

May 12<sup>th</sup>, 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 11<sup>th</sup>, 2017**  
**University of Toronto – Medical Sciences Building, 3312, 7340, 5312**  
**1 King's College Circle, Toronto, Ontario**

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## **1.0 BACKGROUND**

On May 11<sup>th</sup>, 2017, Safetech Environmental Limited (SEL) was contacted to provide air monitoring services within hallways adjacent to 3312, 7340 and 5312 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 in association 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 11<sup>th</sup>, 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 11<sup>th</sup>, 2017**

Sample No.	Sample Location	Start Time	Stop Time	Sample Volume (L)	Airborne Fibre Conc. (f/cc)
2017-05-946	3320K Adjacent to 3312	9:02	10:26	1259	0.004
2017-05-954	7347K Adjacent to 7340	10:32	12:05	1394	0.004
2017-05-957	5322K Adjacent to 5312	12:49	14:28	1484	0.004

### 4.0 CONCLUSIONS

Results of air monitoring on May 11<sup>th</sup>, 2017 indicated that at the time of sampling, the airborne fibre concentration within Hallways 3320K, 7347K and 5322K 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  
Senior Project Manager