

## **Asbestos Building Materials Assessment**

Multi-Residential Building  
55 Reynolds Drive  
Brockville ON



Prepared for:  
United Counties of Leeds & Grenville  
100-25 Central Avenue West  
Brockville ON K6V 4N6

Prepared by:  
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Project No.: 122150275

February 15, 2017

## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>ii</b>
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>2.0 SCOPE.....</b>	<b>1</b>
2.1 LIMITATIONS .....	2
2.1.1 Project-Specific Limitations .....	2
2.1.2 Information from Previous Reports .....	3
<b>3.0 REGULATORY FRAMEWORK .....</b>	<b>3</b>
<b>4.0 ASSESSMENT METHODOLOGY .....</b>	<b>3</b>
4.1 FACILITY DESCRIPTION .....	4
4.2 DOCUMENT REVIEW.....	4
<b>5.0 FINDINGS.....</b>	<b>5</b>
5.1 FRIABLE ASBESTOS-CONTAINING MATERIALS.....	5
5.2 NON-FRIABLE ASBESTOS-CONTAINING MATERIALS.....	5
5.3 PRESUMED ASBESTOS-CONTAINING MATERIALS .....	6
5.4 NON-ASBESTOS-CONTAINING MATERIALS .....	6
5.5 POTENTIAL FOR VERMICULITE INSULATION .....	6
<b>6.0 RECOMMENDATIONS.....</b>	<b>7</b>
<b>7.0 CLOSURE.....</b>	<b>7</b>

### LIST OF APPENDICES

<b>APPENDIX A</b>	<b>SUMMARY OF RESULTS FOR ANALYSIS OF BULK SAMPLES FOR ASBESTOS CONTENT</b>
<b>APPENDIX B</b>	<b>LABORATORY ANALYTICAL REPORTS – ASBESTOS: POLARIZED LIGHT MICROSCOPY</b>
<b>APPENDIX C</b>	<b>SUMMARY OF OCCURRENCES OF ASBESTOS-CONTAINING MATERIALS</b>
<b>APPENDIX D</b>	<b>SELECTED SITE PHOTOGRAPHS</b>

### Executive Summary

Stantec Consulting Ltd. (Stantec) was commissioned by the United Counties of Leeds & Grenville (Leeds Grenville) to conduct an Asbestos Building Materials Assessment of the multi-residential building (subject building), located at 55 Reynolds Drive in Brockville, Ontario.

The purpose of the assessment was to assist Leeds Grenville to meet the requirements of *Ontario Regulation 278/05 Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations*, as amended (O. Reg. 278/05), made under the *Occupational Health and Safety Act* (OHSA). The assessment includes the identification of building materials suspected to be asbestos-containing materials (ACMs) that may require special attention during the operation of the building.

The assessment is intended for the long-term management of asbestos-containing building materials to be included as part of an overall Asbestos Management Program (AMP) and not for construction or renovation purposes. The conclusions presented herein represent the findings for a limited number of residential units. Intrusive inspections and additional testing of suspect ACMs and presumed asbestos-containing materials (PACMs) may be required to complement the information provided in this report if any work activities are planned which may disturb ACMs and/or PACMs.

The work was carried out in accordance with the requirements of the OHSA. The site work was conducted by Victoria Pereira on January 10, 2017.

Based on the visual assessment and laboratory analysis, ACMs were identified to be present in the form of:

- 2'x2' acoustical ceiling tile – large and small pinholes (friable);
- 12"x12" vinyl floor tiles – beige with brown streaks (non-friable); and,
- Drywall joint-fill compound – beige (non-friable).

These materials were observed to be in good condition.

The following building materials were observed to be present but not sampled, and are listed as PACMs:

- Mastic associated with 12"x12" vinyl floor tile – beige with brown streaks;
- Ceramic tile grout and mortar/adhesive;
- Fire rated doors; and,
- Brick mortar.

## **ASBESTOS BUILDING MATERIALS ASSESSMENT**

These materials were observed to be in good condition. These materials were not sampled to preserve their integrity. As these materials are known to have been manufactured with asbestos, they should be presumed to be asbestos-containing unless proven otherwise by laboratory analysis.

Similar materials are likely to present in units not assessed and these should be treated as ACMs or PACMs.

The statements made in this Executive Summary text are subject to the same limitations included in this report, and are to be read in conjunction with the remainder of this report.

Recommendations pertaining to the handling, removal, disposal and management of identified asbestos-containing materials are provided within this report.

# ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

## 1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) was commissioned by the United Counties of Leeds & Grenville (Leeds Grenville) to conduct an Asbestos Building Materials Assessment of the multi-residential building (subject building), located at 55 Reynolds Drive in Brockville, Ontario.

The purpose of the assessment was to assist Leeds Grenville to meet the requirements of *Ontario Regulation 278/05 Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations*, as amended (O. Reg. 278/05), made under the *Occupational Health and Safety Act (OHS)*. The assessment includes the identification of building materials suspected to be asbestos-containing materials (ACMs) that may require special attention during the operation of the building.

The assessment is intended for the long-term management of asbestos-containing building materials to be included as part of an overall Asbestos Management Program (AMP) and not for construction or renovation purposes. The conclusions presented herein represent the findings for a limited number of residential units. Intrusive inspections and additional testing of suspect ACMs and presumed asbestos-containing materials (PACMs) may be required to complement the information provided in this report if any work activities are planned which may disturb ACMs and/or PACMs.

The work was carried out in accordance with the requirements of the OHS. The site work was conducted by Victoria Pereira on January 10, 2017.

## 2.0 SCOPE

The scope of work for this assessment involved the following:

- A review of existing information, including site drawings, previous assessment and/or abatement documentation and discussions with site personnel, where available;
- A visual assessment of readily accessible areas for the presence of asbestos-containing building materials; The assessment generally included common areas, mechanical rooms, and a representative number of residential units;
- The collection of representative bulk samples from building materials suspected of containing asbestos fibres;
- Submission of samples collected for laboratory analysis; and,
- Evaluation and interpretation of field findings and laboratory analytical results to develop conclusions and recommendations pertaining to the management of ACMs and PACMs identified within the building.

# ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

## 2.1 LIMITATIONS

This report reflects the observations made within accessed areas and the results of analyses performed on specific materials sampled during the assessment. Analytical results reflect the sampled materials at the specific sample locations.

Concealed spaces were assessed via existing access panels, where present. Interior and exterior finishes, solid ceilings, walls, flooring and structural elements were not removed to access concealed areas. An inaccessible area, where ACMs may be present includes, but is not limited to: ceiling spaces, wall cavities, crawlspaces, and buried materials.

Due to limitations on the agreed to scope of work for this project as well as physical limitations in accessing concealed areas and limitations associated with working in occupied/operational spaces, there are specific limitations to the information that can be provided for each suspect ACM or PACM considered in this assessment. The presence and asbestos content of some building materials could not be confirmed.

Building materials that may contain asbestos but were not accessible for sampling include, but are not limited to the following:

- Roofing materials;
- Sub-grade materials (e.g., asbestos cement drainage pipe);
- Flooring material concealed beneath carpeting, ceramic tile, brickwork, hardwood flooring, and/or concealed beneath existing sub-floors;
- Insulation material present inside walls (e.g., suspected asbestos-containing vermiculite insulation inside concrete block and/or brick walls);
- Drywall and/or wall plaster and associated finish materials concealed behind new and/or additional walls;
- Woven tape inside duct connection joints;
- Mechanical (e.g., piping and ducting) insulation within wall cavities, crawlspaces tunnels or other concealed spaces;
- Insulation materials inside fire doors;
- Window and door glazing compounds;
- Heating, ventilation and air conditioning (HVAC) units mechanical inner linings and/or inner ducting insulation;
- Heat protection materials inside mechanical installations and light fixtures; and,
- Ceramic tile grout and mortar/adhesive concealed behind ceramic tiles.

### 2.1.1 Project-Specific Limitations

The areas included in this assessment were limited to the following:

- Units 104, 109, 211 and 218;
- Common areas (attic, stairwells, storage room, garbage room, common room, entrance lobby, corridors, and laundry room);



## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

- Mechanical Rooms (utility room); and,
- Exterior.

The following areas were not accessed, for the reasons indicated:

- Roof (no access/sloped).

The roof, windows and associated caulking, vinyl sheet flooring in the corridors, and vinyl floor tiles in units 104 and 109 were not sampled as Leeds Greenville reported them to have been replaced in the past six (6) years and are therefore not suspect to be asbestos-containing.

### 2.1.2 Information from Previous Reports

Stantec was not provided with previous reports for review.

## 3.0 REGULATORY FRAMEWORK

Asbestos is included in the *Ontario Regulation, 490/09 Designated Substances*, as amended (O. Reg. 490/09) made under Ontario's OHS Act, which primarily regulates worker exposure to asbestos during manufacturing of asbestos-containing products, but also includes requirements related to respiratory equipment, measurement of airborne fibres, and medical surveillance of exposed workers.

Ontario Regulation 278/05 clearly defines ACM as a material that contains 0.5 per cent or more asbestos by dry weight. Additionally, the regulation requires that the "record" (i.e., the Asbestos Building Materials Assessment) be updated at least once in each 12 month period or whenever the owner of the facility becomes aware of new information relating to the suspect and confirmed ACMs.

The general waste management regulation for the province of Ontario is *R.R.O. 1990, Regulation 347 General - Waste Management*, as amended (R.R.O. 1990, 347), under the *Environmental Protection Act* (EPA) of Ontario, sets out the requirements for the proper disposal of asbestos waste in Ontario. The waste must be placed in a double sealed container, properly labeled, free of cuts, tears or punctures and disposed of at a licensed waste station which has been properly notified of the presence of asbestos waste.

## 4.0 ASSESSMENT METHODOLOGY

Asbestos-containing materials are grouped into two classifications, friable and non-friable materials. Friable ACMs are those that can easily be crumbled or broken apart by mere hand pressure. When these materials break apart asbestos fibres are then released into the

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

atmosphere. Non-friable ACMs or “manufactured products” are materials that by the nature of their manufacturing/construction do not readily allow the release of asbestos fibres. These materials should not be cut or shaped with power tools, since this procedure may allow for the release of the asbestos fibres. Some non-friable materials such as plaster, drywall and ceiling tiles are considered to be non-friable in an undisturbed state, but can release fibers when damaged or disturbed.

It is Stantec's understanding that the subject building was constructed before 1990. This construction time period is consistent with those dates when asbestos-containing building materials were commonly used.

A visual assessment of accessible areas was undertaken in order to check for the presence of materials suspected of containing asbestos. Locations to collect discrete bulk asbestos samples of suspect building materials were identified. Samples of representative materials were then collected at these locations. An assessment of the condition and accessibility was completed for each occurrence of an ACM. The Public Works and Government Services Canada (PWGSC) document entitled *Deputy Ministers Directive 057 – Asbestos Management* (Last Revised June 16, 1999) was used as the basis for the criteria that was applied in evaluating the presence of ACMs and PACMs within the subject building, where applicable.

Samples of suspect ACMs from various building materials were collected and submitted to Paracel Laboratories Ltd. (Paracel) located in Ottawa, Ontario for analysis using Polarized Light Microscopy (PLM) with dispersion staining. The analysis was conducted following the U.S. EPA/600/R-93/116 Method. Paracel is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples. Asbestos-containing materials are defined as a material that contains 0.5 per cent or more asbestos by dry weight.

A positive stop option was used. Multiple samples of visually similar material were collected and submitted for laboratory analysis. Once one sample within the set is identified to contain asbestos, further analysis of the subsequent samples is deemed to be unnecessary and not conducted.

### 4.1 FACILITY DESCRIPTION

The multi-residential building located at 55 Reynolds Drive consists of a two (2) level building with 42 units. The reported construction date of the building is 1968. The typical structural components and finishes associated with this building consist of brick exterior walls, various types of flooring including cement, vinyl floor tile, vinyl sheet flooring, ceramic tile and carpet flooring and interior concrete block and drywall walls with suspended ceiling tile ceilings.

### 4.2 DOCUMENT REVIEW

Stantec was not provided with previous reports for review.

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

### 5.0 FINDINGS

A summary list of the bulk samples collected by Stantec, including a description of the material, sampling location, type of analysis and laboratory test results is provided in **Appendix A**. A copy of the PLM Laboratory Certificates of Analysis for bulk samples collected is provided in **Appendix B**.

A summary of occurrences of ACMs and/or PACMs is provided in **Appendix C**. Each ACM occurrence includes the following information:

- Room component that contains ACM;
- Location of the ACM within the room space;
- ACM description;
- Estimated quantity;
- Original sample number or representative sample number;
- Friability;
- Condition; and,
- Comments regarding recommended actions.

Selected site photographs are provided in **Appendix D**.

#### 5.1 FRIABLE ASBESTOS-CONTAINING MATERIALS

Friable building materials were observed to be present and identified by laboratory analysis to be asbestos-containing in the form of:

- 2'x2' acoustical ceiling tile – large and small pinholes.

This material was observed to be in good condition.

#### 5.2 NON-FRIABLE ASBESTOS-CONTAINING MATERIALS

Non-friable building materials were observed to be present and identified by laboratory analysis to be asbestos-containing in the form of:

- 12"x12" vinyl floor tiles – beige with brown streaks; and,
- Drywall joint-fill compound – beige.

These materials were observed to be in good condition.

It should be noted that drywall joint-fill compound is considered non-friable in its undisturbed state but can release fibers when damaged.

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

Similar asbestos-containing materials are likely to present in units not assessed and should be treated as asbestos-containing materials. Materials not sampled should be presumed to be asbestos-containing.

### 5.3 PRESUMED ASBESTOS-CONTAINING MATERIALS

The following building materials were observed to be present but not sampled, and are listed as PACMs:

- Mastic associated with 12"x12" vinyl floor tile – beige with brown streaks;
- Ceramic tile grout and mortar/adhesive;
- Fire rated doors; and,
- Brick mortar.

These materials were observed to be in good condition. These materials were not sampled to preserve their integrity. As these materials are known to have been manufactured with asbestos, they should be presumed to be asbestos-containing unless proven otherwise by laboratory analysis.

### 5.4 NON-ASBESTOS-CONTAINING MATERIALS

It should be noted that the roof, windows and associated caulking, vinyl sheet flooring in the corridors, and vinyl floor tiles in units 104 and 109 were reported by Leeds Grenville to have been removed and replaced within with last six (6) years.

A summary list of the bulk samples collected during this assessment and confirmed to be non-ACMs by laboratory analysis is provided in **Appendix A**.

### 5.5 POTENTIAL FOR VERMICULITE INSULATION

Various walls of the subject building were comprised of masonry (concrete) blocks. Asbestos-contaminated vermiculite was historically used as insulating material in masonry block or brick walls. To assess for this potential ACM, destructive sampling is required, which was not conducted as part of this assessment. Although various holes, breaches and cracks were observed and no vermiculite was present, the presence of this potential ACM cannot be ruled out without destructive testing.

February 15, 2017

### 6.0 RECOMMENDATIONS

Stantec recommends the following with regards to meeting the requirements of O. Reg. 278/05:

- Asbestos-containing materials that may be impacted during renovation and/or demolition activities should be removed prior to the renovation and/or demolition activities;
- Prior to renovation and/or demolition activities that would disturb them, undertake testing of PACMs that may be impacted to determine their asbestos content. Confirmed asbestos materials should be handled accordingly;
- Should a material suspected to contain asbestos fibres become uncovered during renovation and/or demolition activities, all work in the areas that may disturb the material should be stopped. Samples of the suspect material should be submitted for laboratory analysis to determine if asbestos fibres are present. Confirmed asbestos materials should be handled accordingly;
- If masonry block walls are to be impacted by renovation and/or demolition work, and these walls have not been checked for the presence of vermiculite insulation, intrusive assessments for vermiculite should be undertaken prior to planned renovation and/or demolition work. If vermiculite insulation is suspected to be present, this material should be treated as an ACM until testing can show otherwise; and,
- This report should be added to the Asbestos Management Program and referred to as the current asbestos record.

### 7.0 CLOSURE

This report has been prepared for the sole benefit of United Counties of Leeds & Grenville. The report may not be used or relied upon by any other person or entity without the express written consent of Stantec Consulting Ltd. and United Counties of Leeds & Grenville.

Any uses that a third party makes of this report, or any reliance on decisions based on it, are the responsibility of such third parties. Stantec Consulting Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. Conclusions presented in this report should not be construed as legal advice.

The conclusions presented in this report represent the best technical judgment of Stantec Consulting Ltd. based on the data obtained from the work. The conclusions are based on the site conditions encountered by Stantec Consulting Ltd. at the time the work was performed at the specific assessment and/or sampling locations, and can only be extrapolated to an

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

undefined limited area around these locations. The extent of the limited area depends on building construction and conditions, weather, building usage and other factors. Due to the nature of the investigation and the limited data available, Stantec Consulting Ltd. cannot warrant against undiscovered environmental liabilities.

If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

We trust that the above is satisfactory for your purposes at this time. Should you have any questions or concerns, or require additional information, please do not hesitate to contact the undersigned at your convenience.

This report was prepared by Victoria Pereira and reviewed by Linda Fleet and Martin Ling.

Regards,

### STANTEC CONSULTING LTD.



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## **ASBESTOS BUILDING MATERIALS ASSESSMENT**

Appendix A  
Summary of Results for Analysis of  
Bulk Samples for Asbestos Content  
February 15, 2017

# Appendix A

## **Summary of Results for Analysis of Bulk Samples for Asbestos Content**

## Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content	Analysis
55-BS-01A	2nd Floor, Custodian Room - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-01B	2nd Floor, Custodian Room - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-01C	2nd Floor, Custodian Room - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-01D	1st Floor, Lobby Corridor - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-01E	1st Floor, Corridor - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-01F	1st Floor, Unit 104 Entrance - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-01G	1st Floor, Unit 109 Entrance - wall	Drywall Joint-fill Compound - white	None Detected	PLM
55-BS-02A	1st Floor, Northwest Stairs - floor	Ceramic Tile Grout and Mortar / Adhesive - brick pattern	None Detected	PLM
55-BS-02B	1st Floor, Northwest Stairs - floor	Ceramic Tile Grout and Mortar / Adhesive - brick pattern	None Detected	PLM
55-BS-02C	1st Floor, Northwest Stairs - floor	Ceramic Tile Grout and Mortar / Adhesive - brick pattern	None Detected	PLM
55-BS-03A	1st Floor, Northwest Exit - ceiling	2'x4' Acoustic Ceiling Tile - big and small pinholes	None Detected	PLM
55-BS-03B	1st Floor, Northwest Exit - ceiling	2'x4' Acoustic Ceiling Tile - big and small pinholes	None Detected	PLM
55-BS-03C	1st Floor, Northwest Exit - ceiling	2'x4' Acoustic Ceiling Tile - big and small pinholes	None Detected	PLM
55-BS-04A	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - large and small pinholes	3% Amosite	PLM
55-BS-04B	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - large and small pinholes	Positive Stop (Not Analyzed)	PLM
55-BS-04C	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - large and small pinholes	Positive Stop (Not Analyzed)	PLM

## Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content	Analysis
55-BS-05A	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - texture with pinholes	None Detected	PLM
55-BS-05B	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - texture with pinholes	None Detected	PLM
55-BS-05C	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - texture with pinholes	None Detected	PLM
55-BS-06A	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - fissures and pinholes	None Detected	PLM
55-BS-06B	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - fissures and pinholes	None Detected	PLM
55-BS-06C	1st Floor, Corridor - ceiling	2'x2' Acoustic Ceiling Tile - fissures and pinholes	None Detected	PLM
55-BS-07A	1st Floor, Electrical Room - conduit	Fire Stop - grey	None Detected	PLM
55-BS-07B	1st Floor, Electrical Room - conduit	Fire Stop - grey	None Detected	PLM
55-BS-07C	1st Floor, Electrical Room - conduit	Fire Stop - grey	None Detected	PLM
55-BS-08A	1st Floor, Lobby - wall	Drywall Joint-fill Compound - beige	3% Chrysotile	PLM
55-BS-08B	1st Floor, Lobby - bulkhead	Drywall Joint-fill Compound - beige	Positive Stop (Not Analyzed)	PLM
55-BS-08C	1st Floor, Lobby - wall	Drywall Joint-fill Compound - beige	Positive Stop (Not Analyzed)	PLM
55-BS-08D	2nd Floor, Unit 211 - wall	Drywall Joint-fill Compound - beige	Positive Stop (Not Analyzed)	PLM
55-BS-08E	2nd Floor, Unit 209 - wall	Drywall Joint-fill Compound - beige	Positive Stop (Not Analyzed)	PLM
55-BS-09A	1st Floor, Far East Closet Under Stairs - floor	12"x12" Vinyl Floor Tile - beige with brown streaks	3.91% Chrysotile	PLM
55-BS-09B	1st Floor, Far East Closet Under Stairs - floor	12"x12" Vinyl Floor Tile - beige with brown streaks	Positive Stop (Not Analyzed)	PLM

## Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content	Analysis
55-BS-09C	1st Floor, Far East Closet Under Stairs - floor	12"x12" Vinyl Floor Tile - beige with brown streaks	Positive Stop (Not Analyzed)	PLM
55-BS-10A	Exterior, Common Area - door	Exterior caulking - brown	None Detected	PLM
55-BS-10B	Exterior, Common Area - door	Exterior caulking - brown	None Detected	PLM
55-BS-10C	Exterior, Common Area - door	Exterior caulking - brown	None Detected	PLM
55-BS-11A	Exterior, West Wing Corridor - window	Exterior caulking - white	None Detected	PLM
55-BS-11B	Exterior, East Wing Corridor - window	Exterior caulking - white	None Detected	PLM
55-BS-11C	Exterior, East Wing Corridor - window	Exterior caulking - white	None Detected	PLM
55-BS-12A	Exterior, Main Entrance - window	Exterior caulking - clear	None Detected	PLM
55-BS-12B	Exterior, Main Entrance - window	Exterior caulking - clear	None Detected	PLM
55-BS-12C	Exterior, Main Entrance - window	Exterior caulking - clear	None Detected	PLM
55-BS-13A	Exterior, West Stairwell - door	Exterior caulking - grey	None Detected	PLM
55-BS-13B	Exterior, West Stairwell - door	Exterior caulking - grey	None Detected	PLM
55-BS-13C	Exterior, West Stairwell - door	Exterior caulking - grey	None Detected	PLM
55-BS-14A	Exterior, East Stairwell - door	Exterior caulking - white	<0.5% Chrysotile	PLM
55-BS-14B	Exterior, East Stairwell - door	Exterior caulking - white	<0.5% Chrysotile	PLM
55-BS-14C	Exterior, East Stairwell - door	Exterior caulking - white	<0.5% Chrysotile	PLM

## **ASBESTOS BUILDING MATERIALS ASSESSMENT**

Appendix B  
Laboratory Analytical Reports – Asbestos: Polarized Light Microscopy  
February 15, 2017

# Appendix B **Laboratory Analytical Reports – Asbestos: Polarized Light Microscopy**

## Certificate of Analysis

**Stantec Consulting Ltd. (Ottawa)**

300-675 Cochrane Dr West Tower  
Markham, ON L3R 0B8  
Attn: Linda Fleet

Client PO: 122150275

Project: 122150275- 55 Reynolds

Custody:

Report Date: 20-Jan-2017

Order Date: 16-Jan-2017

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1703079-01	55-BS-01A
1703079-02	55-BS-01B
1703079-03	55-BS-01C
1703079-04	55-BS-01D
1703079-05	55-BS-01E
1703079-06	55-BS-01F
1703079-07	55-BS-01G
1703079-08	55-BS-02A
1703079-09	55-BS-02B
1703079-10	55-BS-02C
1703079-11	55-BS-03A
1703079-12	55-BS-03B
1703079-13	55-BS-03C
1703079-14	55-BS-04A
1703079-15	55-BS-04B
1703079-16	55-BS-04C
1703079-17	55-BS-05A
1703079-18	55-BS-05B
1703079-19	55-BS-05C
1703079-20	55-BS-06A
1703079-21	55-BS-06B
1703079-22	55-BS-06C
1703079-23	55-BS-07A
1703079-24	55-BS-07B
1703079-25	55-BS-07C
1703079-26	55-BS-08A

Approved By:



Emma Diaz

Senior Analyst

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis

Report Date: 20-Jan-2017

Client: **Stantec Consulting Ltd. (Ottawa)**

Order Date: 16-Jan-2017

Client PO: **122150275**

Project Description: **122150275- 55 Reynolds**

1703079-27	55-BS-08B
1703079-28	55-BS-08C
1703079-29	55-BS-08D
1703079-30	55-BS-08E
1703079-31	55-BS-09A (Tile)
1703079-32	55-BS-09B (Tile)
1703079-33	55-BS-09C (Tile)
1703079-34	55-BS-10A
1703079-35	55-BS-10B
1703079-36	55-BS-10C
1703079-37	55-BS-11A
1703079-38	55-BS-11B
1703079-39	55-BS-11C
1703079-40	55-BS-12A
1703079-41	55-BS-12B
1703079-42	55-BS-12C
1703079-43	55-BS-13A
1703079-44	55-BS-13B
1703079-45	55-BS-13C
1703079-46	55-BS-14A
1703079-47	55-BS-14B
1703079-48	55-BS-14C

Certificate of Analysis  
 Client: **Stantec Consulting Ltd. (Ottawa)**  
 Client PO: **122150275**

Report Date: 20-Jan-2017  
 Order Date: 16-Jan-2017  
 Project Description: **122150275- 55 Reynolds**

**Asbestos, PLM Visual Estimation \*\*MDL - 0.5%\*\***

<i>Parcel I.D.</i>	<i>Sample Date</i>	<i>Layers Analyzed</i>	<i>Colour</i>	<i>Description</i>	<i>Asbestos Detected:</i>	<i>Material Identification</i>	<i>% Content</i>
1703079-01	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-02	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-03	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-04	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-05	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-06	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-07	13-Jan-17	sample homogenized	White	Drywall Joint Compound	No	Non-Fibers	100
1703079-08	13-Jan-17	sample homogenized	Grey/Black	Grout/Adhesive	No	Non-Fibers	100
1703079-09	13-Jan-17	sample homogenized	Grey/Black	Grout/Adhesive	No	Non-Fibers	100
1703079-10	13-Jan-17	sample homogenized	Grey/Black	Grout/Adhesive	No	Non-Fibers	100
1703079-11	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose MMVF Non-Fibers	30 30 40
1703079-12	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose MMVF Non-Fibers	30 30 40
1703079-13	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose MMVF Non-Fibers	30 30 40

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**Asbestos, PLM Visual Estimation    \*\*MDL - 0.5%\*\***

<i>Parcel I.D.</i>	<i>Sample Date</i>	<i>Layers Analyzed</i>	<i>Colour</i>	<i>Description</i>	<i>Asbestos Detected:</i>	<i>Material Identification</i>	<i>% Content</i>
1703079-14	13-Jan-17	sample homogenized	Grey	Ceiling Tile	Yes	Amosite	3
						MMVF	70
						Non-Fibers	27
1703079-15	13-Jan-17					not analyzed	
1703079-16	13-Jan-17					not analyzed	
1703079-17	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose	40
						MMVF	30
						Non-Fibers	30
1703079-18	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose	40
						MMVF	30
						Non-Fibers	30
1703079-19	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose	40
						MMVF	30
						Non-Fibers	30
1703079-20	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose	10
						MMVF	40
						Non-Fibers	50
1703079-21	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose	10
						MMVF	40
						Non-Fibers	50
1703079-22	13-Jan-17	sample homogenized	Brown	Ceiling Tile	No	Cellulose	10
						MMVF	40
						Non-Fibers	50
1703079-23	13-Jan-17	sample homogenized	Grey	Firestop	No	Cellulose	3
						Non-Fibers	97

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**Asbestos, PLM Visual Estimation    \*\*MDL - 0.5%\*\***

<i>Parcel I.D.</i>	<i>Sample Date</i>	<i>Layers Analyzed</i>	<i>Colour</i>	<i>Description</i>	<i>Asbestos Detected:</i>	<i>Material Identification</i>	<i>% Content</i>
1703079-24	13-Jan-17	sample homogenized	Grey	Firestop	No	Cellulose	3
						Non-Fibers	97
1703079-25	13-Jan-17	sample homogenized	Grey	Firestop	No	Cellulose	3
						Non-Fibers	97
1703079-26	13-Jan-17	sample homogenized	Beige	Drywall Joint Compound	Yes	Chrysotile	3
						Non-Fibers	97
1703079-27	13-Jan-17					not analyzed	
1703079-28	13-Jan-17					not analyzed	
1703079-29	13-Jan-17					not analyzed	
1703079-30	13-Jan-17					not analyzed	
1703079-31	13-Jan-17	sample homogenized	Beige	Floor Tile	Yes	Chrysotile	3.91
						Non-Fibers	96.09
1703079-32	13-Jan-17					not analyzed	
1703079-33	13-Jan-17					not analyzed	
1703079-34	13-Jan-17	sample homogenized	Brown	Caulking	No	Non-Fibers	100
1703079-35	13-Jan-17	sample homogenized	Brown	Caulking	No	Non-Fibers	100
1703079-36	13-Jan-17	sample homogenized	Brown	Caulking	No	Non-Fibers	100
1703079-37	13-Jan-17	sample homogenized	White	Caulking	No	Non-Fibers	100
1703079-38	13-Jan-17	sample homogenized	White	Caulking	No	Non-Fibers	100

Certificate of Analysis  
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 Client PO: **122150275**

Report Date: 20-Jan-2017  
 Order Date: 16-Jan-2017  
 Project Description: **122150275- 55 Reynolds**

**Asbestos, PLM Visual Estimation    \*\*MDL - 0.5%\*\***

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1703079-39	13-Jan-17	sample homogenized	White	Caulking	No	Non-Fibers	100
1703079-40	13-Jan-17	sample homogenized	Colourless	Caulking	No	Non-Fibers	100
1703079-41	13-Jan-17	sample homogenized	Colourless	Caulking	No	Non-Fibers	100
1703079-42	13-Jan-17	sample homogenized	Colourless	Caulking	No	Non-Fibers	100
1703079-43	13-Jan-17	sample homogenized	Grey	Caulking	No	Non-Fibers	100
1703079-44	13-Jan-17	sample homogenized	Grey	Caulking	No	Non-Fibers	100
1703079-45	13-Jan-17	sample homogenized	Grey	Caulking	No	Non-Fibers	100
1703079-46	13-Jan-17	sample homogenized	White	Caulking	<b>Yes</b>	[ASTrc] <b>Chrysotile</b> <MDL MMVF 1.32 Non-Fibers 98.68	
1703079-47	13-Jan-17	sample homogenized	White	Caulking	<b>Yes</b>	[ASTrc] <b>Chrysotile</b> <MDL MMVF 1.36 Non-Fibers 98.64	
1703079-48	13-Jan-17	sample homogenized	White	Caulking	<b>Yes</b>	[ASTrc] <b>Chrysotile</b> <MDL MMVF 1.42 Non-Fibers 98.58	

\* MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

\*\* Analytes in bold indicate asbestos mineral content.

**Analysis Summary Table**

Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code *	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	2 - Ottawa West Lab	200812-0	18-Jan-17

\* Reference to the NVLAP term does not permit the user of this report to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Certificate of Analysis

Report Date: 20-Jan-2017

Client: Stantec Consulting Ltd. (Ottawa)

Order Date: 16-Jan-2017

Client PO: 122150275

Project Description: 122150275- 55 Reynolds

## Qualifier Notes

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Sample Qualifiers :

ASLYR: Layers were noted for this sample, however, the entire sample was homogenized per client request.

AS-PRE: Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis

ASTrc: Trace asbestos was observed below the noted detection limit but could not be accurately quantified.

## Work Order Revisions / Comments

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None

## **ASBESTOS BUILDING MATERIALS ASSESSMENT**

Appendix C  
Summary of Occurrences of Asbestos-Containing Materials  
February 15, 2017

# Appendix C

## **Summary of Occurrences of Asbestos-Containing Materials**

## Summary of Occurrences of Asbestos-Containing Materials

Level	Room	Specific Location	ACM Location	ACM Type	Estimated Quantity	Sample Number	Original Sample?	Asbestos Content	Friable? Visible?	Access.	ACM Condition	Comments/ Notes
1	Common Room	Ceiling	Ceiling	2'x2'Acoustic ceiling tile - large and small pinholes	10 sq.m	Ref: 55-BS-04A	No	3% Amosite	Yes Yes	C	good	ACM
1	Corridors	East	Ceiling	2'x2'Acoustic ceiling tile - large and small pinholes	100 sq.m	55-BS-04A	Yes	3% Amosite	Yes Yes	C	good	ACM
1	Main Entrance	Lobby	Walls, Bulkhead and Ceiling	Drywall joint-fill compound - beige	100 sq.m	55-BS-08A	Yes	3% Chrysotile	No Yes	A	good	DRYWALL JOINT-FILL COMPOUND IN UNITS ON THE 1ST FLOOR ARE REPORTED TO BE REMOVED AND REPLACED
1	Main Entrance	Floor	Floor	Ceramic tile grout and mortar / adhesive	10 sq.m	NS	No	PACM	No Yes	A	good (PACM)	PACM
1	Tenant Closet under Stairs	Far East	Under Floor Tile	Mastic Associated with 12"x12"Vinyl floor tile - beige with brown streaks	15 sq.m	NS	No	PACM	No No	D	unknown (PACM)	PACM
1	Tenant Closet under Stairs	Far East	Floor	12"x12"Vinyl floor tile - beige with brown streaks	15 sq.m	55-BS-09A	Yes	3.91% Chrysotile	No Yes	A	good	ACM
1/2	Corridors	Doors	Doors	Fire rated doors	NQ	NS	No	PACM	No Yes	A	good (PACM)	PACM
1/2	Stairwells	Doors	Doors	Fire rated doors	NQ	NS	No	PACM	No Yes	A	good (PACM)	PACM

### Accessibility Classification

- A - Areas of the building within reach (from floor level) of all building users
- B - Frequently entered maintenance areas within reach of maintenance staff, without the need for a ladder
- C - Areas of the building above 2.4 m where use of a ladder is required to reach the asbestos
- D - Areas of the building behind inaccessible solid ceiling systems, walls, or mechanical equipment, etc., where demolition of the ceiling, wall, or equipment, etc., is required to reach the asbestos

### Visibility

- Yes - Suspect material is visible without opening hatches or lifting ceiling tiles
- No - Suspect material can only be viewed if access hatches are opened or ceiling tiles lifted.

\* Based on a non-intrusive inspection of visible surfaces within the room space.

- Notes:
- ACM - asbestos-containing material
  - PACM - presumed asbestos-containing material
  - Access. - accessibility
  - nq - not quantified
  - na - not applicable
  - ns - not sampled
  - ref - reference sample
  - F - friable
  - NF - non friable
  - RCA - recommend corrective action
  - BS - bulk sample

## Summary of Occurrences of Asbestos-Containing Materials

Level	Room	Specific Location	ACM Location	ACM Type	Estimated Quantity	Sample Number	Original Sample?	Asbestos Content	Friable?	Visible?	Access.	ACM Condition	Comments/ Notes
2	Unit 209	Walls, Bulkhead and Ceiling	Walls, Bulkhead and Ceiling	Drywall Joint-Fill Compound - beige	50 sq.m	Ref: 55-BS-08A	No	3% Chrysotile	No	Yes	A	good	ACM
2	Unit 211	Walls, Bulkhead and Ceiling	Walls, Bulkhead and Ceiling	Drywall Joint-Fill Compound - beige	50 sq.m	Ref: 55-BS-08A	No	3% Chrysotile	No	Yes	A	good	ACM
Exterior	Exterior	Walls	Walls	Brick Mortar	NQ	NS	No	PACM	No	Yes	A	good (PACM)	PACM

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  - RCA - recommend corrective action
  - BS - bulk sample

\* Based on a non-intrusive inspection of visible surfaces within the room space.

## **ASBESTOS BUILDING MATERIALS ASSESSMENT**

Appendix D  
Selected Site Photographs  
February 15, 2017

# Appendix D **Selected Site Photographs**

## ASBESTOS BUILDING MATERIALS ASSESSMENT

Appendix D  
Selected Site Photographs  
February 15, 2017



Photo 1: Presumed asbestos-containing fire rated door.



Photo 2: Asbestos-containing 2'x2' acoustic ceiling tile – large and small pinholes.

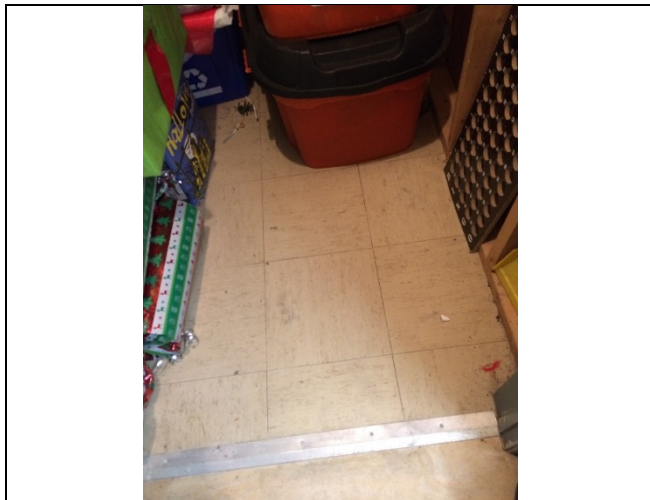


Photo 3: Asbestos-containing 12"x12" vinyl floor tiles – beige with brown streaks in the tenant storage under the stairwell.



Photo 4: Presumed asbestos-containing ceramic tile grout and mortar/adhesive at the main entrance.