FINAL

Hazardous Building Materials Assessment

Building M-20, 1200 Montreal Road, Ottawa, ON

Prepared for:

National Research Council
1200 Montreal Road
Ottawa, Ontario K1A 0R6

Attention: John Goodwin
Mechanical Designer

May 15, 2015

Pinchin File: 102254.001

MEMBER OF
THE PINCHIN GROUP

Issued to:	**National Research Council**
Contact:	**John Goodwin** **Mechanical Designer**
Issued on:	**May 15, 2015**
Pinchin file:	**102254.001**
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EXECUTIVE SUMMARY

National Research Council (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment at Building M-20, 1200 Montreal Road, Ottawa, ON. The assessment was performed on April 1, 2015.

The objective of the assessment was to identify specified hazardous building materials in preparation for renovation of Room 112, Room 114, corridor 154 (limited to the section between the doors to rooms 112 and 114), and Room 118A on the 1st floor, and the Photocopy and Storage rooms on 2nd floor. The rooms were vacant at the time of the assessment work. The results of this assessment are intended for use with a properly developed scope of work and performance specification.

SUMMARY OF FINDINGS

Asbestos: Asbestos-containing materials (ACM) were confirmed to be present as follows:

- Friable parging cement insulation, containing chrysotile asbestos, present on duct work.
- Non-friable plaster, containing chrysotile asbestos, present as wall and ceiling finishes.

Lead:

- Lead may be present in emergency light batteries.

Silica:

- Crystalline silica is present in concrete and plaster in the assessed area.

Mercury:

- Mercury vapour is present in fluorescent lamps.

Polychlorinated Biphenyls (PCBs):

- PCBs may be present in light ballasts.

Mould:

- Mould growth was not observed.

SUMMARY OF RECOMMENDATIONS

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

1. Prepare plans and specifications for hazardous material removal which will or may be affected by the planned work or is otherwise scheduled for removal. The specifications should include and address the scope of work, safe work practices, personal protective equipment, respiratory protection, and disposal of waste materials.
2. Provide this report and the detailed plans and specifications to the contractor prior to bidding or commencing work.
3. Retain a qualified consultant to specify, inspect and verify the successful removal of hazardous materials.
4. Remove asbestos-containing materials if disturbed by renovation work.
5. Remove PCB ballasts and mercury-containing items if disturbed by renovation work.
6. Follow appropriate safe work procedures when handling or disturbing silica.

Please refer to Section 4.0 of this report for detailed recommendations regarding administrative and remedial actions.

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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1.0 INTRODUCTION AND SCOPE

National Research Council (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment at Building M-20, 1200 Montreal Road, Ottawa, ON.

The assessment was performed by Paul Bliss, Project Manager on April 1, 2015. The surveyor was accompanied by John Goodwin during the assessment. The rooms were vacant at the time of the assessment.

The objective of the assessment was to identify specified hazardous building materials in preparation for renovation. This assessment is intended to be used for pre-construction purposes only, and does 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 consisted of Room 112, Room 114, corridor 154 (limited to the area between the doors to rooms 112 and 114), and Room 118A on the 1st floor, and the Photocopy and Storage rooms on 2nd floor.

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

- Asbestos.
- Lead.
- Silica.
- Mercury.

The assessment also included:

- Polychlorinated Biphenyls (PCBs).
- Mould.

The following Ontario 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.
- Isocyanates.
- Vinyl chloride monomer.

2.0 BACKGROUND INFORMATION

2.1 Building Description

Item	Details
Building Use	Office spaces
Total Area of Scope (Square Feet)	4,000sf total of all rooms
Year of Construction	1960’s
Structure	Structural steel and concrete floor slab
Exterior Cladding	Pre-cast concrete
HVAC	Boiler with radiators
Roof	Not in scope
Flooring	Vinyl tile, carpet and exposed concrete
Interior Walls	Drywall, plaster
Ceilings	Drywall, lay-in acoustic ceiling tiles and metal pan ceiling

3.0 FINDINGS

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 (acoustic/decorative).
- Acoustic ceiling tiles.
- Vinyl sheet flooring.
- Firestopping.
- Sealants, Caulking, and Putty.

3.1.2 Spray-Applied Fireproofing and Thermal Insulation

Asbestos containing sprayed-fireproofing is known to be present in the building; however, was not present in the assessed areas. Stephen Hebb (Architectural Designer-NRC) reported that the sprayed fireproofing in Room 114 was removed in 2010 during a retrofit of the room.

Asbestos-containing fireproofing may be present as debris or overspray in wall cavities (including within masonry) where walls extend to the structure/fireproofing; however, may require destructive investigations (not completed in this scope) to identify.

In areas where the building was originally sprayed with asbestos-containing sprayed fireproofing that has been removed and replaced, it is not possible to locate minor amounts of residual sprayed asbestos left in these areas after application of new, non-asbestos fireproofing. Such residual materials may be present within cavities, shafts, within walls, or fully or partially covered with new asbestos-free re-spray. To attempt to locate these residual pockets of ACM would require extensive demolition, visual investigation of literally every square meter and likely extensive removal and replacement of the new fireproofing.

3.1.3 Thermal Systems Insulation (TSI)

3.1.3.1 Pipe Insulation

Pipes within the assessed area were insulated with non-asbestos fiberglass or uninsulated.

3.1.3.2 Duct Insulation

Ducts in corridor 154 and room 112 are insulated with non-asbestos brown tar paper faced fiberglass insulation (samples 003A-C). Parging cement, containing chrysotile asbestos, is present on the seams of the duct insulation (samples 002A-C). Parging cement is a friable insulation, and is in good condition. Approximately 50 linear feet of duct with parging cement is present in the corridor.

Photo 1, Asbestos containing parging cement on seams of the tar paper and fiberglass insulation on ducts throughout the main floor corridor.

3.1.4 Plaster

Plaster, containing chrysotile asbestos, is present on walls and in the rooms assessed in M-20. A total of six samples of plaster (samples 0001A-C and 0005A-C). Plaster is non-friable while in place, but generates friable dust upon removal. All plaster is painted and is in good condition.

3.1.5 Drywall Joint Compound

Stephen Hebb (Architectural Designer- NRC) reported that the drywall and drywall joint compound present in room 114 was installed in approximately 2010, and will not contain asbestos. Therefore, sampling was not performed.

3.1.6 Vinyl Floor Tile and Mastic

Vinyl floor tiles are present as follows:

Size, Pattern, Colour and Photo Number	Locations (Quantity)	Sample Number	Asbestos Type (tile)	Asbestos Type (mastic)
12”x12”, Green,	Room 118A, 104SF	004A-C	None Detected	None Detected

3.1.7 Presumed Asbestos Materials

A number of materials which might contain asbestos were not sampled during our assessment due to limitations in scope and methodology. Where present, these materials must be presumed to be an asbestos material and are best sampled during project planning and preparation of contract documents for their removal. Materials presumed to contain asbestos include:

- Concrete floor levelling compound.
- Elevator and lift brakes.
- Electrical components or wiring within control centers, breakers, motors or lights, insulation on wiring.
- Adhesives and duct mastics.
- Caulking.
- Fire resistant doors.

3.2 Lead

3.2.1 Paints and Surface Coatings

One paint sample was collected from interior painted finishes:

Sample Number	Colour, Substrate Description	Locations	Lead (%)
Lead 1	Green on drywall	Boardroom, south wall	<0.0020

Paint was found to contain an insignificant concentration of lead (below 0.1%).

3.2.2 Lead Products and Applications

Lead-containing batteries are present in emergency lighting.

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, fibre optic cable sheathing, grounding conductors, and solder.
- Plumbing solder.

3.3 Silica

Crystalline silica is a presumed component of the following building materials where present in the building:

- Poured or pre-cast concrete.
- Plaster.

3.4 Mercury

3.4.1 Lamps

Mercury vapour is present in fluorescent lamps present in the assessed area.

3.4.2 Mercury-Containing Devices

Mercury containing devices were not found during the survey.

3.5 Polychlorinated Biphenyls

3.5.1 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 will be pre-1980 and contain PCBs.

3.5.2 Transformers

Transformers were not found during the survey.

3.6 Mould

Visible mould growth was not found in the assessed area.

4.0 RECOMMENDATIONS

4.1 General

1. Prepare plans and specifications for hazardous material removal which will or may be affected by the planned work or is otherwise scheduled for removal. The specifications should include and address the scope of work, safe work practices, personal protective equipment, respiratory protection, and disposal of waste materials.
2. Investigate any items excluded from the scope of work of this report. Ideally this investigation will be performed as part of the development of the specifications, or at a minimum immediately prior to commencing renovations when the areas are no longer occupied.
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

Remedial action is not required at this time.

4.3 Building Renovation Work

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

4.3.1 Asbestos

Remove all asbestos-containing materials (ACM) prior to renovation if ACM may be disturbed by the work.

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

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

4.3.2 Lead

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 light tubes when taken out of service. Liquid 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 from service, 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.

5.0 LIMITATIONS

The work performed by Pinchin Ltd. was conducted in accordance with generally accepted engineering or scientific practices current in this geographical area at the time the work was performed. No warranty is either expressed or implied by furnishing written reports or findings. The Client acknowledges that subsurface and concealed conditions may vary from those encountered or inspected. Pinchin Ltd. can only comment on the environmental conditions observed on the date(s) the survey is performed. The work is limited to those materials or areas of concern identified by the Client or outlined in our proposal. Other areas of concern may exist but were not investigated within the scope of this assignment.

Pinchin Ltd. makes no other representations whatsoever, including those concerning the legal significance of its findings or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issue, regulatory statutes are subject to interpretation and these interpretations may change over time. Pinchin Ltd. accepts no responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

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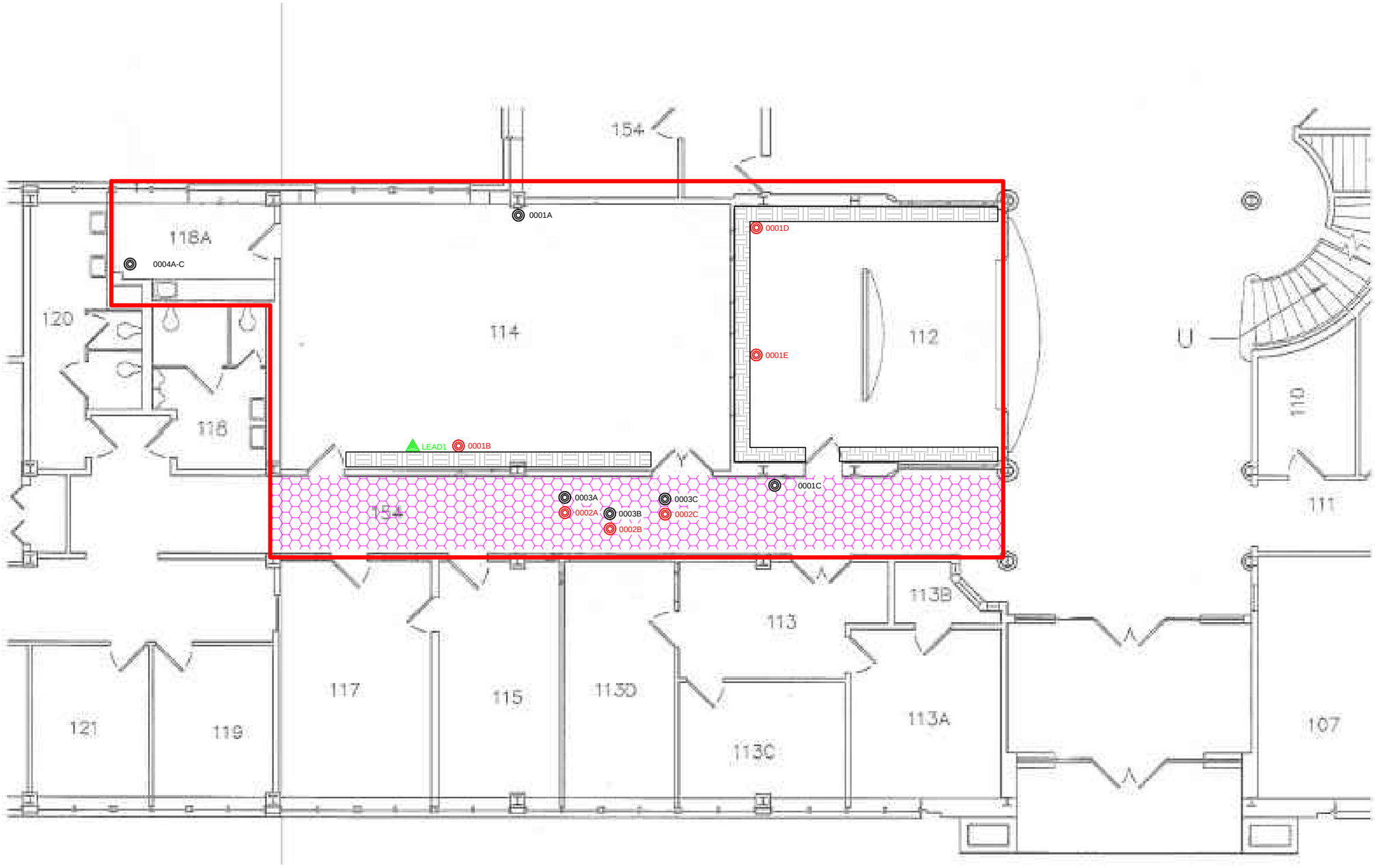
6.0 REFERENCES

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. Ministry of the Environment Regulation, R.R.O. 1990 Reg. 347 as amended.
5. Surface Coating Materials Regulations, SOR/2005-109, Hazardous Products Act.
6. Silica on Construction Projects, Ministry of Labour Guidance Document.
7. Alert – Mould in Workplace Buildings, Ontario Ministry of Labour.

APPENDIX I

Drawings



LEGEND

- NON-ASBESTOS MATERIAL BULK SAMPLE LOCATION
- ASBESTOS-CONTAINING MATERIAL BULK SAMPLE LOCATION
- LEAD SAMPLE NUMBER
- SURVEY BOUNDARY

ASBESTOS-CONTAINING MATERIALS:

- PLASTER
- DUCT INSULATION

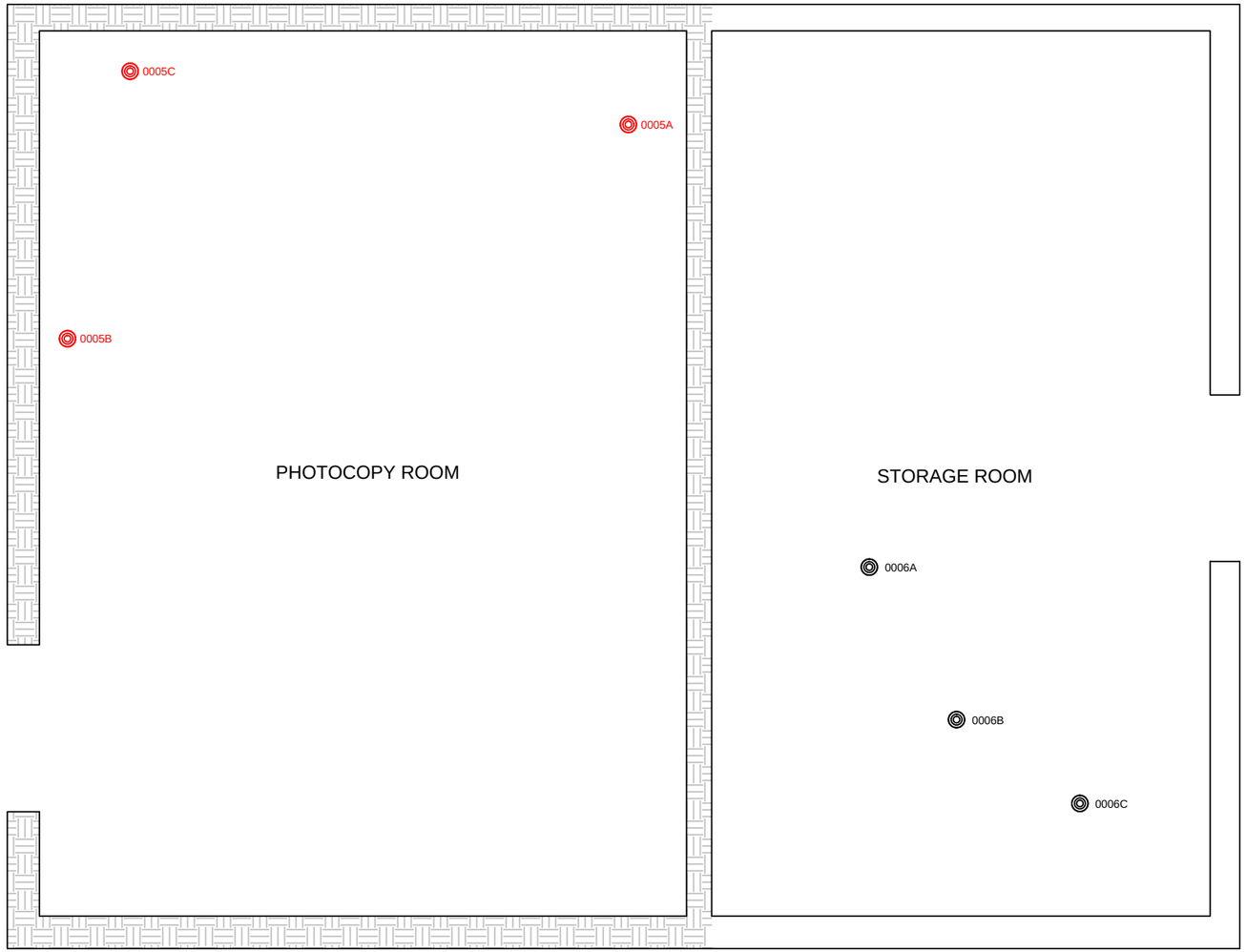
ALL DRAWINGS TO BE REFERENCED WITH THE ASSESSMENT REPORT.

PINCHIN
555 LEGGET DRIVE, SUITE 1001, TOWER A
KANATA, ONTARIO
PHONE: 1 613 592 3387

PROJECT NAME
HAZARDOUS MATERIALS ASSESSMENT
BLDG. M20, 1200 MONTREAL RD., OTT., ON

DRAWING NAME
MAIN FLOOR WORK AREA

FILE NUMBER	REVISION NUMBER
102254.001	-
DRAWN BY: GKG	CHECKED BY: MH
SCALE: NTS	DRAWING NUMBER: 1 OF 2
DATE: 2015/05/14	



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PINCHIN
555 LEGGET DRIVE, SUITE 1001, TOWER A
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PROJECT NAME
HAZARDOUS MATERIALS ASSESSMENT
BLDG. M20, 1200 MONTREAL RD., OTT., ON

DRAWING NAME
SECOND FLOOR WORK AREA

FILE NUMBER	REVISION NUMBER
102254.001	-
DRAWN BY: GKG	CHECKED BY: MH
SCALE: NTS	DRAWING NUMBER: 2 OF 2
DATE: 2015/05/14	

APPENDIX II-A

Asbestos Analytical Certificates

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

AIHA LAP, LLC ACCREDITED LABORATORY INDUSTRIAL HYGIENE ISO/IEC 17025:2005 LAB #173190

NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
555 Legget Drive
Kanata ON K2K 2X3

Attn: Paul Bliss
Gordon Gillespie

Lab Order ID: 1508413
Analysis ID: 1508413_PLM
Date Received: 5/1/2015
Date Reported: 5/7/2015

Project: 102254.001, Pinchin Ltd. 555 Legget Drive, Suite 1001, Tower A, Kanata, Ont, M-20, 1200 Montreal Road, Ottawa, Ontario

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
001A - A *1508413PLM_1*	Plaster, Room 114, North wall, *texture*	**None Detected**		**100% Other**	Beige Non Fibrous Heterogeneous Dissolved
001A - B *1508413PLM_21*	Plaster, Room 114, North wall, *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Teased
001A - C *1508413PLM_22*	Plaster, Room 114, North wall, *base*	**None Detected**		**100% Other**	Gray Non Fibrous Heterogeneous Crushed
001B - A *1508413PLM_2*	Plaster, Room 114, South wall, *texture*	**None Detected**		**100% Other**	Beige Non Fibrous Heterogeneous Crushed
001B - B *1508413PLM_23*	Plaster, Room 114, South wall, *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Teased
001B - C *1508413PLM_24*	Plaster, Room 114, South wall, *base*	**0.6% Chrysotile**		**99.4% Other**	Gray Non Fibrous Heterogeneous Crushed
001C *1508413PLM_3*	Plaster, Hallway between 112 and 114, North wall *finish only*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous Teased
001D - A *1508413PLM_4*	Plaster, Room 112, North wall *finish*	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous 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 recommended 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 SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Estimated MDL is 0.1%.

Byron Stroble (32)

Analyst

Approved Signatory

P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020

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Date Received: 5/1/2015
Date Reported: 5/7/2015

Project: 102254.001, Pinchin Ltd. 555 Legget Drive, Suite 1001, Tower A, Kanata, Ont, M-20, 1200 Montreal Road, Ottawa, Ontario

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
001D - B	Plaster, Room 112, North wall	**Not Analyzed**			
1508413PLM_25	*base*				
001E - A	Plaster, Room 112, Above ceiling tiles, West wall	**None Detected**		**100% Other**	White Non Fibrous Heterogeneous
1508413PLM_5	*finish*				Teased
001E - B	Plaster, Room 112, Above ceiling tiles, West wall	**Not Analyzed**			
1508413PLM_32	*base*				
002A	Parging cement, above ceiling tiles, on duct work insulation, in Hallway	**60% Chrysotile**		**40% Other**	White Fibrous Heterogeneous
1508413PLM_6					Teased
002B	Parging cement, above ceiling tiles, on duct work insulation, in Hallway	**Not Analyzed**			
1508413PLM_7					
002C	Parging cement, above ceiling tiles, on duct work insulation, in Hallway	**Not Analyzed**			
1508413PLM_8					
003A	Tar paper, wrap on duct work, Hallway above ceiling tiles	**None Detected**	**70% Cellulose**	**30% Other**	Brown, Black Fibrous Heterogeneous
1508413PLM_9					Teased, Dissolved
003B	Tar paper, wrap on duct work, Hallway above ceiling tiles	**None Detected**	**70% Cellulose**	**30% Other**	Brown, Black Fibrous Heterogeneous
1508413PLM_10					Teased, Dissolved

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Project: 102254.001, Pinchin Ltd. 555 Legget Drive, Suite 1001, Tower A, Kanata, Ont, M-20, 1200 Montreal Road, Ottawa, Ontario

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
003C *1508413PLM_11*	Tar paper, wrap on duct work, Hallway above ceiling tiles	**None Detected**	**30% Cellulose**	**70% Other**	Brown, Black Fibrous Heterogeneous Teased, Dissolved
004A - A *1508413PLM_12*	Vinyl floor tile, 12" x 12" green, Room 118A *floor tile*	**None Detected**		**100% Other**	Black Non Fibrous Heterogeneous Dissolved
004A - B *1508413PLM_26*	Vinyl floor tile, 12" x 12" green, Room 118A *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Heterogeneous Dissolved
004B - A *1508413PLM_13*	Vinyl floor tile, 12" x 12" green, Room 118A *floor tile*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Dissolved
004B - B *1508413PLM_27*	Vinyl floor tile, 12" x 12" green, Room 118A *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Heterogeneous Dissolved
004C - A *1508413PLM_14*	Vinyl floor tile, 12" x 12" green, Room 118A *floor tile - ashed*	**None Detected**		**100% Other**	Green Non Fibrous Homogeneous Ashed
004C - B *1508413PLM_28*	Vinyl floor tile, 12" x 12" green, Room 118A *mastic*	**None Detected**		**100% Other**	Black Non Fibrous Heterogeneous Dissolved
005A *1508413PLM_15*	Plaster, 2nd floor, photocopier room, west wall. *single layer on paint*	**1% Chrysotile**		**99% Other**	Beige Non Fibrous Heterogeneous Crushed

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P-F-002 r15 1/15/2018

Bulk Asbestos Analysis

By Polarized Light Microscopy
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Project: 102254.001, Pinchin Ltd. 555 Legget Drive, Suite 1001, Tower A, Kanata, Ont, M-20, 1200 Montreal Road, Ottawa, Ontario

Sample ID *Lab Sample ID*	Description *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
005B *1508413PLM_16*	Plaster, 2nd floor, photocopier room, East wall.	**Not Analyzed**			
005C *1508413PLM_17*	Plaster, 2nd floor, photocopier room, South wall.	**Not Analyzed**			
006A - A *1508413PLM_18*	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room *floor tile*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Dissolved
006A - B *1508413PLM_29*	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
006B - A *1508413PLM_19*	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room *floor tile*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Dissolved
006B - B *1508413PLM_30*	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved
006C - A *1508413PLM_20*	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room *floor tile - ashed*	**None Detected**		**100% Other**	Green Non Fibrous Heterogeneous Ashed
006C - B *1508413PLM_31*	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room *mastic*	**None Detected**		**100% Other**	Yellow Non Fibrous Heterogeneous Dissolved

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Byron Stroble (32)

Analyst

Approved Signatory

1508413

Version 1-15-2012

Client:	Pinchin Ltd.	***Instructions:**
Contact:	Paul Bliss / Gord Gillespie	*Use Column "B" for your contact info*
	555 Legget Drive, Suite 1001, Tower A	
Address:	Kanata, ON K2K 2X3	
Phone:	613-592-3387	*To See an Example Click the bottom Example Tab.*
Fax:	613-592-5897	
Email:	pbliss@pinchin.com	***Enter samples between "<<" and ">>"***
	ggillespie@pinchin.com	
Project:	102254.001, Pinchin Ltd. 555 Legget Drive, Suite 1001, Tower A, Kanata, Ont, M-20, 1200 Montreal Road, Ottawa, Ontario	***Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***
Client Notes:		*Only Enter your data on the first sheet "Sheet1"*
P.O. #.	102254.001	*Note: Data 1 and Data 2 are optional*
Date Submitted:	April 30 2015	*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.*
Analysis:	PLM - Stop Positive	
TurnAroundTime:	4 days	

Invoice to:

Contact name here

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	Data 1 (Lab use only)	Sample Description	Data 2 (Lab use only\)
<<			
001A		Plaster, Room 114, North wall,	
001B		Plaster, Room 114, South wall,	
001C		Plaster, Hallway between 112 and 114, North wall	
001D		Plaster, Room 112, North wall	
001E		Plaster, Room 112, Above ceiling tiles, West wall	
002A		Parging cement, above ceiling tiles, on duct work insulation, in Hallway	
002B		Parging cement, above ceiling tiles, on duct work insulation, in Hallway	
002C		Parging cement, above ceiling tiles, on duct work insulation, in Hallway	
003A		Tar paper, wrap on duct work, Hallway above ceiling tiles	
003B		Tar paper, wrap on duct work, Hallway above ceiling tiles	
003C		Tar paper, wrap on duct work, Hallway above ceiling tiles	

REVISED

Accepted ☑

Rejected ☐ except 5/1 10AM CB 4/30

1508413

004A	Vinyl floor tile, 12" x 12" green, Room 118A
004B	Vinyl floor tile, 12" x 12" green, Room 118A
004C	Vinyl floor tile, 12" x 12" green, Room 118A
005A	Plaster, 2nd floor, photocopier room, west wall.
005B	Plaster, 2nd floor, photocopier room, East wall.
005C	Plaster, 2nd floor, photocopier room, South wall.
006A	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room
006B	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room
006C	Vinyl floor tile, 12" x 12" green, 2nd floor, storage room
>>	

APPENDIX II-B

Lead Analytical Certificates

PARACEL LABORATORIES LTD.
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Head Office
300-2319 St. Laurent Blvd.
Ottawa, Ontario K1G 4J8
p: 1-800-749-1947
e: paracel@paracellabs.com
www.paracellabs.com

Certificate of Analysis

Pinchin Ltd. (Ottawa)
555 Legget Dr., Suite 1001, Tower A
Ottawa, ON K2K2X3
Attn: Paul Bliss

Phone: (613) 592-3387
Fax: (613) 592-5897

Client PO: NRC M-20
Project: 102254.001
Custody:

Report Date: 6-May-2015
Order Date: 30-Apr-2015
Revised Report **Order #: 1518292**

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

Paracel ID	Client ID
1518292-01	Lead 1, Paint, green, boardroom, wall, on drywall

Approved By:

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

PARACEL LABORATORIES LTD.

Order #: 1518292

Certificate of Analysis

Report Date: 06-May-2015
Order Date:30-Apr-2015

Client: **Pinchin Ltd. (Ottawa)**
Client PO: NRC M-20 Project Description: 102254.001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-OES	based on MOE E3470, ICP-OES	4-May-15	5-May-15

Sample Data Revisions

None

Work Order Revisions/Comments:

Revision 1 - this report includes revised Reporting Units.

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.

PARACEL LABORATORIES LTD.

Order #: 1518292

Certificate of Analysis

Report Date: 06-May-2015
Order Date:30-Apr-2015

Client: **Pinchin Ltd. (Ottawa)**
Client PO: NRC M-20 Project Description: 102254.001

Sample Results

Lead

Matrix: Paint
Sample Date: 01-Apr-15

Paracel ID	Client ID	Units	MDL	Result
1518292-01	Lead 1, Paint, green, boardroom, wall, on drywall	% by Wt.	0.0020	<0.0020

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	0.0328	0.0020	% by Wt.	0.0302			8.3	30	
Matrix Spike									
Lead	431		ug/L	151	112	70-130			

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Chain of Custody
(Lab Use Only)

Page 1 of 1

Client Name: Pinchin Ltd.	Project Reference: NRC M-20	TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Contact Name: Paul Bliss	Quote #	
Address: 555 Legget Drive, Suite 1001, Tower A, Kanata, Ontario	PO # 102254.001	Date Required: May 6, 2015
Telephone: 613-592-3387	Email Address: pbliss@hotmail.com	

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)

Required Analyses

Paracel Order Number: 1518292

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	ICP-OES;lead										
1	Lead 1, Paint, green, boardroom, wall, on drywall	P			4/1/2015	10.00 am	X										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:

Method of Delivery: Paracel

Relinquished By (Sign):	Received by Driver/Depot: T Fouse	Received at Lab: SUMMERLAN DORMAS	Verified By:
Relinquished By (Print): Paul Bliss	Date/Time: 30/04/15 11:05 AM	Date/Time: APR 30, 2015 04:23	Date/Time:
Date/Time: April 30, 2105	Temperature: ____ °C	Temperature: ____ °C	pH Verified [ ] By:

APPENDIX III
Methodology

1.0 GENERAL

Pinchin Ltd. conducts a room-by-room survey (rooms, corridors, service areas, exterior, etc.) to identify the hazardous building materials as defined by the scope.

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:

- Owner or occupant articles (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.)

In occupied facilities, Pinchin only undertakes non-intrusive testing. Concealed spaces such as those above solid ceilings and within shafts and pipe chases are accessed via existing access panels only. Pinchin does not conduct demolition of walls, solid ceilings, structural items, interior finishes or exterior building finishes to determine the presence of concealed materials.

1.2 Asbestos

Pinchin Ltd. conducts an inspection 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[1] 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, available information on the phases of the construction and prior renovations.

Pinchin collects samples at a rate that is in compliance with Table 1 of O.Reg. 278/05.

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.

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

Pinchin submits the bulk samples to a NVLAP[2] 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.

The asbestos analysis is completed using a stop positive approach. Only one result of greater than the regulated criteria (0.5%) 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 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 described as containing no asbestos, this is subject to the limitations of the analytical method used, and should be understood to mean no asbestos was detected.

Asbestos materials are evaluated in order to make recommendations regarding remedial work. This includes friability, condition and efficiency and practicality of the work.

[1] Environmental Protection Agency
[2] National Voluntary Laboratory Accreditation Program

1.3 Lead

Pinchin Ltd. collects samples of distinctive paint finishes and surface coatings present in more than a limited application, where removal of the paint is possible. Pinchin Ltd. collects samples 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 in accordance with EPA Method No. 3050B/Method No. 7420; flame atomic absorption or Ministry of Environment (MOE) Method E3470; Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES) at an accredited laboratory.

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. However, except for very aggressive disturbance of painted finishes, (e.g., abrasive blasting, torch cutting or grinding), Pinchin and the Environmental Abatement Council of Ontario (EACO) believe that 0.1% (1,000 ug/g) lead in paint represents a de minimus 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.

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

1.4 Silica

Pinchin Ltd. identifies building materials suspected of containing crystalline silica (e.g. concrete, cement, tile, brick, masonry, mortar) by knowledge of current and historic applications and visual inspection only. Pinchin Ltd. 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 were identified by visually inspection only. Dismantling of equipment suspected of containing mercury was not performed. Pinchin does not perform sampling of these materials for laboratory analysis.

1.6 Polychlorinated Biphenyls

Pinchin Ltd. determines the potential for light ballast and wet transformers to contain PCBs 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.

1.7 Visible Mould

Pinchin Ltd. identifies the presence of mould if visibly present in a significant quantity on exposed building surfaces. If any mould growth is concealed within wall cavities it is not addressed in this assessment.