

May 9th, 2017

University of Toronto
255 McCaul Street, Level 4
Toronto, Ontario
M5T 1W7

Attn: Mr. Irfan Miraj, P.Eng, MHSc.
Manager, Hazardous Construction Materials Group

Re: Air Monitoring Report – May 8th, 2017
University of Toronto – Medical Sciences Building, Labs 5342, 5344, 5366
1 King's College Circle, Toronto, Ontario

1.0 BACKGROUND

On May 8th, 2017, Safetech Environmental Limited (SEL) was contacted to provide air monitoring services within Labs 5342, 5344, 5366, at the University of Toronto's Medical Sciences Building located at 1 King's College Circle, Toronto, Ontario. Air sampling was performed at the request of Mr. Doug Colby, Coordinator, Hazardous Construction Materials Group, for the University of Toronto. Air monitoring was performed associated with the installation of gaskets on mechanical shaft doors.

2.0 METHODOLOGY

2.1 Air Monitoring for Airborne Fibres

One (1) phase contrast microscopy (PCM) air sample was retrieved within each area. The air samples were collected using a 25-mm three-piece filter cassettes containing a 0.8 µm cellulose ester membrane filter and equipped with a 50-mm electrically conductive extension cowl. The filter cassettes were attached to a high volume air sampling pump calibrated with a filter cassette in line to a known flow rate.

The air sampling pumps were calibrated to a flow rate of approximately 15 litres per minute. The air samples were collected using 25 mm three piece cassette with 50 mm electrically conductive extension cowl and mixed cellulose ester filter, 0.8 µm (recommended 0.45 to 1.2 in method) effective pore size, and back-up pad. The air samples were analyzed in accordance with U.S. National Institute of Occupational Safety and Health (NIOSH) Manual of Analytical Methods, Method 7400, Issue 2: Asbestos and other Fibres by PCM (August 15, 1994), using the asbestos fibre counting rules.

The quantitative working range of this method is 0.04 to 0.5 fibre/cc for a 1000 L air sample. The Limit of Detection (LOD) depends on sample volume and quantity of interfering dust, and is < 0.01 fibre/cc for atmospheres free of interferences. The method gives an index of airborne fibres. Fibres less than approximately 0.25 µm in diameter will not be detected by this method. In addition, other airborne fibres and particles that fall within the counting range criteria may act as possible interferences. Demolition and construction related work areas where high levels of dust are present might overload the membrane and/or interfere with the analysis.

3.0 RESULTS

3.1 Air Monitoring for Airborne Fibres

PCM air sampling was conducted on May 8th, 2017. Results of subsequent PCM analysis are presented in Table I.

TABLE I
Results of Air Testing
University of Toronto – Medical Sciences Building
1 King’s College Circle, Toronto, Ontario
May 8th, 2017

Sample No.	Sample Location	Start Time	Stop Time	Sample Volume (L)	Airborne Fibre Conc. (f/cc)
2017-05-889	Lab 5344	12:50	14:25	96	0.004
2017-05-890	Lab 5342	13:03	14:31	98	0.001
2017-05-899	Lab 5366	14:47	16:22	95	0.001

4.0 CONCLUSIONS

Results of air monitoring on May 8th, 2017 indicated that at the time of sampling, the airborne fibre concentration within Laboratories 5344, 5342 and 5366 of the Medical Sciences Building were well below the occupational exposure limit for asbestos of 0.1 fibres/cc. In addition, results of PCM air sampling were below the generally accepted clearance standard of 0.01 fibres/cc, thus the subject locations would be expected to be safe for general occupancy.

5.0 LIMITATIONS

The investigation, assessments and recommendations detailed in this report were carried out in a manner consistent with the level of care and skill normally exercised by reasonable members of the environmental and industrial hygiene consulting profession currently practicing under similar conditions in the area. Furthermore, the investigation, assessments and recommendations in this report have been made based on conditions observed at the time of the assessment and are limited to the areas investigated.

In preparing this report, Safetech Environmental Limited (SEL) relied on information supplied by others. Except as expressly set-out in this report, SEL has not made any independent verification of such information.

The analytical method used meets the requirements of O.Reg. 278/05. However, it is important to note that this method is not specific to the identification of asbestos fibres. All particles with a length greater than 5 micrometres, less than 3 micrometres in diameter and a length to diameter ratio of 3 to 1 or greater are included in the count. Fibres with diameters less than about 0.3 micrometres cannot be detected using this method regardless of length.

This report has been prepared for the sole use of the person or entity to who it is addressed. No other person or entity is entitled to use or rely upon this report without the express written consent of Safetech Environmental Limited and the person or entity to who it is addressed. Any use that a third party makes of this report, or any reliance based on conclusions and recommendations made, are the responsibility of such third parties. SEL accepts no responsibility for damages suffered by third parties as a result of actions based on this report.

Should you have any questions regarding this project, please contact our office.
Sincerely,

SAFETECH ENVIRONMENTAL LIMITED



Josh Hamilton
OH&S Technician



Glenn Smith, BA, CRSP, AMRT
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