



Hazardous Building Materials Assessment

254 Frontage Road,
Manitou, Manitoba

Prepared for:

Royal Canadian Mounted Police
1091 Portage Avenue
Winnipeg, MB R3G 0S6

Attention: Pamela Zagrodnik
Asset Coordinator

August 10, 2017

Pinchin File: 208339



Issued to: Royal Canadian Mounted Police
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EXECUTIVE SUMMARY

Royal Canadian Mounted Police (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of the detachment building located at 254 Frontage Road, Manitou, Manitoba. Pinchin performed the assessment on July 12, 2017.

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

The assessed area consisted of the entire building.

SUMMARY OF FINDINGS

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

- Black mastic on fibreglass lining inside air ducts throughout building;
- Black mastic on pins and joints of fibreglass insulation on exterior of ducts;
- Black mastic on fibreglass insulation on domestic waterlines observed in the crawlspace; and
- Caulking on windows.

Lead: No lead was confirmed to be present in the assessed area.

Silica: Crystalline silica is present in concrete, masonry, ceramics, asphalt, etc.

Mercury: Mercury vapour is present in fluorescent lamps and liquid mercury is present in thermostat ampules.

Polychlorinated Biphenyls (PCBs): PCBs were not observed.

Mould: Water damaged drywall and acoustic ceiling tiles observed in the general office area and NCO Office.

SUMMARY OF RECOMMENDATIONS

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

1. Remove and properly dispose of ACM prior to demolition or if disturbed by the planned renovation work; and
2. Perform an intrusive investigation to determine the source and full extent of water damage observed in building.



Please refer to Section 4.0 of this report for detailed recommendations regarding administrative, renovation or demolition activities.

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

Royal Canadian Mounted Police (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of the detachment building, located at 254 Frontage Road, Manitou, Manitoba.

Leah Magura performed the assessment on July 12, 2017. The surveyor was unaccompanied during the assessment. The building was occupied at the time of the assessment.

The objective of the assessment was to identify specified hazardous building materials in preparation for building renovation. 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 consisted of all parts of the building.

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

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

2.0 BACKGROUND INFORMATION

Building Description Item	Details
Number of Floors/Levels	One storey plus one below grade
Total Area of Building	3,650 square feet
Year of Construction	Approximately 1985
Structure	Wood, concrete block
Exterior Cladding	Aluminum panels, parging



Building Description Item	Details
HVAC	Forced air furnace, electric baseboard heaters
Roof	Pitched shingled roof
Flooring	Vinyl sheet flooring, concrete, terrazzo, ceramic tiles
Interior Walls	Drywall, masonry block, wood
Ceilings	Drywall, acoustic ceiling tiles

2.1 Existing Reports

No existing reports were provided for reference.

2.2 Inaccessible Locations

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

Area or Room	Reason
Attic	Ladder insufficient height

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 building and are not discussed in the report findings:

- Spray-applied fireproofing or thermal insulation;
- Plaster;
- Asbestos cement products; and
- Vinyl floor tiles and mastic.

3.1.2 Texture Finishes

Texture finish (stucco) is applied to the concrete footer at the exterior of the building (Samples 0008A-C). No asbestos was detected in the texture finish samples.

3.1.3 Thermal Systems Insulation (TSI)

3.1.3.1 Pipe Insulation

Parging cement is present on pipe fittings (elbows and tees.) on domestic water system lines (Samples 0005A-C). Parging cement was sampled and does not contain asbestos.

Remaining pipes in assessed area are either uninsulated or insulated with non-asbestos fibreglass.



Photo 1: Parging cement on elbows of water lines.

3.1.3.2 Duct Insulation

Ducts are either uninsulated or insulated with non-asbestos fibreglass and jacketed with either canvas or foil.

3.1.3.3 Mechanical Equipment Insulation

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



Photo 2: Basement mechanical room. Fibreglass insulation covered with canvas. No parging noted.



Photo 3: Fibreglass insulation covered with canvas on mechanical equipment. No parging noted.

3.1.4 Vermiculite

Loose fill vermiculite is not present in the assessed areas. Demolition of masonry block walls was not performed and vermiculite may be present within these cavities.

3.1.5 Acoustic Ceiling Tiles

Two distinct types of acoustic ceiling tile are present in the assessed area. One style of ceiling tile is presumed to be non-asbestos based on the date of manufacture determined from the date stamp applied to the top of the tiles. The tiles were manufactured after asbestos stopped being used in acoustic ceiling tiles. The second style of ceiling tile was sampled (0003A-C) and found to be non-asbestos. All ceiling tiles within the assessed area are non-asbestos.

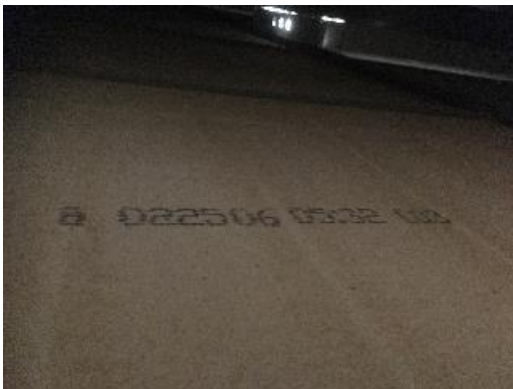


Photo 4: 2006 date code on ceiling tiles.

3.1.6 Drywall Joint Compound

Drywall (gypsum board) and drywall joint compound is present as a wall and ceiling finish in the assessed area. Based on the results of the testing (Samples 0001A-C), the drywall joint compound in the assessed area does not contain asbestos.

3.1.7 Vinyl Sheet Flooring

Two styles of vinyl sheet flooring is present in the building. The first style of vinyl sheet flooring is presumed to be non-asbestos based on historical knowledge of the type of flooring (foam) or based on the lack of a paper backing layer (underpad).

The second style of vinyl sheet flooring present in the storage room and breath-testing room was sampled (Samples 0002A-C) and found to be non-asbestos.

3.1.8 Caulking

Black caulking at exterior windows and doors contains chrysotile asbestos (Samples 0009A-C). Caulking is non-friable and is in good condition.

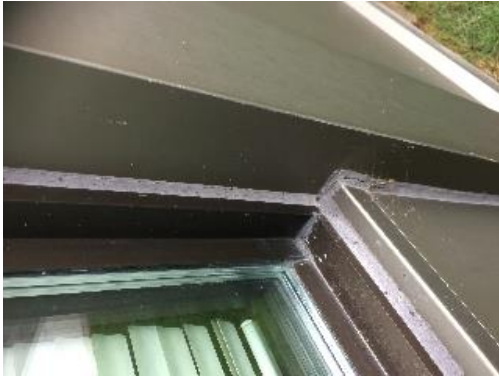


Photo 5: Asbestos-containing window caulking (Samples 0009 A-C).

3.1.9 Mastic

Mastic (black), applied to pins and joints on fibreglass insulation on ductwork was sampled in the assessed area (Samples 0006A-C). Black mastic was also observed on domestic water line seams and elbows in the crawlspace. All black mastic found on fibreglass insulation contains chrysotile asbestos, is non-friable and in good condition.

Mastic (black), applied to pins and joints on fibreglass insulation lining ductwork was observed in the NCO Room and was sampled (Samples 0004A-C). The black mastic inside the ductwork contains chrysotile asbestos is non-friable and in good condition.

Mastic (brown), applied to joints on ductwork was observed in the crawlspace (Samples 0007A-C). The mastic does not contain asbestos.



Photo 6: Non-asbestos brown mastic applied to joints of ductwork (Samples 0007A-C).



Photo 7: Asbestos-containing black mastic applied to foil faced fibreglass insulation on ducts throughout work area (Samples 0006A-C).



Photo 8: Asbestos-containing black mastic applied to fibreglass insulation on joints and seams observed in the crawlspace (0006A-C).



Photo 9: Asbestos-containing black mastic applied to fibreglass insulation inside duct work observed in the NCO Room (0004A-C).

3.1.10 Roofing Products

Sloped shingled roofing is present on the roof over the entire building and is not suspect to contain asbestos.

3.1.11 Presumed Asbestos Materials

A number of materials which might contain asbestos were not sampled during the 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;
- Mastic lining under toilet/sink basins in cells;
- Electrical components or wiring within control centers, breakers, motors or lights, insulation on wiring; and
- Vermiculite in concrete block wall cavities;

3.2 Lead

3.2.1 Paints and Surface Coatings

A total of three paint samples were collected from interior and exterior painted finishes. The table as shown below summarizes the analytical results for paints sampled and their locations.



Sample Number	Colour, Substrate Description	Locations	Lead (%)
L1	Beige masonry and drywall walls	Exhibit room	<0.005
L2	Brown, metal	Doors and frames	<0.007
L3	Peach, drywall	Basement hallway	<0.007

All paints contain insignificant concentrations of lead and were found to be in good condition and not flaking, peeling or delaminating.

Appendix II presents the lead testing results.

3.2.2 *Lead Products and Applications*

Lead products were not found during the survey.

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; and
- Glazing on ceramic tiles.

3.3 **Silica**

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

- Poured or pre-cast concrete; and
- Ceramic tiles, grout.

3.4 **Mercury**

3.4.1 *Mercury-Containing Devices*

Thermostats inspected did not contain liquid mercury ampules.

3.5 **Polychlorinated Biphenyls**

3.5.1 *Lighting Ballasts*

Based on information from the Client and confirmed by visual observations (evidence of T-8 fixtures) the building has been comprehensively re-lamped and will not contain PCB ballasts.

3.5.2 Transformers

Transformers were not found during the assessment.

3.5.3 Presumed PCB Materials

- Oil impregnated cables and potheads;
- Voltage regulators; and
- Paints.

3.6 Mould

Visible water staining was observed on drywall walls on the east exterior wall in the general office area and in the NCO Office. Water damaged acoustic ceiling tiles were observed adjacent to the damaged drywall.



Photo 10: Water damage on drywall. East exterior wall.



Photo 11: Water damage observed on drywall in general office area.



Photo 12: Water damaged acoustic ceiling tiles. General office area.



Photo 13: Water damaged drywall adjacent to windows on east exterior wall.

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. 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. Perform an intrusive investigation to determine the source and full extent of water damage.
4. Provide this report and the detailed plans and specifications to the contractor prior to bidding or commencing work.
5. Retain a qualified consultant to specify, inspect and verify the successful removal of hazardous materials.

4.2 Building Renovation Work

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

4.2.1 Asbestos

Remove all asbestos-containing materials (ACM) prior to renovation, alteration, maintenance or demolition work or 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.

ACM must be disposed of at a landfill approved to accept asbestos waste.

4.2.2 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.



4.2.3 Mercury

Do not break lamps. Recycle and reclaim mercury from fluorescent lamps when taken out of service.

4.2.4 Mould

Water damage and water staining was noted in areas in the assessed building. Perform an intrusive investigation to determine the source and full extent of water damage. Use appropriate precautions and protect workers during removal using methods that comply with provincial guidelines.

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. General Regulation – Workplace Safety and Health Act W210;
2. Workplace Health Hazard Regulation (Manitoba Regulation 217/2006 Workplace Safety and Health Regulation), under the Workplace Safety and Health Act;
3. Canadian Environmental Protection Act – SOR/92-507;
4. PCB Regulations, SOR/2008-273, Canadian Environmental Protection Act;
5. Manitoba Regulation MR 474/88, Manitoba PCB Regulation made under The Dangerous Goods Act;
6. Guide for Asbestos Management – Safe Work Manitoba (June 2016)
7. A Guideline for Working with Lead – Workplace Safety and Health Branch – Manitoba labour and Immigration (2002); and
8. Guidelines for the Investigation, Assessment, and Remediation of Mould In Workplaces, Workplace Safety and Health Division, Manitoba Labour, 2001.

APPENDIX I
Asbestos Analytical Certificates



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name:	RCMP, 254 Frontage St, Manitou, MB		
Project No.:	0208339.000		
Prepared For:	L. Magura / R. Legault	Date Received:	July 19, 2017
Lab Reference No.:	b173512	Date Analyzed:	July 27, 2017
Analyst(s):	S. Capsuyen	# Samples submitted:	24
		# Phases analyzed:	24

Method of Analysis:

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

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

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

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

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

This report relates only to the items tested.

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



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: RCMP, 254 Frontage St, Manitou, MB
Project No.: 0208339.000
Prepared For: L. Magura / R. Legault

Lab Reference No.: b173512
Date Analyzed: July 27, 2017

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0001A Drywall joint compound, ceiling at south wall, storage room	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
Comments:	Cellulose is present on the surface of this sample.		
0001B Drywall joint compound, ceiling above acoustic tiles, hallway	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
0001C Drywall joint compound, wall, general office area	Homogeneous, off-white, drywall joint compound.	None Detected	Non-Fibrous Material > 75%
Comments:	Cellulose is present on the surface of this sample.		
0002A Sheet flooring, Beige, storage	2 Phases:		
	a) Homogeneous, beige, consolidated, fibrous material on the back of vinyl sheet flooring.	None Detected	Cellulose 50-75% Synthetic Fibres 5-10% Man-made Vitreous Fibres 1-5% Wollastonite 1-5% Non-Fibrous Material 25-50%
	b) Homogeneous, yellow, soft, sticky material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%



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Date Analyzed: July 27, 2017

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0002B Sheet flooring, Beige, breath testing room	3 Phases: a) Homogeneous, beige, consolidated, fibrous material on the back of vinyl sheet flooring.	None Detected	Cellulose 50-75% Synthetic Fibres 5-10% Man-made Vitreous Fibres 1-5% Wollastonite 1-5% Non-Fibrous Material 25-50%
	b) Homogeneous, yellow, soft, sticky material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%
	c) Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
0002C Sheet flooring, Beige, breath testing room	2 Phases: a) Homogeneous, beige, consolidated, fibrous material on the back of vinyl sheet flooring.	None Detected	Cellulose 50-75% Synthetic Fibres 5-10% Man-made Vitreous Fibres 1-5% Wollastonite 1-5% Non-Fibrous Material 25-50%
	b) Homogeneous, yellow, soft, sticky material on the back of vinyl sheet flooring.	None Detected	Non-Fibrous Material > 75%
0003A Acoustic ceiling tile, style 1, Storage room	Homogeneous, beige, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-made Vitreous Fibres 10-25% Perlite 10-25% Other Non-Fibrous 1-5%



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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0003B Acoustic ceiling tile, style 1, breathe testing room	Homogeneous, beige, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-made Vitreous Fibres 10-25% Perlite 10-25% Other Non-Fibrous 1-5%
0003C Acoustic ceiling tile, style 1, south main floor exit	Homogeneous, beige, compressed, acoustic ceiling tile.	None Detected	Cellulose 50-75% Man-made Vitreous Fibres 10-25% Perlite 10-25% Other Non-Fibrous 1-5%
0004A Mastic, inside supply duct, NCO 1/c room, above ceiling tile	Homogeneous, black, tar material.	Chrysotile 10-25%	Synthetic Fibres 5-10% Mica 1-5% Tar and other non-fibrous > 75%
Comments:	Man-made vitreous fibres are present on the surface of this sample.		
0004B Mastic, inside supply duct, NCO 1/c room, above ceiling tile			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0004C Mastic, inside supply duct, NCO 1/c room, above ceiling tile			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0005A Parging cement, domestic water line, guard room	Homogeneous, beige, soft, parging cement.	None Detected	Cellulose 10-25% Man-made Vitreous Fibres 5-10% Non-Fibrous Material > 75%
Comments:	Cotton fabric reinforcement is present on the surface of this sample.		



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BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0005B Parging cement, domestic water line, mechanical room	Homogeneous, beige, soft, parging cement.	None Detected	Cellulose 10-25% Man-made Vitreous Fibres 5-10% Non-Fibrous Material > 75%
Comments:	Cotton fabric reinforcement is present on the surface of this sample.		
0005C Parging cement, domestic water line, mechanical room	Homogeneous, beige, soft, parging cement.	None Detected	Cellulose 10-25% Man-made Vitreous Fibres 5-10% Non-Fibrous Material > 75%
Comments:	Cotton fabric reinforcement is present on the surface of this sample.		
0006A Mastic, outside supply duct on foil, crawlspace	Homogeneous, black, tar material.	Chrysotile 10-25%	Mica 1-5% Tar and other non-fibrous > 75%
Comments:	Cellulose, man-made vitreous fibres, and foil are present on the surface of this sample.		
0006B Mastic, outside supply duct on foil, crawlspace			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0006C Mastic, outside supply duct on foil, crawlspace			Not Analyzed
Comments:	Analysis was stopped due to a previous positive result.		
0007A Brown duct mastic, joints, crawlspace	Homogeneous, brown, hard, rubbery material.	None Detected	Wollastonite 10-25% Man-made Vitreous Fibres 1-5% Non-Fibrous Material > 75%



**Pinchin Ltd. Asbestos Laboratory
Certificate of Analysis**

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Date Analyzed: July 27, 2017

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0007B Brown duct mastic, joints, crawlspace	Homogeneous, brown, hard, rubbery material.	None Detected	Wollastonite 10-25% Man-made Vitreous 1-5% Fibres Non-Fibrous Material > 75%
0007C Brown duct mastic, joints, crawlspace	Homogeneous, brown, hard, rubbery material.	None Detected	Wollastonite 10-25% Man-made Vitreous 1-5% Fibres Non-Fibrous Material > 75%
0008A stucco siding, building footer, exterior	Homogeneous, grey, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
0008B stucco siding, building footer, exterior	Homogeneous, grey, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
0008C stucco siding, building footer, exterior	Homogeneous, grey, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%

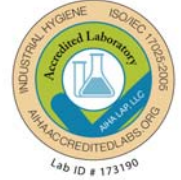
Reviewed by:

Reporting Analyst:



Bulk Asbestos Analysis

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



Customer: Pinchin Ltd.
54 Terracon Place
Winnipeg, MB R2J 4G7

Attn: Leah Magura
Rodney Legault

Lab Order ID: 1716683
Analysis ID: 1716683_PLM
Date Received: 8/3/2017
Date Reported: 8/7/2017

Project: 208339.000, 254 Frontage St., Manitou, MB RCMP

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0009A	Caulking, windows, exterior of building	2% Chrysotile		98% Other	Gray Non Fibrous Homogeneous
1716683PLM_1					Ashed, Dissolved
0009B	Caulking, windows, exterior of building	Not Analyzed			
1716683PLM_2					
0009C	Caulking, windows, exterior of building	Not Analyzed			
1716683PLM_3					

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

Philip Szabo (3)

Analyst

Approved Signatory

APPENDIX II
Lead Analytical Certificates



Analysis for Lead Concentration in Paint Chips

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



Customer: Pinchin Ltd.
54 Terracon Place
Winnipeg, MB R2J 4G7

Attn: Leah Magura
Rodney Legault

Lab Order ID: 1715660
Analysis ID: 1715660_PBP
Date Received: 7/21/2017
Date Reported: 7/27/2017

Project: Manitou, MB RCMP

Sample ID	Description	Mass (g)	Concentration (ppm)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
1	Paint - beige - exhibit room	0.0744	< 54	< 0.005%
1715660PBP_1				
2	Paint - brown - storage room door frame	0.0586	< 68	< 0.007%
1715660PBP_2				
3	Paint - peach - basement hallway	0.0604	< 66	< 0.007%
1715660PBP_3				

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).

Taylor Davis (3)

Analyst

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Laboratory Director

APPENDIX III
Methodology

1.0 GENERAL

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

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

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

1.1 Scope Limitations

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.).

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 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 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.

Pinchin collects samples 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.

Pinchin conducts limited demolition of masonry block walls (core holes) to investigate for loose fill insulation. The core holes are temporarily patched with expanding foam.

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

Flooring mastic/adhesive and leveling compounds are only sampled and analyzed if present on the underside of flooring samples (vinyl floor tile and vinyl sheet flooring).

If present, the following materials are presumed to be asbestos-containing and are best sampled immediately prior to commencing renovation/disturbance:

- Concrete floor levelling compound;
- Mastic lining under toilet/sink basins in cells;
- Electrical components or wiring within control centers, breakers, motors or lights, insulation on wiring;
- Vermiculite in concrete block wall cavities; and
- Exterior cladding.

Pinchin submits the bulk samples 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.

In Manitoba an ACM is defined as materials containing 0.1% or more asbestos by weight for friable materials, 1% or more asbestos by weight for non-friable materials.

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, 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, damaged, debris).
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition).

1.3 Lead

Pinchin collects samples of distinctive paint finishes and surface coatings present in more than a limited application, where removal of the paint is possible. Pinchin 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 at an accredited laboratory in accordance with EPA Method No. 3050B/Method No. 7420; flame atomic absorption.

For this report, all paints containing lead at a concentration of 0.009% or greater are discussed. Paint and surface coatings are evaluated for condition such as flaking, chipping or chalking.

1.4 Silica

Pinchin 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 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 visual 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.

Mercury spills or damaged mercury-containing equipment are recorded where observed.

1.6 Polychlorinated Biphenyls

Pinchin determines the potential for light ballasts 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. Other than light ballasts and pole mounted transformers, all other liquid uses of PCBs should have been discontinued.

Pinchin records spills or leakage of suspect PCB-containing fluids where observed or identified in historical documents.

1.7 Visible Mould

Pinchin 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.

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