



FLI Environmental

858 WASHINGTON STREET
DEDHAM, MA 02026
PHONE 781.251.0040
FAX 781.251.0901

March 24, 2008

City of Newton
Building Department
52 Elliot Street
Newton, MA
Attn: Nick Parnell

Re: Sampling for Asbestos Contamination
Fire Station #3 (Willow Street)
FLI Project # 08-265

Dear Mr. Parnell:

On March 21, 2008 FLI Environmental, Inc. (FLI) was contracted by the City of Newton to provide environmental consulting services at the above referenced fire station. Our purpose was to assess conditions present in the Wires Room and adjacent areas with respect to potential asbestos contamination. This report outlines the initial visual survey & sampling and summary of analytical results provided by FLI.

A. Scope of Work

1. On March 21, 2008 FLI's Massachusetts Licensed and EPA-AHERA Accredited Asbestos Inspector Mr. Carl Pennor performed a limited visual survey of the subject areas and collected air samples and samples of settled dust. Visual observations included damaged pipe and fitting insulation, especially where piping had been cut at a ceiling access hatch, as well as insulation debris on the ceiling below the pipe and fitting insulation. A total of 22 dust samples and 2 air samples were collected and submitted for analysis.

B. Vacuum Dust Sampling:

1. A mixed cellulose ester (MCE) filtered, 25 millimeter cassette was attached to a high volume pump and used to sample accumulated dust in each subject area. The samples were collected on horizontal surfaces and floors within designated areas. The samples were analyzed for specific types of asbestos fibers present using polarized light microscopy (PLM). No specific analytical methods or Federal standards are associated with the dust sampling or analysis. Current industrial hygiene sampling protocols are used in the sampling methods. Analysis of samples follows the protocols established for bulk sample analysis using EPA method 600/R-93-116, July 1993.

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2. The dust samples collected on March 21st were analyzed by EMSL Analytical Laboratory located in Woburn, Massachusetts. This laboratory is certified by the National Institute of Standards and Technologies NIST/NVLAP Program (NVLAP# 101147-0) and the Massachusetts Department of Occupational Safety (# 000188).

C. Air Sampling:

1. The airborne asbestos samples were collected using calibrated equipment and NIOSH recommended sampling procedures in accordance with Commonwealth of Massachusetts regulations. Airborne fibers were collected on mixed cellulose membrane filters mounted in 2-stage 25-mm filter cassettes. Sample collection was performed in the open face position by drawing a known volume of air through the filter with a sampling pump.
2. The air samples were analyzed on-site in accordance with Commonwealth of Massachusetts Method for PCM analysis using .8 micron pore filtered cassettes. The PCM samples were analyzed in accordance with NIOSH 7400 Method using "A" counting rules. This method identifies total fibers by Phase Contrast Microscopy (PCM) using 400X magnification. This method does not distinguish between asbestos and non-asbestos fibers (i.e. fiberglass, mineral wool, cellulose, etc.). All fibers with a length to diameter ratio of 3 to 1 or greater and a length of greater than 5 microns are considered to be asbestos fibers and are counted as such.
3. One of the samples collected in the Wires Room was overloaded with particulate and therefore unreadable via PCM analysis. This sample was submitted for analysis by Transmission Electron Microscopy (TEM) at EMSL Analytical Laboratory in Woburn, MA. Air samples were analyzed in accordance with EPA AHERA Method for TEM analysis. This method identifies total asbestos structures (fibers) by Transmission Electron Microscopy. This method does distinguish between asbestos and non-asbestos fibers (i.e. fiberglass, mineral wool, cellulose, etc.). EMSL of Woburn, MA analyzed the TEM samples. EMSL is a NVLAP accredited laboratory (#101147-0) and licensed by the Commonwealth of Massachusetts (#AA000188).
4. FLI's laboratory is a successful participant in the NIOSH Proficiency and Analytical Testing (PAT) program (# 102582) and is accredited by the Massachusetts Department of Labor and Work Force Development (# AA 000144).

D. Conclusions and Recommendations

1. Air sampling showed that no elevated fiber concentrations were detected in the areas sampled and the time samples were collected.

2. Visual observations conclude that significant damage to friable asbestos insulation is present in several areas throughout the building. As a precaution, FLI believes areas immediately adjacent to damaged insulation be included in the abatement work area and be treated as if it were contaminated.
3. FLI recommends writing a detailed plan for remediation of these areas and contacting the Massachusetts DEP for approval of the plan and obtaining a waiver number (enabling abatement without waiting the standard 10-working day notification period) prior to commencement of abatement activities.
4. FLI also recommends identification and quantification of remaining asbestos materials; drafting a management plan addressing maintenance of remaining asbestos materials; providing 2-hour awareness training to maintenance, cleaning, custodial or other personnel that may encounter the asbestos in the course of their work and develop a long term strategy to remove remaining asbestos materials over time.

Attached please find sample analytical results. Please contact me at your convenience with questions or if you need additional information. Upon your request, FLI will proceed with drafting a formal remediation plan for submittal to the MA DEP and to your contractor, New England Surface Maintenance, Inc. (NESM), for obtaining abatement costs and schedule. Thank you for the opportunity to provide you with our services.

Sincerely,

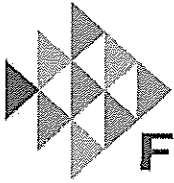
FLI Environmental, Inc.



David MacDonald
President

ANALYTICAL DATA SHEETS

Air Samples



FLI Environmental

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(781) 251-0040 ph
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Asbestos Air Sample Data Sheet

Report #: B20788
Project #: 08-265

Date: 3/21/08
Client: City of Newton
Project: Fire Station. Willow St, Newton MA

Sampled By: CSP
Analyzed By: CSP
Date Analyzed: 3/21/08

Lab Sample #	Field ID	Flow Rate (L/Min)	Start	End	Total Minutes	Volume (Liters)	Fibers / Field	Fiber Concentration	Sample Location	Sample Type
59380	CP-265-1	15.0	4:07 p	5:49 p	102	1530	.12	0.003	Kitchen	Background
59381	CP-265-2						.00	.00		Field Blank

Supervisor

MA DOS Certification # AA000144

Notes:
NIOSH Method 7400 (A)
Phase Contrast Microscopy
Fiber Concentration = Fibers per Cubic Centimeter (F/cc)
The Post-abatement Airborne Fiber Limit is 0.01 F/cc
Method Not Specific for Asbestos Fibers



EMSL Analytical, Inc.

7 Constitution Way, Suite 107, Woburn, MA 01801

Phone: (781) 933-8411 Fax: (781) 933-8412 Email: bostonlab@emsl.com

Attn: **Carl Pennor**
FLI Environmental, Inc.
858 Washington Street Suite 50
Dedham, MA 02026

Fax: (781) 251-0901 Phone: (781) 251-0040
Project: City of Newton: Church St. Station

Customer ID: FLIE62
Customer PO:
Received: 03/24/08 9:10 AM
EMSL Order: 130800963
EMSL Proj:
Analysis Date: 3/24/2008
Report Date: 3/24/2008
Sampling Date:

**Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by
EPA 40 CFR Part 763 Appendix A to Subpart E**

Sample	Location	Volume (Liters)	Area Analyzed (mm ²)	Non Asb	Asbestos Type(s)	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥ 0.5μ < 5μ	≥ 5μ		(S/mm ²)	(S/cc)
24 130800963-0001	Wires Room	1670.00	0.0650	2	None Detected			0.0035	<15.00	<0.0035

Analyst(s)

Renaldo Drakes (1)

or other approved signatory

Disclaimers: The laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This lab is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysts' accuracy and precision) is available upon request. As per 40 CFR 763, the initial screening test may not be applied to samples with collected volumes of <1200 liters. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

NVLAP Lab Code 101147-0, AIHA IHLAP 180179, MA AA000188

ANALYTICAL DATA SHEETS

Dust Samples



EMSL Analytical, Inc.

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Phone: (781) 933-8411 Fax: (781) 933-8412 Email: hostonlab@emsl.com

Attn: **Carl Pennor**
FLI Environmental, Inc.
858 Washington Street Suite 50
Dedham, MA 02026

Fax: (781) 251-0901 Phone: (781) 251-0040
Project: **City of Newton: Willow St Fire Station**

Customer ID: FLIE62
Customer PO:
Received: 03/24/08 9:10 AM
EMSL Order: 130800965

EMSL Proj:
Analysis Date: 3/24/2008
Report Date: 3/24/2008

Asbestos Analysis via Polarized Light Microscopy, Qualitative

Sample	Location	Appearance	Result	Notes
01 130800965-0001	Wires Room @ Closet		None Detected	
02 130800965-0002	Wires Room @ Bathroom		None Detected	
03 130800965-0003	Wires Room @ Garage Stairs		None Detected	
04 130800965-0004	Wires Room Desk @ Hatch		None Detected	
05 130800965-0005	Wires Room Floor		None Detected	
06 130800965-0006	Wires Room Desk @ Map		None Detected	
07 130800965-0007	Wires Room I/S Door @ Floor		None Detected	
08 130800965-0008	App Floor @ Door to Drying Room		None Detected	
09 130800965-0009	App Floor @ Ping Pong Table		None Detected	

Analyst(s) _____

Katherine Wysong (22)

or other approved signatory

EMSL recommends that soil samples reported as "ND" be tested by the EPA Screening Method/Qualitative. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Unless otherwise noted, the results in this report have not been blank corrected. Samples received in good condition unless otherwise noted.



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Project: **City of Newton: Willow St Fire Station**

Customer ID: FLIE62
Customer PO:
Received: 03/24/08 9:10 AM
EMSL Order: 130800965

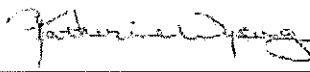
EMSL Proj:
Analysis Date: 3/24/2008
Report Date: 3/24/2008

Asbestos Analysis via Polarized Light Microscopy, Qualitative

Sample	Location	Appearance	Result	Notes
10 130800965-0010	App Floor @ Comm Van		None Detected	
11 130800965-0011	Bitm of Stairs @ Ping Pong Table		None Detected	
12 130800965-0012	Top of Stairs @ Ping Pong Table		None Detected	
13 130800965-0013	App Floor @ Stairway Door		None Detected	
14 130800965-0014	Kitchen Fl @ Stove		None Detected	
15 130800965-0015	Kitchen Fl @ Fridge		None Detected	
16 130800965-0016	Kitchen Fl @ Radiator		None Detected	
17 130800965-0017	Kitchen Stairs		None Detected	
18 130800965-0018	Watch Desk Hall @ Garage Door		None Detected	

Analyst(s) _____

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Project: City of Newton: Willow St Fire Station

Customer ID: FLIE62
Customer PO:
Received: 03/24/08 9:10 AM
EMSL Order: 130800965
EMSL Proj:
Analysis Date: 3/24/2008
Report Date: 3/24/2008

Asbestos Analysis via Polarized Light Microscopy, Qualitative

Sample	Location	Appearance	Result	Notes
19 130800965-0019	Watch Desk Hall @ Windows		None Detected	
20 130800965-0020	Watch Desk Hall @ Stairs		None Detected	
21 130800965-0021	Watch Desk Hall @ Door		None Detected	
22 130800965-0022	Watch Desk Hall @ Kitchen		None Detected	

This method is designed for relatively homogenous bulk building materials. Use of this method for other sample types can produce results that may not provide the analytical reliability for which the method was intended.

Analyst(s)

Katherine Wysong (22)

or other approved signatory

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