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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: Asbestos-Containing Roofing Materials Survey Upper, Middle and Lower Roofs LeBlanc Therapeutic Day School, 58 Sycamore Street Lowell, MA

Dear Mr. Belanger,

At your request, Axiom Partners, Inc. (AXIOM) performed sampling for Asbestos-Containing Materials (ACMs) from all levels of the roofs of the Leblanc Therapeutic Day 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 27, 2014.

AXIOM surveyed the main upper roof, the middle and lower metal roof both of which are located at the rear of the school. The main upper roof, which is the largest, is tar and gravel roof over a wood deck. The middle roof is a combination of paper, sealant and rolled shingle also over a wood deck. The lowest level roof is metal coated with a layer of paper and sealant.

ASBESTOS-CONTANING MATERIALS (ACM's) SURVEY

During this survey AXIOM collected fourteen (14) bulk samples. Six of the samples were found to contain asbestos in regulated quantities. Asbestos was detected in samples collected from the main upper roof edge and parapet wall flashings and on the silver coating on all spinning vents, pipes, roof hatch and chimney. Asbestos was detected in both the main field, edge flashing, parapet walls and sealants on the middle level roof. The roof deck was also wood. The lowest roof level is covered with paper and sealant over the metal roof. Additionally, the copper flashing between the middle and lower roof was covered with a variety of asbestos-containing sealants.

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, LeBlanc Therapeutic Day School

SAMPLE NUMBER	MATERIAL	LOCATION	ANALYSIS RESULTS ¹	QUANTITY ²
082814-09-14A	Upper Roof Main Field	East Side	NAD	N/A
082814-09-14B	Upper Roof Main Field	West Side	NAD	N/A
082814-09-15A	Roof Edge and Wall Flashing	North Side	10% CHR.	~3,200 SF
082814-09-15B	Roof Edge and Wall Flashing	North East Side	SNA	" "
082814-09-16A	Silver Paint on Vents, Pipes and Edges	West Side Center	5% CHR.	~200 SF
082814-09-16B	Silver Paint on Vents, Pipes and Edges	East Side Center	SNA	" "
082814-09-17A	Roof Paper/Sealant Middle Level Roof	East Side	10% CHR.	~3,000 SF
082814-09-17B	Roof Paper/Sealant Middle Level Roof	West Side	SNA	" "
082814-09-18A	Roof Edge and Wall Flashing	West Corner	10% CHR.	~450 SF
082814-09-18B	Roof Edge and Wall Flashing	East Corner	SNA	" "
082814-09-19A	Copper Edge and Roof Seam Sealant	West Side Center	10% CHR.	~85 LF
082814-09-19B	Copper Edge and Roof Seam Sealant	North Side Center	SNA	" "
082814-09-20A	Sealant and Paper on Metal Shed Roof	North West Corner	5% CHR.	~ 450 SF
082814-09-20B	Sealant and Paper on Metal Shed Roof	North Center of Roof	SNA	" "

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; SF = Square 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:	131403714
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 LeBlanc Day School; 58 Sycamore 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
082814-09-14A <i>131403714-0001</i>	East Side - Upper Roof Main Field	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
082814-09-14B <i>131403714-0002</i>	West Side - Upper Roof Main Field	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
082814-09-15A <i>131403714-0003</i>	North Side - Roof Edge and Wall Flashing	Black Non-Fibrous Homogeneous		90% Non-fibrous (other)	10% Chrysotile
082814-09-15B <i>131403714-0004</i>	North East Side - Roof Edge and Wall Flashing				Stop Positive (Not Analyzed)
082814-09-16A <i>131403714-0005</i>	West Side Center - Silver Paint on Vents, Pipes & Edges	Silver Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
082814-09-16B <i>131403714-0006</i>	East Side Center - Silver Paint on Vents, Pipes & Edges				Stop Positive (Not Analyzed)
082814-09-17A <i>131403714-0007</i>	East Side - Roof Paper and Sealant Middle Level Roof	Black Fibrous Homogeneous	20% Cellulose	70% Non-fibrous (other)	10% Chrysotile
082814-09-17B <i>131403714-0008</i>	West Side - Roof Paper and Sealant Middle Level Roof				Stop Positive (Not Analyzed)

Analyst(s)
Steve Grise (9)



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 17:16:48

**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:	131403714
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 LeBlanc Day School; 58 Sycamore 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
082814-09-18A <i>131403714-0009</i>	West Corner - Roof Edge and Wall Flashing	Black Non-Fibrous Homogeneous	10% Glass	80% Non-fibrous (other)	10% Chrysotile
082814-09-18B <i>131403714-0010</i>	East Corner - Roof Edge and Wall Flashing				Stop Positive (Not Analyzed)
082814-09-19A <i>131403714-0011</i>	West Side Center - Copper Edge and Roof SeamSealant	Black Non-Fibrous Homogeneous		90% Non-fibrous (other)	10% Chrysotile
082814-09-19B <i>131403714-0012</i>	North Side Center - Copper Edge and Roof SeamSealant				Stop Positive (Not Analyzed)
082814-09-20A <i>131403714-0013</i>	North West Corner - Sealant and Paper on Metal Shed Roof	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (other)	None Detected
082814-09-20B <i>131403714-0014</i>	North Center of Roof - Sealant and Paper on Metal Shed Roof	Black Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile

Analyst(s) _____
 Steve Grise (9)

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 17:16:48



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

LABORATORY ORDER # 131403714
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 LeBlanc Day School, 58 Sycamore Street, Lowell, MA		
Project ID/Number:			
Special Lab Instructions:	Positive stop unless otherwise noted; email results to pdelse@axiomenv.com and shurley@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 *SA 8/27/14*

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE LOCATION
1 082814-09-14A	Upper Roof Main Field	East Side
2 082814-09-14B	Upper Roof Main Field	West Side
3 082814-09-15A	Roof Edge and Wall Flashing	North Side
4 082814-09-15B	Roof Edge and Wall Flashing	North East Side
5 082814-09-16A	Silver Paint on Vents, Pipes and Edges	West Side Center
6 082814-09-16B	Silver Paint on Vents, Pipes and Edges	East Side Center
7 082814-09-17A	Roof Paper and Sealant Middle Level Roof	East Side
8 082814-09-17B	Roof Paper and Sealant Middle Level Roof	West Side
9 082814-09-18A	Roof Edge and Wall Flashing	West Corner
10 082814-09-18B	Roof Edge and Wall Flashing	East Corner
11 082814-09-19A	Copper Edge and Roof Seam Sealant	West Side Center
12 082814-09-19B	Copper Edge and Roof Seam Sealant	North Side Center
13 082814-09-20A	Sealant and Paper on Metal Shed Roof	North West Corner
14 082814-09-20B	Sealant and Paper on Metal Shed Roof	North Center of Roof

Relinquished:	<i>Peter A. Del Sette, Jr.</i>	Date:	08-27-14	Time:	
Received:		Date:		Time:	

RECEIVED
 AUG 27 2014
 SA for
 By *FL* 14:00 W-M