



REVISED

Hazardous Building Materials Assessment

320 McRae Avenue and 311 &
315 Tweedsmuir Avenue,
Ottawa, Ontario

Prepared for:

The Great-West Life Assurance Company

33 Yonge Street, Suite 1000
Toronto, ON M5E 1G4

Attention: Mr. Andrew Hanna

February 14, 2020

Pinchin File: 230236.003



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EXECUTIVE SUMMARY

The Great-West Life Assurance Company (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment at 320 McRae Avenue and 311 & 315 Tweedsmuir Avenue, Ottawa, Ontario. Pinchin performed the assessment on October 29, 2018. Pinchin returned to the site on January 24, 2020, to assess the Second Floor of 315 Tweedsmuir Avenue, which was inaccessible at the time of the original assessment.

The objective of the assessment was to identify specified hazardous building materials in preparation for building demolitions. The results of this assessment are intended for use with a properly developed scope of work and performance specification. The assessed area consisted of the entire building at 320 McRae Avenue and the houses at 311 & 315 Tweedsmuir Avenue, as shown on the drawings in Appendix I.

SUMMARY OF FINDINGS

Asbestos: Asbestos-containing materials (ACM) are present as follows:

320 McRae Avenue

- Potentially-friable swirl textured finish, containing chrysotile asbestos, is present along the upper walls in Office 2 and in good condition;
- Potentially-friable aggregate-embedded stucco, containing chrysotile asbestos, is present as exterior cladding around Office 1, Garage 2, Garage 3 and Storage 2. The aggregate-embedded stucco is in good condition;
- Non-friable drywall joint compound, containing chrysotile asbestos, is present on the original drywall finishes throughout Office 1, Garage 2 and Storage 2. The drywall joint compound is in good condition;
- Non-friable cement board, containing chrysotile asbestos, is present as exterior cladding above and below the east exterior windows of Office 1 and 2 and in good condition;
- Non-friable caulking, containing chrysotile asbestos, is present around the east windows and the south door, in good condition; and
- Non-friable putty, containing chrysotile asbestos, is present on the east window panels on the roof level at 320 McRae Avenue, in good condition.



311 Tweedsmuir Avenue

- Potentially-friable smooth plaster, containing chrysotile asbestos, is present on the walls and ceilings throughout the house and in good condition;
- Potentially-friable textured plaster, containing chrysotile asbestos, is present on the ceiling in the Living Room and in good condition;
- Potentially Friable aggregate-embedded stucco, containing chrysotile asbestos, is present as exterior cladding. The aggregate-embedded stucco is in good condition; and
- Non-friable vinyl sheet flooring, containing chrysotile asbestos, is present in the multi-layered flooring in the Kitchen and Front Entrance. The vinyl sheet flooring is in good condition.

315 Tweedsmuir Avenue

- Potentially-friable aggregate-embedded stucco, containing chrysotile asbestos, is present as exterior cladding. The aggregate-embedded stucco is in good condition; and
- Non-friable caulking, containing chrysotile asbestos, is present around the window frame on the Garage, in good condition.

Lead: Lead is present as follows:

- Paints/surface coatings were present as follows:
 - Paint on roughcast plaster walls and ceilings in Storage 1 at 320 McRae Avenue;
 - Paint on interior trim at 311 Tweedsmuir Avenue;
 - Paint on block walls in the Basement at 311 Tweedsmuir Avenue; and
 - Paint on exterior trim/wood on the Garage at 315 Tweedsmuir Avenue.
- Batteries of emergency lights and fire alarm systems; and
- Caulking on cast iron pipe joints (bell and spigot).

Silica: Crystalline silica is present in concrete, brick, mortar, drywall, masonry, ceramics, grout, plaster and stone.

Mercury: Mercury vapour is present in light tubes at 320 McRae. Liquid mercury is present in thermostat ampules at each location.

Polychlorinated Biphenyls (PCBs): Based on the date of construction, PCBs may be present in light ballasts at 320 McRae Avenue. Samples of caulking are non-PCB solid based on the threshold (50 ppm).

Mould and Water Damage: Visible mould/water damage was observed throughout the Basement and First Floor, as well as on the ceiling of the Garage at 315 Tweedsmuir Avenue.



SUMMARY OF RECOMMENDATIONS

The following is a summary of significant recommendations; refer to the body of the report for detailed recommendations:

1. Prepare specifications for the hazardous material removal required for the planned work.
2. Do not disturb suspected hazardous building materials discovered during the planned work, which have not been identified in this report. Notify Pinchin immediately to conduct further testing.
3. Remove and properly dispose of asbestos-containing materials prior to demolition.
4. Remove and properly dispose of PCB ballasts prior to demolition.
5. Recycle mercury light tubes. Dispose of mercury switches within thermostats.
6. Follow appropriate safe work procedures when handling or disturbing lead, silica and mould.
7. Remediate the materials as described in Section 4.2.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.



Hazardous Building Materials Assessment

320 McRae Avenue and 311 & 315 Tweedsmuir Avenue, Ottawa, Ontario
The Great-West Life Assurance Company

February 14, 2020
Pinchin File: 230236.003
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1.0 INTRODUCTION AND SCOPE

The Great-West Life Assurance Company (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment at 320 McRae Avenue and 311 & 315 Tweedsmuir Avenue, Ottawa, Ontario.

Tanner Larose, Project Technologist performed the assessment on October 29, 2018, October 30, 2018 and November 1, 2018. The surveyor was unaccompanied during the assessment. The buildings were occupied at the time of the assessment.

The objective of the assessment was to identify specified hazardous building materials in preparation for building demolition. This assessment is intended to be used for pre-demolition purposes only, and may not provide sufficient detail for long term management of hazardous materials as required by Health and Safety regulations. The results of this assessment are intended for use with a properly developed scope of work and performance specification.

1.1 Scope of Assessment

The assessment was performed to establish the location and type of specified hazardous building materials incorporated in the structure(s) and its finishes, in preparation for building demolition. The assessed area consisted of all parts of each building.

For the purpose of the assessment and this report, hazardous building materials are defined as follows:

- Asbestos;
- Lead;
- Silica;
- Mercury;
- Polychlorinated Biphenyls (PCBs); and
- Mould.

The following Designated Substances are not typically found in building materials in a composition/state that is hazardous and were not included in this assessment:

- Arsenic;
- Acrylonitrile;
- Benzene;



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- Coke oven emissions;
- Ethylene oxide;
- Isocyanates; and
- Vinyl chloride monomer.

2.0 BACKGROUND INFORMATION

2.1 Description

Description Item	Details
Use	Warehouse – 320 McRae Avenue House – 311 & 315 Tweedsmuir Avenue
Number of Floors	The 320 McRae Avenue building is 1 storey. The 311 & 315 Tweedsmuir Avenue houses are 2 stories plus 1 underground basement.
Total Area	The total area of the building at 320 McRae is approximately 16,000 square feet. The total area of the house at 311 Tweedsmuir Avenue is approximately 1,800 square feet. The total area of the house and garage at 315 Tweedsmuir Avenue is approximately 2,500 square feet.
Year of Construction	The building at 320 McRae Avenue was constructed circa 1940's with additions added through till 1970. The houses at 311 & 315 Tweedsmuir Avenue were constructed circa 1940's.
Structure	Concrete and steel at 320 McRae Avenue Concrete and timber framed at 311 & 315 Tweedsmuir Avenue
Exterior Cladding	Aggregate-embedded stucco and brick at 320 McRae Avenue Aggregate-embedded stucco at 311 & 315 Tweedsmuir Avenue
HVAC	Rooftop air handling unit at 320 McRae Avenue Gas furnace at 311 & 315 Tweedsmuir Avenue
Roof	Built-up roofing at 320 McRae Avenue Shingles at 311 & 315 Tweedsmuir Avenue

Description Item	Details
Flooring	Concrete, vinyl floor tiles, carpet at 320 McRae Avenue Vinyl sheet flooring, vinyl floor tiles, wood at 311 & 315 Tweedsmuir Avenue
Interior Walls	Plaster, drywall, concrete block at 320 McRae Avenue Plaster at 311 Tweedsmuir Avenue Plaster and drywall at 315 Tweedsmuir Avenue
Ceilings	Acoustic ceiling tiles, plaster, drywall at 320 McRae Avenue Plaster at 311 Tweedsmuir Avenue Plaster and drywall at 315 Tweedsmuir Avenue

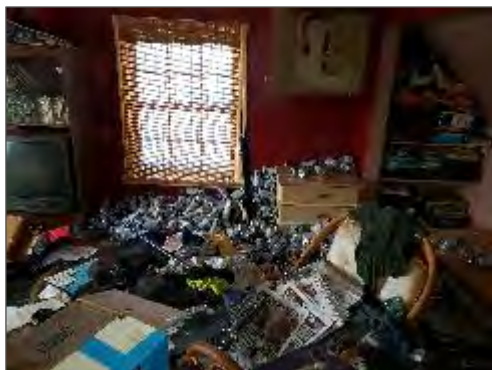
2.2 Existing Reports

No existing reports were provided for reference.

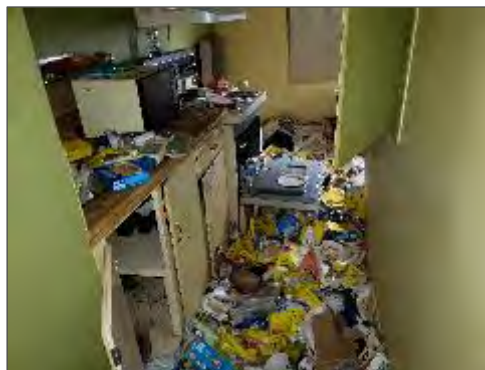
2.3 Limited Access

The following rooms or areas were not accessible and are therefore not included in the report:

Area or Room	Reason
Second Floor, 315 Tweedsmuir Avenue	Limited access throughout the Second Floor due to the debris and possessions still present in the area.



Debris and possessions still present in the area.



Debris and possessions still present in the area.

3.0 FINDINGS

The following section summarizes the findings of the assessment and provides a general description of the hazardous materials identified and their locations.

3.1.1 *Spray-Applied Insulation*

Non-asbestos spray-applied insulation and overspray is present in the ceiling space in Garage 1 at 320 McRae Avenue and in the crawlspace (attic) at 311 Tweedsmuir Avenue (samples 0001A-C and 0029A-C, respectively).



Non-asbestos spray-applied insulation present in the crawlspace (attic) at 311 Tweedsmuir Avenue.

3.1.2 *Texture Finishes (Decorative)*

Swirl texture finish, containing chrysotile asbestos, is present on drywall walls in Office 2 (samples 0002A-C) of 320 McRae Avenue. There is approximately 100 square feet of texture finish. Texture finish is painted, and is considered a non-friable material which may become friable on removal. The texture finish is in good condition.

Ceiling stipple present on the drywall ceilings in the basement at 315 Tweedsmuir Avenue does not contain asbestos (samples 0036A-C).

Ceiling stipple present on the plaster ceiling throughout the Second Floor at 315 Tweedsmuir Avenue does not contain asbestos (samples 0048A-C).



Non-asbestos ceiling stipple present throughout the basement at 315 Tweedsmuir Avenue.



Non-asbestos ceiling stipple present throughout the second floor at 315 Tweedsmuir Avenue.

3.1.3 *Thermal Systems Insulation (TSI)*

3.1.3.1 *Pipe Insulation*

Pipes are insulated with fibreglass, or other non-asbestos insulation such as mineral fibre or elastomeric foam insulation.

Pipes insulated with asbestos-containing insulations may be present in inaccessible spaces such as above solid ceilings, in chases, in column enclosures and within shafts.

3.1.3.2 *Duct Insulation and Mastics*

Ducts are either uninsulated or insulated with non-asbestos fibreglass (foil-faced or canvas).

3.1.3.3 *Mechanical Equipment Insulation*

Mechanical equipment is either uninsulated or insulated with non-asbestos fibreglass.

3.1.4 *Vermiculite*

Destructive testing was conducted of masonry block walls. The masonry block walls were penetrated at representative locations, throughout 320 McRae Avenue, as well as at both 311 & 315 Tweedsmuir Avenue, loose fill vermiculite was not observed within the cavities. The locations of destructive testing have been indicated on the drawings in Appendix I.



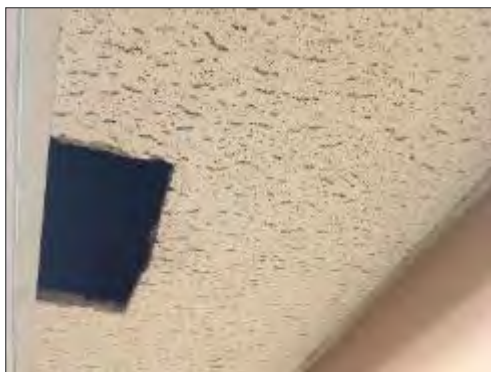
No vermiculite was present in the block walls at 320 McRae Avenue.

3.1.5 Acoustic Ceiling Tiles

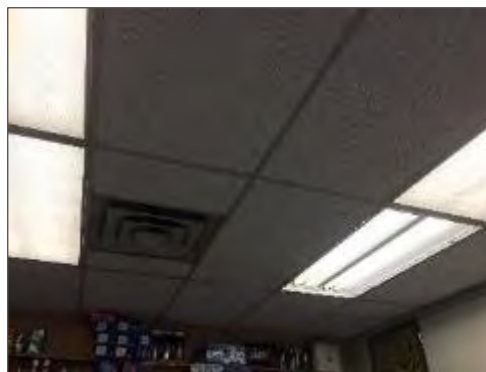
Acoustic ceiling tiles are present in the assessed area, as follows:

Size, Type, Pattern	Locations	Sample Number or Date Code	Asbestos Type
24"x48", width-wise fissures and pinholes, Photo 4	Office 1 – 320 McRae Avenue	S0003A-C	None detected
24"x48", non-directional fissures and pinholes, Photo 5	Garage 1 – 320 McRae Avenue	Date stamped 2015	Presumed non-asbestos

The ceiling tile in Photo 5 is presumed to be non-asbestos based on the date of manufacture determined from the date stamp applied to the top of the tiles. The tiles were manufactured after asbestos was stopped being used in acoustic ceiling tiles.



Non-asbestos acoustic ceiling tiles, 24"x48" with width-wise fissures and pinholes, present in Office 1 at 320 McRae Avenue.



Non-asbestos acoustic ceiling tiles, 24"x48" with non-directional fissures and pinholes, present in Garage 1 at 320 McRae Avenue.

3.1.6 *Plaster and Stucco*

Smooth plaster, containing chrysotile asbestos in the base coat, is present on walls and ceilings, throughout the assessed area at 311 Tweedsmuir Avenue (samples 0030A-E). The plaster is applied to wood lath. Plaster is a non-friable material which may become friable during removal. The plaster is in good condition.

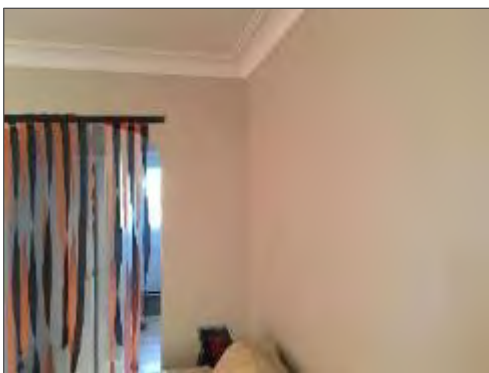
Smooth plaster present on walls and ceilings in Garage 1 at 320 McRae Avenue as well as on the first floor at 315 Tweedsmuir Avenue does not contain asbestos (samples 0004A-C and 0037A-E).

Textured plaster, containing chrysotile asbestos in the base coat, is present on ceilings, in the Living Room at 311 Tweedsmuir Avenue (samples 0031A-C). The plaster is applied to wood lath. Plaster is a non-friable material which may become friable during removal. The plaster is in good condition.

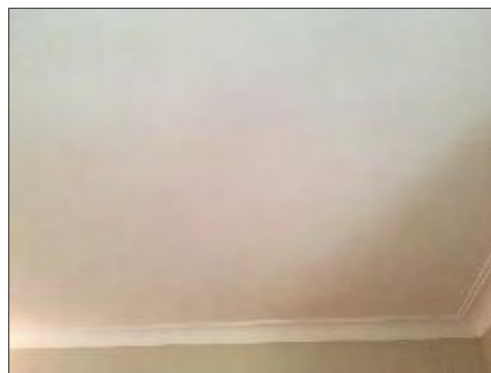
Textured plaster present on the ceilings throughout the first floor at 315 Tweedsmuir Avenue does not contain asbestos (samples 0038A-C).

Rough cast plaster present on walls and ceilings throughout the building at 320 McRae Avenue, and in the basement at 315 Tweedsmuir, does not contain asbestos (samples 0005A-C, 0006A-C, 0007A-C, 0008A-E, 0009A-C, and 0039A-C, respectively).

Aggregate-embedded stucco, containing chrysotile asbestos, is present as exterior cladding around Office 1, Garage 2, Garage 3 and Storage 2 at 320 McRae Avenue, as well as around both houses at 311 & 315 Tweedsmuir Avenue, (samples 0011A-C, 0012A-E, 0032A-E, 0040A-E). The stucco is applied to concrete. Stucco is a non-friable material which may become friable during removal. The stucco is painted, and in good condition.



Asbestos-containing smooth plaster on the walls at 311 Tweedsmuir Avenue.



Asbestos-containing textured plaster on the ceiling at 311 Tweedsmuir Avenue.



Asbestos-containing aggregate-embedded stucco present on the exterior walls of Garage 2 and Storage 2 at 320 McRae Avenue.



Asbestos-containing aggregate-embedded stucco present on the exterior walls of Storage 2 on the roof level at 320 McRae Avenue.

3.1.7 Drywall Joint Compound

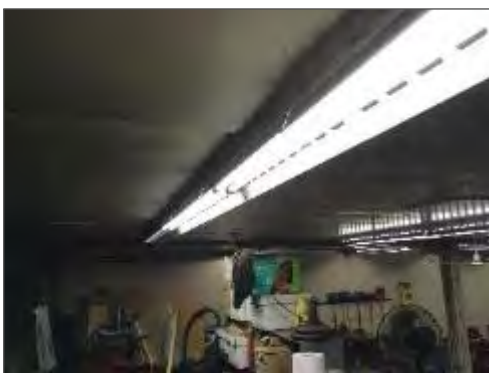
Drywall joint compound, containing chrysotile asbestos, is present on the original wall and ceiling finishes throughout Office 2, Storage 2 and Garage 2 at 320 McRae Avenue (samples 0014A-C and 0015A-G).

Drywall joint compound is a non-friable material, painted and is in good condition.

Drywall joint compound present on wall and ceiling finishes in Garage 1 at 320 McRae Avenue, does not contain asbestos (samples 0013A-C).

Drywall joint compound present on wall and ceiling finishes on the first floor, basement, and separated Garage, at 315 Tweedsmuir Avenue, does not contain asbestos (samples 0041A-C and 0042A-C).

Drywall joint compound on the second floor of 315 Tweedsmuir, if present, was not sampled (no access).



Asbestos-containing drywall joint compound present as the ceiling finish in Garage 2 and Storage 2 at 320 McRae Avenue.



Asbestos-containing drywall joint compound present as the column finish in Garage 2 at 320 McRae Avenue.

3.1.8 Asbestos Cement Products (Transite)

Cement board, containing chrysotile asbestos, is present as exterior cladding, above and below windows, on the East exterior around Offices 1 and 2 at 320 McRae Avenue (samples 0016A-C). The cement board is non-friable and is in good condition.



Asbestos-containing cement board present above and below the windows along Office 1 & 2 at 320 McRae Avenue.

3.1.9 Vinyl Sheet Flooring

Vinyl sheet flooring is present as follows:

Pattern, Colour and Photo Number	Paper Backing (Yes/No)	Locations (Location #)	Sample Number	Asbestos Type
Multi-layered flooring	Yes	Kitchen – 311 Tweedsmuir Avenue	S0033A-C	Chrysotile
White	Yes	Washroom – 311 Tweedsmuir Avenue	S0034A-C	None Detected
Base layer	Yes	Front Entrance – 311 Tweedsmuir Avenue	S0035A-C	Chrysotile

The vinyl sheet flooring is non-friable but can become friable upon removal due to the separation of the vinyl face and paper backing. Vinyl sheet flooring is in good condition.



Asbestos-containing vinyl sheet flooring present in the multi-layered flooring at 311 Tweedsmuir Avenue.

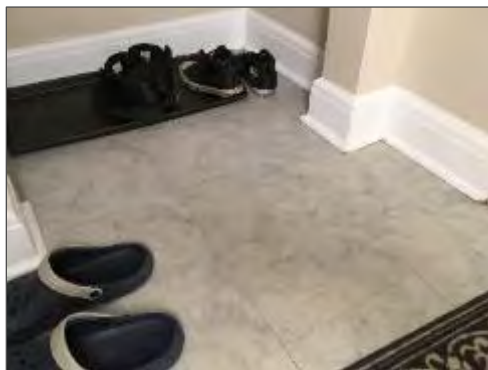


Asbestos-containing vinyl sheet flooring present as the base layer in the front entrance at 311 Tweedsmuir Avenue.

3.1.10 Vinyl Floor Tiles

Vinyl floor tiles are present as follows:

Size, Pattern, Colour	Locations (Location #)	Sample Number	Asbestos Type (tile)	Asbestos Type (mastic)
12"x12", Grey	Office, Garage 2 – 320 McRae	S0017A-C	None Detected	None Detected
12"x12", Peel and Stick (ACM vinyl sheet flooring present as base layer)	Front Entrance – 311 Tweedsmuir Avenue	S0035A-C	None Detected	None Detected
12"x12", Grey	Closet, Basement – 315 Tweedsmuir Avenue	S0043A-C	None Detected	None Detected

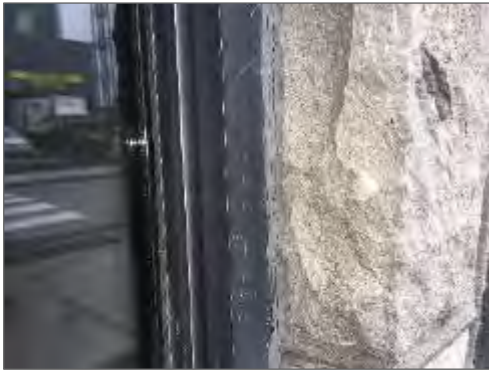


Non-asbestos peel and stick vinyl floor tiles present in the front entrance at 311 Tweedsmuir Avenue. **Asbestos-containing** vinyl sheet flooring is present underneath, as the base layer.

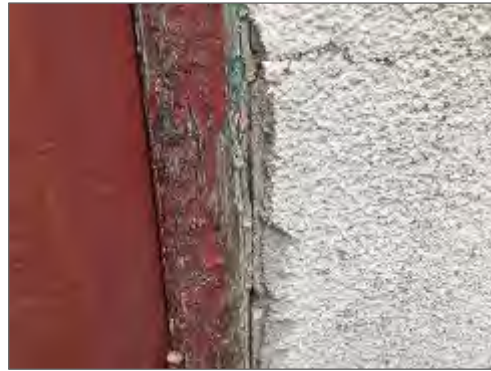
3.1.11 Sealants, Caulking, and Putty

The following table presents a summary of caulking, sealants and putties present:

Material and Colour	Location (Location #)	Quantity	Sample Number	Asbestos Type
Caulking, black	East Window Frames, Office 1, 2 and Garage 1 – 320 McRae Avenue	80 ft	S0018A-C	Chrysotile
Caulking, white	South Door Frame, Garage 2 – Garage 2 – 320 McRae Avenue	12 ft	S0019A-C	Chrysotile
Glazing Putty, white	East Window Frames, Storage 2, Roof Level – 320 McRae Avenue	40 ft	S0020A-C	Chrysotile
Caulking, white	West Window Frames, First Floor – 315 Tweedsmuir Avenue	N/A	S0044A-C	None Detected
Glazing Putty, white	Old Windows, First Floor/Basement – 315 Tweedsmuir Avenue	N/A	S0045A-C	None Detected
Caulking, blue	Window Frame, Garage – 315 Tweedsmuir Avenue	10 ft	S0046A-C	Chrysotile



Asbestos-containing black caulking present around the east window frames at 320 McRae Avenue.



Asbestos-containing white caulking present around the south exterior door frame at 320 McRae Avenue.



Asbestos-containing white putty present around the east window frames on the roof level at 320 McRae Avenue.



Asbestos-containing blue caulking present around the exterior window frame on the Garage at 315 Tweedsmuir Avenue.

3.1.12 Roofing Products

The built up roofing materials on the flat roofs of 320 McRae Avenue do not contain asbestos (samples 0023A-C, 0024A-C, 0025A-C, 0026A-C, 0027A-C, and 0028A-C).

Tar present on the roof of 320 McRae Avenue Office 1 does not contain asbestos (samples 0022A-C).

Tar Paper present on the roof at 315 Tweedsmuir Avenue does not contain asbestos (samples 0047A-C).

Roofing shingles and membrane on 311 Tweedsmuir Avenue appeared to be relatively newer and are presumed to be non-asbestos-containing.



Non-asbestos built up roofing at 320 McRae Avenue.



Non-asbestos tar on the roof at 320 McRae Avenue.



Non-asbestos tar paper present in the roof at 315 Tweedsmuir Avenue.

3.1.13 Paper and Textile Products

Layered tar paper present on the wall in Garage 3 at 320 McRae Avenue does not contain asbestos (samples 0021A-C).

3.1.14 Presumed Asbestos Materials

A number of materials which might contain asbestos were not sampled during this assessment due to limitations in scope and methodology. Where present, these materials are presumed to contain asbestos until otherwise proven by sampling and analysis.

Materials presumed to contain asbestos include:

- Concrete floor levelling compound;
- Electrical components;
- Fibre-reinforced paints and coatings; and
- Materials outside the assessed area.



3.2 Lead

3.2.1 Paints and Surface Coatings

The following table summarizes the analytical results for paints sampled and locations:

Sample Number	Colour, Substrate Description	Location (Location #)	Lead (%)
Pb 01	Composite paint; rough cast plaster walls/ceilings	Garage1, 320 McRae Avenue	0.0555
Pb 02	Composite paint; drywall	Office 2, 320 McRae Avenue	<0.0020
Pb 03	White paint; exterior brick	Office 1 & 2, 320 McRae Avenue	<0.0020
Pb 04	Composite paint; rough cast plaster walls/ceilings	Storage 1, 320 McRae Avenue	0.800
Pb 05	White paint; drywall	Storage 1, 320 McRae Avenue	<0.0020
Pb 06	Grey paint; concrete floor	Storage 1, 320 McRae Avenue	0.0052
Pb 07	Composite paint; block walls	Storage 2 and Garage 2, 320 McRae Avenue	0.0064
Pb 08	Composite paint; drywall ceiling	Storage 2 and Garage 2, 320 McRae Avenue	0.0054
Pb 09	Composite paint; rough cast plaster walls	Garage 3, 320 McRae Avenue	0.0152
Pb 10	Composite paint; smooth plaster walls	311 Tweedsmuir Avenue	0.0381
Pb 11	Composite paint; interior trim	311 Tweedsmuir Avenue	0.192
Pb 12	Composite paint; block walls	Basement, 311 Tweedsmuir Avenue	0.209
Pb 13	Composite paint; smooth plaster walls/ceilings	House, 315 Tweedsmuir Avenue	0.0471
Pb 14	Composite paint; drywall walls/ceiling	House, 315 Tweedsmuir Avenue	0.0086
Pb 15	Composite paint; interior trim	House, 315 Tweedsmuir Avenue	0.0883
Pb 16	Composite paint; exterior wood	House, 315 Tweedsmuir Avenue	0.0148

Sample Number	Colour, Substrate Description	Location (Location #)	Lead (%)
Pb 17	Composite paint; exterior wood	Garage, 315 Tweedsmuir Avenue	0.631

Results above 0.1% are considered elevated (i.e., greater than the EACO guideline of 0.1% for lead-containing paints). All paints determined to be elevated were found to be in good condition and not flaking, peeling or delaminating.

3.2.2 Lead Products and Applications

Lead-containing batteries are present in emergency lighting and fire alarm control panels.

Lead caulking is present in bell and spigot fittings on cast iron pipes.

3.2.3 Presumed Lead Materials

Lead may be present in a number of materials which were not assessed and/or sampled. The following materials, where found, should be considered to contain lead:

- Electrical components, including wiring connectors, grounding conductors, and solder;
- Solder on pipe connections; and
- Glazing on ceramic tiles.

3.3 Silica

Crystalline silica is a presumed component of the following materials:

- Poured or pre-cast concrete;
- Masonry and mortar;
- Ceramic tiles and grout;
- Drywall;
- Plaster; and
- Stone.

3.4 Mercury

3.4.1 Lamps

Mercury vapour is present in fluorescent lamps.

3.4.2 Mercury-Containing Devices

Mercury is present as a liquid in thermostats ampules.

3.5 Polychlorinated Biphenyls

3.5.1 Caulking

Caulking in the assessed area at 311 Tweedsmuir Avenue was not suspected to contain PCBs due to the date of installation (after 1985).

The following table presents a summary of the PCB analytical results of caulking sampled from 320 McRae Avenue and 315 Tweedsmuir Avenue:

Material and Colour	Location	Sample Number	PCB concentration (ppm)
Caulking, black	Windows Frames, Office 1 & 2, Garage 2 – 320 McRae Avenue	PCB 01	<8.7
Caulking, white	Door Frame, Garage 2 – 320 McRae Avenue	PCB 02	<4.0
Caulking, cream	Window Panel - 315 Tweedsmuir Avenue	PCB 03	<4.0
Caulking, blue	Window Frame, Garage – 315 Tweedsmuir Avenue	PCB 04	<6.0

Caulkings present at exterior window and door frames at 320 McRae Avenue and 315 Tweedsmuir Avenue are non-PCB solid based on the threshold (50 ppm).

3.5.2 Lighting Ballasts

The buildings have not been comprehensively re-lamped with new energy efficient light ballasts and lamps, and as such, a percentage of light ballasts may be manufactured prior to 1980 and may contain PCBs.

3.5.3 Transformers

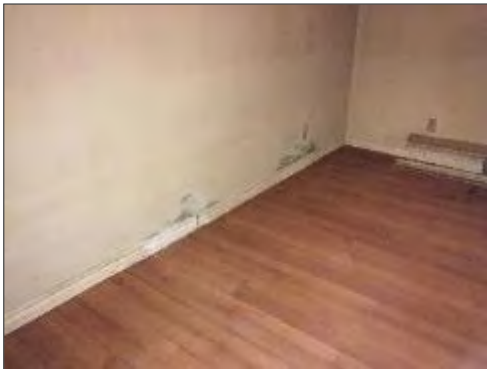
All transformers in the building are dry type transformers and do not contain PCB-containing dielectric fluids.

3.6 Mould

Visible mould growth and water staining is present on drywall walls in the Basement at 315 Tweedsmuir Avenue. There is approximately 100 sq ft of visible mould growth.

Visible mould growth and water staining is present on the ceiling in the Living Room and Bedroom 1 at 315 Tweedsmuir Avenue. There is approximately 15 sq ft of visible mould growth.

Visible mould growth and water staining is present on the drywall ceiling in the Garage at 315 Tweedsmuir Avenue. There is approximately 100 sq ft of visible mould growth.



Mould present on the drywall walls in the Basement at 315 Tweedsmuir Avenue.



Mould present on the back side of the drywall/textured plaster ceiling finish in the front entrance at 315 Tweedsmuir Avenue.



Mould present on the back side of the drywall/textured plaster ceiling finish in the front entrance at 315 Tweedsmuir Avenue.



Mould present on the drywall ceiling in the separate Garage at 315 Tweedsmuir Avenue.

4.0 RECOMMENDATIONS

4.1 General

1. Prepare plans and performance specifications for hazardous material removal required for the planned work. The specifications should include the scope of work, safe work practices, personal protective equipment, respiratory protection, and disposal of waste materials.
2. If suspected hazardous building materials are discovered during the planned work, which are not identified in this report, do not disturb and inform Pinchin immediately to conduct further testing.



3. Provide this report and the detailed plans and specifications to the contractor prior to bidding or commencing work.
4. Retain a qualified consultant to specify, inspect and verify the successful removal of hazardous materials.

4.2 Remedial Work

The following remedial work is recommended regardless of the planned construction work due to the condition and location of the material:

Material, Quantity & Condition	Location	Recommended Procedure
Walls and Ceilings, 315 Tweedsmuir Avenue, <100 ft ²	Basement bedroom and living room walls, main floor Bedroom 1 and living room ceilings, 2 nd floor unknown (no access), Garage ceiling	If any remedial activity of mould-impacted materials inside 315 Tweedsmuir Avenue is required, removal should be conducted in accordance with EACO Level 3 Procedures in the house and EACO Level 2 Procedures in the Garage.
		If the unit is to be mechanically demolished, from the exterior, equipment operators and adjacent property must be protected from the hazard with effective dust control.
		Note that other requirements related to the pre-demolition Type 3 abatement (O.Reg 278/05) of asbestos- containing exterior aggregate-embedded stucco finish also apply.

If the unit is to remain vacant, but access will be required as part of construction/demolition, entrants should be made aware of the mould hazard and appropriate personal protective equipment should be employed.



4.3 Building Demolition or Renovation Work

The following recommendations are made regarding demolition involving the hazardous materials identified.

4.3.1 Asbestos

Remove all asbestos-containing materials (ACM) prior to demolition work.

If the identified ACM will not be removed prior to commencement of the work, any potential disturbance of ACM must follow asbestos precautions appropriate for the type of work being performed.

Asbestos-containing materials must be disposed of at a landfill approved to accept asbestos waste.

320 McRae Avenue

Material	Location, Quantity & Condition	Recommended Procedure
Cement board	Office 1 and 2, east exterior wall (<80 ft ² , good condition)	Follow Type 1 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing cement board, using only non-powered hand tools, without cutting drilling breaking or abrading the material.
Swirl Textured Finish	Office 2, upper wall (150 ft ² , good condition)	Follow Type 3 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing swirl textured finish.
Aggregate-embedded stucco	Garage 2, Storage 2 and upper roof Storage 2 (2,400 ft ² , good condition) Garage 3 and Storage 3 (300 ft ² , good condition)	Follow Type 3 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing aggregate-embedded stucco.
Drywall joint compound	Office 1 and 2 (1330 ft ² , good condition) Garage 2 and Storage 2 (5000 ft ² , good condition)	Follow Type 2 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing drywall joint compound, using only non-powered hand tools.
Black caulking	East exterior windows of Office 1 & 2, Garage 1 (80LF, good condition)	Follow Type 1 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing caulking.
White caulking	Exterior south door of Garage 2 (18LF, good condition)	Follow Type 1 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing caulking.

**Hazardous Building Materials Assessment**

320 McRae Avenue and 311 & 315 Tweedsmuir Avenue, Ottawa, Ontario
The Great-West Life Assurance Company

February 14, 2020
Pinchin File: 230236.003
REVISED

Material	Location, Quantity & Condition	Recommended Procedure
White putty	East exterior window glazing on Storage 2, Roof Level 2 (40 LF, good condition)	Follow Type 1 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing window putty.

311 Tweedsmuir Avenue

Material	Location, Quantity & Condition	Recommended Procedure
Smooth plaster	Walls and ceilings throughout the house (2,000 ft ² , good condition)	Follow Type 3 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing smooth plaster
Textured plaster	Ceiling throughout the Living Room (500 ft ² , good condition)	Follow Type 3 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing textured plaster
Aggregate-embedded stucco	Exterior cladding (1500 ft ² , good condition)	Follow Type 3 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing aggregate-embedded stucco
Vinyl sheet flooring	Kitchen Front entrance (50 ft ² , good condition)	Follow Type 2 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing vinyl sheet flooring. If the flooring becomes friable on removal, be prepared to stop and implement Type 3 abatement procedures according to O. Reg. 278/05.

315 Tweedsmuir Avenue

Material	Location, Quantity & Condition	Recommended Procedure
Aggregate-embedded stucco	Exterior cladding (1,200 ft ² , good condition)	Follow Type 3 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing aggregate-embedded stucco
Window Caulking	Detached garage window (10 LF, good condition)	Follow Type 1 abatement procedures according to O.Reg 278/05 for abatement of asbestos-containing window caulking.

4.3.2 Lead

For paints identified as having elevated levels of lead (i.e., greater than the EACO guideline of 0.1% for lead-containing paints), construction disturbance may result in over-exposure to lead dust or fumes. The need for work procedures, engineering controls and personal protective equipment should be assessed on a site specific basis to comply with provincial standards or guidelines. Performing an exposure assessment during work that disturbs lead in paints and coatings may be able to reduce the use of some of these precautions.

Items painted with paints containing elevated levels of lead may be a hazardous waste. Test lead-painted materials for leachable lead prior to disposal.

Well adhered paints containing elevated levels of lead on metal substrates do not require leachable lead analysis as the materials can be recycled with the paint intact.

Lead-containing items such as lead-acid batteries should be recycled when taken out of service.

4.3.3 Silica

Construction disturbance of silica-containing products may result in excessive exposures to airborne silica, especially if performed indoors and dry. Cutting, grinding, drilling or demolition of materials containing silica should be completed only with proper respiratory protection and other worker safety precautions that comply with provincial standards or guidelines.

4.3.4 Mercury

Do not break lamps or separate liquid mercury from components. Recycle and reclaim mercury from fluorescent lamps and thermostats when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with local regulations.

4.3.5 PCBs

When light fixtures are removed, examine light ballasts for PCB content. If ballasts are not clearly labelled as "non-PCB", or are suspected to contain PCBs; package and ship ballasts for destruction at a federally permitted facility.

4.3.6 Mould

Mould growth was noted in areas affected by the planned work. Appropriate personal protective equipment and precautions should be employed during abatement/demolition activities, in accordance with the requirements of EACO Mould Abatement Guidelines. Use appropriate precautions and protect workers during removal, using methods that comply with provincial guidelines. A qualified consultant should specify, inspect and verify the successful removal of mould-impacted finishes.



5.0 TERMS AND LIMITATIONS

This report was prepared pursuant to and in accordance with the master services agreement (the “MSA”) dated July 16, 2007 between The Pinchin Group of Companies (“Consultant”) and the other parties listed thereto, and the project specific agreement dated May 5, 2014 between Consultant and The Great West Life Assurance Company. The report was prepared by Consultant for the use of Owner and Manager (as those terms are defined under the MSA). In addition to the use of and reliance on this report by Owner and Manager, any person who has received a reliance letter for this report may use and rely on this report as if it was prepared for such persons. Any use of or reliance on this report by any other person (i.e., a person other than any Owner, Manager or otherwise permitted person) is the sole and exclusive responsibility of such other person. Consultant accepts no responsibility for damages, if any, suffered by such other person as a result of the use of or reliance on this report.

This report is based on the best information available to Consultant at the time of preparing this report after Consultant has used best industry practices, in the circumstances, to obtain information. To the extent that Consultant was required to rely on information from other persons, Consultant has verified such information to the extent reasonably possible in the circumstances. The material provided in this report reflects best industry judgment in light of the information available at the time of preparation of this report.

6.0 REFERENCES

The following legislation and documents were referenced in completing the assessment and this report:

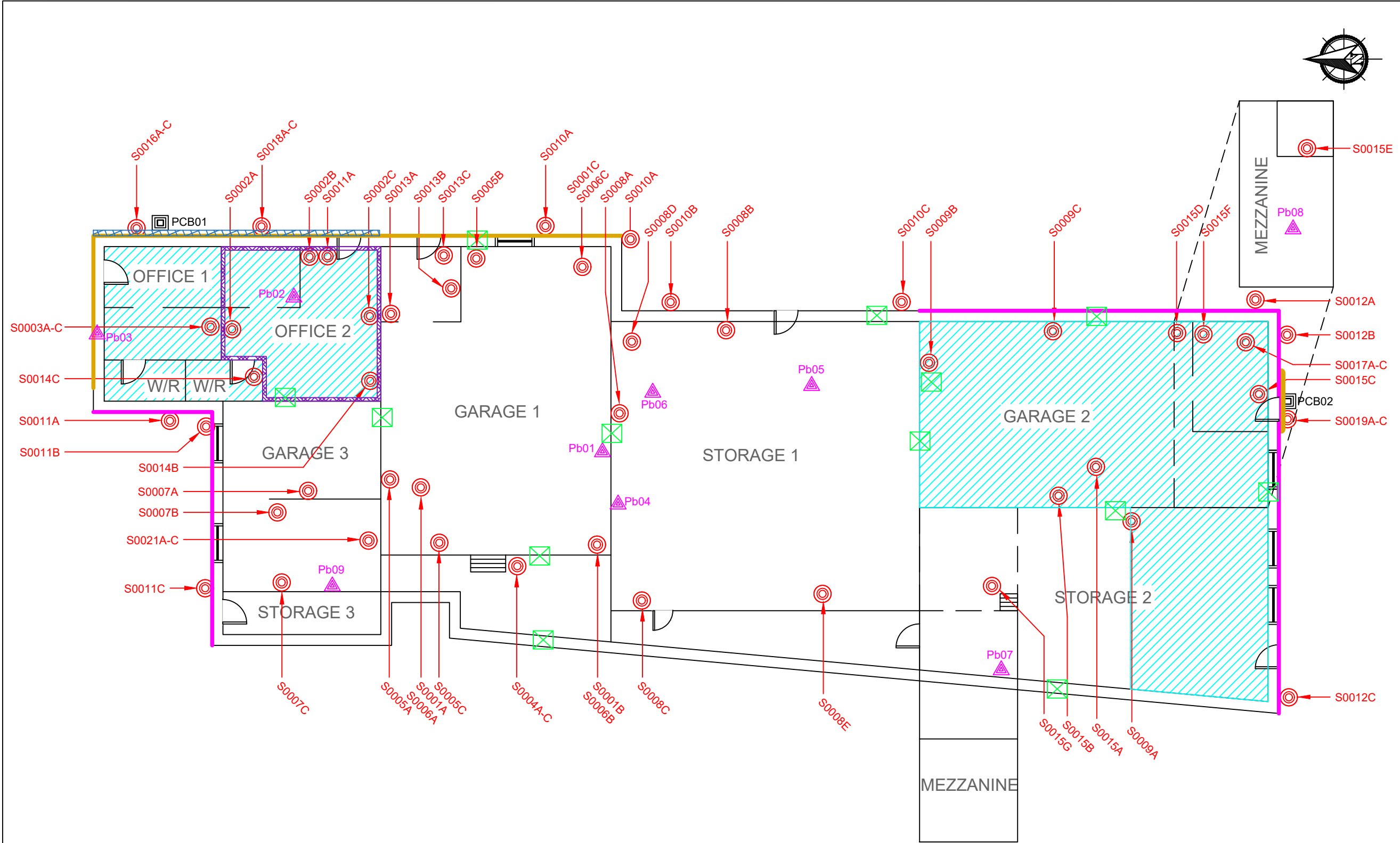
Ontario


1. Asbestos on Construction Projects and in Buildings and Repair Operations, Ontario Regulation 278/05.
2. Designated Substances, Ontario Regulation 490/09.
3. Lead on Construction Projects, Ministry of Labour Guidance Document.
4. The Environmental Abatement Council of Ontario (EACO) Lead Guideline for Construction, Renovation, Maintenance or Repair, October 2014.
5. Ministry of the Environment Regulation, R.R.O. 1990 Reg. 347 as amended.
6. Surface Coating Materials Regulations, SOR/2005-109, Hazardous Products Act.
7. Silica on Construction Projects, Ministry of Labour Guidance Document.
8. Alert – Mould in Workplace Buildings, Ontario Ministry of Labour.

230236.003 HazMat Pre-Con 320 McRae Avenue Ottawa ON GWL





Template: Master Report for Hazardous Materials Assessment Report (Pre-Construction), Haz, October 5, 2018

APPENDIX I
Drawings










LEGEND:

-  ASBESTOS BULK SAMPLE
-  LEAD BULK SAMPLE
-  PCB BULK SAMPLE
- NAR NO ACCESS TO ROOM/AREA
-  INTRUSIVE INSPECTION LOCATION

ASBESTOS-CONTAINING MATERIALS:

-  DRYWALL JOINT COMPOUND
-  SWIRL TEXTURE FINISH
-  CEMENT BOARD
-  AGGREGATE EMBEDDED STUCCO
-  CAULKING/PUTTY

CLIENT:

THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

320 MCRAE AVENUE
OTTAWA, ONTARIO

FIGURE NAME:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
GROUND FLOOR

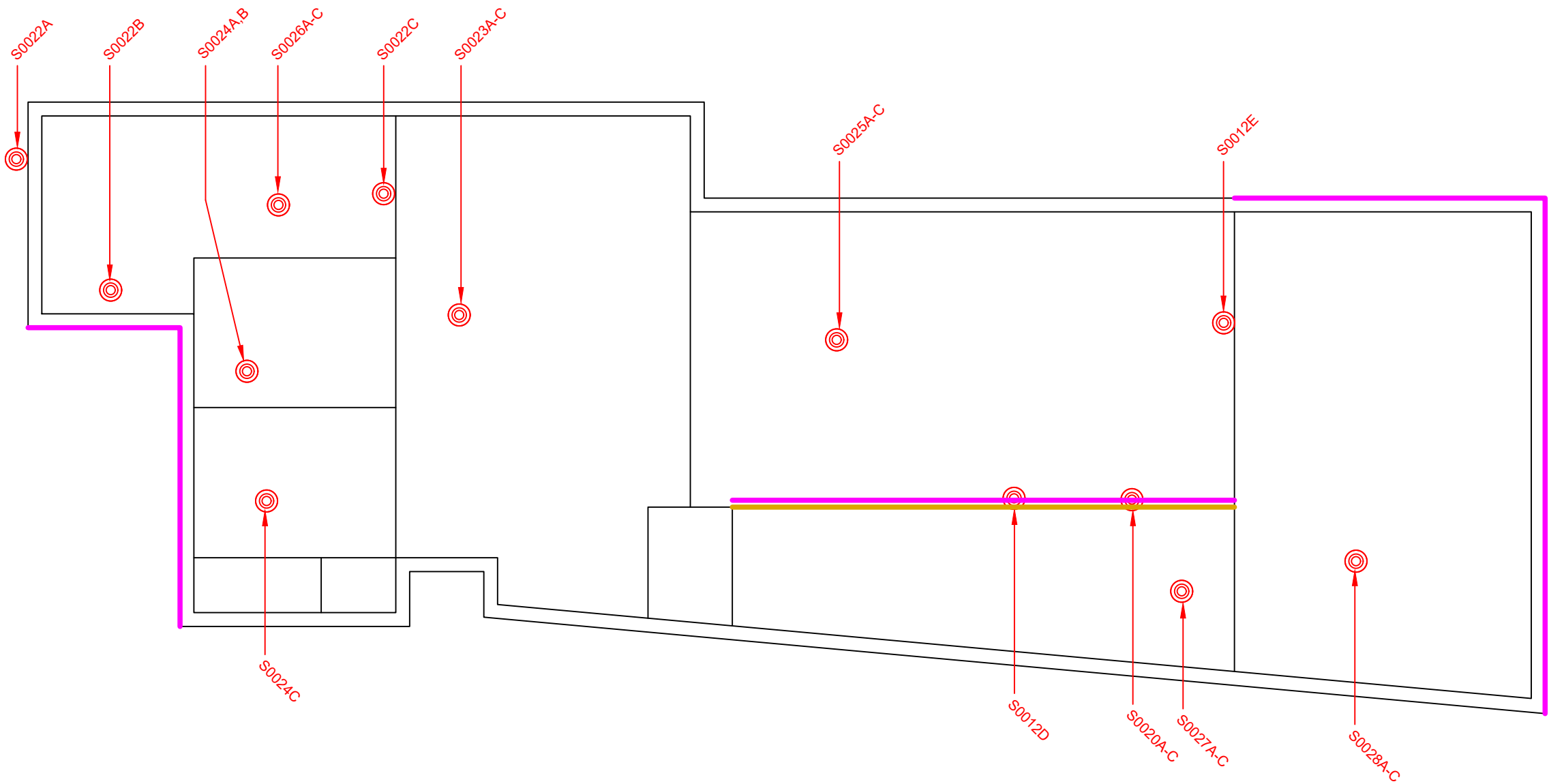
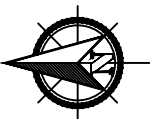
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CHECKED BY:	TL		
SCALE:	NTS		

NOTE:

- SURFACE PAINT/COATING CONTAINS ELEVATED LEVELS OF LEAD ON ROUGH CAST PLASTER IN STORAGE 1.

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



- LEGEND:
- ASBESTOS BULK SAMPLE
 - LEAD BULK SAMPLE
 - PCB BULK SAMPLE
 - NAR NO ACCESS TO ROOM/AREA
 - INTRUSIVE INSPECTION LOCATION
- ASBESTOS-CONTAINING MATERIALS:
- DRYWALL JOINT COMPOUND
 - SWIRL TEXTURE FINISH
 - CEMENT BOARD
 - AGGREGATE EMBEDDED STUCCO
 - CAULKING/PUTTY

CLIENT:
THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:
320 MCRAE AVENUE
OTTAWA, ONTARIO

FIGURE NAME:
HAZARDOUS BUILDING
MATERIALS ASSESSMENT
ROOF

DATE: NOVEMBER 2018	PROJECT # : 230236.003
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CHECKED BY: TL

SCALE: NTS

NOTE:
NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



LEGEND:

- ASBESTOS BULK SAMPLE
- LEAD BULK SAMPLE
- PCB BULK SAMPLE
- NAR** NO ACCESS TO ROOM/AREA
- INTRUSIVE INSPECTION LOCATION
- MOULD GROWTH ON WALL

ASBESTOS-CONTAINING MATERIALS:

- VINYL SHEET FLOORING
- TEXTURED PLASTER
- AGGREGATE EMBEDDED STUCCO

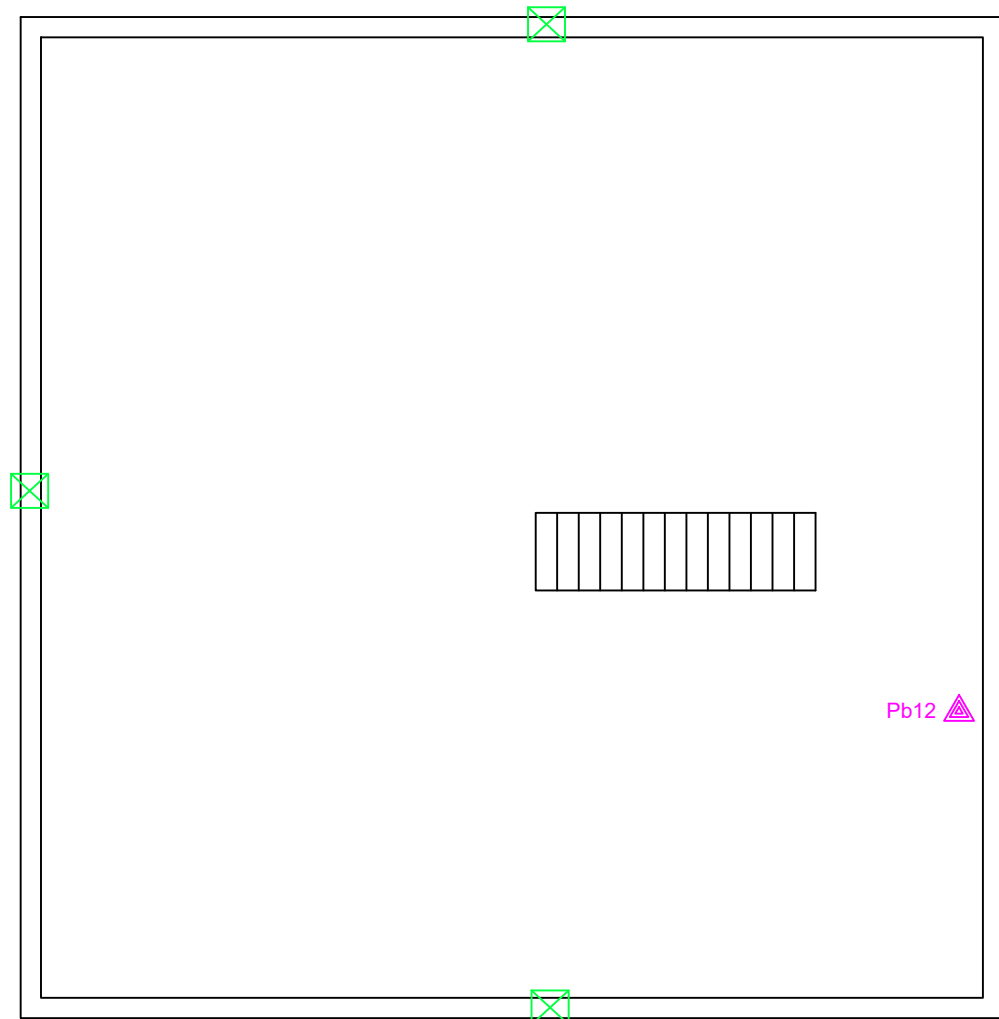
CLIENT:
THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

311 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

FIGURE NAME:
HAZARDOUS BUILDING
MATERIALS ASSESSMENT
BASEMENT

DATE: NOVEMBER 2018	PROJECT # : 230236.003
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SCALE: NTS	

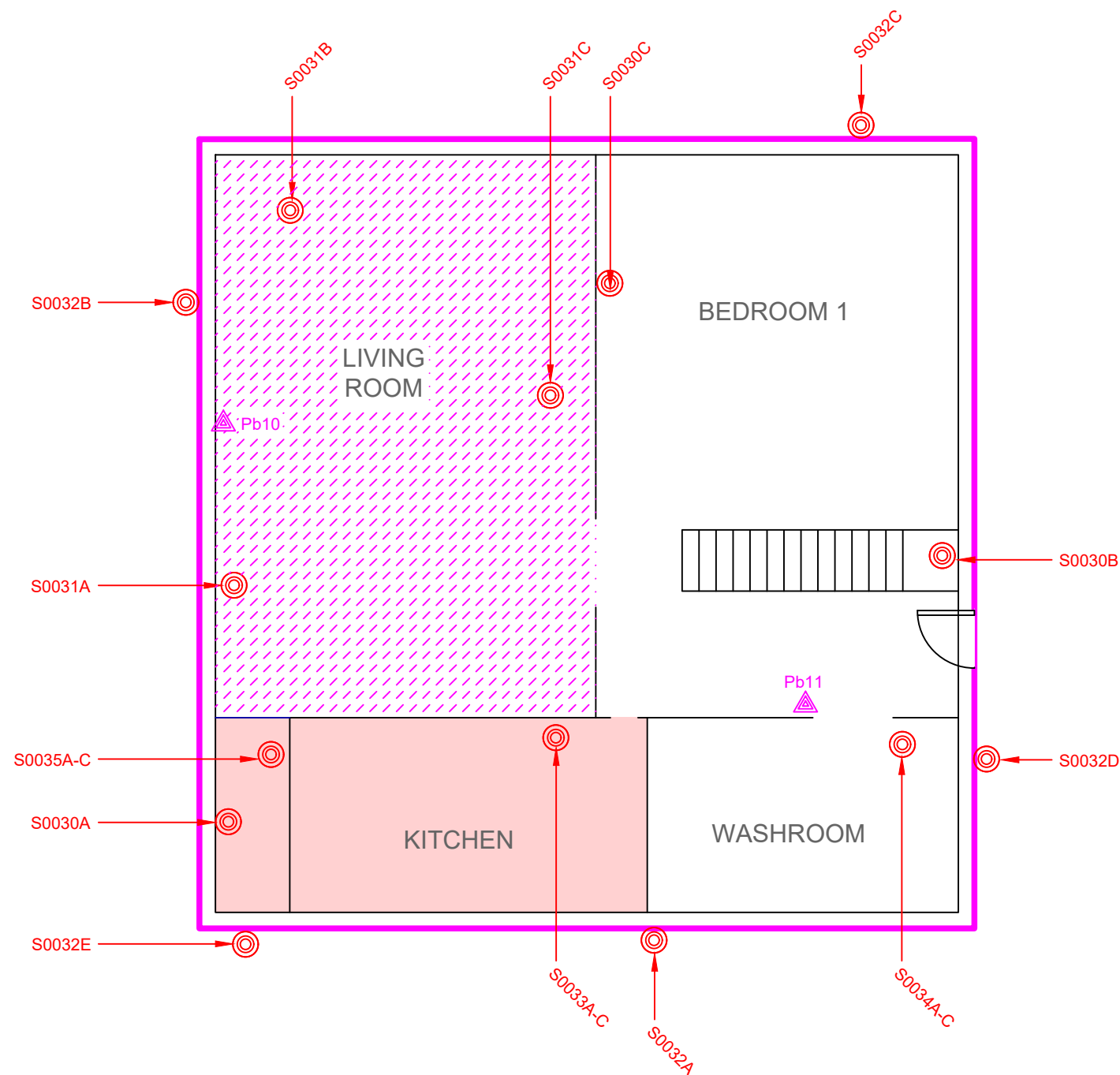


NOTE:

- ASBESTOS-CONTAINING SMOOTH PLASTER PRESENT ON WALLS AND CEILINGS THROUGHOUT HOUSE.

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.








NOTE:

- ASBESTOS-CONTAINING SMOOTH PLASTER PRESENT ON WALLS AND CEILINGS THROUGHOUT HOUSE.
- LEAD PAINT/SURFACE COATING PRESENT ON INTERIOR TRIM.




NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

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LEGEND:

-  ASBESTOS BULK SAMPLE
-  LEAD BULK SAMPLE
-  PCB BULK SAMPLE
- NAR** NO ACCESS TO ROOM/AREA
-  INTRUSIVE INSPECTION LOCATION
-  MOULD GROWTH ON WALL

ASBESTOS-CONTAINING MATERIALS:

-  VINYL SHEET FLOORING
-  TEXTURED PLASTER
-  AGGREGATE EMBEDDED STUCCO

CLIENT:

THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

311 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

FIGURE NAME:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
MAIN FLOOR

DATE:

NOVEMBER 2018

PROJECT # :

230236.003

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CM

DRAWING:

CHECKED BY:

TL

SCALE:

NTS

2 OF 3



LEGEND:

- ASBESTOS BULK SAMPLE
- LEAD BULK SAMPLE
- PCB BULK SAMPLE
- NAR NO ACCESS TO ROOM/AREA
- INTRUSIVE INSPECTION LOCATION
- MOULD GROWTH ON WALL

ASBESTOS-CONTAINING MATERIALS:

- VINYL SHEET FLOORING
- TEXTURED PLASTER
- AGGREGATE EMBEDDED STUCCO

CLIENT:
THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

311 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

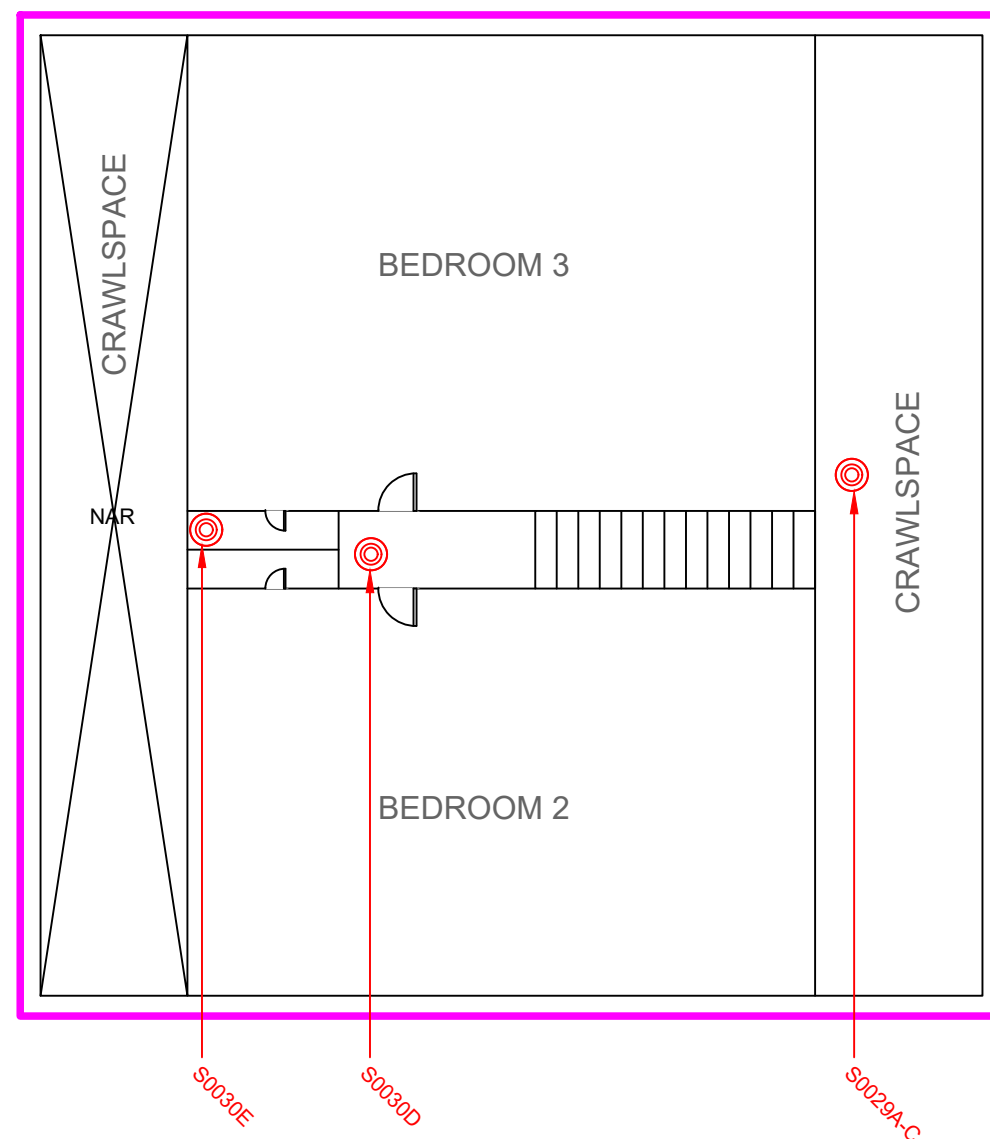
FIGURE NAME:
HAZARDOUS BUILDING
MATERIALS ASSESSMENT
SECOND FLOOR

DATE: NOVEMBER 2018	PROJECT # : 230236.003
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CHECKED BY: TL

SCALE: NTS



NOTE:

- ASBESTOS-CONTAINING SMOOTH PLASTER PRESENT ON WALLS AND CEILINGS THROUGHOUT HOUSE.

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



- ASBESTOS-CONTAINING MATERIALS:

- AGGREGATE EMBEDDED STUCCO

LOCATION:

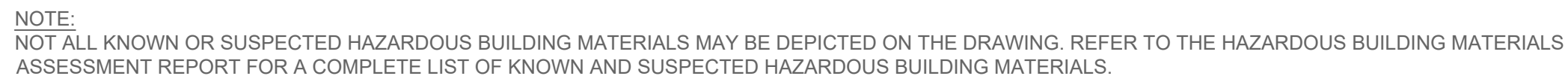
315 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

FIGURE NAME:
HAZARDOUS BUILDING
MATERIALS ASSESSMENT
BASEMENT

DATE:	PROJECT # :
NOVEMBER 2018	230236.003







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CHECKED BY:	
TL	1 OF 4
SCALE:	
NTS	

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LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.

LEGEND:

-  ASBESTOS BULK SAMPLE
-  LEAD BULK SAMPLE
-  PCB BULK SAMPLE
- NAR** NO ACCESS TO ROOM/AREA
-  INTRUSIVE INSPECTION LOCATION
-  MOULD GROWTH ON WALL
-  MOULD GROWTH

ASBESTOS-CONTAINING MATERIALS:

- AGGREGATE EMBEDDED STUCCO

CLIENT: THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

315 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

FIGURE NAME:
HAZARDOUS BUILDING
MATERIALS ASSESSMENT
MAIN FLOOR

DATE: NOVEMBER 2018

PROJECT #:	230236.003
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CHECKED BY:

TL

SCALE: NTS

DRAWING:

2 OF 4



- LEGEND:
- ASBESTOS BULK SAMPLE
 - LEAD BULK SAMPLE
 - PCB BULK SAMPLE
 - NAR NO ACCESS TO ROOM/AREA
 - INTRUSIVE INSPECTION LOCATION
 - MOULD GROWTH ON WALL
 - MOULD GROWTH
- ASBESTOS-CONTAINING MATERIALS:
- AGGREGATE EMBEDDED STUCCO

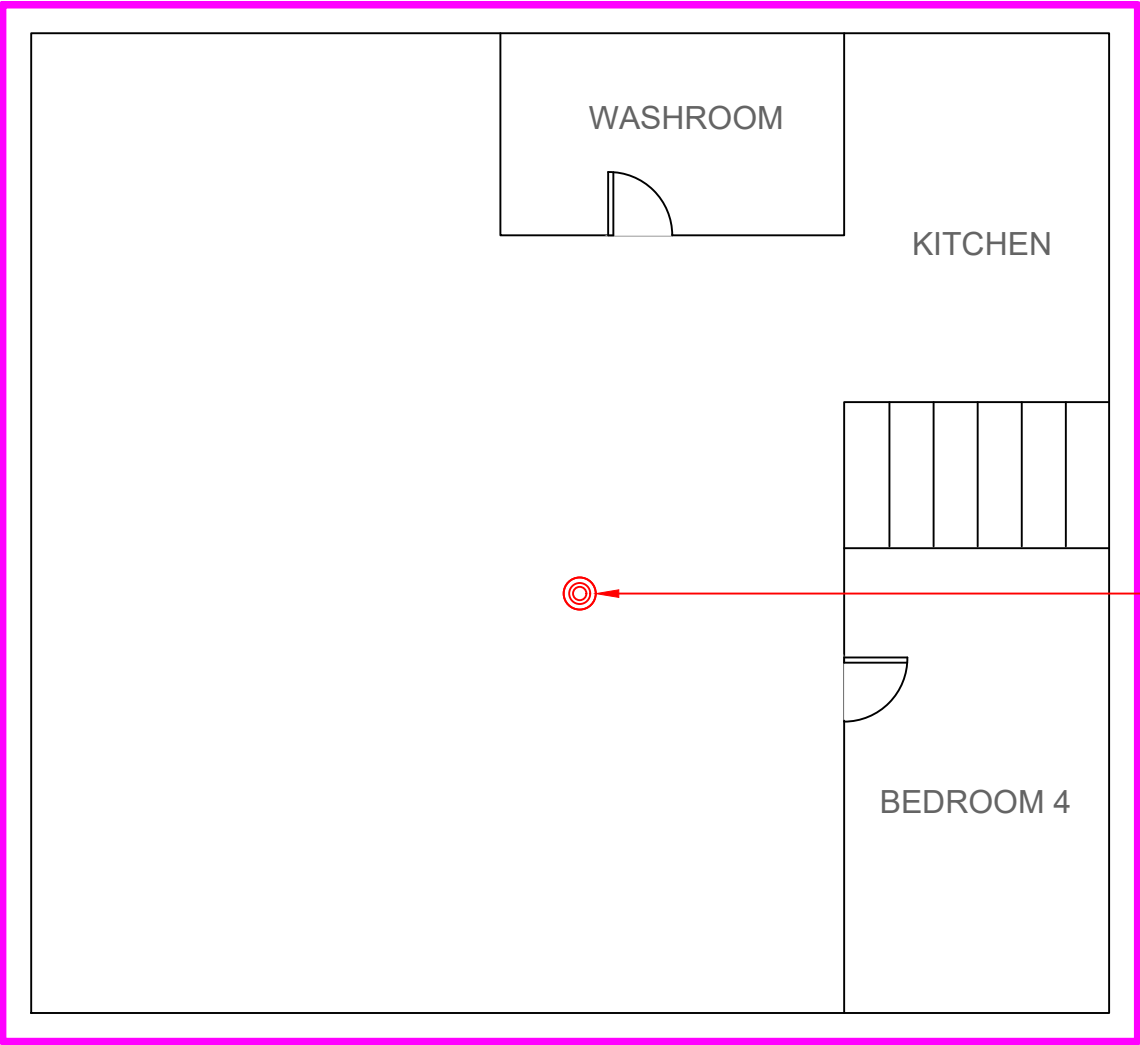
CLIENT:
THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

315 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

FIGURE NAME:
HAZARDOUS BUILDING
MATERIALS ASSESSMENT
SECOND FLOOR

DATE: NOVEMBER 2018	PROJECT # : 230236.003
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CHECKED BY: TL	
SCALE: NTS	

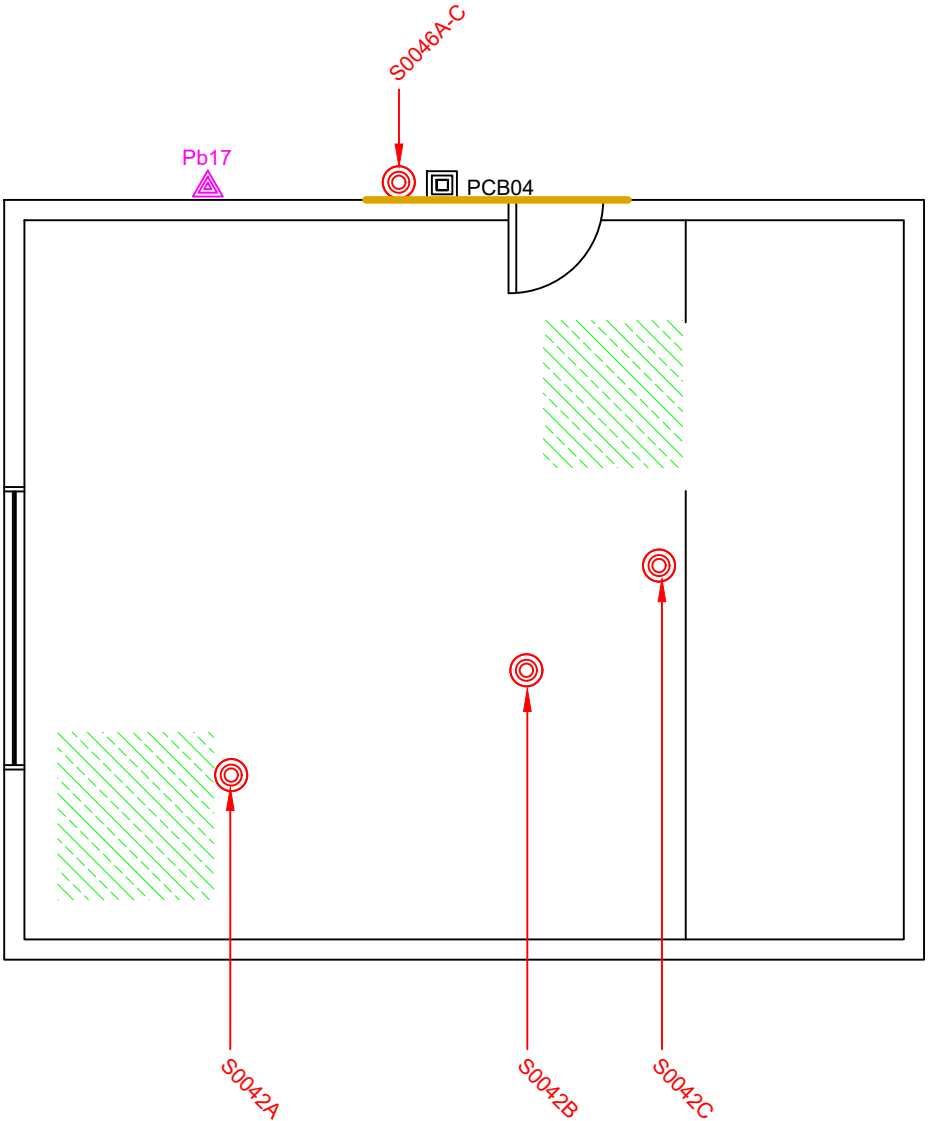


NOTE:
NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS
ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.



- LEGEND:
- ASBESTOS BULK SAMPLE
 - LEAD BULK SAMPLE
 - PCB BULK SAMPLE
 - MOULD GROWTH
- ASBESTOS-CONTAINING MATERIALS:
- CAULKING/PUTTY



NOTE:

- COMPOSITE LEAD PAINT/SURFACE COATINGS PRESENT ON EXTERIOR OF GARAGE.

NOT ALL KNOWN OR SUSPECTED HAZARDOUS BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE HAZARDOUS BUILDING MATERIALS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED HAZARDOUS BUILDING MATERIALS.

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CLIENT:

THE GREAT WEST LIFE
ASSURANCE COMPANY c/o
GWL REALTY ADVISORS

LOCATION:

315 TWEEDSMUIR AVENUE
OTTAWA, ONTARIO

FIGURE NAME:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
GARAGE

DATE: NOVEMBER 2018	PROJECT # : 230236.003
DRAWN BY: CM	4 OF 4
CHECKED BY: TL	
SCALE: NTS	

APPENDIX II-A
Asbestos Analytical Certificates



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Neil Box
Tanner Larose

Project: 230236.003,320 McRae Avenue, Ottawa, The Great-West Life Assurance Company
c/o GWL Realty Advisors Inc.

Lab Order ID: 51829112
Analysis ID: 51829112_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0001A	Spray-applied insulation - Garage 1	None Detected	95% Cellulose	5% Other	Brown Fibrous Homogeneous
51829112PLM_1					Teased
0001B	Spray-applied insulation - Garage 1	None Detected	95% Cellulose	5% Other	Brown Fibrous Homogeneous
51829112PLM_2					Teased
0001C	Spray-applied insulation - Garage 1	None Detected	95% Cellulose	5% Other	Brown Fibrous Homogeneous
51829112PLM_3					Teased
0002A	Swirl texture finish - Office 2	3% Chrysotile		97% Other	White Non Fibrous Homogeneous
51829112PLM_4					Crushed
0002B	Swirl texture finish - Office 2	Not Analyzed			
51829112PLM_5					
0002C	Swirl texture finish - Office 2	Not Analyzed			
51829112PLM_6					
0003A	Acoustic ceiling tile; 24"x48", width-wise fissures and pinholes - Office 1	None Detected	40% Cellulose 40% Mineral Wool	20% Other	Tan Fibrous Homogeneous
51829112PLM_7					Teased
0003B	Acoustic ceiling tile; 24"x48", width-wise fissures and pinholes - Office 1	None Detected	40% Cellulose 40% Mineral Wool	20% Other	Tan Fibrous Homogeneous
51829112PLM_8					Teased

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAL. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Charmel Dozier (92)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Neil Box
Tanner Larose

Project: 230236.003,320 McRae Avenue, Ottawa, The Great-West Life Assurance Company
c/o GWL Realty Advisors Inc.

Lab Order ID: 51829112
Analysis ID: 51829112_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0003C	Acoustic ceiling tile; 24"x48", width-wise fissures and pinholes - Office 1	None Detected	40% Cellulose 40% Mineral Wool	20% Other	Tan Fibrous Homogeneous
51829112PLM_9					Teased
0004A - A	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_10	white layer				Crushed
0004A - B	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_75	beige layer				Crushed
0004A - C	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_76	gray layer				Crushed
0004B - A	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_11	white layer				Crushed
0004B - B	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_77	beige layer				Crushed
0004B - C	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_78	gray layer				Crushed
0004C - A	Smooth plaster; interior wall - Mechancial Area, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_12	white layer				Crushed

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Charmel Dozier (92)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Neil Box
Tanner Larose

Project: 230236.003,320 McRae Avenue, Ottawa, The Great-West Life Assurance Company
c/o GWL Realty Advisors Inc.

Lab Order ID: 51829112
Analysis ID: 51829112_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0004C - B	Smooth plaster; interior wall - Mechanical Area, Garage 1	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_79	beige layer				Crushed
0004C - C	Smooth plaster; interior wall - Mechanical Area, Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_80	gray layer				Crushed
0005A	Rough cast plaster; original perimeter wall - Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_13					Crushed
0005B	Rough cast plaster; perimeter wall - Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_14					Crushed
0005C	Rough cast plaster; interior wall - Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_15					Crushed
0006A - A	Rough cast plaster; ceiling - Garage 1	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_16	beige layer				Crushed
0006A - B	Rough cast plaster; ceiling - Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_81	gray layer				Crushed
0006B - A	Rough cast plaster; ceiling - Garage 1	None Detected		100% Other	Green Non Fibrous Homogeneous
51829112PLM_17	beige layer				Crushed

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0006B - B	Rough cast plaster; ceiling - Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_82	gray layer				Crushed
0006C - A	Rough cast plaster; ceiling - Garage 1	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_18	beige layer				Crushed
0006C - B	Rough cast plaster; ceiling - Garage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_83	gray layer				Crushed
0007A	Rough cast plaster; interior wall - East side, Garage 3	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_19					Crushed
0007B	Rough cast plaster; interior wall - West side, Garage 3	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_20					Crushed
0007C - A	Rough cast plaster; interior wall - West side, Garage 3	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829112PLM_21	beige layer				Crushed
0007C - B	Rough cast plaster; interior wall - West side, Garage 3	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_84	gray layer				Crushed
0008A - A	Rough cast plaster; north interior wall - Storage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_22	white layer				Crushed

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0008A - B	Rough cast plaster; north interior wall - Storage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_85	gray layer				Crushed
0008B - A	Rough cast plaster; east perimeter wall - Storage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_23	white layer				Crushed
0008B - B	Rough cast plaster; east perimeter wall - Storage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_86	gray layer				Crushed
0008C - A	Rough cast plaster; west interior wall - Storage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_24	white layer				Crushed
0008C - B	Rough cast plaster; west interior wall - Storage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_87	gray layer				Crushed
0008D - A	Rough cast plaster; northeast ceilingl - Storage 1	None Detected		100% Quartz	White Non Fibrous Homogeneous
51829112PLM_25	white layer				Crushed
0008D - B	Rough cast plaster; northeast ceilingl - Storage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_88	gray layer				Crushed
0008E - A	Rough cast plaster; southwest interior wall - Storage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_26	white layer				Crushed

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0008E - B	Rough cast plaster; southwest interior wall - Storage 1	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_89	gray layer				Crushed
0009A	Rough cast plaster; interior wall - Storage 2	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_27					Crushed
0009B	Rough cast plaster; east perimeter wall - Garage 2	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_28					Crushed
0009C	Rough cast plaster; interior wall - Garage 2	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_29					Crushed
0010A	Aggregated embedded stucco; east exterior wall - Garage 1	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829112PLM_30					Crushed
0010B	Aggregated embedded stucco; east exterior wall - Storage 1	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829112PLM_31					Crushed
0010C	Aggregated embedded stucco; east exterior wall - Storage 1	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829112PLM_32					Crushed
0011A	Aggregated embedded stucco; west exterior wall - Office 1	2% Chrysotile		98% Other	Gray Non Fibrous Heterogeneous
51829112PLM_33					Crushed

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0011B	Aggregated embedded stucco; north exterior wall - Garage 3	4% Chrysotile		96% Other	Gray Non Fibrous Heterogeneous
51829112PLM_34					Crushed
0011C	Aggregated embedded stucco; north exterior wall - Garage 3	4% Chrysotile		96% Other	Gray Non Fibrous Homogeneous
51829112PLM_35					Crushed
0012A	Aggregated embedded stucco; east exterior wall - Garage 2	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829112PLM_36					Crushed
0012B	Aggregated embedded stucco; south exterior wall - Garage 2	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829112PLM_37					Crushed
0012C	Aggregated embedded stucco; south exterior wall - Storage 2	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829112PLM_38					Crushed
0012D	Aggregated embedded stucco; south exterior wall - Roof level, Storage 2	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829112PLM_39					Crushed
0012E	Aggregated embedded stucco; south exterior wall - Roof level, Garage 2	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829112PLM_40					Crushed
0013A	Drywall joint compound; interior wall - Office, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_41					Crushed

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0013B	Drywall joint compound; interior wall - Office, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_42					Crushed
0013C	Drywall joint compound; perimeter wall - Office, Garage 1	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_43					Crushed
0014A	Drywall joint compound; perimeter wall - Office 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_44					Crushed
0014B	Drywall joint compound; interior wall - Office 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_45					Crushed
0014C	Drywall joint compound; interior wall - Office 2	2% Chrysotile		98% Other	White Non Fibrous Homogeneous
51829112PLM_46					Crushed
0015A	Drywall joint compound; interior column - Garage 2	3% Chrysotile		97% Other	White Non Fibrous Homogeneous
51829112PLM_47					Crushed
0015B	Drywall joint compound; interior wall - Garage 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_48					Crushed
0015C	Drywall joint compound; south perimeter wall - Garage 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_49					Crushed

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0015D	Drywall joint compound; ceiling - Garage 2	3% Chrysotile		97% Other	Tan Non Fibrous Homogeneous
51829112PLM_50					Crushed
0015E	Drywall joint compound; interior wall - Mezzanine, Garage 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_51					Crushed
0015F	Drywall joint compound; interior wall - Office, Garage 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_52					Crushed
0015G	Drywall joint compound; interior wall - Mezzanine, Storage 2	None Detected		100% Other	White Non Fibrous Homogeneous
51829112PLM_53					Crushed
0016A	Cement board; east exterior wall - Office 1	12% Chrysotile		88% Other	Gray Non Fibrous Homogeneous
51829112PLM_54					Crushed
0016B	Cement board; east exterior wall - Office 1	Not Analyzed			
51829112PLM_55					
0016C	Cement board; east exterior wall - Office 1	Not Analyzed			
51829112PLM_56					
0017A - A	Vinyl floor tile; 12"x12", grey - Office, Garage 2	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_57	tile				Dissolved

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0017A - B	Vinyl floor tile; 12"x12", grey - Office, Garage 2	None Detected		100% Other	Black Non Fibrous Homogeneous
51829112PLM_90	mastic				Dissolved
0017B - A	Vinyl floor tile; 12"x12", grey - Office, Garage 2	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_58	tile				Dissolved
0017B - B	Vinyl floor tile; 12"x12", grey - Office, Garage 2	None Detected		100% Other	Black Non Fibrous Homogeneous
51829112PLM_91	mastic				Dissolved
0017C - A	Vinyl floor tile; 12"x12", grey - Office, Garage 2	None Detected		100% Other	Gray Non Fibrous Homogeneous
51829112PLM_59	tile - ashed				Ashed
0017C - B	Vinyl floor tile; 12"x12", grey - Office, Garage 2	None Detected		100% Other	Black Non Fibrous Homogeneous
51829112PLM_92	mastic				Dissolved
0018A	Caulking; black on window/brick seams - Office 1	2% Chrysotile		98% Other	Black Non Fibrous Homogeneous
51829112PLM_60					Dissolved
0018B	Caulking; black on window/brick seams - Office 2	Not Analyzed			
51829112PLM_61					
0018C	Caulking; black on window/brick seams - Garage 1	Not Analyzed			
51829112PLM_62					

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0019A	Caulking; white on door/stucco seams - Garage 2	5% Chrysotile		95% Other	White Non Fibrous Homogeneous
51829112PLM_63					Dissolved
0019B	Caulking; white on door/stucco seams - Garage 2	Not Analyzed			
51829112PLM_64					
0019C	Caulking; white on door/stucco seams - Garage 2	Not Analyzed			
51829112PLM_65					
0020A	Putty; white on windows - Roof, Storage 2	3% Chrysotile		97% Other	White Non Fibrous Homogeneous
51829112PLM_66					Crushed
0020B	Putty; white on windows - Roof, Storage 2	Not Analyzed			
51829112PLM_67					
0020C	Putty; white on windows - Roof, Storage 2	Not Analyzed			
51829112PLM_68					
0021A	Layered tar - West side, Garage 3	None Detected	20% Cellulose 5% Hair 5% Synthetic Fibers	70% Other	Black Fibrous Homogeneous
51829112PLM_69					Dissolved
0021B	Layered tar - West side, Garage 3	None Detected	20% Cellulose 5% Hair 5% Synthetic Fibers	70% Other	Black Fibrous Homogeneous
51829112PLM_70					Dissolved

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Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0021C	Layered tar - West side, Garage 3	None Detected	20% Cellulose 5% Hair 5% Synthetic Fibers	70% Other	Black Fibrous Homogeneous
51829112PLM_71					Dissolved
0022A	Tar; on sign anchors - Roof, Office 1	None Detected	15% Cellulose	85% Other	Black Non Fibrous Homogeneous
51829112PLM_72					Dissolved
0022B	Tar; repair - Roof, Office 1	None Detected	15% Cellulose	85% Other	Black Non Fibrous Homogeneous
51829112PLM_73					Dissolved
0022C	Tar; on washroom stack - Roof, Office 1	None Detected	15% Cellulose	85% Other	Black Non Fibrous Homogeneous
51829112PLM_74					Dissolved

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51829112

Version 1-15-2012

Client:	Pinchin Ltd.	*Instructions: Use Column "B" for your contact info	Invoice to: kbrook@pinchin.com Email address here
Contact:	Tanner Larose 555 Legget Drive, Suite 1001, Tower A		
Address:	Kanata, ON K2K 2X3	To See an Example Click the bottom Example Tab.	
Phone:	613-592-3387		
Fax:	613-592-5897	Enter samples between "<<" and ">>"	Scientific Analytical Institute
Email:	tlarose@pinchin.com nbox@pinchin.com 230236.003, 320 McRae Avenue, Ottawa, The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.		
Project:		Begin Samples with a "<<" above the first sample and end with a ">>" below the last sample. Only Enter your data on the first sheet "Sheet1"	4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sailab.com
Client Notes:			
P.O. #.	230236.003	Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.	
Date Submitted:	November 6, 2018		
Analysis:	PLM - Stop Positive		
TurnAroundTime:	4days		

Sample Number	Data 1 (Lab use only)	Sample Description	Data 2 (Lab use only)
<<			
0001A		Spray-applied insulation - Garage 1	
0001B		Spray-applied insulation - Garage 1	
0001C		Spray-applied insulation - Garage 1	
0002A		Swirl texture finsh - Office 2	
0002B		Swirl texture finsh - Office 2	
0002C		Swirl texture finsh - Office 2	
0003A		Acoustic ceiling tile; 24"x48", width-wise fissures and pinholes - Office 1	
0003B		Acoustic ceiling tile; 24"x48", width-wise fissures and pinholes - Office 1	
0003C		Acoustic ceiling tile; 24"x48", width-wise fissures and pinholes - Office 1	
0004A		Smooth plaster; interior wall - Mechancial Area, Garage 1	
0004B		Smooth plaster; interior wall - Mechancial Area, Garage 1	

Accepted ☒Rejected ☐

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0004C	Smooth plaster; interior wall - Mechancial Area, Garage 1
0005A	Rough cast plaster; original perimeter wall - Garage 1
0005B	Rough cast plaster; perimeter wall - Garage 1
0005C	Rough cast plaster; interior wall - Garage 1
0006A	Rough cast plaster; ceiling - Garage 1
0006B	Rough cast plaster; ceiling - Garage 1
0006C	Rough cast plaster; ceiling - Garage 1
0007A	Rough cast plaster; interior wall - East side, Garage 3
0007B	Rough cast plaster; interior wall - West side, Garage 3
0007C	Rough cast plaster; interior wall - West side, Garage 3
0008A	Rough cast plaster; north interior wall - Storage 1
0008B	Rough cast plaster; east perimeter wall - Storage 1
0008C	Rough cast plaster; west interior wall - Storage 1
0008D	Rough cast plaster; northeast ceilingl - Storage 1
0008E	Rough cast plaster; southwest interior wall - Storage 1
0009A	Rough cast plaster; interior wall - Storage 2
0009B	Rough cast plaster; east perimeter wall - Garage 2
0009C	Rough cast plaster; interior wall - Garage 2
0010A	Aggregated embedded stucco; east exterior wall - Garage 1
0010B	Aggregated embedded stucco; east exterior wall - Storage 1
0010C	Aggregated embedded stucco; east exterior wall - Storage 1
0011A	Aggregated embedded stucco; west exterior wall - Office 1
0011B	Aggregated embedded stucco; north exterior wall - Garage 3
0011C	Aggregated embedded stucco; north exterior wall - Garage 3
0012A	Aggregated embedded stucco; east exterior wall - Garage 2
0012B	Aggregated embedded stucco; south exterior wall - Garage 2
0012C	Aggregated embedded stucco; south exterior wall - Storage 2
0012D	Aggregated embedded stucco; south exterior wall - Roof level, Storage 2
0012E	Aggregated embedded stucco; south exterior wall - Roof level, Garage 2
0013A	Drywall joint compound; interior wall - Office, Garage 1
0013B	Drywall joint compound; interior wall - Office, Garage 1
0013C	Drywall joint compound; perimeter wall - Office, Garage 1
0014A	Drywall joint compound; periemter wall - Office 2
0014B	Drywall joint compound; interior wall - Office 2
0014C	Drywall joint compound; interior wall - Office 2
0015A	Drywall joint compound; interior column - Garage 2
0015B	Drywall joint compound; interior wall - Garage 2

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0015C	Drywall joint compound; south perimeter wall - Garage 2
0015D	Drywall joint compound; ceiling - Garage 2
0015E	Drywall joint compound; interior wall - Mezzanine, Garage 2
0015F	Drywall joint compound; interior wall - Office, Garage 2
0015G	Drywall joint compound; interior wall - Mezzanine, Storage 2
0016A	Cement board; east exterior wall - Office 1
0016B	Cement board; east exterior wall - Office 1
0016C	Cement board; east exterior wall - Office 1
0017A	Vinyl floor tile; 12"x12", grey - Office, Garage 2
0017B	Vinyl floor tile; 12"x12", grey - Office, Garage 2
0017C	Vinyl floor tile; 12"x12", grey - Office, Garage 2
0018A	Caulking; black on window/brick seams - Office 1
0018B	Caulking; black on window/brick seams - Office 2
0018C	Caulking; black on window/brick seams - Garage 1
0019A	Caulking; white on door/stucco seams - Garage 2
0019B	Caulking; white on door/stucco seams - Garage 2
0019C	Caulking; white on door/stucco seams - Garage 2
0020A	Putty; white on windows - Roof, Storage 2
0020B	Putty; white on windows - Roof, Storage 2
0020C	Putty; white on windows - Roof, Storage 2
0021A	Layered tar - West side, Garage 3
0021B	Layered tar - West side, Garage 3
0021C	Layered tar - West side, Garage 3
0022A	Tar; on sign anchors - Roof, Office 1
0022B	Tar; repair - Roof, Office 1
0022C	Tar; on washroom stack - Roof, Office 1

>>



Project Name:	The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.		
	320 McRae Avenue, Ottawa		
Project No.:	0230236.000		
Prepared For:	T. Larose / N. Box	Date Received:	November 6, 2018
Lab Reference No.:	b200055	Date Analyzed:	November 13, 2018
Analyst(s):	T. Ly	# Samples submitted:	6
		# Phases analyzed:	12

EPA 600/R-93/116 - Method for the Determination of Asbestos in Bulk Building Materials dated July, 1993

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

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



Pinchin Ltd. Asbestos Laboratory

Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200055
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0023A Built-up roofing - Roof, Garage 1	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Man-made Vitreous Fibres < 0.5% Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:		Cellulose is present on the surface of this sample.	
0023B Built-up roofing - Roof, Garage 1	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Man-made Vitreous Fibres < 0.5% Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:		Cellulose is present on the surface of this sample.	
0023C Built-up roofing - Roof, Garage 1	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Man-made Vitreous Fibres < 0.5% Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:		Cellulose is present on the surface of this sample.	



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200055
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0024A Built-up roofing - Roof, Garage 3	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Man-made Vitreous Fibres < 0.5% Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:		Cellulose is present on the surface of this sample.	
0024B Built-up roofing - Roof, Garage 3	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Man-made Vitreous Fibres < 0.5% Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:		Cellulose is present on the surface of this sample.	
0024C Built-up roofing - Roof, Garage 3	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Man-made Vitreous Fibres < 0.5% Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:		Cellulose is present on the surface of this sample.	

Reviewed by:

Digitally signed by
Eileen Luong
Date: 2018.11.13
17:01:28 -05'00'

Reporting Analyst:

Digitally signed by
Eileen Luong
Date: 2018.11.13
17:01:54 -05'00'



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Special Instructions:

Pinchin Ltd. - Asbestos Laboratory
Internal Asbestos Bulk Sample Chain of Custody

Client Name:	The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.	Project Address:	320 McRae Avenue, Ottawa
Portfolio/Building No:		Pinchin File:	230236
Submitted by:	Tanner Larose	Email:	tlarose@pinchin.com
CC Results to:	Neil Box	CC Email:	nbox@pinchin.com
Invoice to:	Kristen Brook	Invoice Email:	kbrook@pinchin.com
Date Submitted:	November 5, 2018	Required by:	November 13, 2018
# of Samples:	2	Priority:	5 Day Turnaround
Year of Building Construction (Mandatory Field):			
Do NOT Stop on Positive (Sample Numbers):		0004-0015	
Pinchin Group Company (Mandatory Field):		Pinchin	

To be Completed by Lab Personnel Only:

Lab Reference #:	6200055	Time:	24 hour clock
Received by:	NOV 06 2018 JL	Date:	Month Day Year
Name(s) of Analyst(s):			

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
	0001	A	Spray-applied insulation - Garage 1
	0001	B	Spray-applied insulation - Garage 1
	0001	C	Spray-applied insulation - Garage 1
	0002	A	Swirl texture finish - Office 2
	0002	B	Swirl texture finish - Office 2
	0002	C	Swirl texture finish - Office 2

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
	0021	C	Layered tar - West side, Garage 3
	0022	A	Tar; on sign anchors - Roof, Office 1
	0022	B	Tar; repair - Roof, Office 1
	0022	C	Tar; on washroom stack - Roof, Office 1
	0023	A	Built-up roofing - Roof, Garage 1 a) ND b) ND
	0023	B	Built-up roofing - Roof, Garage 1 a) ND b) ND
	0023	C	Built-up roofing - Roof, Garage 1 a) ND b) ND
	0024	A	Built-up roofing - Roof, Garage 3 a) ND b) ND
	0024	B	Built-up roofing - Roof, Garage 3 a) ND b) ND
	0024	C	Built-up roofing - Roof, Garage 3 a) ND b) ND
	0025	A	Built-up roofing - Roof, Storage 1
	0025	B	Built-up roofing - Roof, Storage 1
	0025	C	Built-up roofing - Roof, Storage 1
	0026	A	Built-up roofing - Roof, Office 2
	0026	B	Built-up roofing - Roof, Office 2
	0026	C	Built-up roofing - Roof, Office 2



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200056
Analyst(s): C. Luong
Date Received: November 6, 2018
Date Analyzed: November 13, 2018
Samples submitted: 6
Phases analyzed: 24

Method of Analysis:

EPA 600/R-93/116 - Method for the Determination of Asbestos in Bulk Building Materials dated July, 1993

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

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

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

Pinchin Ltd. is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0) for the 'EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples,' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2005.

This report relates only to the items tested.

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



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200056
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0025A Built-up roofing - Roof, Storage 1	5 Phases: a) Homogeneous, black, layered, shiny, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	d) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Man-made Vitreous Fibres 25-50% Tar and other non-fibrous 50-75%
	e) Homogeneous, black, tar material rocks.	None Detected	Cellulose 5-10% Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		
0025B Built-up roofing - Roof, Storage 1	2 Phases: a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
Comments:	Cellulose is present on the surface of this sample.		



Pinchin Ltd. Asbestos Laboratory

Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa

Project No.: 0230236.000

Prepared For: T. Larose / N. Box

Lab Reference No.: b200056

Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0025C Built-up roofing - Roof, Storage 1	5 Phases:		
	a) Homogeneous, black, layered, shiny, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	d) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Man-made Vitreous Fibres 25-50% Tar and other non-fibrous 50-75%
	e) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
 320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200056
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0026A Built-up roofing - Roof, Office 2	4 Phases:		
	a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 25-50% Tar and other non-fibrous 50-75%
	c) Homogeneous, black, sticky, tar material.	None Detected	Tar and other non-fibrous > 75%
	d) Non-homogeneous, black, roofing material.	None Detected	Synthetic Fibres 5-10% Man-made Vitreous Fibres 0.5-5% Tar and other non-fibrous > 75%
Comments:	Cellulose and drywall are present on the surface of this sample.		
0026B Built-up roofing - Roof, Office 2	4 Phases:		
	a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 25-50% Tar and other non-fibrous 50-75%
	c) Homogeneous, black, sticky, tar material.	None Detected	Tar and other non-fibrous > 75%
	d) Non-homogeneous, black, roofing material.	None Detected	Synthetic Fibres 5-10% Man-made Vitreous Fibres 0.5-5% Tar and other non-fibrous > 75%
Comments:	Cellulose and drywall are present on the surface of this sample.		



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200056
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0026C Built-up roofing - Roof, Office 2	4 Phases:		
	a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, sticky, tar material.	None Detected	Tar and other non-fibrous > 75%
	d) Non-homogeneous, black, roofing material.	None Detected	Synthetic Fibres 5-10% Man-made Vitreous 0.5-5% Fibres Tar and other non-fibrous > 75%
Comments:	Cellulose and drywall are present on the surface of this sample.		

Reviewed by:

Reporting Analyst:

Digitally signed by
Julieth Oran
Date: 2018.11.13
16:38:33 -05'00'

Digitally signed by
Julieth Oran
Date: 2018.11.13
16:38:22 -05'00'



Analyzed by: CJ
Reviewed by: JK
Report Sent by: JK



Special Instructions:

Pinchin Ltd. - Asbestos Laboratory
Internal Asbestos Bulk Sample Chain of Custody

24

Client Name:	The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.	Project Address:	320 McRae Avenue, Ottawa
Portfolio/Building No:		Pinchin File:	230236
Submitted by:	Tanner Larose	Email:	tlarose@pinchin.com
CC Results to:	Neil Box	CC Email:	nbox@pinchin.com
Invoice to:	Kristen Brook	Invoice Email:	kbrook@pinchin.com
Date Submitted:	November 5 2018	Required by:	November 13 2018
# of Samples:	92 (6)	Priority:	5 Day Turnaround
Year of Building Construction (Mandatory Field):			
Do NOT Stop on Positive (Sample Numbers):	0004-0015		
Pinchin Group Company (Mandatory Field):	Pinchin		

To be Completed by Lab Personnel Only:

Lab Reference #:	6200 056		Time:	24 hour clock		
Received by:	NOV 06 2018		Date:	Month	Day	Year
Name(s) of Analyst(s):	CJ/MT			Nov	13	2018
Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)			
	0001	A	Spray-applied insulation - Garage 1			
	0001	B	Spray-applied insulation - Garage 1			
	0001	C	Spray-applied insulation - Garage 1			
	0002	A	Swirl texture finish - Office 2			
	0002	B	Swirl texture finish - Office 2			
	0002	C	Swirl texture finish - Office 2			

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
	0021	C	Layered tar - West side, Garage 3
	0022	A	Tar; on sign anchors - Roof, Office 1
	0022	B	Tar; repair - Roof, Office 1
	0022	C	Tar; on washroom stack - Roof, Office 1
	0023	A	Built-up roofing - Roof, Garage 1
	0023	B	Built-up roofing - Roof, Garage 1
	0023	C	Built-up roofing - Roof, Garage 1
	0024	A	Built-up roofing - Roof, Garage 3
	0024	B	Built-up roofing - Roof, Garage 3
	0024	C	Built-up roofing - Roof, Garage 3
	0025	A	Built-up roofing - Roof, Storage 1 a)ND b)ND c)ND d)ND e)ND
	0025	B	Built-up roofing - Roof, Storage 1 a)ND b)ND
	0025	C	Built-up roofing - Roof, Storage 1 a)ND b)ND c)ND d)ND e)ND
	0026	A	Built-up roofing - Roof, Office 2 a)ND b)ND c)ND d)ND
	0026	B	Built-up roofing - Roof, Office 2 a)ND b)ND c)ND d)ND
	0026	C	Built-up roofing - Roof, Office 2 a)ND b)ND c)ND d)ND

MT



Project Name:	The Great-West Life Assurance Company c/o GWL Realty Advisors Inc. 320 McRae Avenue, Ottawa		
Project No.:	0230236.000		
Prepared For:	T. Larose / N. Box	Date Received:	November 6, 2018
Lab Reference No.:	b200057	Date Analyzed:	November 13, 2018
Analyst(s):	A. Williams	# Samples submitted:	6
		# Phases analyzed:	24

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

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

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

Pinchin Ltd. is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0) for the 'EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples,' and the 'EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials'; and meets all requirements of ISO/IEC 17025:2005.

This report relates only to the items tested.

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Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200057
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0027A Built-up roofing - Roof, Storage 2	3 Phases:		
	a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non-fibrous > 75%
Comments:		Cellulose is present on the surface of this sample.	
0027B Built-up roofing - Roof, Storage 2	3 Phases:		
	a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non-fibrous > 75%
Comments:		Cellulose is present on the surface of this sample.	



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200057
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0027C Built-up roofing - Roof, Storage 2	3 Phases:		
	a) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		
0028A Built-up roofing - Roof, Garage 2	5 Phases:		
	a) Homogeneous, grey, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non-fibrous 25-50%
	c) Homogeneous, black, layered, tar material.	None Detected	Tar and other non-fibrous > 75%
	d) Homogeneous, black, tar impregnated, compressed fibrous material.	None Detected	Man-made Vitreous Fibres 25-50% Tar and other non-fibrous 50-75%
	e) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		



Pinchin Ltd. Asbestos Laboratory
Certificate of Analysis

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320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200057
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0028B Built-up roofing - Roof, Garage 2	5 Phases: a) Homogeneous, grey, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non- fibrous 25-50%
	c) Homogeneous, black, layered, tar material.	None Detected	Tar and other non- fibrous > 75%
	d) Homogeneous, black, tar impregnated, compressed fibrous material.	None Detected	Man-made Vitreous Fibres 25-50% Tar and other non- fibrous 50-75%
	e) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non- fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		



Pinchin Ltd. Asbestos Laboratory
Certificate of Analysis

Project Name: The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.
320 McRae Avenue, Ottawa
Project No.: 0230236.000
Prepared For: T. Larose / N. Box
Lab Reference No.: b200057
Date Analyzed: November 13, 2018

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0028C Built-up roofing - Roof, Garage 2	5 Phases: a) Homogeneous, grey, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
	b) Homogeneous, black, layered, tar impregnated, compressed fibrous material.	None Detected	Cellulose 50-75% Tar and other non- fibrous 25-50%
	c) Homogeneous, black, layered, tar material.	None Detected	Tar and other non- fibrous > 75%
	d) Homogeneous, black, tar impregnated, compressed fibrous material.	None Detected	Man-made Vitreous Fibres 25-50% Tar and other non- fibrous 50-75%
	e) Homogeneous, black, tar material with rocks.	None Detected	Tar and other non- fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		

Reviewed by:

Digitally signed by
Julieth Oran
Date: 2018.11.13
14:19:46 -05'00'

Reporting Analyst:

Digitally signed
by Julieth Oran
Date: 2018.11.13
14:19:31 -05'00'



Analysed by: AW
Reviewed by: HB
Report Sent by: SR

Special Instructions:

**Pinchin Ltd. - Asbestos Laboratory
Internal Asbestos Bulk Sample Chain of Custody**

Client Name:	The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.	Project Address:	320 McRae Avenue, Ottawa
Portfolio/Building No:		Pinchin File:	230236
Submitted by:	Tanner Larose	Email:	tlarose@pinchin.com
CC Results to:	Neil Box	CC Email:	nbox@pinchin.com
Invoice to:	Kristen Brook	Invoice Email:	kbrook@pinchin.com
Date Submitted:	November 5 2018	Required by:	November 13 2018
# of Samples:	92 (b)	Priority:	5 Day Turnaround
Year of Building Construction (Mandatory Field):			
Do NOT Stop on Positive (Sample Numbers):	0004-0015		
Pinchin Group Company (Mandatory Field):	Pinchin		

To be Completed by Lab Personnel Only:

Lab Reference #:	0200057		Time:	24 hour clock		
Received by:	NOV 06 2018		Date:	Month	Day	Year
Name(s) of Analyst(s):	AW NOV. 13 / 18					
Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)			
	0001	A	Spray-applied insulation - Garage 1			
	0001	B	Spray-applied insulation - Garage 1			
	0001	C	Spray-applied insulation - Garage 1			
	0002	A	Swirl texture finish - Office 2			
	0002	B	Swirl texture finish - Office 2			
	0002	C	Swirl texture finish - Office 2			

Sample Prefix	Sample No.	Sample Suffix	Sample Description/Location (Mandatory)
	0027	A	Built-up roofing - Roof, Storage 2 a)ND c)ND b)NP
	0027	B	Built-up roofing - Roof, Storage 2 a)ND c)ND b)NP
	0027	C	Built-up roofing - Roof, Storage 2 a)ND c)ND b)NP
	0028	A	Built-up roofing - Roof, Garage 2 a)ND c)ND e)ND b)NP d)NP
	0028	B	Built-up roofing - Roof, Garage 2 a)ND c)ND e)ND b)NP d)ND
	0028	C	Built-up roofing - Roof, Garage 2 a)ND c)ND e)ND b)NP d)NP



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Project: 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Lab Order ID: 51829196
Analysis ID: 51829196_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0029A	Spray-applied insulation - Crawlspace	None Detected	98% Cellulose	2% Other	Brown Fibrous Heterogeneous
51829196PLM_1					Teased
0029B	Spray-applied insulation - Crawlspace	None Detected	98% Cellulose	2% Other	Brown Fibrous Heterogeneous
51829196PLM_2					Teased
0029C	Spray-applied insulation - Crawlspace	None Detected	98% Cellulose	2% Other	Brown Fibrous Heterogeneous
51829196PLM_3					Teased
0030A - A	Smooth plaster; west perimeter wall - Entrance, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_4	finish				Crushed
0030A - B	Smooth plaster; west perimeter wall - Entrance, First Floor	1% Chrysotile	3% Hair	96% Other	Brown Non Fibrous Heterogeneous
51829196PLM_26	base				Crushed
0030B - A	Smooth plaster; east perimeter wall - First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_5	finish				Crushed
0030B - B	Smooth plaster; east perimeter wall - First Floor	1% Chrysotile	3% Hair	96% Other	Brown Non Fibrous Heterogeneous
51829196PLM_27	base				Crushed
0030C - A	Smooth plaster; interior wall - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_6	finish				Crushed

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Heather Davide (48)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Project: 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Lab Order ID: 51829196
Analysis ID: 51829196_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0030C - B	Smooth plaster; interior wall - Bedroom 1, First Floor	None Detected		100% Other	Brown Non Fibrous Heterogeneous
51829196PLM_28	base				Crushed
0030D - A	Smooth plaster; ceiling - Landing, Second Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_7	finish				Crushed
0030D - B	Smooth plaster; ceiling - Landing, Second Floor	None Detected		100% Other	Brown Non Fibrous Heterogeneous
51829196PLM_29	base				Crushed
0030E - A	Smooth plaster; ceiling - Closet, Bedroom 3, Second Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_8	finish				Crushed
0030E - B	Smooth plaster; ceiling - Closet, Bedroom 3, Second Floor	None Detected		100% Other	Brown Non Fibrous Heterogeneous
51829196PLM_30	base				Crushed
0031A - A	Textured plaster; ceiling - Living Room, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_9	finish				Crushed
0031A - B	Textured plaster; ceiling - Living Room, First Floor	2% Chrysotile		98% Other	Brown Non Fibrous Heterogeneous
51829196PLM_31	base				Crushed
0031B - A	Textured plaster; ceiling - Living Room, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_10	finish				Crushed

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Heather Davide (48)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Lab Order ID: 51829196
Analysis ID: 51829196_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018

Project: 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0031B - B	Textured plaster; ceiling - Living Room, First Floor	2% Chrysotile		98% Other	Brown Non Fibrous Heterogeneous
51829196PLM_32	base				Crushed
0031C - A	Textured plaster; ceiling - Living Room, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_11	finish				Crushed
0031C - B	Textured plaster; ceiling - Living Room, First Floor	2% Chrysotile		98% Other	Brown Non Fibrous Heterogeneous
51829196PLM_33	base				Crushed
0032A	Aggregated embedded stucco - South exterior wall	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829196PLM_12					Crushed
0032B	Aggregated embedded stucco - West exterior wall	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829196PLM_13					Crushed
0032C	Aggregated embedded stucco - North exterior wall	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829196PLM_14					Crushed
0032D	Aggregated embedded stucco - East exterior wall	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829196PLM_15					Crushed
0032E	Aggregated embedded stucco - South exterior wall	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829196PLM_16					Crushed

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Heather Davide (48)

Analyst

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Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Project: 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Lab Order ID: 51829196
Analysis ID: 51829196_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0033A - A	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected	60% Cellulose 10% Fiber Glass	30% Other	White Non Fibrous Homogeneous
51829196PLM_17	white vinyl sheet flooring				Teased, Crushed
0033A - B	Vinyl sheet flooring; multilayered - Kitchen, First Floor	20% Chrysotile		80% Other	Yellow, Gray Non Fibrous Homogeneous
51829196PLM_34	yellowed vinyl sheet flooring				Teased, Crushed
0033A - C	Vinyl sheet flooring; multilayered - Kitchen, First Floor	3% Chrysotile		97% Other	Gray Non Fibrous Homogeneous
51829196PLM_35	gray tile				Crushed, Dissolved
0033A - D	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected		100% Other	Yellow Non Fibrous Homogeneous
51829196PLM_36	yellow mastic				Dissolved
0033A - E	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected	40% Cellulose	60% Other	Blue, Black Non Fibrous Homogeneous
51829196PLM_37	blue vinyl sheet flooring				Crushed, Dissolved
0033B - A	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected	60% Cellulose 10% Fiber Glass	30% Other	White Non Fibrous Homogeneous
51829196PLM_18	white vinyl sheet flooring				Teased, Crushed
0033B - B	Vinyl sheet flooring; multilayered - Kitchen, First Floor	20% Chrysotile		80% Other	Yellow, Gray Non Fibrous Homogeneous
51829196PLM_38	yellowed vinyl sheet flooring				Teased, Crushed
0033B - C	Vinyl sheet flooring; multilayered - Kitchen, First Floor	3% Chrysotile		97% Other	Gray Non Fibrous Homogeneous
51829196PLM_39	grey tile				Crushed, Dissolved

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Heather Davide (48)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Lab Order ID: 51829196
Analysis ID: 51829196_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018

Project: 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0033B - D	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected		100% Other	Yellow Non Fibrous Homogeneous
51829196PLM_40	yellow mastic				Dissolved
0033B - E	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected	40% Cellulose	60% Other	Blue Non Fibrous Homogeneous
51829196PLM_41	blue vinyl sheet flooring				Crushed, Dissolved
0033C - A	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected	60% Cellulose 10% Fiber Glass	30% Other	White Non Fibrous Homogeneous
51829196PLM_19	white vinyl sheet flooring				Teased, Crushed
0033C - B	Vinyl sheet flooring; multilayered - Kitchen, First Floor	20% Chrysotile		80% Other	Yellow, Gray Non Fibrous Homogeneous
51829196PLM_42	yellowed vinyl sheet flooring				Teased, Crushed
0033C - C	Vinyl sheet flooring; multilayered - Kitchen, First Floor	3% Chrysotile		97% Other	Gray Non Fibrous Homogeneous
51829196PLM_43	grey tile				Crushed, Dissolved
0033C - D	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected		100% Other	Yellow Non Fibrous Homogeneous
51829196PLM_44	yellow mastic				Dissolved
0033C - E	Vinyl sheet flooring; multilayered - Kitchen, First Floor	None Detected	40% Cellulose	60% Other	Blue Non Fibrous Homogeneous
51829196PLM_45	blue vinyl sheet flooring				Crushed, Dissolved
0034A	Vinyl sheet flooring; white - Washroom, First Floor	None Detected	50% Cellulose 10% Fiber Glass	40% Other	White Non Fibrous Homogeneous
51829196PLM_20					Teased, Crushed

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Heather Davide (48)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Lab Order ID: 51829196
Analysis ID: 51829196_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018

Project: 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0034B	Vinyl sheet flooring; white - Washroom, First Floor	None Detected	50% Cellulose 10% Fiber Glass	40% Other	White Non Fibrous Homogeneous
51829196PLM_21					Teased, Crushed
0034C	Vinyl sheet flooring; white - Washroom, First Floor	None Detected	50% Cellulose 10% Fiber Glass	40% Other	White Non Fibrous Homogeneous
51829196PLM_22					Teased, Crushed
0035A - A	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_23	self stick tile				Crushed, Dissolved
0035A - B	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor	20% Chrysotile		80% Other	Beige, Brown Non Fibrous Homogeneous
51829196PLM_46	vinyl sheet flooring				Teased, Crushed
0035B - A	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_24	self stick tile				Crushed, Dissolved
0035B - B	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor	Not Analyzed			
51829196PLM_47	vinyl sheet flooring				
0035C - A	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829196PLM_25	self stick tile				Crushed, Dissolved
0035C - B	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor	Not Analyzed			
51829196PLM_48	vinyl sheet flooring				

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Heather Davide (48)

Analyst

Approved Signatory

51829196

Version 1-15-2012

Client:	Pinchin Ltd.	*Instructions: Use Column "B" for your contact info	Invoice to: kbrook@pinchin.com Email address here
Contact:	Tanner Larose 555 Legget Drive, Suite 1001, Tower A		
Address:	Kanata, ON K2K 2X3	To See an Example Click the bottom Example Tab.	
Phone:	613-592-3387		
Fax:	613-592-5897	Enter samples between "<<" and ">>"	Scientific Analytical Institute
Email:	tlarose@pinchin.com cmahoney@pinchin.com 230236.003,311 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.		
Project:		Begin Samples with a "<<" above the first sample and end with a ">>" below the last sample. Only Enter your data on the first sheet "Sheet1"	4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sailab.com
Client Notes:			
P.O. #.	230236.003	Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.	
Date Submitted:	November 6, 2018		
Analysis:	PLM - Stop Positive Secret *		
TurnAroundTime:	4days * 0030-0033		

Sample Number	Data 1 (Lab use only)	Sample Description	Data 2 (Lab use only)
<<			
0029A		Spray-applied insulation - Crawlspace	
0029B		Spray-applied insulation - Crawlspace	
0029C		Spray-applied insulation - Crawlspace	
0030A		Smooth plaster; west perimeter wall - Entrance, First Floor	
0030B		Smooth plaster; east perimeter wall - First Floor	
0030C		Smooth plaster; interior wall - Bedroom 1, First Floor	
0030D		Smooth plaster; ceiling - Landing, Second Floor	
0030E		Smooth plaster; ceiling - Closet, Bedroom 3, Second Floor	
0031A		Textured plaster; ceiling - Living Room, First Floor	
0031B		Textured plaster; ceiling - Living Room, First Floor	
0031C		Textured plaster; ceiling - Living Room, First Floor	

Accepted ☒Rejected ☐

N. Kavanagh 11/7 10:30A

51829196

0032A	Aggregated embedded stucco - South exterior wall
0032B	Aggregated embedded stucco - West exterior wall
0032C	Aggregated embedded stucco - North exterior wall
0032D	Aggregated embedded stucco - East exterior wall
0032E	Aggregated embedded stucco - South exterior wall
0033A	Vinyl sheet flooring; multilayered - Kitchen, First Floor
0033B	Vinyl sheet flooring; multilayered - Kitchen, First Floor
0033C	Vinyl sheet flooring; multilayered - Kitchen, First Floor
0034A	Vinyl sheet flooring; white - Washroom, First Floor
0034B	Vinyl sheet flooring; white - Washroom, First Floor
0034C	Vinyl sheet flooring; white - Washroom, First Floor
0035A	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor
0035B	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor
0035C	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor
>>	



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
App.E



Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

Attn: Tanner Larose
Chris Mahoney

Project: 230236.003,315 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Lab Order ID: 51829194
Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0036A	Ceiling stipple - Basement	None Detected		100% Other	Tan, White Non Fibrous Heterogeneous
51829194PLM_1					Crushed
0036B	Ceiling stipple - Basement	None Detected		100% Other	Tan, White Non Fibrous Heterogeneous
51829194PLM_2					Crushed
0036C	Ceiling stipple - Basement	None Detected		100% Other	Tan, White Non Fibrous Heterogeneous
51829194PLM_3					Crushed
0037A - A	Smooth plaster; interior wall - Living Room, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_4	finish				Crushed
0037A - B	Smooth plaster; interior wall - Living Room, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_47	base				Crushed
0037B - A	Smooth plaster; west perimeter wall - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_5	compound				Crushed
0037B - B	Smooth plaster; west perimeter wall - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_48	finish				Crushed
0037B - C	Smooth plaster; west perimeter wall - Bedroom 1, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_49	base				Crushed

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Bobby Wheatley (62)

Analyst

Approved Signatory



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Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0037C - A	Smooth plaster; north perimeter wall - Bedroom 2, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_6	finish				Crushed
0037C - B	Smooth plaster; north perimeter wall - Bedroom 2, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_50	base				Crushed
0037D - A	Smooth plaster; south perimeter wall - Bedroom 2, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_7	finish				Crushed
0037D - B	Smooth plaster; south perimeter wall - Bedroom 2, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_51	base				Crushed
0037E - A	Smooth plaster; ceiling - Kitchen, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_8	finish				Crushed
0037E - B	Smooth plaster; ceiling - Kitchen, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_52	base				Crushed
0038A - A	Textured plaster; ceiling - Living Room, First Floor	None Detected		100% Other	White Non Fibrous Heterogeneous
51829194PLM_9	texture				Crushed
0038A - B	Textured plaster; ceiling - Living Room, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_53	finish				Crushed

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Lab Order ID: 51829194
Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0038A - C	Textured plaster; ceiling - Living Room, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_54	base				Crushed
0038A - D	Textured plaster; ceiling - Living Room, First Floor	None Detected	15% Cellulose	85% Other	Gray Non Fibrous Heterogeneous
51829194PLM_55	drywall				Crushed
0038B - A	Textured plaster; ceiling - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Heterogeneous
51829194PLM_10	texture				Crushed
0038B - B	Textured plaster; ceiling - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_56	finish				Crushed
0038B - C	Textured plaster; ceiling - Bedroom 1, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_57	base				Crushed
0038B - D	Textured plaster; ceiling - Bedroom 1, First Floor	None Detected	15% Cellulose	85% Other	Gray Non Fibrous Heterogeneous
51829194PLM_58	drywall				Crushed
0038C - A	Textured plaster; ceiling - Bedroom 2, First Floor	None Detected		100% Other	White Non Fibrous Heterogeneous
51829194PLM_11	texture				Crushed
0038C - B	Textured plaster; ceiling - Bedroom 2, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_59	finish				Crushed

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Bulk Asbestos Analysis

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Chris Mahoney

Project: 230236.003,315 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Lab Order ID: 51829194
Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0038C - C	Textured plaster; ceiling - Bedroom 2, First Floor	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_60	base				Crushed
0038C - D	Textured plaster; ceiling - Bedroom 2, First Floor	None Detected	15% Cellulose	85% Other	Gray Non Fibrous Heterogeneous
51829194PLM_61	drywall				Crushed
0039A	Rough cast plaster - Mechanical room, Basement	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_12	single layer plaster				Crushed
0039B	Rough cast plaster - Mechanical room, Basement	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_13	single layer plaster				Crushed
0039C - A	Rough cast plaster - Mechanical room, Basement	None Detected		100% Other	Gray Non Fibrous Heterogeneous
51829194PLM_14	gray layer				Crushed
0039C - B	Rough cast plaster - Mechanical room, Basement	None Detected		80% Vermiculite 20% Other	White Non Fibrous Heterogeneous
51829194PLM_62	white layer				Crushed
0040A - A	Aggregated embedded stucco - South exterior wall	3% Chrysotile		97% Other	White Non Fibrous Heterogeneous
51829194PLM_15	white layer				Crushed
0040A - B	Aggregated embedded stucco - South exterior wall	2% Chrysotile		98% Other	Gray Non Fibrous Heterogeneous
51829194PLM_63	gray layer				Crushed

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Analyst

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Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
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1 Hines Road
Kanata, ON K2K 3C7

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Chris Mahoney

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Lab Order ID: 51829194
Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0040B - A	Aggregated embedded stucco - South exterior wall	3% Chrysotile		97% Other	White Non Fibrous Heterogeneous
51829194PLM_16	white layer				Crushed
0040B - B	Aggregated embedded stucco - South exterior wall	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
51829194PLM_64	gray layer				Crushed
0040C	Aggregated embedded stucco - North exterior wall	3% Chrysotile		97% Other	White Non Fibrous Heterogeneous
51829194PLM_17	white layer only				Crushed
0040D	Aggregated embedded stucco - West exterior wall	3% Chrysotile		97% Other	White Non Fibrous Heterogeneous
51829194PLM_18	white layer only				Crushed
0040E - A	Aggregated embedded stucco - East exterior wall	3% Chrysotile		97% Other	White Non Fibrous Heterogeneous
51829194PLM_19	white layer				Crushed
0040E - B	Aggregated embedded stucco - East exterior wall	2% Chrysotile		98% Other	Gray Non Fibrous Heterogeneous
51829194PLM_65	gray layer				Crushed
0041A	Drywall joint compound; west perimeter wall - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_26					Crushed
0041B	Drywall joint compound; ceiling - Washroom, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_27					Crushed

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Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E,
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Customer: Pinchin Ltd.
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Project: 230236.003,315 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
Company c/o GWL Realty Advisors Inc.

Lab Order ID: 51829194
Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0041C	Drywall joint compound; perimeter wall - Kitchen, Basement	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_28					Crushed
0042A	Drywall joint compound; ceiling - Garage	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_29					Crushed
0042B	Drywall joint compound; ceiling - Garage	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_30					Crushed
0042C	Drywall joint compound; wall - Garage	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_31					Crushed
0043A - A	Vinyl floor tile; 12"x12", beige - Closet, Basement	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829194PLM_32	tile				Dissolved
0043A - B	Vinyl floor tile; 12"x12", beige - Closet, Basement	None Detected		100% Other	Yellow Non Fibrous Homogeneous
51829194PLM_66	mastic				Dissolved
0043B - A	Vinyl floor tile; 12"x12", beige - Closet, Basement	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829194PLM_33	tile				Dissolved
0043B - B	Vinyl floor tile; 12"x12", beige - Closet, Basement	None Detected		100% Other	Yellow Non Fibrous Homogeneous
51829194PLM_67	mastic				Dissolved

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Bobby Wheatley (62)

Analyst

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Bulk Asbestos Analysis

By Polarized Light Microscopy
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Customer: Pinchin Ltd.
1 Hines Road
Kanata, ON K2K 3C7

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Project: 230236.003,315 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance
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Lab Order ID: 51829194
Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0043C - A	Vinyl floor tile; 12"x12", beige - Closet, Basement	None Detected		100% Other	Beige Non Fibrous Homogeneous
51829194PLM_34	tile - ashed				Ashed
0043C - B	Vinyl floor tile; 12"x12", beige - Closet, Basement	None Detected		100% Other	Yellow Non Fibrous Homogeneous
51829194PLM_68	mastic				Dissolved
0044A	Caulking; white on window seam - Living room, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_35					Ashed
0044B	Caulking; white on window seam - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_36					Crushed
0044C	Caulking; white on window seam - Bedroom 1, First Floor	None Detected		100% Other	White Non Fibrous Homogeneous
51829194PLM_37					Crushed
0045A	Putty; white on window seams - Kitchen, First Floor	None Detected		100% Other	White Non Fibrous Heterogeneous
51829194PLM_38					Crushed, Dissolved
0045B	Putty; white on window seams - Kitchen, First Floor	None Detected		100% Other	White Non Fibrous Heterogeneous
51829194PLM_39					Crushed, Dissolved
0045C	Putty; white on window seams - Laundry Room, Basement	None Detected		100% Other	White Non Fibrous Heterogeneous
51829194PLM_40					Crushed, Dissolved

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Analysis ID: 51829194_PLM
Date Received: 11/7/2018
Date Reported: 11/10/2018
Date Amended: 11/16/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0046A	Caulking; blue on window - Garage	5% Chrysotile		95% Other	Blue Non Fibrous Heterogeneous
51829194PLM_41					Ashed
0046B	Caulking; blue on window - Garage	Not Analyzed			
51829194PLM_42					
0046C	Caulking; blue on window - Garage	Not Analyzed			
51829194PLM_43					
0047A	Tar Paper - Roof	None Detected	90% Cellulose	10% Other	Black Fibrous Heterogeneous
51829194PLM_44					Dissolved
0047B	Tar Paper - Roof	None Detected	90% Cellulose	10% Other	Black Fibrous Heterogeneous
51829194PLM_45					Dissolved
0047C	Tar Paper - Roof	None Detected	90% Cellulose	10% Other	Black Fibrous Heterogeneous
51829194PLM_46					Dissolved

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Bobby Wheatley (62)

Analyst

Approved Signatory

51829194

Version 1-15-2012

Client:	Pinchin Ltd.	*Instructions: Use Column "B" for your contact info	Invoice to: kbrook@pinchin.com Email address here
Contact:	Tanner Larose 555 Legget Drive, Suite 1001, Tower A		
Address:	Kanata, ON K2K 2X3	To See an Example Click the bottom Example Tab.	
Phone:	613-592-3387		
Fax:	613-592-5897	Enter samples between "<<" and ">>"	Scientific Analytical Institute
Email:	tlarose@pinchin.com cmahoney@pinchin.com		
Project:	230236.003, 315 Tweedsmuir Avenue, Ottawa, The Great-West Life Assurance Company c/o GWL Realty Advisors Inc.	Begin Samples with a "<<" above the first sample and end with a ">>" below the last sample. Only Enter your data on the first sheet "Sheet1"	4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888
Client Notes:			
P.O. #.	230236.003	Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included	Fax: 336.292.3313 Email: lab@sailab.com
Date Submitted:	November 6, 2018		
Analysis:	PLM - Stop Positive EXCEPT 0037- 0041	in the electronic data returned to you to facilitate your reintegration of the report data.	
TurnAroundTime:	4days		

Sample Number	Data 1 (Lab use only)	Sample Description	Data 2 (Lab use only)
---------------	-----------------------	--------------------	-----------------------

<<

0036A
0036B
0036C
0037A
0037B
0037C
0037D
0037E
0038A
0038B

Ceiling stipple - Basement
Ceiling stipple - Basement
Ceiling stipple - Basement
Smooth plaster; interior wall - Living Room, First Floor
Smooth plaster; west perimeter wall - Bedroom 1, First Floor
Smooth plaster; north perimeter wall - Bedroom 2, First Floor
Smooth plaster; south perimeter wall - Bedroom 2, First Floor
Smooth plaster; ceiling - Kitchen, First Floor
Textured plaster; ceiling - Living Room, First Floor
Textured plaster; ceiling - Bedroom 1, First Floor

Accepted ☒Rejected ☐

N. Kanan 11/7 10:30A

51829194

0038C	Textured plaster; ceiling - Bedroom 2, First Floor
0039A	Rough cast plaster - Mechancial room, Basement
0039B	Rough cast plaster - Mechancial room, Basement
0039C	Rough cast plaster - Mechancial room, Basement
0040A	Aggregated embedded stucco - South exterior wall
0040B	Aggregated embedded stucco - South exterior wall
0040C	Aggregated embedded stucco - North exterior wall
0040D	Aggregated embedded stucco - West exterior wall
0040E	Aggregated embedded stucco - East exterior wall
0041A	Aggregated embedded stucco - East exterior wall
0041B	Aggregated embedded stucco - South exterior wall
0041C	Vinyl sheet flooring; white - Washroom, First Floor
0042A	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor
0042B	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor
0042C	Vinyl floor tile; peel and stick, 12"x12" with second layer - Front entrance, First Floor
0043A	Drywall joint compound; west perimeter wall - Bedroom 1, First Floor
0043B	Drywall joint compound; ceiling - Washroom, First Floor
0043C	Drywall joint compound; perimeter wall - Kitchen, Basement
0044A	Drywall joint compound; ceiling - Garage
0044B	Drywall joint compound; ceiling - Garage
0044C	Drywall joint compound; wall - Garage
0045A	Vinyl floor tile; 12"x12", beige - Closet, Basement
0045B	Vinyl floor tile; 12"x12", beige - Closet, Basement
0045C	Vinyl floor tile; 12"x12", beige - Closet, Basement
0046A	Caulking; white on window seam - Living room, First Floor
0046B	Caulking; white on window seam - Bedroom 1, First Floor
0046C	Caulking; white on window seam - Bedroom 1, First Floor
0047A	Putty; white on window seams - Kitchen, First Floor
0047B	Putty; white on window seams - Kitchen, First Floor
0047C	Putty; white on window seams - Laundry Room, Basement
0048A	Caulking; blue on window - Garage
0048B	Caulking; blue on window - Garage
0048C	Caulking; blue on window - Garage
0049A	Tar Paper - Roof
0049B	Tar Paper - Roof
0049C	Tar Paper - Roof

>>

Certificate of Analysis

Pinchin Ltd. (Ottawa)

1 Hines Road, Suite 200
Kanata, ON K2K 3C7
Attn: Tanner Larose

Client PO: 315 Tweedsmere Ave. Ottawa

Project: 230236.007

Custody: 43002

Report Date: 14-Feb-2020

Order Date: 13-Feb-2020

Revised Report

Order #: 2007525

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

Paracel ID

2007525-01

2007525-02

2007525-03

Client ID

0048A:Ceiling Stipple; on smooth plaster ceiling -Second Floor

0048B:Ceiling Stipple; on smooth plaster ceiling -Second Floor

0048C:Ceiling Stipple; on smooth plaster ceiling -Second Floor

Approved By:



Emma Diaz

Senior Analyst

Certificate of Analysis
Client: Pinchin Ltd. (Ottawa)

Client PO: 315 Tweedsmere Ave. Ottawa

Report Date: 14-Feb-2020

Order Date: 13-Feb-2020

Project Description: 230236.007

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2007525-01	13-Feb-20	White	Stipple	No	Client ID: 0048A:Ceiling Stipple; on smooth plaster ceiling -Second Floor	
					Non-Fibers	100
2007525-02	13-Feb-20	White	Stipple	No	Client ID: 0048B:Ceiling Stipple; on smooth plaster ceiling -Second Floor	
					Non-Fibers	100
2007525-03	13-Feb-20	White	Stipple	No	Client ID: 0048C:Ceiling Stipple; on smooth plaster ceiling -Second Floor	
					Non-Fibers	100

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	2 - Ottawa West	NVLAP 200812-0		14-Feb-20

* 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.

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Work Order Revisions | Comments

Revision 1: This version has amended sample ID's.

2007525



1 Office
2319 St. Laurent Blvd.
wa, Ontario K1G 4J8
800-749-1947
iracel@paracellabs.com

Chain of Custody
(Lab Use Only)

Nº 43002

Page ___ of ___

Client Name: <u>Pinchin Ltd.</u>	Project Reference: <u>315 Tweedsmuir Ave. Ottawa</u>
Contact Name: <u>Tanner Larose</u>	Quote #:
Address: <u>1 Hines Rd. Ottawa</u>	PO #: <u>230236.007</u>
Telephone: <u>613 592 3387</u>	Email Address: <u>tlarose@pinchin.com</u>

Turnaround Time:

- ☒ Immediate ☐ 1 Day
☐ 4 Hour ☐ 2 Day
☐ 8 Hour ☐ 3 Day
☐ Regular

Date Required: 2/13/2020

ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air ☒ Bulk ☐ Tape Lift ☐ Swab ☐ Other Regulatory Guideline: ☒ ON ☐ QC ☐ AB ☐ SK ☐ Other:

Analyses: ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos ☒ PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Parcel Order Number:		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk	
Sample ID					Identify Distinct Building Materials to Be Analyzed (if not specified, all materials identified will be analyzed) *	Positive Stop?
1	0048A: Ceiling stipple on smooth plaster —	2/13/2020		PLM		<input type="checkbox"/>
2	0048B: 2nd Floor ↓	↓		↓		<input type="checkbox"/>
3	0048C: ↓	↓		↓		<input type="checkbox"/>
4						<input type="checkbox"/>
5						<input type="checkbox"/>
6						<input type="checkbox"/>
7						<input type="checkbox"/>
8						<input type="checkbox"/>
9						<input type="checkbox"/>
10						<input type="checkbox"/>
11						<input type="checkbox"/>
12						<input type="checkbox"/>

* If left blank, all distinct materials identified in the samples will be analyzed and reported separately as per EPA 600/R-93/116. Additional charges will apply.

Comments:

Method of Delivery:

Walk-in

Relinquished By (Sign): <u>[Signature]</u>	Received at Depot:	Received at Lab: <u>[Signature]</u>	Verified By: <u>[Signature]</u>
Relinquished By (Print): <u>Tanner Larose</u>	Date/Time: <u>Feb 13/20 17:00</u>	Date/Time: <u>Feb 13/20 17:15</u>	

APPENDIX II-B
Lead Analytical Certificates

Certificate of Analysis

Pinchin Ltd. (Ottawa)

1 Hines Road, Suite 200
Kanata, ON K2K 3C7
Attn: Tanner Larose

Client PO: 315 McRae Ave, 311&315 Tweedsmuir Ave, Ottawa, ON
Project: 230236.003
Custody:

Report Date: 14-Nov-2018
Order Date: 7-Nov-2018

Order #: 1845417

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

Paracel ID	Client ID
1845417-01	Pb 01 : Composite paint; on rough cast plaster walls/ceilings - Garage 1, 320 McRae Ave
1845417-02	Pb 02 : Composite paint; on drywall walls - Office 2, 320 McRae Ave
1845417-03	Pb 03 : White paint; on ext. brick - Office 1, 320 McRae Ave
1845417-04	Pb 04 : Composite paint; on rough cast plaster walls/ceilings - Storage 1, 320 McRae Ave
1845417-05	Pb 05 : White Paint; on drywall walls - Storage 1, 320 McRae Ave
1845417-06	Pb 06 : Grey Paint; on concrete floor - Storage 1, 320 McRae Ave
1845417-07	Pb 07 : Composite Paint; on block walls - Storage 2 and Garage 2, 320 McRae Ave
1845417-08	Pb 08 : Composite Paint; on drywall ceiling - Storage 2 and Garage 2, 320 McRae Ave
1845417-09	Pb 09 : Composite Paint; on rough cast plaster walls - Garage 3, 320 McRae Ave
1845417-10	Pb 10 : Composite Paint; on smooth plaster walls/ceilings - 311 Tweedsmuir Ave
1845417-11	Pb 11 : Composite Paint; on int. trim - 311 Tweedsmuir Ave
1845417-12	Pb 12 : Composite Paint; on block - Basement, 311 Tweedsmuir Ave
1845417-13	Pb 13 : Composite Paint; on smooth plaster walls/ceilings - 315 Tweedsmuir Ave
1845417-14	Pb 14 : Composite Paint; on drywall walls/ceilings - 315 Tweedsmuir Ave
1845417-15	Pb 15 : Composite Paint; on int. trim - 315 Tweedsmuir Ave
1845417-16	Pb 16 : Composite Paint; on exterior wood - 315 Tweedsmuir Ave
1845417-17	Pb 17 : Composite Paint; on exterior wood - Garage - 315 Tweedsmuir Ave

Approved By:

Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

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 circumstances be liable to you in connection with this work

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: 315 McRae Ave, 311&315 Tweedsmuir Ave, Ottawa,

Report Date: 14-Nov-2018

Order Date: 7-Nov-2018

Project Description: 230236.003

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-OES	based on MOE E3470, ICP-OES	13-Nov-18	13-Nov-18

Sample and QC Qualifiers Notes

1- QR-05 : Duplicate RPDs higher than normally accepted. Remaining batch QA/QC was acceptable. May be sample effect.

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

Certificate of Analysis
Client: Pinchin Ltd. (Ottawa)
Client PO: 315 McRae Ave, 311&315 Tweedsmuir Ave, Ottawa,

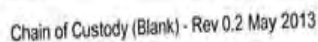
Report Date: 14-Nov-2018
Order Date: 7-Nov-2018
Project Description: 230236.003

Sample Results

Lead				Matrix: Paint
				Sample Date: 30-Oct-18
Paracel ID	Client ID	Units	MDL	Result
1845417-01	Pb 01 :Composite paint; on rough cast plaster walls/ceilings	% by Wt.	0.0020	0.0555
1845417-02	Pb 02 :Composite paint; on drywall walls - Office 2, 320 McRae Ave	% by Wt.	0.0020	<0.0020
1845417-03	Pb 03 : White paint; on ext. brick - Office 1, 320 McRae Ave	% by Wt.	0.0020	<0.0020
1845417-04	Pb 04 : Composite paint; on rough cast plaster walls/ceiling	% by Wt.	0.0020	0.800
1845417-05	Pb 05 : White Paint; on drywall walls - Storage 1, 320 McRae Ave	% by Wt.	0.0020	<0.0020
1845417-06	Pb 06 : Grey Paint; on concrete floor - Storage 1, 320 McRae Ave	% by Wt.	0.0020	0.0052
1845417-07	Pb 07 : Composite Paint; on block walls - Storage 2 and Garage	% by Wt.	0.0020	0.0064
1845417-08	Pb 08 : Composite Paint; on drywall ceiling - Storage 2 and Garage	% by Wt.	0.0020	0.0054
1845417-09	Pb 09 : Composite Paint; on rough cast plaster walls - Garage	% by Wt.	0.0020	0.0152
1845417-10	Pb 10 : Composite Paint; on smooth plaster walls/ceilings -	% by Wt.	0.0020	0.0381
1845417-11	Pb 11 : Composite Paint; on int. trim - 311 Tweedsmuir Ave	% by Wt.	0.0020	0.192
1845417-12	Pb 12 : Composite Paint; on block - Basement, 311 Tweedsmuir Ave	% by Wt.	0.0020	0.209
1845417-13	Pb 13 : Composite Paint; on smooth plaster walls/ceilings -	% by Wt.	0.0020	0.0471
1845417-14	Pb 14 : Composite Paint; on drywall walls/ceilings - 315 Tweedsmuir Ave	% by Wt.	0.0020	0.0086
1845417-15	Pb 15 : Composite Paint; on int. trim - 315 Tweedsmuir Ave	% by Wt.	0.0020	0.0883
1845417-16	Pb 16 : Composite Paint; on exterior wood - 315 Tweedsmuir Ave	% by Wt.	0.0020	0.0148
1845417-17	Pb 17 : Composite Paint; on exterior wood - Garage - 315 Tweedsmuir Ave	% by Wt.	0.0020	0.631

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	0.0020	% by Wt.						
Matrix Duplicate									
Lead	0.505	0.0020	% by Wt.	0.512			1.4	30	
Matrix Spike									
Lead	2740		ug/L	2560	71.6	70-130			





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Client Name: Pinchin Ltd.
Contact Name: Tanner Larose
Address: 1 Hines Road, Suite 200, Kanata ON K2K 3C7
Telephone: 613-592-3387 ext. 1804

Project Reference: 315 McRae Ave, 311 & 315 Tweedsmuir Ave, Ottawa, Ontario
Quote #
PO # 230236.003
Email Address: tlarose@pinchin.com

TAT: [X] Regular [] 3 Day
[] 2 Day [] 1 Day
Date Required: 11/14/2018

Criteria: [] O. Reg. 153/04 (As Amended) Table [] RSC Filing [] O. Reg. 558/00 [] PWQO [] CCME [] SUB (Sworn) [] SUB (Sanitary) Municipality [] Other

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

Parcel Order Number:

1845417

Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken		Lead													
				Date	Time														
1 Pb 10: Composite paint; on smooth plaster walls/ceilings - 311 Tweedsmuir Ave	P			Oct 30		X													
2 Pb 11: Composite paint; on int. trim - 311 Tweedsmuir Ave	P					X													
3 Pb 12: Composite paint; on block - Basement, 311 Tweedsmuir Ave	P					X													
4 Pb 13: Composite paint; on smooth plaster walls/ceilings - 315 Tweedsmuir Ave	P					X													
5 Pb 14: Composite paint; on drywall walls - 315 Tweedsmuir Ave	P					X													
6 Pb 15: Composite paint; on int. trim - 315 Tweedsmuir Ave	P					X													
7 Pb 16: Composite paint; on exterior wood - 315 Tweedsmuir Ave	P					X													
8 Pb 17: Composite paint; on exterior wood - Garage, 315 Tweedsmuir Ave	P					X													

Comments: Please provide results in percent by weight. Thank you.

Method of Delivery

Swift

Relinquished By (Sign):	Received by Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Tanner Larose	Date/Time:	Date/Time: NOV 7/18	Date/Time: NOV 7, 18 4:45
Date/Time: 11/7/2018	Temperature: °C	Temperature: °C 2.31P	pH Verified [] By: NA

APPENDIX II-C
PCB Analytical Certificates

Certificate of Analysis

Pinchin Ltd. (Ottawa)

1 Hines Road, Suite 200
Kanata, ON K2K 3C7
Attn: Tanner Larose

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON
Project: 230236.003
Custody:

Report Date: 14-Nov-2018
Order Date: 7-Nov-2018

Order #: 1845408

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

Paracel ID

1845408-01
1845408-02
1845408-03
1845408-04

Client ID

PCB 01 : Caulking; black around window and brick and seams - Office 1, 315 McRae Ave
PCB 02 : Caulking; white around door frame seam - garage 2, 315 McRae Ave
PCB 03 : Caulking; cream on window panel - West Windows, 315 Tweedsmuir Ave
PCB 04 : Caulking; blue on window panel - Shed, 315 Tweedsmuir Ave

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON

Report Date: 14-Nov-2018

Order Date: 7-Nov-2018

Project Description: 230236.003

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PCBs, total	based on SW846 8082A - GC-ECD	8-Nov-18	13-Nov-18

Certificate of Analysis
Client: Pinchin Ltd. (Ottawa)

Report Date: 14-Nov-2018

Order Date: 7-Nov-2018

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON

Project Description: 230236.003

Client ID:	PCB 01 : Caulking; black around window and brick and seams - Office 1, 315 McRae Ave	PCB 02 : Caulking; white around door frame seam - garage 2, 315 McRae Ave	PCB 03 : Caulking; cream on window panel - West Windows, 315 Tweedsmuir Ave	PCB 04 : Caulking; blue on window panel - Shed, 315 Tweedsmuir Ave
Sample Date:	10/30/2018 09:00	10/30/2018 09:00	10/30/2018 09:00	10/30/2018 09:00
Sample ID:	1845408-01	1845408-02	1845408-03	1845408-04
MDL/Units	Other	Other	Other	Other

PCBs

PCBs, total	0.2 ug/g	<8.7 [1] [3]	<4.0 [1] [3]	<4.0 [1] [3]	<6.0 [1] [3]
-------------	----------	--------------	--------------	--------------	--------------

Certificate of Analysis

Report Date: 14-Nov-2018

Client: Pinchin Ltd. (Ottawa)

Order Date: 7-Nov-2018

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON

Project Description: 230236.003

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	0.2	ug/g						
Surrogate: Decachlorobiphenyl	0.895		ug/g		89.5	43-142			

Certificate of Analysis

Report Date: 14-Nov-2018

Client: Pinchin Ltd. (Ottawa)

Order Date: 7-Nov-2018

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON

Project Description: 230236.003

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	4.0	ug/g					35	GEN09, S-01

Certificate of Analysis

Report Date: 14-Nov-2018

Client: Pinchin Ltd. (Ottawa)

Order Date: 7-Nov-2018

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON

Project Description: 230236.003

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	2.57	0.2	ug/g		129	58-147			
Surrogate: Decachlorobiphenyl	0.850		ug/g		85.0	43-142			

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, ON

Report Date: 14-Nov-2018

Order Date: 7-Nov-2018

Project Description: 230236.003

Qualifier Notes:

Login Qualifiers :

Container(s) - Bottle and COC sample ID don't match -

Applies to samples: PCB 04 : Caulking; blue on window panel - Shed, 315 Tweedsmuir Ave

Sample Qualifiers :

1 : Elevated detection limits due to the nature of the sample matrix.

3 : The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference's.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.



OTTAWA • KINGSTON • NIAGARA • MISSISSAUGA • SARNIA

Client Name: Pinchin Ltd.
Contact Name: Tanner Larose
Address: 1 Hines Road, Suite 200, Kanata ON K2K 3C7
Telephone: 613-592-3387 ext. 1804

Project Reference: 315 McRae Ave & 315 Tweedsmuir Ave, Ottawa, Ontario
Quote #
PO # 230236.003
Email Address: tlarose@pinchin.com

TAT: ☒ Regular ☐ 3 Day
☐ 2 Day ☐ 1 Day
Date Required: 11/14/2018

Criteria: ☐ O. Reg. 153/04 (As Amended) Table ☐ RSC Filing ☐ O. Reg. 558/00 ☐ PWQO ☐ CCME ☐ SUB (Storm) ☐ SUB (Sanitary) Municipality: ☐ Other: ☐

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Parcel Order Number:		Matrix	Air Volume	# of Containers	Sample Taken		PCBs												
Sample ID/Location Name					Date	Time													
1	PCB 01: Caulking; black around window and brick and seams - Office 1, 315 McRae Ave	0			Oct 30		X												
2	PCB 02: Caulking; white around door frame seam - Garage 2, 315 McRae Ave	0					X												
3	PCB 03: Caulking; cream on window panel - West Windows, 315 Tweedsmuir Ave	0					X												
4	PCB 04: Caulking; blue on window panel - Shed, 315 Tweedsmuir Ave	0					X												
5	4																		
6	→ Reads PCB04 on bag &c																		
7	→ Reads PCB04 on bag &c																		
																			Method of Delivery

Comments: Sample date as per Tanner &c

Relinquished By (Sign): <i>[Signature]</i>	Received by Driver/Depot: <i>[Signature]</i>	Received at: <i>[Signature]</i>	Verified By: <i>[Signature]</i>
Relinquished By (Print): Tanner Larose	Date/Time: <i>[Signature]</i>	Date/Time: NOV 7 18	Date/Time: NOV 13 3:44
Date/Time: 11/7/2018	Temperature: <i>[Signature]</i> °C	Temperature: 2.30 °C	Verified By: NA

APPENDIX III
Methodology

1.0 GENERAL

Pinchin conducts a room-by-room survey (rooms, corridors, service areas, exterior, etc.) to identify the hazardous building materials as defined by the scope of work. All work is conducted in accordance with our own internal Standard Operating Procedures.

Information regarding the location and condition of hazardous building materials encountered and visually estimated quantities are recorded. The locations of any samples collected are recorded on small-scale plans.

As-built drawings and previous reports are referenced where provided.

1.1 Limitations on Scope

The assessment excludes the following:

- Articles belonging to the owner, tenant or occupant (e.g. stored items, furniture, appliances, etc.);
- Underground materials or equipment (e.g. vessels, drums, underground storage tanks, pipes, etc.);
- Building envelope, structural components, inaccessible or concealed materials or other items where sampling may cause consequential damage to the property;
- Energized systems (e.g. internal boiler components, elevators, mechanical or electrical components);
- Controlled products (e.g. stored chemicals, operational or process-related substances); and
- Materials not typically associated with construction (e.g. settled dust, spills, residual contamination from prior spills, etc.).

The assessment includes demolition of wall and ceiling finishes (drywall or plaster) to view concealed conditions at representative areas as permitted by the current building use. Destructive testing of flooring is conducted where possible (under carpets or multiple layers of flooring). Demolition of exterior building finishes, masonry walls (chases, shafts etc.), and structural items is conducted as permitted by the current building use.

1.2 Asbestos

An inspection is conducted for the presence of friable and non-friable asbestos-containing materials (ACM). A friable material is a material that when dry can be crumbled, pulverized or powdered by hand pressure.

A separate set of samples is collected of each type of homogenous material suspected to contain asbestos. A homogenous material is defined by the US EPA as material that is uniform in texture and appearance, was installed at one time, and is unlikely to consist of more than one type or formulation of material. The homogeneous materials are determined by visual examination and available information on the phases of construction and prior renovations.

Samples are collected at a rate that is in compliance with the requirements of local regulations and guidelines. The sampling strategy is also based on known ban dates and phase out dates of the use of asbestos; sampling of certain building materials is not conducted after specific construction dates. In addition, to be conservative, several years past these dates are added to account for some uncertainty in the exact start / finish date of construction and associated usage of ACM.

In some cases, manufactured products such as asbestos cement pipe are visually identified without sample confirmation.

Sampling of roofing felts is conducted at the client's request. A temporary repair is made with asphalt-based mastic and fibreglass mesh. A more permanent repair is required if the roofing or the building is to remain in use for any extended period of time. Pinchin is not responsible or liable for leaks or water damage caused by sampling and or repair.

Drywall joint compound is sampled at exterior walls, columns or other locations that are unlikely to have been renovated in an attempt to determine the presence of asbestos in the original drywall compound. Delineation of asbestos-containing drywall compound from newer, non-asbestos drywall compound is not conducted.

Flooring mastic or adhesive is sampled and analyzed if present on the underside of flooring samples (vinyl floor tile and vinyl sheet flooring).

Limited demolition of masonry block walls (core holes) is conducted to investigate for loose fill vermiculite insulation. The core holes are temporarily patched with expanding foam or caulking.

The following materials (if present) are not sampled and will be presumed to contain asbestos:

- Concrete floor levelling compound;
- Electrical components or wiring within control centers, breakers, motors or lights, insulation on wiring;

- Moulded plastic components (laboratory bench tops);
- Refractory materials and insulations in boilers, incinerators and stacks;
- Insulation under metal clad boilers and vessels;
- Mechanical packing, ropes and gaskets;
- Soffit and fascia boards at elevated heights;
- Fire resistant doors or metal clad finishes; and
- Exterior cladding.

The bulk samples are submitted to a NVLAP accredited laboratory for analysis. The analysis is performed in accordance with Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, July 1993.

Analytical results are compared to the following criteria:

Jurisdiction	Friable	Non-Friable
Ontario	0.5%	0.5%

The asbestos analysis is completed using a stop positive approach. Only one result meeting the above regulated criteria is required to determine that a material is asbestos-containing, but all samples must be analyzed to conclusively determine that a material is non-asbestos. The laboratory stops analyzing samples from a homogeneous material once a result equal to or greater than the regulated criteria is detected in any of the samples of that material. All samples of a homogeneous material are analyzed if no asbestos is detected. In some cases, all samples are analyzed in the sample set regardless of result.

Where building materials are described in the report as “non-asbestos” or “does not contain asbestos”, this means that either no asbestos was detected by the analytical method utilized in any of the multiple samples or, if detected, it is below the lower limit of an asbestos-containing material in the applicable regulation.

Asbestos materials are evaluated in order to make recommendations regarding remedial work. The priority for remedial action is based on several factors:

- Friability (friable or non-friable);
- Condition (good, fair, poor, debris);
- Accessibility (ranking from accessible to all building users to inaccessible); and
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition).

1.3 Lead

Samples of distinctive paint finishes and surface coatings present in more than a limited application, where removal of the paint is possible is collected. The samples are collected by scraping the painted finish to include base and covering applications. Drawings included show sample locations.

Analysis for lead in paints or surface coatings is performed at an accredited laboratory in accordance with EPA Method No. 3050B/Method No. 7420; flame atomic absorption.

The Ontario Ministry of Labour (MOL) has not established a lower limit for concentrations of lead in paint, below which precautions do not need to be considered during construction projects. Pinchin follows the recommendations of the Environmental Abatement Council of Ontario (EACO) Lead Guideline for Construction, Renovation, Maintenance or Repair. The Guideline suggests that 0.1% (1,000 ppm) lead in paint represents a de minimis concentration of lead in paint for construction hygiene purposes, that is a concentration below which the lead content is not the limiting hazard in any disturbance of leaded paint for non-aggressive disturbance of painted finishes, (hand powered demolition, chipping, scraping, light sanding, etc.). The use of aggressive methods such as power grinding, torching, welding, etc. may result in significant lead exposures even with low concentrations of lead in paints (below 0.1%). Paint and surface coatings are evaluated for condition such as flaking, chipping or spalling.

Other lead building products (e.g. batteries, lead sheeting, flashing) are identified by visual observation only.

Pinchin reviews the bulk samples results for elevated concentrations of lead. Where elevated concentrations are present, samples containing the highest concentrations per substrate (i.e., wood, concrete, plaster) are submitted for Toxicity Characteristic Leaching Procedure (TCLP) analysis. Analytical results are compared against local provincial requirements for waste characterization.

1.4 Silica

Building materials known to contain crystalline silica (e.g. concrete, cement, tile, brick, masonry, mortar) is identified by visual inspection only. Pinchin does not perform sampling of these materials for laboratory analysis of crystalline silica content.

1.5 Mercury

Building materials/products/equipment (e.g. thermostats, barometers, pressure gauges, light tubes), suspected to contain mercury are identified by visually inspection only. Dismantling of equipment suspected of containing mercury is not performed. Sampling of these materials for laboratory analysis of mercury content is not performed.

1.6 Polychlorinated Biphenyls

The potential for light ballast and wet transformers to contain PCBs is based on the age of the building, a review of maintenance records and examination of labels or nameplates on equipment, where present and accessible. The information is compared to known ban dates of PCBs and Environment Canada publications.

Dry type transformers are presumed to be free of dielectric fluids and hence non-PCB.

Fluids (mineral oil, hydraulic, Aroclor or Askarel) in transformers or other equipment are not sampled for PCB content.

Caulking or sealants are sampled for PCBs based on the date of construction or installation. Caulking installed after 1985 (1980 ban date plus a reasonable non-compliance period based on our experience) is presumed to be free of PCBs and hence not sampled. If sampled, analysis for PCBs is performed using an ASTM test method appropriate to the sample matrix at an accredited laboratory. Sample results are compared to the criteria of 50 ppm for solids as stated in the PCB Regulation, SOR/2008-273.

1.7 Visible Mould

The presence of mould is determined by visual inspection of exposed building surfaces. If any mould growth is concealed within building cavities it is not addressed in this assessment.

Master Template: Methodology Document for Hazardous Building Materials Management, HAZ, December 1, 2017