	Int/Ext	Results mg/Kg
April 17, 2012 - continued					
Follow-Up PCB Bulk Samples (Interior)					
PCB-30	Room 248 (rooms 249, 263, 262, 250, 251, 252, 253, 256, 254, 255, 342A, C, D, 343, 344, 378 corridor, stairwell 9, 345, 349)	1971-72	Brown window frame caulk	Int	250
PCB-31	Stairwell 10 (stairwell 9)	1971-72	Brittle brown window frame caulk	Int	170
PCB-32	Room 301 & 305 (rooms 305, 306, 312, 317, 318, 319, 337, 334)	1961-62	Soft gray window glazing compound composite	Int	36
PCB-33	Room 302	1961-62	Hard white window frame caulk	Int	700
PCB-34	Room 305 corridor (corridor 318, 333, 331)	1961-62	Grey window glazing compound	Int	37
PCB-35	Room 314	1961-62	White window frame caulk on block	Int	760
PCB-36	Room 361, 359 & 358 (rooms 360, 362, 364, 357, stair 7-flr 2)	1950	Brittle gray window glazing compound – composite	Int	4.8
PCB-37	Room 320 (rooms 321, 322, 324, 329, 325, 328, 326, 327, stair 8-flr 2)	1961-62	Gray window glazing compound – composite	Int	60
PCB-38	Room 347 (room 349)	1971-72	Brown window frame caulk	Int	100
PCB-39	Room 347 (room 349)	1971-72	Brown window glazing compound	Int	8.7
May 5, 2012					
Follow-Up PCB Bulk Samples (Exterior)					
PCB-01	O/S room 275, 276 Façade A	1950	Gray window frame caulk, replacement	Ext	2.1
PCB-02	o/s Room 275, 276 Façade A	1950	Light grey original window frame caulk under exterior gray window frame caulk	Ext	3.6
PCB-03	Room 271	1950	Soft grey window frame caulk	Ext	1.5
PCB-04	o/s Stair #10	1971-72	Brown window frame caulk on brick	Ext	100,000

Sample Number	Location	Year	Component	In/Ext	Results mg/Kg
May 5, 2012 - continued Follow-Up PCB Bulk Samples (Exterior)					
PCB-05	Stair #10	1971-72	Black metal window glazing compound on window	Ext	41,000
PCB-06 (1)	o/s Room 255	1971-72	Grey metal window frame caulk	Ext	170,000
PCB-06(2)	o/s Room 350	1971-72	Grey metal window frame caulk	Ext	No result (maybe combined with other #6 sample?)
PCB-07	Façade A	1950	Grey window frame caulk at room 280	Ext	5.5
PCB-08	Façade C	1961-62	Grey caulk @ metal window sill on brick at rooms 121 & 122	Ext	38,000
PCB-09	Façade C	1961-62	Window frame caulk	Ext	74
PCB-10	Façade C	1950	Grey window frame caulk @ room 228	Ext	43,000
PCB-11	Façade C	1950	Caulk at metal window sill on brick at room 220	Ext	660,000
PCB-12	Façade C	1950	Caulk at window frame @ rooms 221, 222, 315, 316, 127 & 129	Ext	3.4
PCB-13	Façade C	1961-61	Gray caulk at window frame (2 nd & 3 rd floor windows)	Ext	29,000
PCB-14	Façade C	1961-62	Window sill caulk @ metal sill/brick @ 2 nd & 3 rd floor windows	Ext	70,000
PCB-15	Façade D	1971-72	Window sill caulk @ metal sill/brick junction	Ext	26
PCB-16	Façade D	1971-72	Window frame caulk	Ext	110,000
May 18, 2012 Follow-Up PBC Bulk Samples (Exterior Courtyards)					
PCB-17	138 A, B, C & D	1950	Window frame caulk	Ext.	200,000
PCB-18	o/s room 266 A	1950	Outer layer soft gray window frame caulk	Ext	4.1
PCB-19	o/s room 266 A	1950	2 nd layer dark gray window frame caulk	Ext	5.1

Sample Number	Location	Year	Component	Int/Ext	Results mg/Kg
May 18, 2012 Follow-Up PBC Bulk Samples (Exterior Courtyards)					
PCB-20	o/s room 282 & 282B	1950	Soft grey window frame caulk	Ext	ND
PCB-21	o/s room 282 & 282B	1950	Grey caulk on window frame	Ext	19,000
PCB-22	o/s 266 B	1950	Caulk at window sill on brick	Ext	300,000
PCB-23	Corridor 149	1950	Soft grey window frame caulk to layer	Ext	26
PCB-24	Corridor 149	1950	Brittle brown original window frame caulk	Ext	72
PCB-25	Corridor 149	1950	Caulk at metal window sill/brick	Ext	140,000
PCB-26	Room 115	1950	Soft gray window frame caulk	Ext	23,000
PCB-27	Room 157	1950	Bottom layer brittle brown window frame caulk	Ext	9.6
July 14, 2012 Additional PBC Bulk Samples					
PCB-01	Fac D O/S 148	1971-72	Window Frame Caulk	Ext	69,000
PCB-02	Fac D O/S 148	1971-72	Window Sill Caulk	Ext	110,000
PCB-03	Fac C O/S 142	1971-72	Window Frame Caulk	Ext	56,000
PCB-04	Fac C O/S 142	1971-72	Window Sill Caulk	Ext	78,000

AMC Environmental was later retained by the Fairfield Board Of Education to continue the Environmental Assessment at Ludlowe High School. In response to the preliminary report findings, AMC was contracted to obtain PCB in air samples from two (2) rooms and a corridor from within the school on February 11 & 12, 2012. The sampling was obtained from the areas where materials with the highest PCB concentrations were identified during the initial bulk sample inspection. The results of the air tests documented no detectable levels of PCB's within the air in any of the locations tested.

Moving forward, bulk material sampling was conducted on April 17, May 5, May 18 and July 14, 2012 during afterhours and weekends. The results of the sampling were consistent with the concentrations and locations identified in the initial inspection back in October of 2011. All three building eras within the school documented variable concentrations of PCB's within the caulking and glazing on the interior and exterior portions of the building. Once all source materials are identified and organized, a substrate sampling plan can be developed.

PCB's have the ability to migrate in to surrounding substrates such as brick, concrete, and CMU block. Therefore, PCB containing window caulks are likely to leach into adjacent porous surfaces. Based on the data collected to this point, AMC developed a sampling plan

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to test the various types of substrates around the windows. Substrate sampling was performed on July, 14 and 28 and on August 11, 2012. Substrate sampling is performed by collecting a core sample in the substrates that are in closest proximity to the source caulking. The core sample is obtained by using a masonry drill bit and collected into a sterilized glass container. Often times, several rounds of core samples are needed to define the parameters of the PCB migration within the substrate.

Presently, AMC Environmental is still collecting substrate samples throughout the school. Once clearly defined, all the data collected will be developed into a remediation plan and submitted to the USEPA for approval. All sampling will be performed while no children are present and a final report will be issued once the assessment is complete.

If you have any further questions please do not hesitate to call.

Very truly yours,



Richard Onofrio
Environmental Consultant