



## Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

January 10, 2023

Upper Canada District School Board  
225 Central Avenue West  
Brockville ON K6V 5X1

Attention: Steve Holmes

Lab Reference No.: b284590  
Client Project Name: Linklater Public School - Roofing, Building #135  
Client Project No.: Activity ID #1682  
Date Received: December 29, 2022  
Date Analyzed: January 10, 2023  
Analyst(s): C. Luong  
# Samples submitted: 3  
# Phases analyzed: 34

The Pinchin Ltd. Mississauga asbestos laboratory is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0) for the 'EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples,' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2017. The Pinchin asbestos laboratory uses the aforementioned methods of analysis.

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared with representative portions of material and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold (see chart below) indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with all provincial regulatory requirements (NIOSH 9002, I.R.S.S.T. MA-244). Multiple phases within a sample are analyzed and reported separately.

| Provincial Jurisdiction                   | Regulatory Threshold | Provincial Jurisdiction  | Regulatory Threshold        |
|---|----------------------|--|-----------------------------|
| Ontario, British Columbia,<br>Nova Scotia | 0.5%                 | PEI, NWT, Yukon, Nunavut,<br>Newfoundland and Labrador,<br>and New Brunswick | 1%                          |
| Quebec                                    | 0.1%                 | Saskatchewan   | 0.5% friable 1% non-friable |
| Alberta                                   | Undefined            | Manitoba   | 0.1% friable 1% non-friable |

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This report relates only to the items tested. If you have any questions, please feel free to contact me.

Yours truly,

**NOTE:** This test report may not be reproduced, except in full, without the written approval of the laboratory. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. This report is valid only when signed in blue ink by the analyst and the laboratory manager. Vinyl asbestos floor tiles contain very fine fibres of asbestos and may be missed by some laboratories using the PLM method. Internal verification studies performed by Pinchin indicate that the chance of missing asbestos in floor tiles is no higher than about 2%. The vinyl tile study and laboratory documentation on measurement uncertainty are available upon request. The analysis of dust samples by PLM cannot be used as an indicator of past or present airborne asbestos fibre levels.



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### BULK SAMPLE ANALYSIS

| SAMPLE IDENTIFICATION                   | SAMPLE DESCRIPTION  | % COMPOSITION (VISUAL ESTIMATE) |        |                           |        |
|---|---|---------------------------------|--------|---------------------------|--------|
|   |   | ASBESTOS                        |        | OTHER                     |        |
| 1<br>Roof "F" - Linklater Public School | 12 Phases:  |                                 |        |                           |        |
|   | a) Homogeneous, black, tar material on beige and black, layered paper with tar. | Chrysotile                      | 0.5-5% | Tar and other non-fibrous | > 75%  |
|   | b) Non-homogeneous, beige and black, layered paper with tar.                    | None Detected                   |        | Cellulose                 | > 75%  |
|   |   |                                 |        | Tar and other non-fibrous | 10-25% |
|   | c) Homogeneous, black, hard, tar material.                                      | None Detected                   |        | Tar and other non-fibrous | > 75%  |
|   | d) Homogeneous, black, layered, tar material.                                   | None Detected                   |        | Tar and other non-fibrous | > 75%  |
|   | e) Homogeneous, black, layered, tar-impregnated, compressed, fibrous material.  | None Detected                   |        | Cellulose                 | 50-75% |
|   |   |                                 |        | Tar and other non-fibrous | 25-50% |
|   | f) Homogeneous, black, thick, tar material.                                     | None Detected                   |        | Man-Made Vitreous Fibres  | < 0.5% |
|   |   |                                 |        | Tar and other non-fibrous | > 75%  |
|   | g) Homogeneous, grey, layered paper.  | None Detected                   |        | Cellulose                 | > 75%  |
|   |   |                                 |        | Man-Made Vitreous Fibres  | 5-10%  |
|   |   |                                 |        | Non-Fibrous Material      | 5-10%  |
|   | h) Homogeneous, black, tar material between layered paper and cellulose.        | None Detected                   |        | Tar and other non-fibrous | > 75%  |
|   | i) Homogeneous, black, layered, tar material.                                   | None Detected                   |        | Tar and other non-fibrous | > 75%  |
|   | j) Homogeneous, black, layered, tar-impregnated, compressed, fibrous material.  | None Detected                   |        | Cellulose                 | 50-75% |
|   |   |                                 |        | Tar and other non-fibrous | 25-50% |
|   | k) Homogeneous, black, hard, tar-impregnated, compressed, fibrous material.     | None Detected                   |        | Cellulose                 | 50-75% |
|   |   |                                 |        | Hair                      | 0.5-5% |
|   |   |                                 |        | Synthetic Fibres          | 0.5-5% |
|   |   |                                 |        | Tar and other non-fibrous | 25-50% |
|   | l) Homogeneous, black, hard, textured, tar material.                            | None Detected                   |        | Tar and other non-fibrous | > 75%  |
| Comments:                               | Foam and cellulose are present on the surface of this sample.                   |                                 |        |                           |        |



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### BULK SAMPLE ANALYSIS

| SAMPLE IDENTIFICATION                   | SAMPLE DESCRIPTION  | % COMPOSITION (VISUAL ESTIMATE) |  |
|---|---|---------------------------------|--|
|   |   | ASBESTOS                        | OTHER  |
| 2<br>Roof "G" - Linklater Public School | 14 Phases:  |                                 |  |
|   | a) Homogeneous, black, hard, tar-impregnated, compressed, fibrous material.     | None Detected                   | Cellulose 50-75%<br>Hair 0.5-5%<br>Synthetic Fibres 0.5-5%<br>Tar and other non-fibrous 25-50% |
|   | b) Homogeneous, black, hard, tar material.                                      | None Detected                   | Tar and other non-fibrous > 75%  |
|   | c) Homogeneous, black, tar material on brown and black, layered paper with tar. | Chrysotile 0.5-5%               | Tar and other non-fibrous > 75%  |
|   | d) Non-homogeneous, brown and black, layered paper with tar.                    | None Detected                   | Cellulose > 75%<br>Tar and other non-fibrous 10-25%  |
|   | e) Homogeneous, black, thick, tar material.                                     | None Detected                   | Tar and other non-fibrous > 75%  |
|   | f) Homogeneous, black, layered, tar-impregnated, compressed, fibrous material.  | None Detected                   | Cellulose 50-75%<br>Tar and other non-fibrous 25-50%   |
|   | g) Homogeneous, black, layered, tar material.                                   | None Detected                   | Tar and other non-fibrous > 75%  |
|   | h) Homogeneous, black, tar material on grey, layered paper.                     | None Detected                   | Tar and other non-fibrous > 75%  |
|   | i) Homogeneous, grey, layered paper.  | None Detected                   | Cellulose > 75%<br>Man-Made Vitreous Fibres 5-10%<br>Non-Fibrous Material 5-10%                |
|   | j) Homogeneous, black, tar material between layered paper and cellulose.        | None Detected                   | Tar and other non-fibrous > 75%  |
|   | k) Homogeneous, black, tar material between cellulose.                          | None Detected                   | Tar and other non-fibrous > 75%  |
|   | l) Homogeneous, black, layered, tar material.                                   | None Detected                   | Tar and other non-fibrous > 75%  |
|   | m) Homogeneous, black, layered, tar-impregnated, compressed, fibrous material.  | None Detected                   | Cellulose 50-75%<br>Tar and other non-fibrous 25-50%   |
|   | n) Homogeneous, black, shiny, textured, tar material.                           | None Detected                   | Tar and other non-fibrous > 75%  |
| Comments:                               | Foam and cellulose are present on the surface of this sample.                   |                                 |  |



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| SAMPLE IDENTIFICATION                   | SAMPLE DESCRIPTION   | % COMPOSITION (VISUAL ESTIMATE) |   |
|---|--|---------------------------------|---|
|   |  | ASBESTOS                        | OTHER   |
| 3<br>Roof "H" - Linklater Public School | 8 Phases:  |                                 |   |
|   | a) Homogeneous, black, tar-impregnated, compressed, fibrous material.          | None Detected                   | Cellulose 50-75%<br>Tar and other non-fibrous 25-50%                            |
|   | b) Homogeneous, black, tar material.   | None Detected                   | Tar and other non-fibrous > 75%   |
|   | c) Homogeneous, grey, layered paper.   | None Detected                   | Cellulose > 75%<br>Man-Made Vitreous Fibres 5-10%<br>Non-Fibrous Material 5-10% |
|   | d) Homogeneous, black, tar material between layered paper and cellulose.       | None Detected                   | Tar and other non-fibrous > 75%   |
|   | e) Homogeneous, black, tar material between cellulose.                         | None Detected                   | Tar and other non-fibrous > 75%   |
|   | f) Homogeneous, black, layered, tar material.                                  | None Detected                   | Tar and other non-fibrous > 75%   |
|   | g) Homogeneous, black, layered, tar-impregnated, compressed, fibrous material. | None Detected                   | Cellulose 50-75%<br>Tar and other non-fibrous 25-50%                            |
|   | h) Homogeneous, black, shiny, textured, tar material.                          | None Detected                   | Tar and other non-fibrous > 75%   |
| Comments:                               | Foam and cellulose are present on the surface of this sample.                  |                                 |   |

Reviewed by:

Reporting Analyst: