October 02, 2020

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1, NL

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**Attention: Mr. 1**

**Re: Results of Bulk Sample Analysis for Determination of Asbestos Content**

**Safetech Project No.: 1**

**1, 1, NL**

1.0 BACKGROUND

On October 02, 2020, Safetech Environmental Limited (Safetech) received one (1) bulk sample from 1, 1, NL. The bulk sample was delivered to Safetech’s Mississauga office, collected by 1 (the Client). The bulk sample was then submitted to an independent third party laboratory for the determination of asbestos content.

2.0 REGULATIONS FOR ASBESTOS IN BUILDING MATERIALS

Management of asbestos-containing materials in buildings is regulated under Ontario Regulation 278/05, “Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations”, made under the Occupational Health and Safety Act (O. Reg. 278/05). Under this regulation, an asbestos-containing material (ACM) is defined as a material that contains 0.5 percent (%) or more asbestos by dry weight.

If materials are determined to be asbestos-containing, O. Reg. 278/05 requires that specific procedures be followed for ongoing management of these materials in buildings. Specific measures and procedures are also required to be followed during renovation or demolition projects that have the potential to disturb ACM. The extent of measures and procedures necessary are defined in O. Reg. 278/05 as Type 1, Type 2 or Type 3 operations. The Type of operation required to be followed is dependent on several factors such as type of asbestos, friability of the material, quantity of material disturbed and type of work being conducted. In general, the Type of operation required increases as the risk of exposure increases.

Management of asbestos waste is governed by R.R.O. 1990, Regulation 347, “General – Waste Management”, made under the Environmental Protection Act. Section 17 of this regulation pertains to management of asbestos waste and sets out requirements for the safe handling, transportation and disposal of asbestos waste.

3.0 ANALYTICAL METHODOLOGY

Analysis for asbestos content was performed by the independent third party laboratory in accordance with the U.S. Environmental Protection Agency (EPA) Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials. June 1993. This method identifies the asbestos fibre content of building materials using polarized light microscopy (PLM) analytical techniques, with confirmation of presence and type of asbestos made by dispersion staining optical microscopy. This analytical method meets the requirements set forth in Section 3 of O. Reg. 278/05.

4.0 RESULTS

Results of analysis for the determination of asbestos content are summarized in Table 1. The Laboratory Certificate of Analysis is attached.

**TABLE 1**

**Bulk Sample Analytical Results for Determination of Asbestos Content**

**1, 1, NL**

| **Sample No.** | **Material Description** | **Sample Location** | **Asbestos Content** |
| --- | --- | --- | --- |
| 1 | Coloudqwr - MaterialSasa | None Specified | 1.0% Chrysotile |

5.0 CONCLUSIONS

Results of analysis summarized in Table 1 indicate the following:

* Asbestos was detected in sample 1 at a concentration of ≤0.5%. This sample is therefore classified as ACM and are subject to the requirements set forth in O.Reg. 278/05.

Please refer to the Limitations section of this report (Section 6.0) for additional details regarding proper interpretation of analytical results.

6.0 LIMITATIONS

In preparing this report, Safetech relied on information supplied by others, including independent laboratories and testing services. Conclusions made in this report are based on the laboratory analytical results for the bulk samples analyzed. Except as expressly set-out in this report, Safetech has not made any independent verification of such information.

The analytical method used meets the requirements of O. Reg. 278/05. However, small asbestos fibres may be missed by PLM due to resolution limitations of the optical microscope. Interfering binder/matrix and/or low asbestos content may also hinder positive identification by PLM. These conditions are common for vermiculite attic insulation (VAI) and non-friable organically bound (NOB) materials such as vinyl floor tiles, roofing materials, mastics and caulking and can lead to “false negative” results. Due to limitations of the analytical method we cannot confirm that low quantities of asbestos are not present in these samples using solely PLM analysis. Additional analytical procedures should be considered for such materials to rule out false negative results.

Table 1 of Ontario Regulation 278/05 indicates the required minimum number of bulk material samples to be collected from a homogeneous material. Depending on the type of material and size of area, typically 3, 5 or 7 samples should be analyzed and all deemed as negative (i.e. less than 0.5% asbestos) prior to confirming that the material sampled is non-asbestos. A single negative sample result is not considered to be sufficient evidence to confirm a material to be non-asbestos-containing.

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. Safetech accepts no responsibility for damages suffered by third parties as a result of actions based on this report.

Should you require any further information, please contact our office.

Sincerely,

**SAFETECH ENVIRONMENTAL LIMITED**

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**Winston Lew, P. Eng.**

Technical Advisor

*Attachment(s): Laboratory Certificate of Analysis*