



**MAIN OFFICE:**

545 Salem Street  
 Wakefield, Massachusetts 01880  
 (781) 213-9198  
 (781) 213-6992 Fax

**BRANCH OFFICES:**

46 Watergate Lane  
 W Barnstable, Massachusetts 02668  
 (508) 746-5218  
 (508) 732-0281 Fax

10 Diamond Drive  
 Derry, New Hampshire 03038  
 (603) 434-5245  
 (603) 434-5172 Fax

[www.axiomenv.com](http://www.axiomenv.com)

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, Upper and Rear Gymnasium Roofs, James S. Daley School, 150 Fleming Street, Lowell, MA

Dear Mr. Belanger,

At your request, Axiom Partners, Inc. (AXIOM) performed sampling for Asbestos-Containing Materials (ACMs) from two roofs of the James S. Daley 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 upper and rear lower roofs of gymnasium. Both roofs were flat, comprised of a combination of rubber over fiber board and other types of insulation over concrete roof decks.

**ASBESTOS-CONTAINING MATERIALS (ACM's) SURVEY**

AXIOM collected eight (8) bulk samples. One sample was found to contain asbestos in regulated quantities. Asbestos was detected the sealant on the underside edge of the rubber roof and brick under the rubber on the lower roof at the point where the rubber turns up the wall. The positive sample was collected on the west end of the roof.

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, James S. Delaney School**

SAMPLE NUMBER	MATERIAL	LOCATION	ANALYSIS RESULTS <sup>1</sup>	QUANTITY
082814-09-01A	Paper Under ISO Board	Main Field East Side Upper Roof	NAD	N/A
082814-09-01B	Paper Under ISO Board	Main Field West Side Upper Roof	NAD	N/A

<sup>1</sup> NAD = No Asbestos Detected; CHR. = Chrysotile Asbestos

SAMPLE NUMBER	MATERIAL	LOCATION	ANALYSIS RESULTS <sup>1</sup>	QUANTITY
082814-09-02A	Sealant on Concrete Deck Under ISO Board	Main Field East Side of Upper Roof	NAD	N/A
082814-09-02B	Sealant on Concrete Deck Under ISO Board	Main Field West Side Upper Roof	NAD	N/A
082814-09-04A	Sealant on Concrete Deck Under ISO Board	Main Field West Side Lower Roof	NAD	N/A
082814-09-04B	Sealant on Concrete Deck Under ISO Board	Main Field South East Lower Roof	NAD	N/A
082814-09-05A	Edge Sealant On Rubber Edge Flashing/Brick Wall	East Side of Wall	NAD	N/A
082814-09-05B	Edge Sealant On Rubber Edge Flashing/Brick Wall	West Side of Wall	4% CHR.	~400 SF

**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.

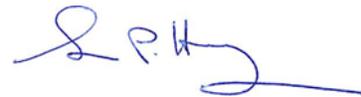
Federal regulations require that for buildings or in areas of buildings that will be demolished through renovation, asbestos-containing materials must be removed prior to demolition. All confirmed ACMs should be abated by a Massachusetts asbestos abatement contractor.

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



# 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](mailto:bostonlab@emsl.com)

EMSL Order:	131403708
CustomerID:	AXIO80
CustomerPO:	
ProjectID:	

Attn: <b>Peter A. Del Sette, Jr.</b> <b>Axiom Partners, Inc.</b> <b>545 Salem Street</b> <b>Wakefield, MA 01880</b>	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: <b>The James S. Delany School; 150 Fleming Street; Lowell, MA</b>	

## 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
082814-09-01A <i>131403708-0001</i>	Main Field; East Side of Upper Roof - Paper under ISO Board	Black Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (other)	None Detected
082814-09-01B <i>131403708-0002</i>	Main Field; West Side of Upper Roof - Paper under ISO Board	Black Fibrous Homogeneous	60% Cellulose 5% Glass	35% Non-fibrous (other)	None Detected
082814-09-02A <i>131403708-0003</i>	Main Field; East Side of Upper Roof - Sealant on Concrete Deck under ISO Board	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (other)	None Detected
082814-09-02B <i>131403708-0004</i>	Main Field; West Side of Upper Roof - Sealant on Concrete Deck under ISO Board	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (other)	None Detected
082814-09-04A <i>131403708-0005</i>	Main Field; West Side of Lower Roof - Sealant on Concrete Deck under ISO Board	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-04B <i>131403708-0006</i>	Main Field; South East of Lower Roof - Sealant on Concrete Deck under ISO Board	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	None Detected

Analyst(s)  
 Fievel Lam (4)  
 Sean Ryan (4)

  
 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 16:56:40



# 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](mailto:bostonlab@emsl.com)

EMSL Order:	131403708
CustomerID:	AXIO80
CustomerPO:	
ProjectID:	

Attn: <b>Peter A. Del Sette, Jr.</b> <b>Axiom Partners, Inc.</b> <b>545 Salem Street</b> <b>Wakefield, MA 01880</b>	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: <b>The James S. Delany School; 150 Fleming Street; Lowell, MA</b>	

## 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
082814-09-05A 131403708-0007	East Side of Wall - Edge Sealant on Rubber Edge Flashing/Brick Wall	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
082814-09-05B 131403708-0008	West Side of Wall - Edge Sealant on Rubber Edge Flashing/Brick Wall	Black Non-Fibrous Homogeneous		96% Non-fibrous (other)	4% Chrysotile

Analyst(s)  
 \_\_\_\_\_  
 Fievel Lam (4)  
 Sean Ryan (4)

  
 \_\_\_\_\_  
 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 16:56:40

