Asbestos Building Materials Assessment

Multi-Unit Residential Building
523 Hyde Street
Prescott ON

Prepared for:
United Countries 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 17, 2017

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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-unit residential building (subject building), located at 523 Hyde Street in Prescott, 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 PACMs.

The work was carried out in accordance with the requirements of the OHSA. The site work was conducted by Will Madden-Macavelia on January 12, 2017.

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

- Stucco (friable);
- 9"x9" vinyl floor tiles – grey with brown streaks (non-friable);
- Drywall joint-fill compound (non-friable); and,
- Exterior door caulking – white (non-friable).

Drywall joint-fill compound was observed to be in poor condition (<1 sq. m chipped) in the front entrance lobby. The remaining 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 9"x9" vinyl floor tiles – grey with brown streaks;
- Brick mortar;
- Ceramic tile grout and mortar/adhesive;
- Fire rated doors – metal and wood;
- Exterior window caulking – white;

- 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.

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.

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-unit residential building (subject building), located at 523 Hyde Street in Prescott, 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 PACMs.

The work was carried out in accordance with the requirements of the OHSA. The site work was conducted by Will Madden-Macavelia on January 12, 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.

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 3 and 6;
- Common areas (common room, entrance lobby, stairwells, hallways, and laundry room);
- Mechanical Rooms (hot water tank room and electrical room);
- Exterior.

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 OHSA, 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.

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 523 Hyde Street consists of a one (1) level building with seven (7) 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 with metal soffit, various types of flooring including carpeting, vinyl floor tile, and ceramic tile flooring and interior concrete block and drywall walls with drywall, and stucco 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.**

A summary of occurrences of ACMs and 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:

- Stucco.

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:

- 9"x9" vinyl floor tiles – grey with brown streaks;
- Drywall joint-fill compound; and,
- Exterior door caulking – white.

Drywall joint-fill compound was observed to be in poor condition (<1 sq. m chipped) in the front entrance lobby. The remaining 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.

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 9"x9" vinyl floor tiles – grey with brown streaks;
- Brick mortar;
- Ceramic tile grout and mortar/adhesive;
- Fire rated doors – metal;
- Exterior window caulking – white;
- 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

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.

6.0 RECOMMENDATIONS

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

- Damaged asbestos-containing drywall joint-fill compound should be repaired following type 1 abatement procedures;
- Asbestos-containing materials that may be impacted during renovation or demolition activities should be removed prior to the renovation or demolition activities;
- Prior to renovation 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 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 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 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 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 Urvashi Vyas and reviewed by Linda Fleet and Rob Robinson.

Regards,

STANTEC CONSULTING LTD.

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

Rob Robinson, P.Eng.
Senior Reviewer
Phone: (905) 817-2070
Fax: (905) 858-4426
Rob.Robinson@stantec.com

Nicole Flanagan
Associate
Phone: (613)-738-6086
Fax: (613) 722-2799
Nicole.Flanagan@stantec.com

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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
523-BS-01A	First Floor - Unit 6 Closet Wall	Drywall Joint-Fill Compound	1% Chrysotile	PLM
523-BS-01B	First Floor - Front Entrance Lobby Wall	Drywall Joint-Fill Compound	Positive Stop (Not Analyzed)	PLM
523-BS-01C	First Floor - Front Entrance Lobby Wall	Drywall Joint-Fill Compound	Positive Stop (Not Analyzed)	PLM
523-BS-01D	First Floor - Hot Water Tank Room Wall	Drywall Joint-Fill Compound	Positive Stop (Not Analyzed)	PLM
523-BS-01E	First Floor - Hot Water Tank Room Wall	Drywall Joint-Fill Compound	Positive Stop (Not Analyzed)	PLM
523-BS-01F	First Floor - Laundry Room Wall	Drywall Joint-Fill Compound	Positive Stop (Not Analyzed)	PLM
523-BS-01G	First Floor - Front Entrance Lobby Wall	Drywall Joint-Fill Compound	Positive Stop (Not Analyzed)	PLM
523-BS-02A	First Floor - Unit 6 Hallway Ceiling	Stucco	3% Chrysotile	PLM
523-BS-02B	First Floor - Front Entrance Lobby Ceiling	Stucco	Positive Stop (Not Analyzed)	PLM
523-BS-02C	First Floor - Front Entrance Lobby Ceiling	Stucco	Positive Stop (Not Analyzed)	PLM
523-BS-02D	First Floor - Hallway Ceiling	Stucco	Positive Stop (Not Analyzed)	PLM
523-BS-02E	First Floor - Hallway Ceiling	Stucco	Positive Stop (Not Analyzed)	PLM
523-BS-02F	First Floor - Hallway Ceiling	Stucco	Positive Stop (Not Analyzed)	PLM
523-BS-02G	First Floor - Common Room	Stucco	Positive Stop (Not Analyzed)	PLM
523-BS-03A	First Floor - Front Entrance Lobby Closet	9"x9" Vinyl Floor Tile - Grey with Brown Streaks	1.52% Chrysotile	PLM
523-BS-03B	First Floor - Front Entrance Lobby Closet	9"x9" Vinyl Floor Tile - Grey with Brown Streaks	Positive Stop (Not Analyzed)	PLM
523-BS-03C	First Floor - Front Entrance Lobby Closet	9"x9" Vinyl Floor Tile - Grey with Brown Streaks	Positive Stop (Not Analyzed)	PLM

PLM - Polarized Light Microscopy
TEM - Transmission Electron Microscopy
BS - Bulk Sample

Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content	Analysis
523-BS-04A	Exterior - Front Entrance	Exterior Caulking - Grey	None Detected	PLM
523-BS-04B	Exterior - Front Entrance	Exterior Caulking - Grey	None Detected	PLM
523-BS-04C	Exterior - Front Entrance	Exterior Caulking - Grey	None Detected	PLM
523-BS-05A	Exterior - Front Entrance	Exterior Plaster - Grey	None Detected	PLM
523-BS-05B	Exterior - Front Entrance	Exterior Plaster - Grey	None Detected	PLM
523-BS-05C	Exterior - Front Entrance	Exterior Plaster - Grey	None Detected	PLM
523-BS-06A	Exterior - Rear Door	Exterior Door Caulking - White	6.9% Chrysotile	PLM
523-BS-06B	Exterior - Rear Door	Exterior Door Caulking - White	Positive Stop (Not Analyzed)	PLM
523-BS-06C	Exterior - Rear Door	Exterior Door Caulking - White	Positive Stop (Not Analyzed)	PLM

PLM - Polarized Light Microscopy
TEM - Transmission Electron Microscopy
BS - Bulk Sample

Appendix B
Laboratory Analytical Reports – Asbestos: Polarized Light Microscopy

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Certificate of Analysis

Stantec Consulting Ltd. (Ottawa)

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

Client PO: 523 Hyde Street Prescott
Project: 122150275
Custody:

Report Date: 24-Jan-2017
Order Date: 18-Jan-2017

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

Paracel ID	Client ID
1703244-01	523-BS-01A (DJC)
1703244-02	523-BS-01B (DJC)
1703244-03	523-BS-01C (DJC)
1703244-04	523-BS-01D (DJC)
1703244-05	523-BS-01E (DJC)
1703244-06	523-BS-01F (DJC)
1703244-07	523-BS-01G (DJC)
1703244-08	523-BS-02A (stucco ceiling)
1703244-09	523-BS-02B (stucco ceiling)
1703244-10	523-BS-02C (stucco ceiling)
1703244-11	523-BS-02D (stucco ceiling)
1703244-12	523-BS-02E (stucco ceiling)
1703244-13	523-BS-02F (stucco ceiling)
1703244-14	523-BS-02G (stucco ceiling)
1703244-15	523-BS-03A (VFT)
1703244-16	523-BS-03B (VFT)
1703244-17	523-BS-03C (VFT)
1703244-18	523-BS-04A (grey caulking)
1703244-19	523-BS-04B (grey caulking)
1703244-20	523-BS-04C (grey caulking)
1703244-21	523-BS-05A (grey plaster)
1703244-22	523-BS-05B (grey plaster)
1703244-23	523-BS-05C (grey plaster)
1703244-24	523-BS-06A (white caulking)
1703244-25	523-BS-06B (white caulking)
1703244-26	523-BS-06C (white caulking)

Approved By:

Emma Diaz

Senior Analyst

PARACEL LABORATORIES LTD.

Order #: 1703244

Certificate of Analysis

Report Date: 24-Jan-2017

Client: Stantec Consulting Ltd. (Ottawa)

Order Date: 18-Jan-2017

Client PO: 523 Hyde Street Prescott

Project Description: 122150275

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

Paracel I.D.	*Sample Date*	*Layers Analyzed*	*Colour*	*Description*	*Asbestos Detected:*	*Material Identification*	*% Content*
1703244-01	12-Jan-17	sample homogenized	Beige	Drywall Joint Compound	**Yes**	Client ID: 523-BS-01A (DJC)	
						Chrysotile	1
						Non-Fibers	99
1703244-02	12-Jan-17					Client ID: 523-BS-01B (DJC)	
						not analyzed	
1703244-03	12-Jan-17					Client ID: 523-BS-01C (DJC)	
						not analyzed	
1703244-04	12-Jan-17					Client ID: 523-BS-01D (DJC)	
						not analyzed	
1703244-05	12-Jan-17					Client ID: 523-BS-01E (DJC)	
						not analyzed	
1703244-06	12-Jan-17					Client ID: 523-BS-01F (DJC)	
						not analyzed	
1703244-07	12-Jan-17					Client ID: 523-BS-01G (DJC)	
						not analyzed	
1703244-08	12-Jan-17	sample homogenized	Grey	Stucco	**Yes**	Client ID: 523-BS-02A (stucco ceiling)	
						Chrysotile	3
						Non-Fibers	97
1703244-09	12-Jan-17					Client ID: 523-BS-02B (stucco ceiling)	
						not analyzed	
1703244-10	12-Jan-17					Client ID: 523-BS-02C (stucco ceiling)	
						not analyzed	
1703244-11	12-Jan-17					Client ID: 523-BS-02D (stucco ceiling)	
						not analyzed	
1703244-12	12-Jan-17					Client ID: 523-BS-02E (stucco ceiling)	
						not analyzed	
1703244-13	12-Jan-17					Client ID: 523-BS-02F (stucco ceiling)	
						not analyzed	
1703244-14	12-Jan-17					Client ID: 523-BS-02G (stucco ceiling)	
						not analyzed	
1703244-15	12-Jan-17	sample homogenized	Brown	Floor Tile	**Yes**	Client ID: 523-BS-03A (VFT)	[AS-PRE]
						Chrysotile	1.52
						Non-Fibers	98.48
1703244-16	12-Jan-17					Client ID: 523-BS-03B (VFT)	
						not analyzed	

PARACEL LABORATORIES LTD.

Order #: 1703244

Certificate of Analysis

Client: Stantec Consulting Ltd. (Ottawa)

Client PO: 523 Hyde Street Prescott

Report Date: 24-Jan-2017

Order Date: 18-Jan-2017

Project Description: 122150275

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

Paracel I.D.	*Sample Date*	*Layers Analyzed*	*Colour*	*Description*	*Asbestos Detected:*	*Material Identification*	*% Content*
1703244-17	12-Jan-17					Client ID: 523-BS-03C (VFT)	
						not analyzed	
1703244-18	12-Jan-17	sample homogenized	Grey	Caulking	No	Client ID: 523-BS-04A (grey caulking) [AS-PRE]	
						Non-Fibers	95.93
						Other fibers	4.07
1703244-19	12-Jan-17	sample homogenized	Grey	Caulking	No	Client ID: 523-BS-04B (grey caulking) [AS-PRE]	
						Non-Fibers	95.98
						Other fibers	4.02
1703244-20	12-Jan-17	sample homogenized	Grey	Caulking	No	Client ID: 523-BS-04C (grey caulking) [AS-PRE]	
						Non-Fibers	96.07
						Other fibers	3.93
1703244-21	12-Jan-17	sample homogenized	Grey	Plaster	No	Client ID: 523-BS-05A (grey plaster)	
						Non-Fibers	100
1703244-22	12-Jan-17	sample homogenized	Grey	Plaster	No	Client ID: 523-BS-05B (grey plaster)	
						Non-Fibers	100
1703244-23	12-Jan-17	sample homogenized	Grey	Plaster	No	Client ID: 523-BS-05C (grey plaster)	
						Non-Fibers	100
1703244-24	12-Jan-17	sample homogenized	White	Caulking	Yes	Client ID: 523-BS-06A (white caulking) [AS-PRE]	
						Chrysotile	6.9
						Non-Fibers	93.1
1703244-25	12-Jan-17					Client ID: 523-BS-06B (white caulking)	
						not analyzed	
1703244-26	12-Jan-17					Client ID: 523-BS-06C (white caulking)	
						not analyzed	

**** 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	24-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

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	Stucco	20 sq. m	Ref: 523-BS-02A	No	3% Chrysotile	Yes	Yes	C	good	ACM
1	Common Room	Walls	Walls	Drywall Joint-Fill Compound	50 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	good	ACM
1	Electrical Room	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	16 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	good	ACM
1	Front Entrance Lobby	Closet	Under Floor Tile	Mastic Associated with 9"x9" Vinyl Floor Tile - Grey with Brown Streaks	2 sq.m	NS	No	PACM	No	No	D	unknown (PACM)	PACM
1	Front Entrance Lobby	Floor	Floor	Ceramic Tile Grout and Mortar/Adhesive	15 sq. m	NS	No	PACM	No	Yes	A	good (PACM)	PACM
1	Front Entrance Lobby	Walls	Walls	Drywall Joint-Fill Compound	30 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	poor	<1 SQ. M CHIPPED
1	Front Entrance Lobby	Closet	Floor	9"x9" Vinyl Floor Tile - Grey with Brown Streaks	2 sq.m	523-BS-03A	Yes	1.52% Chrysotile	No	Yes	A	good	ACM
1	Front Entrance Lobby	Ceiling	Ceiling	Stucco	10 sq. m	Ref: 523-BS-02A	No	3% Chrysotile	Yes	Yes	C	good	ACM
1	Hallway	Ceiling	Ceiling	Stucco	25 sq. m	Ref: 523-BS-02A	No	3% Chrysotile	Yes	Yes	C	good	ACM
1	Hallway	Walls	Walls	Drywall Joint-Fill Compound	85 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	good	ACM
1	Hot Water Tank Room	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	16 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	good	ACM

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	Laundry Room	Floor	Floor	Ceramic Tile Grout and Mortar/Adhesive	15 sq. m	NS	No	PACM	No	Yes	A	good (PACM)	PACM
1	Laundry Room	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	60 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	good	ACM
1	Unit 3	Floor	Under Floor Tile	Mastic Associated with 9"x9" Vinyl Floor Tile - Grey with Brown Streaks	50 sq.m	NS	No	PACM	No	No	D	unknown (PACM)	PACM
1	Unit 3	Bedroom, Hallway, Living Room	Ceiling	Stucco	40 sq. m	Ref: 523-BS-02A	No	3% Chrysotile	Yes	Yes	C	good	ACM
1	Unit 3	Floor	Floor	9"x9" Vinyl Floor Tile - Grey with Brown Streaks	50 sq.m	Ref: 523-BS-03A	No	1.52% Chrysotile	No	Yes	A	good	ACM
1	Unit 3	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	200 sq. m	Ref: 523-BS-01A	No	1% Chrysotile	No	Yes	A	good	ACM
1	Unit 6	Bedroom, Hallway, Living Room	Ceiling	Stucco	40 sq. m	523-BS-02A	Yes	3% Chrysotile	Yes	Yes	C	good	ACM
1	Unit 6	Walls and Ceiling	Walls and Ceiling	Drywall Joint-Fill Compound	200 sq. m	523-BS-01A	Yes	1% Chrysotile	No	Yes	A	good	ACM
1	Washroom	Floor	Floor	Ceramic Tile Grout and Mortar/Adhesive	2 sq. m	NS	No	PACM	No	Yes	A	good (PACM)	PACM
E	Exterior	Exterior	Walls	Brick Mortar	NQ	NS	No	PACM	No	Yes	A	good (PACM)	PACM
E	Exterior	Exterior	Windows	Exterior Window Caulking - White	NQ	NS	No	PACM	No	Yes	A	good (PACM)	PACM

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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
E	Exterior	Back Door	Doors	Exterior Door Caulking - White	20 m	523-BS-06A	Yes	6.9% Chrysotile	No	Yes	A	good	ACM
I	Interior	Door	Door	Fire Rated Door - Wood	NQ	NS	No	PACM	No	Yes	A	good (PACM)	PACM
I	Interior	Door	Door	Fire Rated Door - Metal	NQ	NS	No	PACM	No	Yes	A	good (PACM)	PACM
R	Roof	Roof	Roofing	Roof Caulking	NQ	NS	No	PACM	No	Yes	C	good (PACM)	PACM
R	Roof	Roof	Roofing	Roofing Materials	NQ	NS	No	PACM	No	Yes	C	good (PACM)	PACM

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Appendix D
Selected Site Photographs

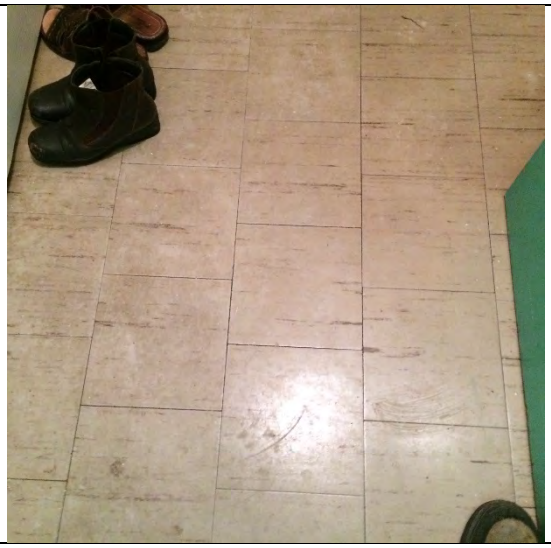

Photo 1: 9"x9" vinyl floor tile – grey with brown streaks is identified to be asbestos-containing (1.52% Chrysotile).

Photo 2: Stucco on ceilings is identified to be asbestos-containing (3% Chrysotile).

Photo 3: Exterior door caulking – white is identified to be asbestos-containing (6.9% Chrysotile).

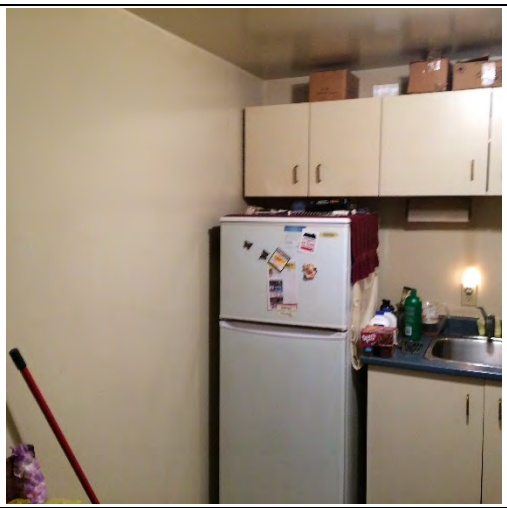

Photo 4: Drywall joint-fill compound is identified to be asbestos-containing (1% Chrysotile).

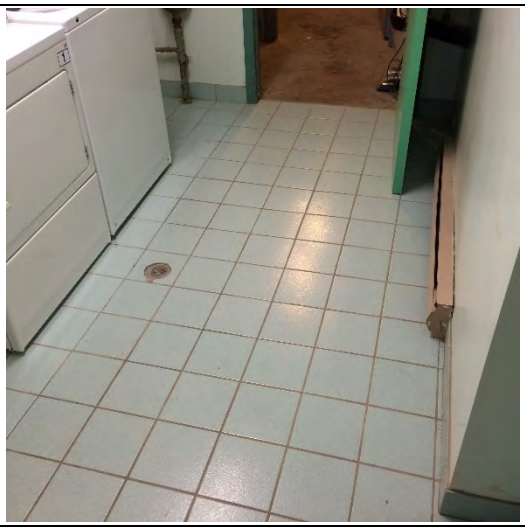

Photo 5: Ceramic tile grout and mortar/adhesive is presumed to be asbestos-containing.

Photo 6: Exterior window caulking – white is presumed to be asbestos-containing.

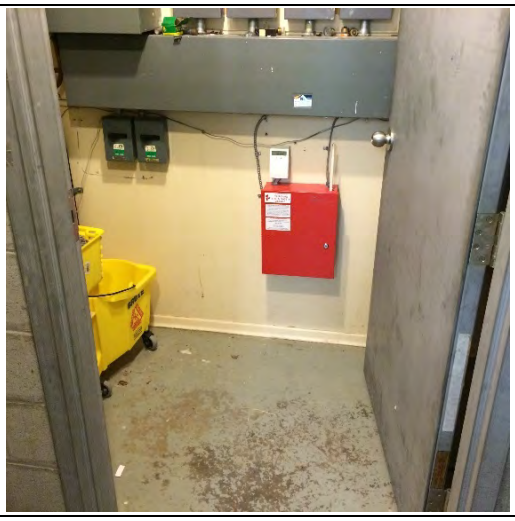

Photo 7: Fire rated door – metal is presumed to be asbestos-containing.

Photo 8: Fire rated door – wood is presumed to be asbestos-containing.