

Hazardous Building Materials Assessment

Kent OC (HYD00420)
22291 Charing Cross Road,
Chatham, Ontario

Prepared for:

Hydro One c/o BGIS

400 – 300 Sparks Street
Ottawa, Ontario, K1R 7S3

Attention: Cristina Jimenez
Project Manager

July 15, 2019

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EXECUTIVE SUMMARY

Hydro One c/o BGIS (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment at the Kent SC Office Building located at 22291 Charing Cross Road, Chatham, Ontario. Pinchin performed the assessment on June 10, 2019.

The objective of the assessment was to identify specified hazardous building materials in preparation for the Building Upgrade Project. The results of this assessment are intended for use with a properly developed scope of work and performance specification.

The assessed area was limited to the Kent SC Office Building as identified by the Client on site. The roof was excluded from the scope.

SUMMARY OF FINDINGS

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

- Friable parging cement, containing chrysotile asbestos, is present on the rain water leader and domestic water pipe systems, in good condition;
- Friable parging cement, containing chrysotile asbestos, is present on fibreglass insulation on seams of ducts, in good condition;
- Non-friable black mastic, containing chrysotile asbestos, is present on fibreglass insulated duct seams, in good condition;
- Non-friable, lay-in ceiling tiles, containing amosite and chrysotile asbestos, is present in the forestry office (Location 3), in good condition;
- Non-friable transite board, presumed to contain asbestos based on visual observation, is present on ceilings in the Men’s Washroom, Kitchen and Washroom (Locations 7, 16 and 19), in good condition;
- Non-friable black firestopping (sealant), containing chrysotile asbestos, is present at pipe and conduit penetrations along exterior walls, in good condition;
- Non-friable, white caulking, containing chrysotile asbestos, is present on exterior windows, in good condition;
- Non-friable beige, brown and grey caulking, containing chrysotile asbestos, is present in exterior expansion joints, in good condition;

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- Non-friable, off-white putty, containing chrysotile asbestos, is present around exterior doors, in good condition; and
- Non-friable anti sweat gold mastic, containing chrysotile asbestos is present on the underside of sinks, in good condition.

Lead: Lead is present as follows:

- Cream paint, containing elevated levels of lead, is present on concrete block walls, in good condition;
- Light pink paint, containing elevated levels of lead, is present on concrete block walls, in good condition;
- Yellow paint, containing elevated levels of lead, is present on the exterior steel of the storage shed, in good condition;
- 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, mortar, masonry, ceramic tiles and grout.

Mercury: Mercury vapour is present in light tubes and liquid mercury is present in thermostat ampules.

Polychlorinated Biphenyls (PCBs): PCBs may be present in light ballasts.

Mould and Water Damage: Visible mould growth and water damage was not observed.

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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 dispose of asbestos-containing materials if disturbed by the planned renovation work.
4. Remove and properly dispose of PCB ballasts when fixtures are decommissioned.
5. Recycle mercury-containing light tubes and thermostats when removed from service.
6. Follow appropriate safe work procedures when handling or disturbing silica, and lead.

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.

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TABLE OF CONTENTS

1.0 INTRODUCTION AND SCOPE 1
1.1 Scope of Assessment 1
2.0 BACKGROUND INFORMATION 2
2.1 Building Description 2
3.0 FINDINGS 2
3.1 Asbestos 2
3.2 Lead 11
3.3 Silica 13
3.4 Mercury 13
3.5 Polychlorinated Biphenyls 14
3.6 Mould 15
4.0 RECOMMENDATIONS 15
4.1 General 15
4.2 Abatement Budget Estimation 15
4.3 Building Renovation Work 17
5.0 TERMS AND LIMITATIONS 19
6.0 REFERENCES 19

APPENDICES

APPENDIX I Drawing
APPENDIX II-A Asbestos Analytical Certificates
APPENDIX II-B Lead Analytical Certificates
APPENDIX II-C PCB Analytical Certificates
APPENDIX III Methodology

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1.0 INTRODUCTION AND SCOPE

Hydro One c/o BGIS (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment at the Kent SC Office Building located at 22291 Charing Cross Road, Chatham, Ontario.

Dylan Melo, B.Sc. Project Technologist performed the assessment on June 10, 2019. The surveyor was unaccompanied during the assessment. The assessed area was occupied at the time of the assessment.

The objective of the assessment was to identify specified hazardous building materials in preparation for the Building Upgrade Project. This assessment is intended to be used for pre-construction 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. The assessed area was limited to the Kent SC Office Building as identified by the Client on site. The roof was excluded from the scope.

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;
- Coke oven emissions;
- Ethylene oxide;

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- Isocyanates; and
- Vinyl chloride monomer.

2.0 BACKGROUND INFORMATION

2.1 Building Description

Description Item	Details
Use	Office Building
Number of Floors	One storey
Total Area	10,000 square feet
Year of Construction	Unknown
Structure	Steel and masonry block
Exterior Cladding	Masonry block and steel
HVAC	Rooftop HVAC forced air
Roof	Not assessed (outside of scope)
Flooring	Vinyl floor tiles, ceramic tiles and concrete
Interior Walls	Drywall and concrete block
Ceilings	Drywall, acoustic ceiling tiles and transite ceiling panels

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 Asbestos

3.1.1 Suspect Building Materials Not Found

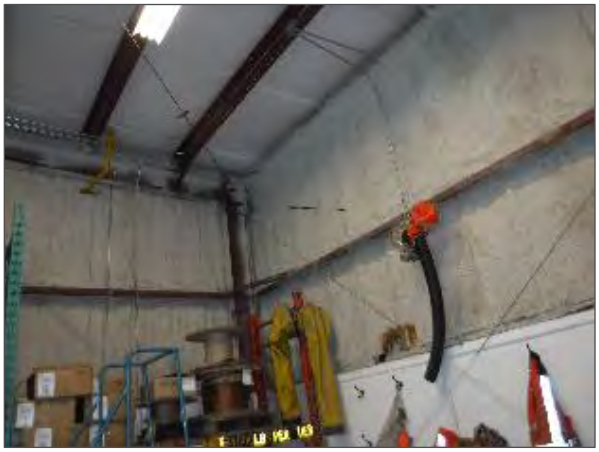
The following types of building materials may historically contain asbestos but were not observed in the assessed area and are not discussed in the report findings:

- Texture finishes (decorative);
- Plaster and Stucco; and
- Vinyl sheet flooring.

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3.1.2 Spray-Applied Insulation

Non-asbestos spray-applied insulation and overspray is present on the walls throughout the Maintenance shop (Location 5, samples 1901A-G).



Non-asbestos spray applied insulation.

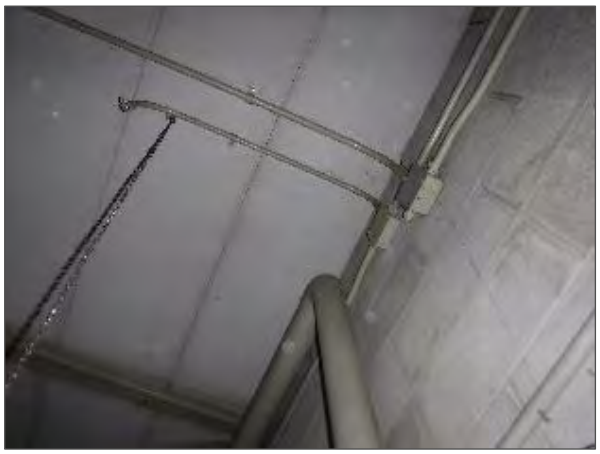
3.1.3 Pipe Insulation

Parging cement, containing chrysotile asbestos, is present on pipe fittings (elbows, valves, tees, hangers etc.) on the rain water leader and domestic water pipe systems in the Offices, Furnace Room and Side Entrance (Location 6, 8, and 20) (samples 1914A-C). Parging cement is a friable insulation, jacketed with canvas and painted, and were observed in good condition. There is approximately 4 fittings in the Offices (Location 6), 5 fittings in the Furnace Room (Location 8), and 2 fittings in the Side Entrance (Location 20) insulated with asbestos-containing parging cement.

Remaining 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.

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Asbestos-containing parging cement on fittings.



Asbestos-containing parging cement on fittings.

3.1.4 Duct Insulation and Mastic

Parging cement, containing chrysotile asbestos, is present over the edges, seams and pins of fibreglass insulation on ducts in the Furnace Room (Location 8) (samples 1915A-C). Parging cement is a friable insulation, jacketed with canvas, approximately six square feet is present in the Furnace Room (Location 8) and is in good condition.

Black duct mastic, containing chrysotile asbestos, is present on seams / joints of the fibreglass insulation on ducts throughout the assessed area (samples 1905A-C). Mastic is a non-friable material and approximately 2,000 square feet is present and is in good condition.



Asbestos-containing black mastic on fiberglass insulation.



Asbestos-containing black mastic on fiberglass insulation.

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Asbestos-containing parging cement on duct seams in the Furnace Room (Location 8).

3.1.5 Mechanical Equipment Insulation

Mechanical equipment (HVAC equipment, hot water tanks) is either uninsulated or insulated with non-asbestos fibreglass.

3.1.6 Vermiculite

Destructive testing was conducted of masonry block walls. The masonry block walls were penetrated in 13 locations; loose fill vermiculite was not observed within the cavities. The locations of destructive testing have been indicated on the drawings in Appendix I.

3.1.7 Acoustic Ceiling Tiles

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

Size, Type, Pattern	Locations (Location #)	Sample Number	Asbestos Type
24”x48”, Lay-in, Medium widthwise fissures and pinholes	Offices (Location 6) Offices (Location 11) Kitchen (Location 16)	1904A-C	None detected
24”x48”, Lay-in, Lengthwise fissures and pinholes	**Forestry Office (Location 3) - 400 SF**	**1906A-C**	**Amosite and Chrysotile**

Ceiling tiles are considered to be non-friable and are in good condition.

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Non-asbestos 24”x48” lay-in ceiling tile with medium width wise fissures and pinholes.



Asbestos-containing 24”x48” lay-in ceiling tile with lengthwise fissures and pinholes in Forestry Room (Location 3).

3.1.8 Drywall Joint Compound

Drywall joint compound present on wall and ceiling finishes throughout the assessed area does not contain asbestos (samples 1903A-C).

3.1.9 Asbestos Cement Products (Transite)

Transite board, presumed to contain asbestos based on visual observation, is present on the ceiling in the Men’s Washroom, Kitchen and Washroom (Locations 7, 16 and 19). Transite is non-friable, approximately 2,000 square feet is present and is in good condition.

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Asbestos-containing transite ceiling board.



Asbestos-containing transite ceiling board in the Men's Washroom (Location 7).

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". Beige with grey, beige and white smears	Throughout building	1902A-C	None detected	None detected
12"x12" Beige with white smears	Forestry Office (Location 3)	1907A-C	None detected	None detected

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Non-asbestos 12”x12” beige vinyl floor tiles with a grey, beige and white smear pattern.



Non-asbestos 12”x12” beige vinyl floor tiles with a smear pattern.

3.1.11 Firestopping

Black mastic firestopping (sealant), containing chrysotile asbestos, is present at pipe and conduit penetrations on the exterior walls (samples 1913A-C). The firestopping is a non-friable material, approximately 2 square feet is present in the Side Entrance (Location 20) and is in good condition.



Asbestos-containing black mastic firestopping.

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3.1.12 Sealants, Caulking, and Putty

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

Material and Colour	Location	Quantity	Sample Number	Asbestos Type
Caulking, White	**Exterior Windows**	**250 LF**	**1909A-C**	**Chrysotile**
Caulking, White	Interior windows	N/A	1911A-C	None detected
Caulking, Beige	**Entrance expansion Joints**	**15 LF**	**1912A-C**	**Chrysotile**
Caulking, Brown	**Exterior expansion Joints**	**100 LF**	**1916A-C**	**Chrysotile**
Putty, Off-White	**Exterior doors**	**15 LF**	**1917A-C**	**Chrysotile**
Caulking, grey	**Exterior expansion joints**	**200 LF**	**1918A-C**	**Chrysotile**
Caulking (Silicone), Brown	Exterior Doors	N/A	Visually assessed	None

Caulking and putty are non-friable materials and in good condition.

Silicone caulking present around exterior doors was visually determined to be non-asbestos based on the non-asbestos composition of the caulking (i.e. silicone).

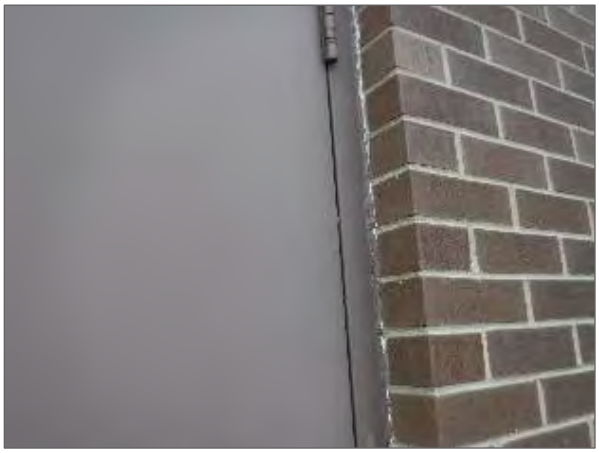


Asbestos-containing beige expansion joint caulking.



Asbestos-containing grey expansion joint caulking.

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Asbestos-containing white door putty.

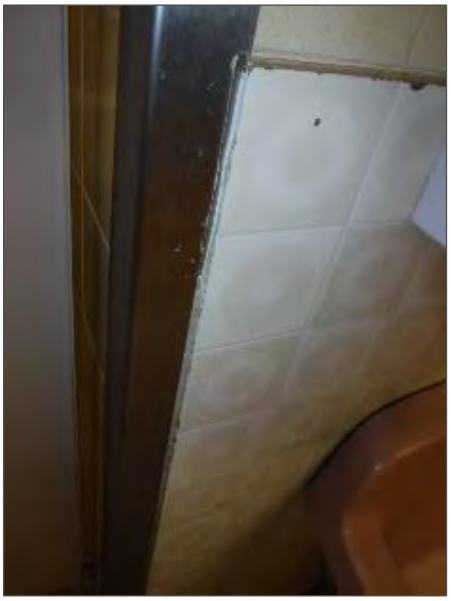
3.1.13 Other Building Materials

Gold mastic, containing chrysotile asbestos, is present on the underside of the sink in the Kitchen (Location 16, samples 1908A-C). Mastic is non-friable, approximately 4 square feet is present and in good condition.

Fibrous board present in the Men's Washroom (Location 7, samples 1910A-C) does not contain asbestos.



Asbestos-containing black mastic present on the underside of the sink in the Kitchen (Location 16).



Non-asbestos fibrous wallboard.

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3.1.14 Presumed Asbestos Materials

The methodology identifies a list of materials which may contain asbestos, which were not to be sampled, based on limitations of the scope. The following is a list of materials which may contain asbestos, which were not observed during the assessment, but based on site conditions may be present. If determined to be present during building renovation, these materials are presumed to contain asbestos until otherwise proven by sampling and analysis:

- Roofing felts and tar, mastics;
- Floor levelling compound;
- Ceramic tile setting compound;
- Electrical components; and
- Materials concealed or 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:

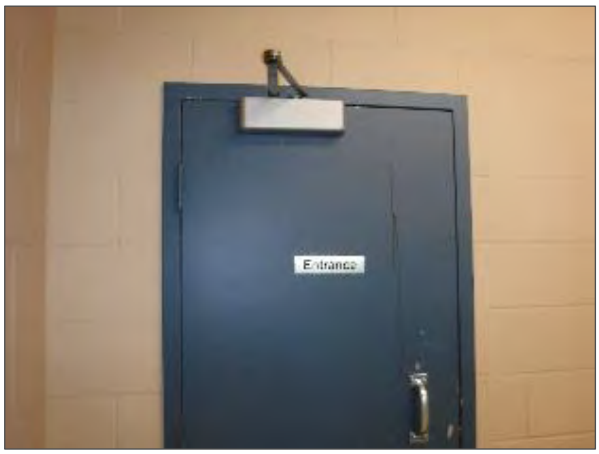
Sample Number	Colour, Substrate Description	Location (Location #)	Lead (%)
L-001	Red, steel	Maintenance Shop (Location 5)	<0.0061
L-002	Brown, steel	Maintenance Shop (Location 5)	0.010
L-003	Beige, steel	Stock Room (Location 4)	0.081
L-004	Blue, steel	Stock Room (Location 4)	<0.0067
L-005	Beige, drywall	Hallway (Location 10)	<0.0059
L-006	**Cream, masonry (5,000 square feet)**	**Forestry Office (Location 3) Throughout building**	**0.13**
L-007	Light brown, masonry	Lunch Room (Location 2)	0.068
L-008	**Light pink, masonry (2,000 square feet)**	**Men's and Women's Washrooms (Location 7 and 19)**	**0.12**
L-009	**Yellow, steel (10,000 square feet)**	**Exterior Storage Shed (Location 9)**	**0.58**

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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.



Lead-containing cream paint on masonry walls throughout the building.



Lead-containing light pink paint on masonry walls tis present in the Men's and Women's Washrooms (Location 7 and 19).



Lead-containing yellow steel paint on the exterior of the Storage Shed.

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.

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Lead-containing battery.

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; and
- Ceramic tiles and grout.

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.

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Liquid mercury in thermostat ampule.

3.5 Polychlorinated Biphenyls

3.5.1 Caulking

The following table presents a summary of caulking present:

Material and Colour	Location	Quantity	Sample Number	PCB concentration (ppm)
Caulking, white	Exterior windows frames	N/A	PCB-01	<0.5
Caulking, white	Interior window frames	N/A	PCB-02	<0.5
Caulking, beige	Entrance expansion joints	N/A	PCB-03	<0.5
Caulking, brown	Exterior expansion joints	N/A	PCB-04	<0.5
Putty, off-white	Exterior doors	N/A	PCB-05	<0.5
Caulking, grey	Exterior expansion joints	N/A	PCB-06	<0.5

These materials are non-PCB solids based on the threshold (50 ppm).

3.5.2 Lighting Ballasts

The building has 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

Transformers were not found during the assessment.

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3.6 Mould

Visible mould growth and water damage was not found during the assessment.

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.
5. Update the asbestos inventory upon completion of the abatement and removal of asbestos-containing materials.

4.2 Abatement Budget Estimation

The following Class D cost estimate (+/-25%) has been prepared to aid in budgeting for removal of all known hazardous building materials identified in this report.

Costs may also vary depending on seasonal work patterns, availability of contractors, or local market conditions:

Hazardous Material	Approximate Quantity	Removal Procedure	Cost Estimate
Asbestos-containing parging cement on pipe fittings	11 fittings	Type 2 Glove Bag asbestos abatement procedures	$1,265.00
Asbestos-containing parging cement on fibreglass duct insulation	6 square feet	Type 3 asbestos abatement procedures	$3,500.00

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Hazardous Material	Approximate Quantity	Removal Procedure	Cost Estimate
Asbestos-containing black mastic on fibreglass duct insulation	2,000 square feet	Type 1 asbestos abatement procedures	$40,000.00
Asbestos-containing acoustic ceiling tiles	400 square feet	Type 2 asbestos abatement procedures	$2,500.00
Asbestos-containing Transite ceiling panels	2,000 square feet	Type 1 asbestos abatement procedures	$10,000.00
Asbestos-containing black mastic fireproofing at pipe and conduit penetrations	2 square feet	Type 1 asbestos abatement procedures	$800.00
Asbestos-containing white caulking around exterior windows	250 linear feet	Type 1 asbestos abatement procedures	$3,750.00
Asbestos-containing beige, brown and grey caulking present in exterior expansion joints	315 linear feet	Type 1 asbestos abatement procedures	$4,725.00
Asbestos-containing white putty around exterior doors	15 linear feet	Type 1 asbestos abatement procedures	$750.00
Asbestos-containing gold mastic on the underside of sinks	4 square feet	Type 1 asbestos abatement procedures	$800.00
Lead-containing cream paint on masonry walls	5,000 square feet	EACO lead abatement procedures	$400,000.00*
Lead-containing light pink paint on masonry walls	2,000 square feet	EACO lead abatement procedures	$160,000.00*
Lead-containing yellow paint on steel walls	10,000 square feet	EACO lead abatement procedures	$800,000.00*

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Hazardous Material	Approximate Quantity	Removal Procedure	Cost Estimate
Mercury containing light tubes	<500	Do not break lamps or separate liquid mercury from components. Recycle and reclaim mercury from fluorescent lamps when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with local regulations.	$750.00
Mercury-containing thermostats	<20 each	Do not separate liquid mercury from components. Recycle and reclaim mercury from thermostats when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with local regulations.	$500.00
PCB light ballasts	<50 kg	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	$350.00
TOTAL ESTIMATE (Class D +/-25%)			**$1,429,690.00**

*Disposal costs for potential lead leachate toxic paint is not included.

4.3 Building Renovation Work

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

4.3.1 Asbestos

Remove asbestos-containing materials (ACM) prior to renovation, alteration, or maintenance if ACM may be disturbed by the work.

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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.

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 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 themostats 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.

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5.0 TERMS AND LIMITATIONS

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

6.0 REFERENCES

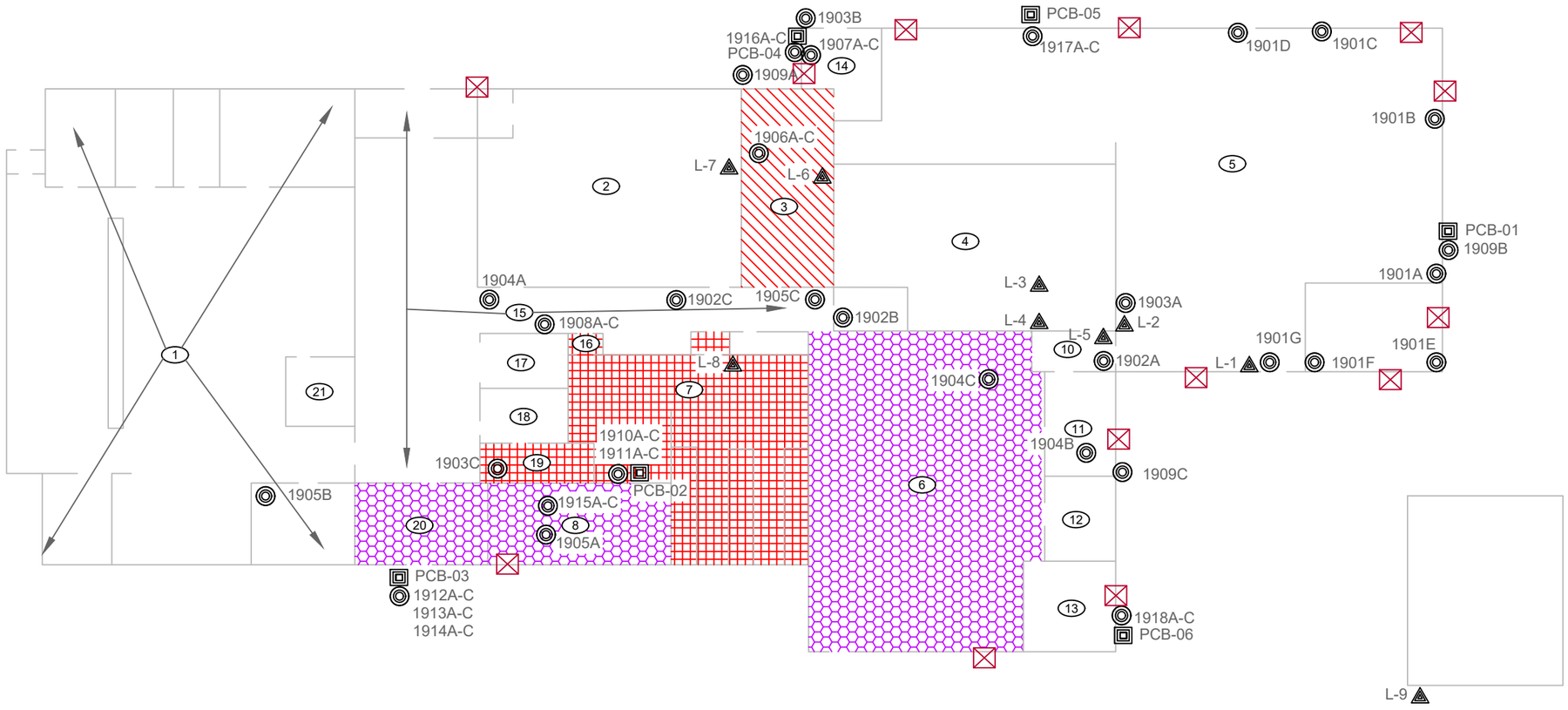
The following legislation and documents were referenced in completing the assessment and this report:

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.
9. PCB Regulations, SOR/2008-273, Canadian Environmental Protection Act.

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APPENDIX I

Drawing



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.

BASE PLAN PROVIDED BY CLIENT.

PINCHIN

LEGEND:

- (X) PINCHIN LOCATION NUMBER
- ASBESTOS BULK SAMPLE
- LEAD BULK SAMPLE
- PCB BULK SAMPLE
- VERMICULITE DRILL LOCATION
- THERMAL SYSTEM INSULATION
- ACOUSTIC CEILING TILES
- ASBESTOS CEMENT PANELS

FOR CLARITY, THE FOLLOWING ASBESTOS CONTAINING MATERIALS, ARE PRESENT IN THE ASSESSED AREA, BUT HAVE NOT BEEN HATCHED ON THE DRAWING:

- VARIOUS APPLICATIONS OF CAULKING, MASTIC, SEALANTS, FIRESTOPPING AND PUTTY

CLIENT:
BGIS

LOCATION:
22291 CHARING CROSS ROAD
CHATHAM, ONTARIO
KENT OC (HYD00420)

TITLE:
HAZARDOUS BUILDING MATERIALS ASSESSMENT
MAIN FLOOR

DATE:	PROJECT # :
2019/06/26	242815.003
DRAWN BY: BR	DRAWING: 1 OF 1
CHECKED BY: DM	
SCALE: NTS	

MASTER DRAWING TEMPLATE MARCH 2018

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

NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
5 Superior Street
Tilbury, Ontario N0P 2L0

Attn: Dylan Melo
S Young
Tayler Deweerd

Lab Order ID: 71914848
Analysis ID: 71914848_PLM
Date Received: 6/4/2019
Date Reported: 6/6/2019

Project: 242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1901A *71914848PLM_1*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1901B *71914848PLM_2*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1901C *71914848PLM_3*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1901D *71914848PLM_4*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1901E *71914848PLM_5*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1901F *71914848PLM_6*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1901G *71914848PLM_7*	Cementitious Fireproofing Location 5	**None Detected**	**15% Cellulose** **15% Fiber Glass**	**70% Other**	Gray Fibrous Homogeneous Teased, Crushed
1902A - A *71914848PLM_8*	12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 10 *tile*	**None Detected**		**100% Other**	Beige, Gray Non Fibrous Homogeneous Dissolved

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Bethany Nichols (64)

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

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Date Reported: 6/6/2019

Project: 242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1902A - B *71914848PLM_59*	12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 10 *mixed mastics*	None Detected		100% Other	Black, Yellow Non Fibrous Heterogeneous Dissolved
1902B - A *71914848PLM_9*	12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 11 *tile*	None Detected		100% Other	Beige, Gray Non Fibrous Homogeneous Dissolved
1902B - B *71914848PLM_60*	12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 11 *mixed mastics*	None Detected		100% Other	Black, Yellow Non Fibrous Heterogeneous Dissolved
1902C - A *71914848PLM_10*	12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 17 *tile - ashed*	None Detected		100% Other	Beige, Gray Non Fibrous Homogeneous Dissolved, Ashed
1902C - B *71914848PLM_61*	12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 17 *mixed mastics*	None Detected		100% Other	Black, Yellow Non Fibrous Heterogeneous Dissolved
1903A *71914848PLM_11*	Drywall Joint Compound Location 10	None Detected		100% Other	White Non Fibrous Heterogeneous Crushed
1903B *71914848PLM_12*	Drywall Joint Compound Location 14	None Detected		100% Other	White Non Fibrous Homogeneous Crushed
1903C *71914848PLM_13*	Drywall Joint Compound Location 19	None Detected		100% Other	White Non Fibrous Homogeneous Crushed

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Bulk Asbestos Analysis

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

NVLAP Lab Code: 200664-0

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Analysis ID: 71914848_PLM
Date Received: 6/4/2019
Date Reported: 6/6/2019

Project: 242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
1904A / *71914848PLM_14*	24x48 Lay-In Ceiling Tile, Medium Width Fissure and Pinhole Pattern. Location 16	None Detected	40% Cellulose 40% Fiber Glass	10% Perlite 10% Other	White, Gray Fibrous Homogeneous Ashed, Teased
1904B / *71914848PLM_15*	24x48 Lay-In Ceiling Tile, Medium Width Fissure and Pinhole Pattern. Location 11	None Detected	40% Cellulose 40% Fiber Glass	10% Perlite 10% Other	White, Gray Fibrous Homogeneous Ashed, Teased
1904C / *71914848PLM_16*	24x48 Lay-In Ceiling Tile, Medium Width Fissure and Pinhole Pattern. Location 6	None Detected	40% Cellulose 40% Fiber Glass	10% Perlite 10% Other	White, Gray Fibrous Homogeneous Ashed, Teased
1905A / *71914848PLM_17*	Black Mastic on Fiber Glass Duct Insulation. Location 8	None Detected	40% Cellulose	60% Other	Black, Brown Fibrous Heterogeneous Dissolved, Teased
1905B / *71914848PLM_18*	Black Mastic on Fiber Glass Duct Insulation. Location 22	None Detected	40% Cellulose	60% Other	Black, Brown Fibrous Heterogeneous Dissolved, Teased
1905C / *71914848PLM_19*	Black Mastic on Fiber Glass Duct Insulation. Location 1	5% Chrysotile	20% Cellulose	75% Other	Black, Brown Fibrous Heterogeneous Dissolved, Teased
1906A / *71914848PLM_20*	24x48 Lay-In Ceiling Tile, Length Fissure and Pinhole Pattern, Location 3	6% Amosite 2% Chrysotile	40% Cellulose 40% Fiber Glass	12% Other	White, Gray Fibrous Homogeneous Ashed, Teased
1906B / *71914848PLM_21*	24x48 Lay-In Ceiling Tile, Length Fissure and Pinhole Pattern, Location 3	Not Analyzed			

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Bethany Nichols (64)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

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NVLAP Lab Code: 200664-0

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5 Superior Street
Tilbury, Ontario N0P 2L0

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S Young
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Analysis ID: 71914848_PLM
Date Received: 6/4/2019
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Project: 242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1906C	24x48 Lay-In Ceiling Tile, Length Fissure and Pinhole Pattern, Location 3	**Not Analyzed**			
71914848PLM_22					
1907A - A	12x12 Beige and White Smear Vinyl Floor Tile Location 3	**None Detected**		**100% Other**	Beige Non Fibrous Homogeneous
71914848PLM_23	*tile*				Dissolved
1907A - B	12x12 Beige and White Smear Vinyl Floor Tile Location 3	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous
71914848PLM_62	*mastic/leveling - small sample*				Dissolved
1907B - A	12x12 Beige and White Smear Vinyl Floor Tile Location 3	**None Detected**		**100% Other**	Beige Non Fibrous Homogeneous
71914848PLM_24	*tile*				Dissolved
1907B - B	12x12 Beige and White Smear Vinyl Floor Tile Location 3	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous
71914848PLM_63	*mastic/leveling - small sample*				Dissolved
1907C - A	12x12 Beige and White Smear Vinyl Floor Tile Location 3	**None Detected**		**100% Other**	Beige Non Fibrous Homogeneous
71914848PLM_25	*tile - ashed*				Dissolved, Ashed
1907C - B	12x12 Beige and White Smear Vinyl Floor Tile Location 3	**None Detected**		**100% Other**	Yellow, Gray Non Fibrous Heterogeneous
71914848PLM_64	*mastic/leveling - small sample*				Dissolved
1908A	Gold Sink Mastic - Location 16	**5% Chrysotile**		**95% Other**	Gold Non Fibrous Homogeneous
71914848PLM_26					Dissolved

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Bulk Asbestos Analysis

By Polarized Light Microscopy
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NVLAP Lab Code: 200664-0

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5 Superior Street
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Project: 242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1908B *71914848PLM_27*	Gold Sink Mastic - Location 16	**Not Analyzed**			
1908C *71914848PLM_28*	Gold Sink Mastic - Location 16	**Not Analyzed**			
1909A *71914848PLM_29*	Exterior White Window Caulking Location 9	**2% Chrysotile**		**98% Other**	White Non Fibrous Homogeneous Dissolved, Ashed
1909B *71914848PLM_30*	Exterior White Window Caulking Location 9	**Not Analyzed**			
1909C *71914848PLM_31*	Exterior White Window Caulking Location 9	**Not Analyzed**			
1910A *71914848PLM_32*	Fiberous Wall Board Location 7	**None Detected**	**90% Cellulose**	**10% Other**	White, Brown Fibrous Heterogeneous Teased, Ashed
1910B *71914848PLM_33*	Fiberous Wall Board Location 7	**None Detected**	**90% Cellulose**	**10% Other**	White, Brown Fibrous Heterogeneous Teased, Ashed
1910C *71914848PLM_34*	Fiberous Wall Board Location 7	**None Detected**	**90% Cellulose**	**10% Other**	White, Brown Fibrous Heterogeneous Teased, Ashed

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Project: 242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1911A *71914848PLM_35*	White Caulking - Location 7	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
1911B *71914848PLM_36*	White Caulking - Location 7	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
1911C *71914848PLM_37*	White Caulking - Location 7	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
1912A *71914848PLM_38*	Beige Expansion Seam Caulking - Location 20	**2% Chrysotile**	**5% Other**	**93% Other**	Gray Non Fibrous Homogeneous Dissolved
1912B *71914848PLM_39*	Beige Expansion Seam Caulking - Location 20	**Not Analyzed**			
1912C *71914848PLM_40*	Beige Expansion Seam Caulking - Location 20	**Not Analyzed**			
1913A *71914848PLM_41*	Black Mastic Firestop firestop on Conduit Penetrations-Location 20	**20% Chrysotile**		**80% Other**	Gray Fibrous Homogeneous Teased, Dissolved
1913B *71914848PLM_42*	Black Mastic Firestop firestop on Conduit Penetrations-Location 20	**Not Analyzed**			

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Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1913C *71914848PLM_43*	Black Mastic Firestop firestop on Conduit Penetrations-Location 20	**Not Analyzed**			
1914A *71914848PLM_44*	Parging Cement on Pipe Fittings - Location 20	**60% Chrysotile**		**40% Other**	Gray Fibrous Homogeneous Teased
1914B *71914848PLM_45*	Parging Cement on Pipe Fittings - Location 20	**Not Analyzed**			
1914C *71914848PLM_46*	Parging Cement on Pipe Fittings - Location 20	**Not Analyzed**			
1915A *71914848PLM_47*	Parging Cement on fiber glass on duct seams - Location 8	**30% Chrysotile**		**70% Other**	Gray Fibrous Homogeneous Teased
1915B *71914848PLM_48*	Parging Cement on fiber glass on duct seams - Location 8	**Not Analyzed**			
1915C *71914848PLM_49*	Parging Cement on fiber glass on duct seams - Location 8	**Not Analyzed**			
1916A *71914848PLM_50*	Brown Caulking on exterior Wall Seams and Joints location 9	**2% Chrysotile**		**98% Other**	Brown Non Fibrous Homogeneous Dissolved

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Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
1916B *71914848PLM_51*	Brown Caulking on exterior Wall Seams and Joints location 9	**Not Analyzed**			
1916C *71914848PLM_52*	Brown Caulking on exterior Wall Seams and Joints location 9	**Not Analyzed**			
1917A *71914848PLM_53*	Off White Door Putty Location 9	**5% Chrysotile**		**95% Other**	Gray Non Fibrous Homogeneous Dissolved
1917B *71914848PLM_54*	Off White Door Putty Location 9	**Not Analyzed**			
1917C *71914848PLM_55*	Off White Door Putty Location 9	**Not Analyzed**			
1918A *71914848PLM_56*	Grey Expansion Caulking - Location 9	**2% Chrysotile**		**98% Other**	Brown Non Fibrous Homogeneous Dissolved
1918B *71914848PLM_57*	Grey Expansion Caulking - Location 9	**Not Analyzed**			
1918C *71914848PLM_58*	Grey Expansion Caulking - Location 9	**Not Analyzed**			

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Analyst

Approved Signatory

P-F-002 r15 1/16/2021

7191484 8
Revised

Version 1-15-2012

Client:	Pinchin Ltd.	*"Instructions:*
Contact:	Dylan Melo	*Use Column "B" for your contact info*
Address:	30 Queen Street South, PO Box 339, Tilbury, ON N0P 2L0	
Phone:	519-682-4492	*To See an Example Click the bottom Example Tab.*
Fax:	519-682-4493	
Email:	'dmelo@pinchin.com; syoung@pinchin.com; tdeweerd@p	*Enter samples between "<<" and ">>"*
Project:	242815.003,22291 Charing Cross Road, Chatham,BGIS-Hydro One,Kent OC	*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"*
Client Notes:		
P.O. #.	242815.003	*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:	June 3,2019	
Analysis:	PLM - Stop Positive	
TurnAroundTime:	4days	

Invoice to:
ap@pinchin.com
Email address here

Scientific Analytical Institute
4604 Dundas Dr.
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Date 1 (Lab use only)	Sample Description	Date 2 (Lab use only)
<<			
1901A		Cementitious Fireproofing Location 5	
1901B		Cementitious Fireproofing Location 5	
1901C		Cementitious Fireproofing Location 5	
1901D		Cementitious Fireproofing Location 5	
1901E		Cementitious Fireproofing Location 5	
1901F		Cementitious Fireproofing Location 5	
1901G		Cementitious Fireproofing Location 5	
1902A		12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 10	
1902B		12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 11	
1902C		12x12 Beige Vinyl Floor Tile with Grey Beige and White Smear Pattern. Location 17	
1903A		Drywall Joint Compound Location 10	
1903B		Drywall Joint Compound Location 14	
1903C		Drywall Joint Compound Location 19	
1904A		24x48 Lay-In Ceiling Tile, Medium Width Fissure and Pinhole Pattern. Location 16	
1904B		24x48 Lay-In Ceiling Tile, Medium Width Fissure and Pinhole Pattern. Location 11	
1904C		24x48 Lay-In Ceiling Tile, Medium Width Fissure and Pinhole Pattern. Location 6	
1905A		Black Mastic on Fiber Glass Duct Insulation. Location 8	
1905B		Black Mastic on Fiber Glass Duct Insulation. Location 22	
1905C		Black Mastic on Fiber Glass Duct Insulation. Location 1	
1906A		24x48 Lay-In Ceiling Tile, Length Fissure and Pinhole Pattern, Location 3	
1906B		24x48 Lay-In Ceiling Tile, Length Fissure and Pinhole Pattern, Location 3	
1906C		24x48 Lay-In Ceiling Tile, Length Fissure and Pinhole Pattern, Location 3	
1907A		12x12 Beige and White Smear Vinyl Floor Tile Location 3	
1907B		12x12 Beige and White Smear Vinyl Floor Tile Location 3	
1907C		12x12 Beige and White Smear Vinyl Floor Tile Location 3	
1908A		Gold Sink Mastic - Location 16	
1908B		Gold Sink Mastic - Location 16	
1908C		Gold Sink Mastic - Location 16	
1909A		Exterior White Window Caulking Location 9	
1909B		Exterior White Window Caulking Location 9	
1909C		Exterior White Window Caulking Location 9	
1910A		Fiberous Wall Board Location 7	
1910B		Fiberous Wall Board Location 7	
1910C		Fiberous Wall Board Location 7	
1911A		White Caulking - Location 7	
1911B		White Caulking - Location 7	
1911C		White Caulking - Location 7	
1912A		Beige Expansion Seam Caulking - Location 20	
1912B		Beige Expansion Seam Caulking - Location 20	
1912C		Beige Expansion Seam Caulking - Location 20	
1913A		Black Mastic Firestop firestop on Conduit Penetrations- Location 20	
1913B		Black Mastic Firestop firestop on Conduit Penetrations- Location 20	
1913C		Black Mastic Firestop firestop on Conduit Penetrations- Location 20	
1914A		Parging Cement on Pipe Fittings - Location 20	
1914B		Parging Cement on Pipe Fittings - Location 20	
1914C		Parging Cement on Pipe Fittings - Location 20	
1915A		Parging Cement on fiber glass on duct seams - Location 8	
1915B		Parging Cement on fiber glass on duct seams - Location 8	
1915C		Parging Cement on fiber glass on duct seams - Location 8	
1916A		Brown Caulking on exterior Wall Seams and Joints location 9	
1916B		Brown Caulking on exterior Wall Seams and Joints location 9	
1916C		Brown Caulking on exterior Wall Seams and Joints location 9	
1917A		Off White Door Putty Location 9	
1917B		Off White Door Putty Location 9	
1917C		Off White Door Putty Location 9	
1918A		Grey Expansion Caulking - Location 9	
1918B		Grey Expansion Caulking - Location 9	
1918C		Grey Expansion Caulking - Location 9	
>>			

Accepted ☒

Rejected ☐

BKelley 6/6 1830 pm

APPENDIX II-B

Lead Analytical Certificates

Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: Pinchin Ltd.
5 Superior Street
Tilbury, Ontario N0P 2L0

Attn: Dylan Melo
Tayler Deweerd
S Young

Project: 242815.003

Lab Order ID: 71914844
Analysis ID: 71914844_PBP
Date Received: 6/4/2019
Date Reported: 6/11/2019

Sample ID *Lab Sample ID*	Description *Lab Notes*	Mass *(g)*	Concentration *(ppm)*	Concentration *(% by weight)*
L-001 71914844PBP_1	Red Steel Structure Paint - Location 5	0.0655	< 61	**< 0.0061%**
L-002 71914844PBP_2	Brown Steel Door Paint - Location 5	0.0835	100	**0.010%**
L-003 71914844PBP_3	Beige Steel Structure Paint - Location 4	0.0808	810	**0.081%**
L-004 71914844PBP_4	Blue Poor Paint Location 4	0.0595	< 67	**< 0.0067%**
L-005 71914844PBP_5	Beige Drywall Wall Paint - Location 10	0.0675	< 59	**< 0.0059%**
L-006 71914844PBP_6	Cream block wall paint - Location 3	0.0525	1300	**0.13%**
L-007 71914844PBP_7	Light Brown Block Wall Paint - Location 2	0.0538	680	**0.068%**
L-008 71914844PBP_8	Light Pink Block Wall Paint - Location 7	0.0833	1200	**0.12%**
L-009 71914844PBP_9	Yellow paint on exterior steel storage shed - Location 9	0.0501	5800	**0.58%**

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb).

Matthew Caffey (9)
Analyst

Laboratory Director

71914844

Client:	Pinchin Ltd.	
Contact:	Dylan Melo	
Address:	5 Superior St, Tilbury ON N0P 2L0	
Phone:	519.682.4492 ext. 3308	
Fax:	519.682.4493	
Email:	dmelo@pinchin.com; syoung@pinchin.com; tdeweerd@pinchin.com	
Project:	242815.003	
Client Notes:		
P.O. #.	242815.003	
Date Submitted:		
Analysis:	Lead	
TurnAroundTime:	Regular	

Instructions:

Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
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"

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.

Version 1-15-2012

Invoice to:

Account Payable
AP@pinchin.com

Scientific Analytical Institute

4604 Dundas Dr.
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1 (Lab use only)	Sample Description	Data 2 (Lab use only)
<<			
L-001		Red Steel Structure Paint - Location 5	
L-002		Brown Steel Door Paint - Location 5	
L-003		Beige Steel Structure Paint - Location 4	
L-004		Blue Poor Paint Location 4	
L-005		Beige Drywall Wall Paint - Location 10	
L-006		Cream block wall paint - Location 3	
L-007		Light Brown Block Wall Paint - Location 2	
L-008		Light Pink Block Wall Paint - Location 7	
L-009		Yellow paint on exterior steel storage shed - Location 9	

Accepted ☑

Rejected ☐

C Soundara 6/4
10:30am

APPENDIX II-C

PCB Analytical Certificates

aevitas (AYR)

AEVITAS INC. (AYR)
ANALYTICAL CHEMISTRY DEPARTMENT
75 WANLESS COURT, AYR, ONTARIO, N0B 1E0, CANADA
WWW.AEVITAS.CA

ilac-MRA CALA Testing Accreditation No. A 3494

Certificate of Analysis

Dylan Melo / **Sarah Young**

Pinchin Ltd. (Tilbury)
30 Queen Street South, PO Box 399, Tilbury, ON N0P2L0

Printed: Jun 07, 2019

Report Description: ***6 solid samples were submitted for the following chemical analysis***

Project Name:	Aviva Canada	**Date Sampled:**	May 30, 2019
Project No.:	242815.003	**Date Tested:**	Jun 06, 2019
Site Location:	22291 Charing Cross Road, Chatham, On	**Sampled by:**	Dylan Melo

Report Number: 19-0943

No.	Analyte	Result	Units	MDL	Comments	Technique / Test Method
1	*Sample ID.:* ***PCB-01 - Exterior White Window Caulking Location 9***					
	PCBs in Solid	**<0.5**	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
2	*Sample ID.:* ***PCB-02 - White Caulking Location 7***					
	PCBs in Solid	**<0.5**	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
3	*Sample ID.:* ***PCB-03 - Beige Expansion Seam Caulking Location 20***					
	PCBs in Solid	**<0.5**	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
4	*Sample ID.:* ***PCB-04 - Brown Caulking on Exterior Wall Seams and joints location 9***					
	PCBs in Solid	**<0.5**	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
5	*Sample ID.:* ***PCB-05 - Off-white Door Putty Location 9***					
	PCBs in Solid	**<0.5**	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
6	*Sample ID.:* ***PCB-06 - Grey Expansion Caulking Location 9***					
	PCBs in Solid	**<0.5**	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)

Results relate only to the samples tested above, as received.

Approved By:

Son C.H. Le, *B. Eng. (Chem.)*
Lab Manager
Phone: (519) 740-1333 Ext.: 230
Fax: (519) 740-2320
Email: SonLe@aevitas.ca

The Analytical Chemistry Laboratory of Aevitas Inc. (Ayr) is accredited for specific tests in accordance with the recognised International Standard ISO/IEC 17025:2005 by the Canadian Association for Laboratory Accreditation (CALA) Inc. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009). The laboratory quality management system of Aevitas Inc. (Ayr) meets the principles of ISO 9001:2008.

All Analytical data is subject to uncertainty which, may vary with sample matrices, sample preparation techniques and instrumental parameters. As a general guideline, uncertainty may be expressed as approximately +/- 50% of the reported value at or near the Method Detection Limit (MDL) and +/-10% or less, of the reported result that is greater than 10 times the MDL. Method Detection Limits are defined as approximately 3 times the standard deviation value (at 99% confidence level), which is obtained from replicate analysis of a low-level standard as per the Ontario MOE - MISA Protocol for the Sampling and Analysis of Industrial / Municipal Wastewater (1999). MDL determination is based on undiluted samples with relatively low matrix interferences. Where dilutions are required, the reported MDL value will be scaled proportionally.

All testing procedures follow strict guidelines and quality assurance / quality control (QA/QC) protocols. QA/QC data is available for review at any time upon client's request.

APPENDIX III
Methodology

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 limited demolition of wall and ceiling finishes (drywall or plaster) to view concealed conditions at representative areas as permitted by the current building use. Limited 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 not conducted.

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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.

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:

- Roofing felts and tar, including repair mastics;
- Concrete floor levelling compound, including ceramic tile thin set;
- Elevator and lift brakes;
- 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;

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- Insulation under metal clad boilers and vessels;
- Mechanical packing, ropes and gaskets;
- Paints and coatings;
- Paper products under wood flooring or metal or slate roofing;
- Soffit and fascia boards at elevated heights;
- Fire resistant doors or metal clad finishes;
- Vibration dampers on HVAC equipment; and
- Materials concealed or outside the assessed area.

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).

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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, or equivalent.

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.

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.

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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.

Template: Methodology for Hazardous Building Materials Assessment, HAZ, May 8, 2019

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