

## **Asbestos Building Materials Assessment**

House  
98 Reynolds Drive  
Brockville ON



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

Prepared by:  
Stantec Consulting Ltd.  
400-1331 Clyde Avenue  
Ottawa ON K2C 3G4

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>4</b>
5.1 FRIABLE ASBESTOS-CONTAINING MATERIALS.....	5
5.2 NON-FRIABLE ASBESTOS-CONTAINING MATERIALS.....	5
5.3 PRESUMED ASBESTOS-CONTAINING MATERIALS .....	5
5.4 NON-ASBESTOS-CONTAINING MATERIALS .....	6
5.5 POTENTIAL FOR VERMICULITE INSULATION .....	6
<b>6.0 RECOMMENDATIONS.....</b>	<b>6</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 house (subject building), located at 98 Reynolds Drive in Brockville, Ontario.

The purpose of the assessment was to assist the 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. 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:

- Drywall joint-fill compound (non-friable).

This material was 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 black flecks;
- Mastic associated with 12"x12" vinyl floor tile – beige with brown smears;
- Ceramic tile grout and mortar/adhesive;
- Brick mortar;
- Exterior window caulking – white;
- Roof caulking; and,
- Roofing materials.

## **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 houses 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 house (subject building), located at 275 Water Street in Prescott, Ontario.

The purpose of the assessment was to assist the UCLG 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. 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 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 following areas were not accessed, for the reasons indicated:

- Vents (no access – hatch does not open without damage); and,
- Roof (no access/sloped).

## **ASBESTOS BUILDING MATERIALS ASSESSMENT**

February 15, 2017

### **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 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.

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

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 house located at 98 Reynolds Drive is a three (3) bedroom, one (1) level house with an attic. The reported construction date of the house is 1940. The typical structural components and finished associated with this building consist of aluminum exterior walls, various types of flooring including ceramic tile, vinyl floor tile, wood and vinyl sheet flooring and interior drywall walls with drywall ceilings.

### 4.2 DOCUMENT REVIEW

Stantec was not provided with previous reports for review.

## 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**.

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

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 suspected to be asbestos-containing were identified by laboratory analysis to be non-asbestos-containing.

### 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:

- Drywall joint-fill compound.

This material was 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.

Similar asbestos-containing materials are likely to present in houses 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 black flecks;
- Mastic associated with 12"x12" vinyl floor tile – beige with brown smears;
- Ceramic tile grout and mortar/adhesive;
- Brick mortar;
- Exterior window caulking – white;

## ASBESTOS BUILDING MATERIALS ASSESSMENT

February 15, 2017

- Roof caulking; and,
- Roofing materials.

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

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

Based on building construction and the assessment, vermiculite is not suspected to be present.

## 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; and,
- This report should be added to the Asbestos Management Program and referred to as the current asbestos record.

February 15, 2017

### 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 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.

**ASBESTOS BUILDING MATERIALS ASSESSMENT**

February 15, 2017

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

Regards,

**STANTEC CONSULTING LTD.**



Linda Fleet  
Project Manager  
Phone: (905) 415-6368  
Fax: (905) 474-9889  
linda.fleet@stantec.com



Martin Ling  
Senior Reviewer  
Phone: (905) 415-6386  
Fax: (905) 474-9889  
martin.ling@stantec.com



Nicole Flanagan, M.A.Sc., P.Eng.  
Associate  
Phone: (613) 738-6086  
Fax: (613) 722-2799  
nicole.flanagan@stantec.com

VP/LF/ML/aek

\\Cd1215-f01\work\_group\01221\active\122150275\Reports\98 Reynolds Drive Brockville\122150275\_rpt\_vp\_2017Feb14\_UCLG\_98ReynoldsDr\_Brockville.docx

## **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
98-BS-01A	Laundry Room	12"x12" Vinyl Floor Tile - beige with black flecks	None Detected	PLM
98-BS-01B	Laundry Room	12"x12" Vinyl Floor Tile - beige with black flecks	None Detected	PLM
98-BS-01C	Laundry Room	12"x12" Vinyl Floor Tile - beige with black flecks	None Detected	PLM
98-BS-02A	Laundry Room - storage	12"x12" Vinyl Floor Tile - beige with brown smears	None Detected	PLM
98-BS-02B	Laundry Room - storage	12"x12" Vinyl Floor Tile - beige with brown smears	None Detected	PLM
98-BS-02C	Laundry Room - storage	12"x12" Vinyl Floor Tile - beige with brown smears	None Detected	PLM
98-BS-03A	Corridor - wall	Drywall Joint-fill Compound	2% Chrysotile	PLM
98-BS-03B	Living Room - wall	Drywall Joint-fill Compound	Positive Stop (Not Analyzed)	PLM
98-BS-03C	Washroom - wall	Drywall Joint-fill Compound	Positive Stop (Not Analyzed)	PLM
98-BS-03D	Bedroom 1 - wall	Drywall Joint-fill Compound	Positive Stop (Not Analyzed)	PLM
98-BS-03E	Bedroom 2 - wall	Drywall Joint-fill Compound	Positive Stop (Not Analyzed)	PLM
98-BS-03F	Laundry Room - wall	Drywall Joint-fill Compound	Positive Stop (Not Analyzed)	PLM
98-BS-03G	Bedroom 2 - wall	Drywall Joint-fill Compound	Positive Stop (Not Analyzed)	PLM
98-BS-04A	Washroom	Paper Backing Associated with Vinyl Sheet Flooring - beige mosaic pattern	None Detected	PLM
98-BS-04B	Washroom	Paper Backing Associated with Vinyl Sheet Flooring - beige mosaic pattern	None Detected	PLM

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

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content	Analysis
98-BS-04C	Washroom	Paper Backing Associated with Vinyl Sheet Flooring - beige mosaic pattern	None Detected	PLM
98-BS-05A	Attic	Shingle - brown	None Detected	PLM
98-BS-05B	Attic	Shingle - brown	None Detected	PLM
98-BS-05C	Attic	Shingle - brown	None Detected	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- 98 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
1703086-01	98-BS-01A (Tile)
1703086-02	98-BS-01B (Tile)
1703086-03	98-BS-01C (Tile)
1703086-04	98-BS-02A (Tile)
1703086-05	98-BS-02B (Tile)
1703086-06	98-BS-02C (Tile)
1703086-07	98-BS-03A
1703086-08	98-BS-03B
1703086-09	98-BS-03C
1703086-10	98-BS-03D
1703086-11	98-BS-03E
1703086-12	98-BS-03F
1703086-13	98-BS-03G
1703086-14	98-BS-04A
1703086-15	98-BS-04B
1703086-16	98-BS-04C
1703086-17	98-BS-05A
1703086-18	98-BS-05B
1703086-19	98-BS-05C

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

Report Date: 20-Jan-2017  
 Order Date: 16-Jan-2017

Project Description: **122150275- 98 Reynolds**

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

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1703086-01	13-Jan-17	sample homogenized	Beige	Floor Tile	No	Client ID: 98-BS-01A (Tile) [AS-PRE] Non-Fibers	100
1703086-02	13-Jan-17	sample homogenized	Beige	Floor Tile	No	Client ID: 98-BS-01B (Tile) [AS-PRE] Non-Fibers	100
1703086-03	13-Jan-17	sample homogenized	Beige	Floor Tile	No	Client ID: 98-BS-01C (Tile) [AS-PRE] Non-Fibers	100
1703086-04	13-Jan-17	sample homogenized	Beige	Floor Tile	No	Client ID: 98-BS-02A (Tile) [AS-PRE] Non-Fibers	100
1703086-05	13-Jan-17	sample homogenized	Beige	Floor Tile	No	Client ID: 98-BS-02B (Tile) [AS-PRE] Non-Fibers	100
1703086-06	13-Jan-17	sample homogenized	Beige	Floor Tile	No	Client ID: 98-BS-02C (Tile) [AS-PRE] Non-Fibers	100
1703086-07	13-Jan-17	sample homogenized	Beige	Drywall Joint Compound	Yes	Client ID: 98-BS-03A Chrysotile Non-Fibers	2 98
1703086-08	13-Jan-17					Client ID: 98-BS-03B not analyzed	
1703086-09	13-Jan-17					Client ID: 98-BS-03C not analyzed	
1703086-10	13-Jan-17					Client ID: 98-BS-03D not analyzed	
1703086-11	13-Jan-17					Client ID: 98-BS-03E not analyzed	
1703086-12	13-Jan-17					Client ID: 98-BS-03F not analyzed	
1703086-13	13-Jan-17					Client ID: 98-BS-03G not analyzed	
1703086-14	13-Jan-17	sample homogenized	Grey	Sheet Vinyl Flooring	No	Client ID: 98-BS-04A [AS-PRE] Cellulose MMVF Non-Fibers	10 5 85
1703086-15	13-Jan-17	sample homogenized	Grey	Sheet Vinyl Flooring	No	Client ID: 98-BS-04B [AS-PRE] Cellulose MMVF Non-Fibers	10 5 85

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

Report Date: 20-Jan-2017  
 Order Date: 16-Jan-2017  
 Project Description: **122150275- 98 Reynolds**

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

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content	
1703086-16	13-Jan-17	sample homogenized	Grey	Sheet Vinyl Flooring	No	<b>Client ID: 98-BS-04C</b> [AS-PRE]		
						Cellulose	10	
						MMVF	5	
							Non-Fibers	85
1703086-17	13-Jan-17	sample homogenized	Brown	Shingle	No	<b>Client ID: 98-BS-05A</b> [AS-PRE]		
						MMVF	10	
						Non-Fibers	90	
1703086-18	13-Jan-17	sample homogenized	Brown	Shingle	No	<b>Client ID: 98-BS-05B</b> [AS-PRE]		
						MMVF	10	
						Non-Fibers	90	
1703086-19	13-Jan-17	sample homogenized	Black	Shingle	No	<b>Client ID: 98-BS-05C</b> [AS-PRE]		
						MMVF	10	
						Non-Fibers	90	

\* 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	20-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.

**Qualifier Notes**

Sample Qualifiers :

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

**Work Order Revisions / Comments**

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	Bedroom 1	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	75 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Bedroom 2	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	100 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Corridor	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	20 sq.m	98-BS-03A	Yes	2% Chrysotile	No	Yes	A	good	ACM
1	Foyer	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	15 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Foyer	Floor	Floor	Ceramic Tile Grout and Mortar / Adhesive	2 sq. m	ns	No	PACM	No	Yes	A	good (PACM)	PACM
1	Kitchen	Floor	Floor	Ceramic Tile Grout and Mortar / Adhesive	9 sq. m	ns	No	PACM	No	Yes	A	good (PACM)	PACM
1	Kitchen	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	50 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Laundry Room	Column	Column	Brick Mortar	9 sq.m	NS	No	PACM	No	Yes	A	good (PACM)	PACM
1	Laundry Room	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	50 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Living Room	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	50 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Storage Room	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	45 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
1	Washroom	Wall	Wall	Ceramic Tile Grout and Mortar / Adhesive	5 sq. m	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
1	Washroom	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	50 sq.m	Ref: 98-BS-03A	No	2% Chrysotile	No	Yes	A	good	ACM
Exterior	Back of House	Walls	Windows	Exterior Caulking - white	16 m (4 windows)	NS	No	PACM	No	Yes	A	good (PACM)	PACM
Exterior	Front of House	Walls	Windows	Exterior Caulking - white	12 m (2 windows)	NS	No	PACM	No	Yes	A	good (PACM)	PACM
Exterior	Side of House	Walls	Windows	Exterior Caulking - white	4 m (1 window)	NS	No	PACM	No	Yes	A	good (PACM)	PACM
Roof	Roof	Roofing	Roofing	Roofing materials	NQ	NS	No	PACM	No	Yes	B	unknown (PACM)	PACM
Roof	Roof	Roofing	Roofing	Roof Caulking	NQ	NS	No	PACM	No	Yes	B	unknown (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

# **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: Asbestos-containing drywall joint-fill compound was observed to be in good condition on the walls and ceiling in the storage room access to the attic.



Photo 2: Presumed asbestos-containing exterior caulking – white on the exterior window.

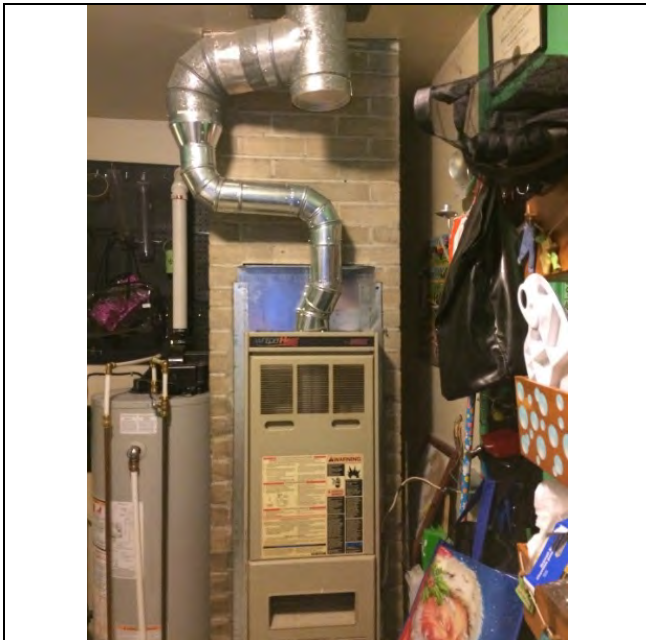


Photo 3: Presumed asbestos-containing brick mortar was observed on a chimney exhaust in the laundry room.

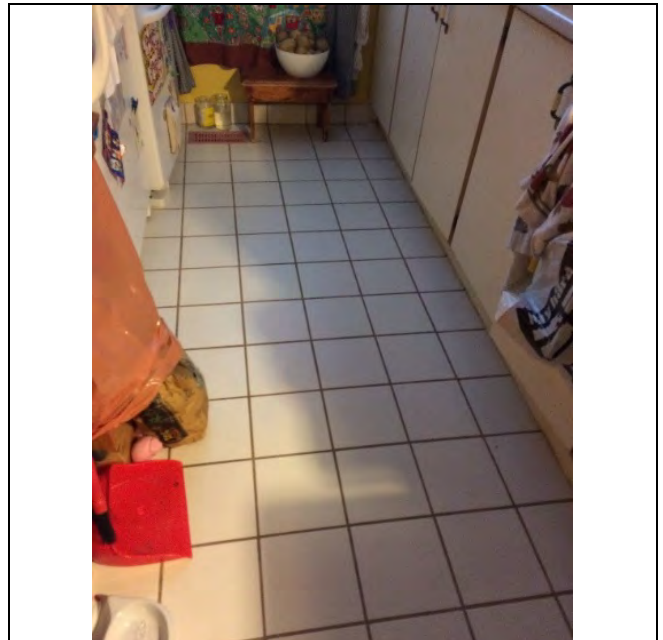


Photo 4: Presumed asbestos-containing ceramic tile grout and mortar / adhesive was observed in the kitchen.