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September 2, 2014

Mr. Philip Belanger AIA, LEED AP
Architect
Watermark Engineering
175 Cabot Street
Lowell, MA 01854

AXIOM Project Number

01202.006

RE: Limited Asbestos-Containing Roofing Materials, Main Upper Roof and Cafeteria Roofs and Portico Roofs, Bartlett Community Partnership School, 79 Wannalancit Street, Lowell, MA

Dear Mr. Belanger,

At your request, Axiom Partners, Inc. (AXIOM) performed sampling for Asbestos-Containing Materials (ACMs) from several roofs of the Bartlett Community Partnership School at the address listed above. AXIOM's licensed asbestos inspector Mr. Peter A. Del Sette Jr, (MA Asbestos Inspectors License #061265) performed the survey on August 28, 2014.

AXIOM surveyed the main upper roofs, several levels of cafeteria and a small roof over a portico. All roofs were flat, comprised of a combination of rubber over fiber board and other types of insulation over concrete or metal roof decks.

ASBESTOS-CONTAINING MATERIALS (ACM's) SURVEY

During this survey AXIOM collected eleven (11) bulk samples. Two samples were found to contain asbestos in regulated quantities. Asbestos was detected in the sealant between the coping stones of upper main roof field and several layers of white and black caulking on the copper flashing on the rear lower café roof at the brick wall.

The entire inventory of collected samples may not have required analysis. Initially, one sample per material was analyzed. If the first sample was found to contain asbestos, the remaining samples were not analyzed (*Positive Stop* protocol). If the first sample was determined not to contain asbestos, however, the remaining samples were analyzed until asbestos was detected or until the entire sample set was analyzed. All samples of each homogeneous application of a suspect material must be found to contain "less than or equal to 1% asbestos" to conclude that the material is non-asbestos under the EPA NESHAP regulation

Bulk samples collected during this inspection were submitted to EMSL Analytical (EMSL); Inc. EMSL is located in Woburn, Massachusetts and is fully accredited for bulk sample analysis under the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology (NIST). Bulk samples were analyzed for asbestos content using EPA Method 600/R-93/116. The laboratory analysis results are attached to this report and are summarized in the table below.

Sampling for Asbestos-Containing Roofing Materials, Bartlett Community Partnership School

SAMPLE NUMBER	MATERIAL	LOCATION	ANALYSIS RESULTS ¹	QUANTITY ²
082814-09-07A	Sealant on Concrete Roof Deck Under Insulation Boards	North Side of Upper Main Field	NAD	N/A
082814-09-07B	Sealant on Concrete Roof Deck Under Insulation Boards	South Side of Upper Main Field	NAD	N/A
082814-09-08A	Edge Flashing Roof Sealant on Roof at Wall	North Side of Upper Main Field	NAD	N/A
082814-09-08B	Edge Flashing Roof Sealant on Roof at Wall	South Side of Upper Main Field	NAD	N/A
082814-09-09A	Coping Stone Seam Sealant	North Side of Upper Main Field	8% CHR.	TBD
082814-09-10A	Sealant on Vent Curbing	Upper Café Roof	NAD	N/A
082814-09-10B	Sealant on Vent Curbing	Lower Café Roof	NAD	N/A
082814-09-11A	Black/White Caulking on Copper Flashing on Brick Wall	Rear Lower Café Roof	2% CHR.	~85 LF
082814-09-11B	Black/White Caulking on Copper Flashing on Brick Wall	Rear Lower Café Roof	SNA	" "
082814-09-12A	Misc. Black Sealant one Edge Flashing	Lower / Small Upper Café Roof	NAD	N/A
082814-09-12B	Misc. Black Sealant one Edge Flashing	Lower / Small Upper Café Roof	NAD	N/A

DISCUSSION AND RECOMMENDATIONS

ACMs were commonly incorporated into structures built prior to 1982. The presence of ACM does not necessarily imply that building occupants will experience any health hazards. Most misconceptions about ACMs and the potential for increased health risk are a result of poorly presented information and the general public's anxiety arising from a misunderstanding of such information.

Federal regulations require that for buildings or in areas of buildings that will be demolished through renovation, asbestos-containing materials must be removed prior to demolition. All confirmed ACMs should be abated by a Massachusetts asbestos abatement contractor.

If AXIOM can be of further assistance please do not hesitate to contact us.

Sincerely,



Peter A. Del Sette, Jr.
 Asbestos Inspector



Sean P. Hurly
 Principal

attachments: EMSL Asbestos Laboratory Analysis Results

¹ NAD = No Asbestos Detected; SNA: Sample Not Analyzed; CHR. = Chrysotile Asbestos

² N/A = Not Applicable; LF = Linear Feet



EMSL Analytical, Inc.

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com>

bostonlab@emsl.com

EMSL Order:	131403713
CustomerID:	AXIO80
CustomerPO:	
ProjectID:	

Attn: **Peter A. Del Sette, Jr.**
Axiom Partners, Inc.
545 Salem Street
Wakefield, MA 01880

Phone: (781) 213-9198
 Fax: (781) 213-6992
 Received: 08/27/14 2:00 PM
 Analysis Date: 8/29/2014
 Collected: 8/27/2014

Project: **The Bartlett School; 79 Wannalancit Street; Lowell, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
082814-09-07A 131403713-0001	North Side of Upper Main Field - Sealant on Concrete Roof Deck under Insulation Board	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected
082814-09-07B 131403713-0002	South Side of Upper Main Field - Sealant on Concrete Roof Deck under Insulation Board	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-08A 131403713-0003	North Side of Upper Main Field - Edge Flashing Roof Sealant on Roof at Wall	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-08B 131403713-0004	South Side of Upper Main Field - Edge Flashing Roof Sealant on Roof at Wall	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-09A 131403713-0005	North Side of Upper Main Field - Coping Stone Seam Sealant	Black Non-Fibrous Homogeneous		92% Non-fibrous (other)	8% Chrysotile
082814-09-10A 131403713-0006	Upper Café Roof - Sealant on Vent Curbing	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)
 Fievel Lam (5)
 Steve Grise (5)


 Steve Grise, Laboratory Manager
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

Initial report from 08/29/2014 16:47:53



EMSL Analytical, Inc.

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone/Fax: (781) 933-8411 / (781) 933-8412

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EMSL Order:	131403713
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Attn: Peter A. Del Sette, Jr. Axiom Partners, Inc. 545 Salem Street Wakefield, MA 01880	Phone: (781) 213-9198 Fax: (781) 213-6992 Received: 08/27/14 2:00 PM Analysis Date: 8/29/2014 Collected: 8/27/2014
Project: The Bartlett School; 79 Wannalancit Street; Lowell, MA	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
082814-09-10B <i>131403713-0007</i>	Lower Café Roof - Sealant on Vent Curbing	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-11A <i>131403713-0008</i>	Lower Café Roof - Black/White Caulking on Copper Flashing on Brick Wall	White/Black Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
082814-09-11B <i>131403713-0009</i>	Lower Café Roof - Black/White Caulking on Copper Flashing on Brick Wall				Stop Positive (Not Analyzed)
082814-09-12A <i>131403713-0010</i>	Lower/Small Upper Café Roof - Misc Black Sealant on Edge Flashing	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-12B <i>131403713-0011</i>	Lower/Small Upper Café Roof - Misc Black Sealant on Edge Flashing	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

 Fievel Lam (5)
 Steve Grise (5)



 Steve Grise, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

Initial report from 08/29/2014 16:47:53



AXIOM PARTNERS
979 MAIN STREET
WAKEFIELD, MA 01880
PHONE: 781.213.9198
FAX: 781.213.6992

LABORATORY ORDER #:

131403713

Sample(s) received in good condition? [Y] [N]

Discernable field blank submitted? [Y] [N]

Asbestos Analysis - Chain of Custody Form

Sampled by:	<i>Peter A. Del Sette, Jr.</i>	Date Collected:	08-27-2014
Project Name:	Asbestos-Containing Roofing Materials Survey		
Project Site:	The Bartlett School, 79 Wannalancit Street, Lowell, MA		
Project ID/Number:			
Special Lab Instructions:	Positive stop unless otherwise noted; email results to pdelsette@axiomenv.com and shurlev@axiomenv.com		

TURNAROUND TIME - If turnaround time is not chosen standard turnaround time applies (6 + Days)

<input type="checkbox"/> 3 Hours	<input type="checkbox"/> 6 Hours	<input type="checkbox"/> 12 Hours	<input type="checkbox"/> 24 Hours	<input checked="" type="checkbox"/> 48 Hours	<input type="checkbox"/> 72 Hours	<input type="checkbox"/> 4 Days	<input type="checkbox"/> 5 Days	<input type="checkbox"/> 6-10 Days
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TYPE OF ASBESTOS ANALYSIS: EPA 600/R-93/116

SO 8/28/14

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE LOCATION
1 082814-09-07A	Sealant on Concrete Roof Deck Under Insulation Boards	North Side of Upper Main Field
2 082814-09-07B	Sealant on Concrete Roof Deck Under Insulation Boards	South Side of Upper Main Field
3 082814-09-08A	Edge Flashing Roof Sealant on Roof at Wall	North Side of Upper Main Field
4 082814-09-08B	Edge Flashing Roof Sealant on Roof at Wall	South Side of Upper Main Field
5 082814-09-09A	Coping Stone Seam Sealant	North Side of Upper Main Field
6 082814-09-10A	Sealant on Vent Curbing	Upper Café Roof
7 082814-09-10B	Sealant on Vent Curbing	Lower Café Roof
8 082814-09-11A	Black/White Caulking on Copper Flashing on Brick Wall	Lower Café Roof
9 082814-09-11B	Black/White Caulking on Copper Flashing on Brick Wall	Lower Café Roof
10 082814-09-12A	Misc Black Sealant one Edge Flashing	Lower / Small Upper Café Roof
11 082814-09-12B	Misc. Black Sealant one Edge Flashing	Lower / Small Upper Café Roof

Relinquished:

Peter A. Del Sette, Jr.

Date: 08-27-14

Time: _____

Received:

Date: _____

Time: _____

