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May 4, 2022

Mr. Michael Lane  
EH&S Manager  
Office of Court Management  
Facilities Management & Court Capital  
Massachusetts Superior Courts  
Lowell Justice Center  
370 Jackson Street  
Lowell, MA 01852  
W0422-27

**VIA EMAIL**

AXIOM Project #1275.007

RE: Air Monitoring During Fan Coil Unit Renovation and Repair Project, Springfield Hall of Justice, 50 State Street, Springfield, MA

Dear Mr. Lane,

As requested, Axiom Partners, Inc. (AXIOM) provided observation and air monitoring support for the referenced project. AXIOM's Industrial Hygienist (IH), Jeff Young performed air sampling to measure airborne fiber levels during fan coil unit (FCU) renovation and repair work that was performed by the Contractor, BG Mechanical and to monitor the contractor's adherence to the approved Work Plan during the FCU renovation and repair work. The monitoring support was performed on April 27, 2022 and was limited to FCUs on the second floor in Room 249 and the Regional Director of Security's Office Area.

Area air samples were collected and analyzed by Phase Contrast Microscopy (PCM) according to the NIOSH Method 7400 which is recognized by OSHA, EPA, Department of Labor Standards (DLS) and the MADEP for its ability to characterize total airborne fiber levels.

Six air samples were collected around the work areas and the fiber concentrations were as follows:

Sample Number	Location	Result (f/cc)
A-01	Room 249, Southwest Office Next to Work Area	0.001
A-02	Room 249, Southwest Office Opposite to Work Area	<0.001
A-03	Room 249, Lobby Outside Work Area	0.003
A-04	Regional Director of Security Office	0.011
A-05	Regional Director of Security Office	0.003
A-06	Hall Outside Security Office	0.002

Although there is no regulatory exposure limit for fiberglass, air sample results were compared to the NIOSH Recommended Exposure Limit (REL) for fibrous glass of 3 fibers per cubic centimeter ( $f/cm^3$ ) and the more stringent California Personal Exposure Limit (PEL) of 1 f/cc. Note that  $cm^3$  is equivalent to cc.

AXIOM also observe the contractor's work practices and engineering controls and conformance with the approved work plan. Based on our observations, BG Mechanical performed the work in a manner consistent with the written work plan.

Please do not hesitate to call us if you have any questions or require additional assistance.

Sincerely,



Stephen E. Minassian  
Project Manager/Principal



Jeff Young  
Industrial Hygienist

attachments: PCM Air Monitoring Worksheet, Site Log

//projects/1275/007/FCU/monitoringreport050422

# SITE LOG

## Axiom Partners, Inc.

50B Salem Street – Suite 103  
Lynnfield, MA 0194  
781-213-9198

Date:	<u>04/27/22</u>	Location:	<u>Room 249 &amp; Reg. Dir. of Security Office</u>
Project Number:	<u>1275.007</u>	Address:	<u>50 State St., Springfield, MA</u>
Project Monitor:	<u>Jeff Young</u>	Project:	<u>Springfield Courthouse Air Monitoring</u>
License Number:	<u>N/A</u>	Supervisor:	<u>Bret w/ BG Mechanical</u>
Contractor:	<u>BG Mechanical / IMI</u>	No. of Workers:	<u>2</u>

TIME	NOTES
1015	I arrive on site and am escorted to the work area in Room 249 by Courthouse maintenance staff.  Workers Present: Bret (BG Mechanical) and Josh (IMI).  Most fiberglass insulation had previously been removed from the fan coil unit in this area. Remaining scope of work for this area is installation of new foam insulation and clean up.
1045	They begin installation of new foam insulation material on the FCU.  I proceed to set up PCM high volume area air samples as follows: <ul style="list-style-type: none"><li>• 2 in the southwest office (1 near work area and 1 on opposite side of room)</li><li>• 1 in Room 249 lobby at south windows</li></ul>
1245	The crew completes of foam insulation installation and cleans area with HEPA vac.
1300	The crew has moved to the Regional Director of Security Office to begin removal of fiberglass insulation from fan coil unit. One worker is using a HEPA-filtered vacuum to clean dust and debris while cutting and removing the fiberglass insulation.  I proceed to set up PCM high volume area air samples as follows: <ul style="list-style-type: none"><li>• 2 in the Regional Director of Security office</li><li>• 1 in the southwest corner near work area and 1 in the east corner opposite side of room</li><li>• 1 in hallway outside off of office work area</li></ul>
1400	Removal of fiberglass insulation complete. They placed the removed fiberglass insulation into plastic bags and seal them.
1415	Clean up is complete, the plastic sheathing is removed from desks and surfaces and final HEPA vacuuming is completed.
1430	I gather my equipment and depart the site.



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



# PCM AIR MONITORING WORKSHEET

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

Site Address: 50 State Street, Springfield, MA  
 Project Name: Springfield Courthouse FCU Renovation Work  
 Sampler Name: Jeff Young Date: April 27, 2022  
 Analyst Name: Jeff Young Date: April 27, 2022

Project No: 1275.007  
 Client: Massachusetts Superior Courts  
 Location(s) Sampled: Room 249 - SW Office and Reg. Director of Security Office  
 State License #: N/A

Sample Number	Sample Location	Sample Type*	Work Activity**	Sampling Time (Minutes-Military format)			Flow Rate (Liters per Minute)			Total Volume (Liters)	Fiber Density (f/mm <sup>2</sup> )	Limit of Detection (f/mm <sup>2</sup> )	Fiber Count #	RESULT Fibers/Cubic Centimeter
				Start	Stop	Total	Start	Stop	Average					
A-03	Room 249 - Lobby Outside Work Area	OWA	15	10:45	12:47	122	14.8	15.2	14.98	1827.6	12.1	12.1	9.5	0.003
A-06	Hallway Outside Security Office Work Area	OWA	15	13:01	14:02	61	14.7	14.9	14.82	904.0	5.7	7.0	4.5	0.002
A-01	Room 249 - SW Office Next to Work Area	IWA	15	10:46	12:48	122	14.8	15.3	15.04	1834.3	15.9	15.9	12.5	0.001
A-02	Room 249 - SW Office Opposite to Work Area	IWA	15	10:46	12:48	122	14.9	15.0	14.96	1825.1	9.6	9.6	7.5	< 0.001
A-04	Regional Director of Security Office	IWA	15	13:00	14:00	60	14.9	15.2	15.05	903.0	35.0	35.0	27.5	0.011
A-05	Regional Director of Security Office	IWA	15	13:00	14:01	61	14.8	15.2	15.00	915.0	15.3	15.3	12.0	0.003

<b>CHAIN-OF-CUSTODY</b>		<b>Microscope ID #</b> <u>PCM-2</u>		<b>*Sample Type Codes</b>		<b>**Work Activity Codes</b>	
Relinquished by: _____		<b>Rotameter ID #</b> <u>ROT-2</u>		IWA = Inside Work Area		1 = Background	
Printed Name: _____				OWA = Outside Work Area		9 = Pre-Abatement	
Date: _____				HEPA = HEPA Exhaust		2 = Work Area Prep	
Time: _____				BG = Background		3 = Asbestos Removal	
				PL = Personal		4 = Waste Loadout	
				CL = Clearance		5 = Glovebag Removal	
				DF = Decontam. Facility		6 = Clearance Test	
				OT = Other		7 = Repair/Encapsulation	
						8 = Cleaning/Decontamination	
Received By: _____		<b>Analytical Method: NIOSH 7400, "B" Rules</b>					
Printed Name: _____		f/mm <sup>2</sup> - fibers per square millimeter					
Date: _____		Effective Filter Area = 385 mm <sup>2</sup>					
Time: _____		Field Area = 0.00785 mm <sup>2</sup>					
		* Fibers per 100 Fields unless specified					
		Fibers/CC = (SAMPLE fibers/field) - (BLANK fibers/field) x (385)					
		(7.85) x (liters)					
<u>MA PCM Lab ID # AA000179</u>		<u>AIHA Lab # 121587</u>				<b>Analyst Signature:</b>	

New Hampshire Only (fax copy of form to NH Air Resources at 603-271-1381):  Project Scope (Check One):  Major (> 10 Inft/25 sqft of Friable ACM)  Minor (≤ 10 Inft/25 sqft of Friable ACM)