



Hazardous Building Materials Assessment

99 Cartwright Avenue, Toronto,
Ontario

Prepared for:

Sterling Hall School
99 Cartwright Avenue
Toronto, Ontario, M6A 1V2

Attention: Steven Hardy

December 19, 2014

Pinchin File: 98692.001



Hazardous Building Materials Assessment

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Sterling Hall School

December 19, 2014
Pinchin File: 98692.001

Issued to: Sterling Hall School
Contact: Steven Hardy

Issued on: December 19, 2014
Pinchin file: 98692.001
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EXECUTIVE SUMMARY

Sterling Hall School (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of Site Name located at 99 Cartwright Avenue, Toronto, Ontario. The assessment was performed on November 25, 2014.

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 was limited to the part of the building, which consisted of the basement boiler room, ground floor hallway, southwest area of the school and the south central port-a-pack classrooms of the school. The assessed areas are outlined in the drawings in Appendix I. The building was occupied at the time of the assessment work.

SUMMARY OF FINDINGS

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

- Parging cement, containing chrysotile asbestos is present on pipe fittings in the Boiler Room
- Aircell pipe insulation, containing chrysotile asbestos, is present on straight sections of pipe in the Boiler Room

Lead: Lead was confirmed present in select paints/surface coatings and is present in emergency light batteries.

Silica: Crystalline silica is present in concrete, mortar, brick, masonry, ceramics, asphalt, etc., where present in the building.

Mercury: Mercury vapour is present in fluorescent lamps throughout the building.

Polychlorinated Biphenyls (PCBs): PCBs are presumed to be present in light ballasts.

Ozone depleting Substances: ozone depleting refrigerants are present in the rooftop air conditioning units on the port-a-pack classrooms

SUMMARY OF RECOMMENDATIONS

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



1. Remove asbestos-containing materials prior to demolition or if disturbed by renovation work.
2. Remove PCB ballasts and mercury-containing items prior to demolition or if disturbed by renovation work.
3. Follow appropriate safe work procedures when handling or disturbing lead, silica and mould.

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

Sterling Hall School (Client) retained Pinchin Ltd. (Pinchin) to conduct a hazardous building materials assessment of Site Name, located at 99 Cartwright Avenue, Toronto, Ontario.

The assessment was performed by Mike Horobin, Project Technologist on November 25, 2014. The surveyor was accompanied by a member of Sterling Hall School staff 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 demolition. 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 parts of the building within the area to be renovated which are outlined in the drawings in Appendix I. The extent of the assessed area was defined by the Client.

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)
- Ozone Depleting Substances
- 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

Building Description Item	Details
Building Use	School
Number of Floors/Levels	1 stories plus 1 below grade
Total Area of Building (Square Feet)	30,000 SF
Year of Construction/Significant Additions/Renovations (area assessed)	1958
Structure	Structural steel, concrete
Exterior Cladding	Masonry
HVAC	Rooftop AC, Boiler and hot water heating to radiators
Roof	Built-up roofing
Flooring	Vinyl tile, wood, carpet, ceramic tiles
Interior Walls	Drywall and concrete block
Ceilings	Drywall and acoustic ceiling tiles

2.1 Existing Reports

Pinchin was provided, and instructed to rely upon, the following existing reports:

- *"Asbestos Building Materials Reassessment Survey, Cartwright Public School, 99 Cartwright Avenue, Toronto Ontario, SAP # 3055"* dated July 2013 by ECOH Management Inc.

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
- Texture finishes (acoustic/decorative)
- Plaster
- Asbestos cement products
- Vinyl sheet flooring
- Firestopping
- Levelling Compound

3.1.2 Thermal Systems Insulation (TSI)

3.1.2.1 Pipe Insulation

Parging cement, containing chrysotile asbestos, is present on pipe fittings (elbows, valves, tees, etc.) on hot water heating system pipes in the Boiler Room (sampled by ECOH). Parging cement is a friable insulation, jacketed with canvas and is in good condition.

A white corrugated paper insulation (trade name Aircell), containing chrysotile asbestos, is present on straight sections of hot water heating system pipes in the Boiler Room (sampled by ECOH). Aircell is a friable insulation, jacketed with canvas and is in good condition.

Non-asbestos fibreglass insulation is present on straight and fittings sections of pipe in the remaining areas of the school. There was no asbestos parging cement noted on the seams of the insulation at the locations inspected.

Asbestos-containing pipe insulations are present in the following location, quantity, and condition:

Pipe System, Type	Location	Sample Number	Asbestos Type	Total Quantity	Quantity Damaged
Hot water heating, parging cement	Boiler Room	Sampled by ECOH	Chrysotile	10 fittings	N/A
Hot water heating, Aircell	Boiler Room	Sampled by ECOH	Chrysotile	50 LF	N/A

3.1.2.2 Duct Insulation

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

Grey duct mastic is present on the ducts within the Hallway of the school. Three samples of the mastic (samples 0005A-C) were collected and it was determined that the grey mastic is non-asbestos.



Non-asbestos grey duct mastic.

3.1.2.3 Mechanical Equipment Insulation

Mechanical equipment is not insulated.

3.1.3 Vermiculite

Loose fill vermiculite is not present in the assessed areas. Demolition of masonry block walls was performed.

Acoustic Ceiling Tiles

Four (4) distinct types of acoustic ceiling tile are present in the assessed area, as follows:

Size, Type, Pattern, Photo #	Locations (Quantity in Square Feet)	Sample Number or Date Code	Asbestos Type
24" x 48" pockmark and pinhole	Various classrooms in the port-a-pack	Dated 2003	None
24" x 48" fissure and pinhole	Various classrooms in the port-a-pack	Dated 2005	None
24" x 48" fleck and pinhole	Various classrooms in the port-a-pack	Dated 2007	None
24" x 48" random pinhole	Change Room	Dated 2001	None

All ceiling tiles are presumed to be non-asbestos based on the date of manufacture determined from the date stamp applied to the top of the tiles or the age of the materials determined from the age of the

building or the renovation. The tiles were manufactured after asbestos stopped being used in acoustic ceiling tiles.



Non-asbestos 24" x 48" pockmark and pinhole acoustic ceiling tile



Non-asbestos 24" x 48" fissure and pinhole acoustic ceiling tile

3.1.4 Drywall Joint Compound

Drywall (gypsum board) and drywall joint compound is present as a wall and ceiling finish throughout the assessed area. Eight (8) samples of drywall joint compound were collected (samples 0001A-E and 0004A-C) and found to be non-asbestos.

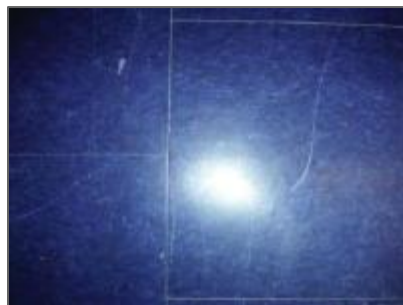
3.1.5 Vinyl Floor Tile and Mastic

Vinyl floor tiles are present as follows:

Size, Pattern, Colour and Photo Number	Locations (Quantity)	Sample Number	Asbestos Type (tile)	Asbestos Type (mastic)
12" x 12" beige with grey flecks	Classroom 35 (250SF), Classroom 36 (350SF) and Hallway (500SF)	0002A-C	None	None
12" x 12" grey with white and black flecks	Classroom 36 (150SF)	0003A-C	None	None
12" x 12" blue	Stage (250SF)	0006A-C	None	None
12" x 12" beige with brown flecks	Hallway (250SF)	0007A-C	None	None
12" x 12" blue with red and white flecks	Change Room (150SF)	0009A-C	None	None



Non-asbestos 12" x 12" beige with grey flecks vinyl floor tiles



Non-asbestos 12" x 12" blue vinyl floor tiles

3.1.6 Sealants, Caulking, and Putty

Brown caulking at exterior doors contains was sampled and determined to be non-asbestos (samples 0008A-C).



Non-asbestos exterior brown caulking.

3.1.7 Other Building Materials

Built-up roofing is present on the roof over the port-a-pack. The built up roofing material was sampled (samples 0010A-C). The built up roofing materials was found to be non-asbestos.



Non-asbestos built-up roofing.

3.1.8 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
- paper products under wood flooring or metal or slate roofing
- fire resistant doors

3.2 Lead

3.2.1 Paints and Surface Coatings

A total of five (5) paint samples were collected from interior and exterior painted finishes. The following table summarizes the analytical results for paints sampled and their locations.

Sample Number	Colour, Substrate Description	Locations	Lead (%)
L0001	Blue paint on drywall	Throughout the School	<0.008%
L0002	Beige paint on drywall	Throughout the School	<0.008%
L0003	Grey paint on concrete	Basement	1.2%
L0004	Dark blue paint drywall	Throughout the School	<0.004%
L0005	White paint on metal	Exterior of the school	<0.005%

All paints containing elevated levels of lead were found to be in good condition and not flaking, peeling or delaminating.

Appendix II-B presents the lead testing or bulk sample analytical results.

3.2.2 Lead Products and Applications

Lead-containing batteries are present in emergency lighting present in School.

Lead wool or lead caulking is present in bell and spigot fittings on cast iron pipes throughout the building.

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
- glazing on ceramic tiles

3.3 Silica

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

- poured or pre-cast concrete
- masonry and mortar
- ceramic tiles, grout

3.4 Mercury

3.4.1 Lamps

Mercury vapour is present in fluorescent lamps and other lighting that is known to contain mercury such as mercury vapour lamps where 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 Roofing

The built-up roofing was sampled and analyzed for its PCB content (sample PCB-02). The PCB concentration in the built-up roofing is <0.5ppm.

3.5.2 Caulking

Brown exterior caulking is present on exterior doors (sample PCB-01) and contains <0.5 ppm PCBs. The material is a non-PCB solid based on the threshold given in SOR/2008-273 (50 ppm).

3.5.3 *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.

3.5.4 *Transformers*

Transformers were not found during the survey.

3.5.5 *Presumed PCB Materials*

- voltage regulators
- hydraulic fluids
- capacitors

3.6 **Ozone Depleting Substances**

Ozone depleting substances (R-22) are present as refrigerants in the rooftop air conditioning units.

3.7 **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, risk assessments, 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.

4.2 **Building Demolition or 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.

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

4.2.2 Lead

Construction disturbance of lead in paint and coatings (or other materials) may result in over-exposure to lead dust or fumes. The need for work procedures, engineering controls and personal protective equipment will need to be assessed on a project-by-project basis and must comply with provincial standards or guidelines. Performing an exposure assessment during work that disturbs lead in paints and coatings may be able to alleviate the use of some of the precautions specified by these standards or guidelines.

Lead-painted items may be a hazardous waste. Test lead-painted materials for leachable lead prior to disposal.

Lead-containing items [lead-acid batteries, others] should be recycled when taken out of service or prior to building demolition.

4.2.3 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.

4.2.4 Mercury

Do not break lamps or separate liquid mercury from components. Recycle and reclaim mercury from fluorescent light tubes and thermostats when taken out of service. Light tubes are accepted free of charge at many local recycling depots. Liquid mercury is classified as a hazardous waste and must be disposed of in accordance with local regulations.



4.2.5 PCBs

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

4.2.6 Mould

No mould was observed. If mould is uncovered inside wall cavities during hand demolition, use appropriate precautions and protect workers using methods that comply with provincial guidelines.

5.0 LIMITATIONS

The work performed by Pinchin 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 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 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 accepts no responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The liability of Pinchin or our officers, directors, shareholders or staff will be limited to the lesser of the fees paid or actual damages incurred by the Client. Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from the negligence of Pinchin. Pinchin will not be liable for any losses or damage if the Client has failed, within a period of two years following the date upon which the claim is discovered (Claim Period), to commence legal proceedings against Pinchin to recover such losses or damage unless the laws of the jurisdiction which governs the Claim Period which is applicable to such claim provides that the applicable Claim Period is greater than two years and cannot be abridged by the contract between the Client and Pinchin, in which case the Claim Period shall be deemed to be extended by the shortest additional period which results in this provision being legally enforceable.



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. 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.

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Template: Master Report for Hazardous Materials Assessment Report (Pre-Construction), Haz, October 31, 2014

APPENDIX I
Drawings



LEGEND:

-  SURVEY BOUNDARY
-  ASBESTOS BULK SAMPLE LOCATION
-  LEAD SAMPLE NUMBER
-  PCB BULK SAMPLE LOCATION

ASBESTOS-CONTAINING MATERIALS:

-  PIPE INSULATION

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.

CLIENT:

THE STERLING HALL SCHOOL

LOCATION:

99 CARTWRIGHT AVENUE
TORONTO, ONTARIO

TITLE:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
BASEMENT

DATE:

201412/18

PROJECT # :

98392.001

DRAWN BY:

SC

DRAWING:

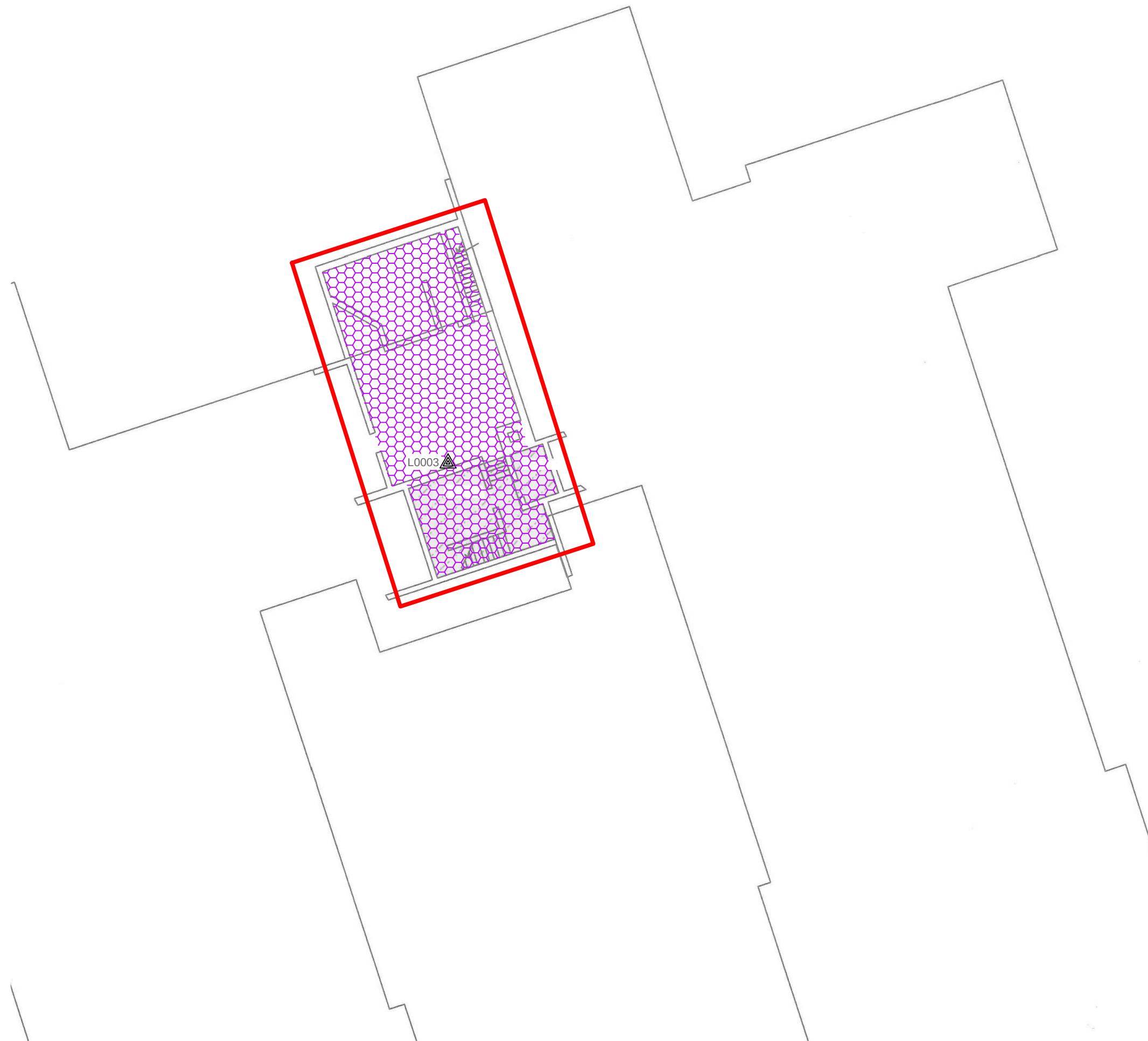
CHECKED BY:

MH

SCALE:

NTS

1 OF 4





LEGEND:

-  SURVEY BOUNDARY
-  ASBESTOS BULK SAMPLE LOCATION
-  LEAD SAMPLE NUMBER
-  PCB BULK SAMPLE LOCATION

ASBESTOS-CONTAINING MATERIALS:

-  PIPE INSULATION

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

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BASE PLAN PROVIDED BY CLIENT.

CLIENT:

THE STERLING HALL SCHOOL

LOCATION:

99 CARTWRIGHT AVENUE
TORONTO, ONTARIO

TITLE:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
GROUND FLOOR

DATE:

2014/12/18

PROJECT #:

98392.001

DRAWN BY:

SC

DRAWING:

CHECKED BY:

MH

SCALE:

NTS

2 OF 4





LEGEND:

-  SURVEY BOUNDARY
-  ASBESTOS BULK SAMPLE LOCATION
-  LEAD SAMPLE NUMBER
-  PCB BULK SAMPLE LOCATION

ASBESTOS-CONTAINING MATERIALS:

-  PIPE INSULATION

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.

CLIENT:

THE STERLING HALL SCHOOL

LOCATION:

99 CARTWRIGHT AVENUE
TORONTO, ONTARIO

TITLE:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
ROOF

DATE:

2014/12/18

PROJECT # :

98392.001

DRAWN BY:

SC

DRAWING:

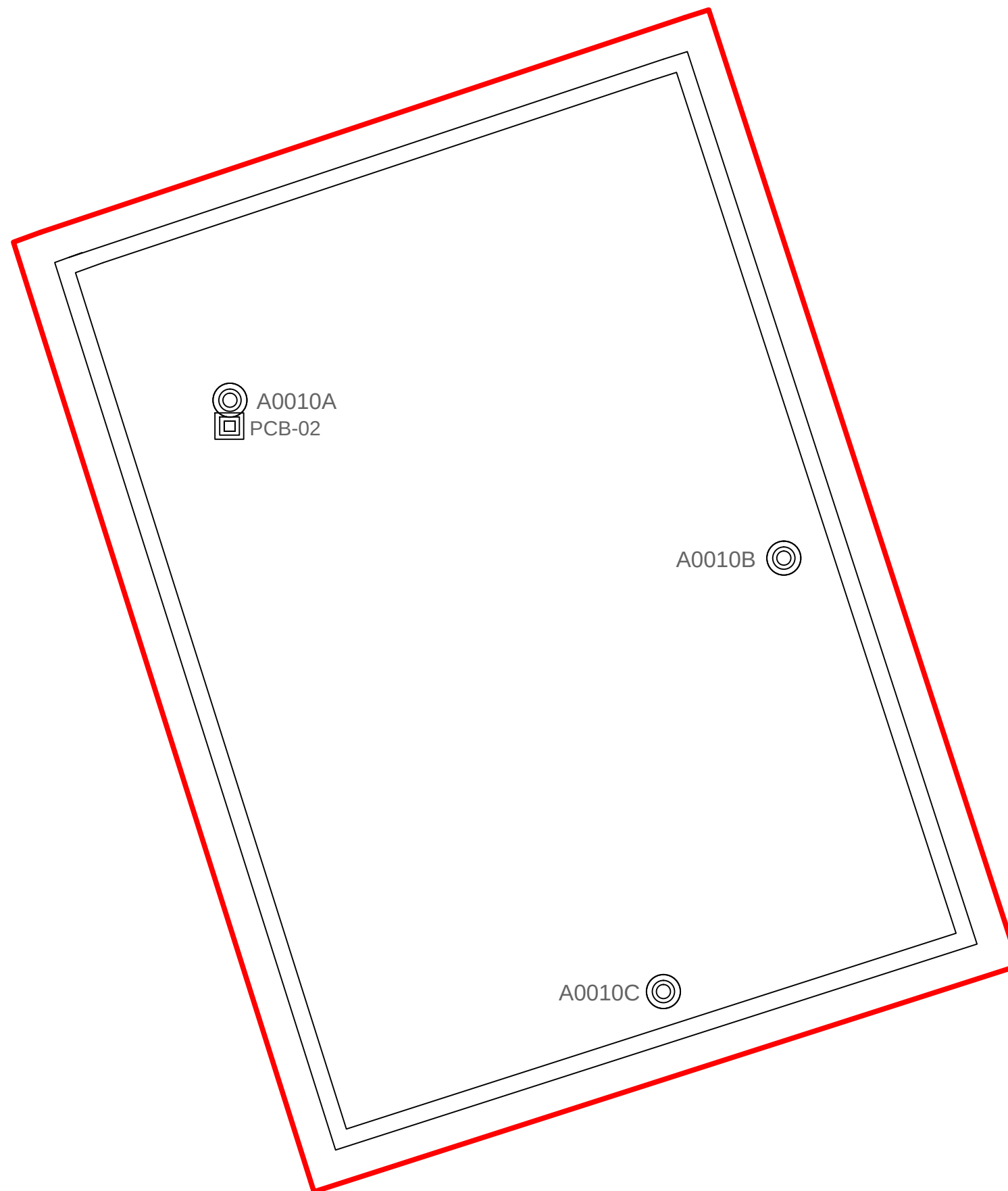
CHECKED BY:

MH

3 OF 4

SCALE:

NTS





LEGEND:

-  SURVEY BOUNDARY
-  ASBESTOS BULK SAMPLE LOCATION
-  LEAD SAMPLE NUMBER
-  PCB BULK SAMPLE LOCATION

ASBESTOS-CONTAINING MATERIALS:

-  PIPE INSULATION

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.

CLIENT:

THE STERLING HALL SCHOOL

LOCATION:

99 CARTWRIGHT AVENUE
TORONTO, ONTARIO

TITLE:

HAZARDOUS BUILDING
MATERIALS ASSESSMENT
ROOF CROSS SECTION

DATE:

2014/12/18

PROJECT # :

98392.001

DRAWN BY:

SC

DRAWING:

4 OF 4

CHECKED BY:

MH

SCALE:

NTS



← 4 PLY ROOFING



← TAR BASED MASTIC



← WOOD DECK

APPENDIX II-A
Asbestos Analytical Certificates



Bulk Asbestos Analysis

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



NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin
Mark Stroomborgen

Lab Order ID: 1423384

Analysis ID: 1423384_PLM

Date Received: 12/1/2014

Date Reported: 12/9/2014

Project: 98692.001, Sterling Hall School, 99
bCartwright Ave

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0001A	DWJC - room 33	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_1					Crushed
0001B	DWJC - room 31	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_2					Crushed
0001C	DWJC - room 36	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_3					Crushed
0001D	DWJC - hallway	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_4					Crushed
0001E	DWJC - room 29	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_5					Crushed
0002A - A	12" x 12" beige with grey flecks VFT	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_6	tile				Dissolved
0002A - B	12" x 12" beige with grey flecks VFT	None Detected	5% Cellulose	95% Other	Black Non Fibrous Homogeneous
1423384PLM_30	mastic				Dissolved
0002B - A	12" x 12" beige with grey flecks VFT	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_7	tile				Dissolved

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 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%.

Bethany Nichols (44)

Analyst

Approved Signatory



Bulk Asbestos Analysis

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



NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin
Mark Stroomborgen

Lab Order ID: 1423384

Analysis ID: 1423384_PLM

Date Received: 12/1/2014

Date Reported: 12/9/2014

Project: 98692.001, Sterling Hall School, 99
bCartwright Ave

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0002B - B	12" x 12" beige with grey flecks VFT	None Detected	5% Cellulose	95% Other	Black Non Fibrous Homogeneous
1423384PLM_31	mastic				Dissolved
0002C - A	12" x 12" beige with grey flecks VFT	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_8	tile; ashed				Ashed
0002C - B	12" x 12" beige with grey flecks VFT	None Detected	5% Cellulose	95% Other	Black Non Fibrous Homogeneous
1423384PLM_32	mastic				Dissolved
0003A - A	12" x 12" grey with white and black flecks VFT	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_9	tile				Dissolved
0003A - B	12" x 12" grey with white and black flecks VFT	None Detected	5% Cellulose	95% Other	Orange Non Fibrous Homogeneous
1423384PLM_33	mastic				Dissolved
0003B - A	12" x 12" grey with white and black flecks VFT	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_10	tile				Dissolved
0003B - B	12" x 12" grey with white and black flecks VFT	None Detected	60% Cellulose	40% Other	Orange, Black Fibrous Heterogeneous
1423384PLM_34	mastic/felt				Dissolved, Teased
0003C - A	12" x 12" grey with white and black flecks VFT	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_11	tile; ashed				Ashed

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 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%.

Bethany Nichols (44)

Analyst



Approved Signatory

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Page 2 of 6



Bulk Asbestos Analysis

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



NVLAP[®]
NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin
Mark Stroomborgen

Lab Order ID: 1423384

Analysis ID: 1423384_PLM

Date Received: 12/1/2014

Date Reported: 12/9/2014

Project: 98692.001, Sterling Hall School, 99
bCartwright Ave

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0003C - B	12" x 12" grey with white and black flecks VFT	None Detected	20% Cellulose	80% Other	Orange, Black Fibrous Heterogeneous
1423384PLM_35	mastic/felt				Dissolved, Teased
0004A	DWJC - main hallway	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_12					Crushed
0004B	DWJC - main hallway	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_13					Crushed
0004C	DWJC - main hallway	None Detected		100% Other	White Non Fibrous Homogeneous
1423384PLM_14					Crushed
0005A	Grey duct mastic	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_15					Dissolved
0005B	Grey duct mastic	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_16					Dissolved
0005C	Grey duct mastic	None Detected		100% Other	Gray Non Fibrous Homogeneous
1423384PLM_17					Dissolved
0006A - A	12" x 12" blue VFT	None Detected		100% Other	Blue Non Fibrous Homogeneous
1423384PLM_18	tile				Dissolved

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 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%.

Bethany Nichols (44)

Analyst


Approved Signatory



Bulk Asbestos Analysis

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



NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin
Mark Stroomborgen

Lab Order ID: 1423384

Analysis ID: 1423384_PLM

Date Received: 12/1/2014

Date Reported: 12/9/2014

Project: 98692.001, Sterling Hall School, 99
bCartwright Ave

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0006A - B	12" x 12" blue VFT	None Detected		100% Other	Yellow Non Fibrous Homogeneous
1423384PLM_36	mastic				Dissolved
0006B - A	12" x 12" blue VFT	None Detected		100% Other	Blue Non Fibrous Homogeneous
1423384PLM_19	tile				Dissolved
0006B - B	12" x 12" blue VFT	None Detected		100% Other	Yellow Non Fibrous Homogeneous
1423384PLM_37	mastic				Dissolved
0006C - A	12" x 12" blue VFT	None Detected		100% Other	Blue Non Fibrous Homogeneous
1423384PLM_20	tile; ashed				Ashed
0006C - B	12" x 12" blue VFT	None Detected		100% Other	Yellow Non Fibrous Homogeneous
1423384PLM_38	mastic				Dissolved
0007A - A	12" x 12" beige with brown flecks VFT	None Detected		100% Other	Beige Non Fibrous Homogeneous
1423384PLM_21	tile				Dissolved
0007A - B	12" x 12" beige with brown flecks VFT	None Detected		100% Other	Black Non Fibrous Homogeneous
1423384PLM_39	mastic				Dissolved
0007B - A	12" x 12" beige with brown flecks VFT	None Detected		100% Other	Beige Non Fibrous Homogeneous
1423384PLM_22	tile				Dissolved

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 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%.

Bethany Nichols (44)

Analyst

Approved Signatory



Bulk Asbestos Analysis

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



NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin
Mark Stroomborgen

Lab Order ID: 1423384

Analysis ID: 1423384_PLM

Date Received: 12/1/2014

Date Reported: 12/9/2014

Project: 98692.001, Sterling Hall School, 99
bCartwright Ave

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0007B - B	12" x 12" beige with brown flecks VFT	None Detected		100% Other	Black Non Fibrous Homogeneous
1423384PLM_40	mastic				Dissolved
0007C - A	12" x 12" beige with brown flecks VFT	None Detected		100% Other	Beige Non Fibrous Homogeneous
1423384PLM_23	tile; ashed				Ashed
0007C - B	12" x 12" beige with brown flecks VFT	None Detected		100% Other	Black Non Fibrous Homogeneous
1423384PLM_41	mastic				Dissolved
0008A	Exterior brown caulking	None Detected		100% Other	Brown Non Fibrous Homogeneous
1423384PLM_24					Dissolved
0008B	Exterior brown caulking	None Detected		100% Other	Brown Non Fibrous Homogeneous
1423384PLM_25					Dissolved
0008C	Exterior brown caulking	None Detected		100% Other	Brown Non Fibrous Homogeneous
1423384PLM_26					Dissolved
0009A - A	12" x 12" blue with red and white flecks VFT	None Detected		100% Other	Blue Non Fibrous Homogeneous
1423384PLM_27	tile				Dissolved
0009A - B	12" x 12" blue with red and white flecks VFT	None Detected		100% Other	Black Non Fibrous Homogeneous
1423384PLM_42	mastic				Dissolved

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 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%.

Bethany Nichols (44)

Analyst

Approved Signatory



Bulk Asbestos Analysis

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



NVLAP Lab Code: 200664-0

Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin
Mark Stroomborgen

Lab Order ID: 1423384

Analysis ID: 1423384_PLM

Date Received: 12/1/2014

Date Reported: 12/9/2014

Project: 98692.001, Sterling Hall School, 99
bCartwright Ave

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0009B - A	12" x 12" blue with red and white flecks VFT	None Detected		100% Other	Blue Non Fibrous Homogeneous
1423384PLM_28	tile				Dissolved
0009B - B	12" x 12" blue with red and white flecks VFT	None Detected		100% Other	Black Non Fibrous Homogeneous
1423384PLM_43	mastic				Dissolved
0009C - A	12" x 12" blue with red and white flecks VFT	None Detected		100% Other	Blue Non Fibrous Homogeneous
1423384PLM_29	tile; ashed				Ashed
0009C - B	12" x 12" blue with red and white flecks VFT	None Detected		100% Other	Black Non Fibrous Homogeneous
1423384PLM_44	mastic				Dissolved

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%.

Bethany Nichols (44)

Analyst

Approved Signatory

Client:	Pinchin Ltd.	*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.	1423384 Scientific Analytical Institute 4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sailab.com
Contact:	Mike Horobin / Mark Stroombergen		
Address:	2470 Milltower Court, Mississauga, ON, Canada		
Phone:	905-363-0678		
Fax:	905-363-0681		
Email:	mhorobin@pinchin.com mstroombergen@pinchin.com		
Project:	98692.001, Sterling Hall School, 99 bCartwright Ave		
Client Notes:			
P.O. #.	98692.001		
Date Submitted:	November 28 2014		
Analysis:	PLM - Stop Positive		
TurnAroundTime:	5 days		

Sample Number	Data 1 (Lab use only)	Sample Description	Data 2 (Lab use only)
<<			
0001A		DWJC - room 33	
0001B		DWJC - room 31	
0001C		DWJC - room 36	
0001D		DWJC - hallway	
0001E		DWJC - room 29	
0002A		12" x 12" beige with grey flecks VFT	
0002B		12" x 12" beige with grey flecks VFT	
0002C		12" x 12" beige with grey flecks VFT	
0003A		12" x 12" grey with white and black flecks VFT	
0003B		12" x 12" grey with white and black flecks VFT	
0003C		12" x 12" grey with white and black flecks VFT	
0004A		DWJC - main hallway	
0004B		DWJC - main hallway	
0004C		DWJC - main hallway	
0005A		Grey duct mastic	

Accepted ☒Rejected ☐

17.10.2014

12.1 10:22

1423384

0005B	Grey duct mastic
0005C	Grey duct mastic
0006A	12" x 12" blue VFT
0006B	12" x 12" blue VFT
0006C	12" x 12" blue VFT
0007A	12" x 12" beige with brown flecks VFT
0007B	12" x 12" beige with brown flecks VFT
0007C	12" x 12" beige with brown flecks VFT
0008A	Exterior brown caulking
0008B	Exterior brown caulking
0008C	Exterior brown caulking
0009A	12" x 12" blue with red and white flecks VFT
0009B	12" x 12" blue with red and white flecks VFT
0009C	12" x 12" blue with red and white flecks VFT
>>	



Pinchin Ltd. Asbestos Laboratory Certificate of Analysis

Project Name: Sterling Hall School, 99 Cartwright Avenue, Toronto Ontario
Project No.: 98692.001
Prepared For: M. Horobin / M. Stroombergen
Lab Reference No.: b114632
Analyst(s): S. Capsuyen

Date Received: November 28, 2014
Date Analyzed: December 5, 2014
Samples submitted: 3
Phases analyzed: 9

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 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: Sterling Hall School, 99 Cartwright Avenue, Toronto Ontario
Project No.: 98692.001
Prepared For: M. Horobin /
M. Stroombergen
Lab Reference No.: b114632
Date Analyzed: December 5, 2014

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0010A Roofing material	3 Phases: a) Homogeneous, black, rubbery, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, tar impregnated, compressed fibrous material.	None Detected	Synthetic Fibres 25-50% Tar and other non-fibrous > 75%
	c) Non-homogeneous, black and grey, roofing material.	None Detected	Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		
0010B Roofing material	3 Phases: a) Homogeneous, rubbery, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, tar impregnated, compressed fibrous material.	None Detected	Synthetic Fibres 25-50% Man-made Vitreous Fibres 0.5-5% Tar and other non-fibrous 50-75%
	c) Non-homogeneous, black and grey, roofing material.	None Detected	Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		

REVIEWED BY

ANALYST



Pinchin Ltd. Asbestos Laboratory
Certificate of Analysis

Project Name: Sterling Hall School, 99 Cartwright Avenue, Toronto Ontario
Project No.: 98692.001
Prepared For: M. Horobin /
M. Stroombergen
Lab Reference No.: b114632
Date Analyzed: December 5, 2014

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
0010C Roofing material	3 Phases:		
	a) Homogeneous, black, rubbery, tar material.	None Detected	Tar and other non-fibrous > 75%
	b) Homogeneous, black, tar impregnated, compressed fibrous material.	None Detected	Synthetic Fibres 25-50% Tar and other non-fibrous 50-75%
	c) Non-homogeneous, black and grey, roofing material.	None Detected	Tar and other non-fibrous > 75%
Comments:	Cellulose is present on the surface of this sample.		

REVIEWED BY

ANALYST

APPENDIX II-B
Lead Analytical Certificates



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3rd Ed. Method No. 3050B/Method No. 7420



Customer: Pinchin Ltd.
2470 Milltower Court
Mississauga ON L5N 7W5

Attn: Mike Horobin

Lab Order ID: 1423205

Analysis ID: 1423205_PBP

Date Received: 11/26/2014

Date Reported: 12/5/2014

Project: Sterling Hall School 99 Cartwright Ave

Sample ID	Description	Mass (g)	Analytical Sensitivity (% by weight)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
L0001	Blue paint	0.0526	0.003%	< 0.008%
1423205PBP_1				
L0002	Beige paint	0.0525	0.003%	< 0.008%
1423205PBP_2				
L0003	Grey paint	0.0746	0.002%	1.2%
1423205PBP_3				
L0004	Dark blue paint	0.0398	0.001%	< 0.004%
1423205PBP_4				
L0005	White paint	0.0321	0.002%	< 0.005%
1423205PBP_5				

The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. 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 AIHA or any other agency of the U.S. government. (R.L. = 0.01 wt.%)

Daniel Olson (5)

Analyst

Laboratory Director

14123205

Version 1-15-2012

Client:	Pinchin Ltd.	*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.
Contact:	Mike Horobin	
Address:	2470 Milltower court	
Phone:	905-363-0678	
Fax:	905-363-0681	
Email:	mhorobin@pinchin.com	
Project:	Sterling Hall School	
Client Notes:	99 Cartwright Ave	
P.O. #.		98692
Date Submitted:		11/26/2014 0:00
Analysis:	Lead by Flame AA	120 hrs.
TurnAroundTime:	[Enter Turn Around Time 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)
<<			
L0001		Blue paint	
L0002		Beige paint	
L0003		Grey paint	
L0004		Dark blue paint	
L0005		White paint	
>>			

Accepted ☒

Rejected ☐

11/26/2014

APPENDIX II-C
PCB Analytical Certificates

Certificate of Analysis

Mike Horobin

Pinchin Environmental Ltd. (Mississauga)
2470 Milltower Court, Mississauga, ON L5N 7W5

Printed: Dec 02, 2014

Special Notes: Project Name: 130 Bentworth Avenue / Project No: 98692

2 solid samples were submitted for the following analysis from Pinchin Environmental Ltd.

Date Sampled: Nov 24, 2014

Date Tested: Dec 01, 2014

Sampled by: Mike Horobin

Report Number: 14-2086

Sample #	Analyte	Result	Units	MDL	Comments	Technique / Test Method
1	<u>Sample ID.:</u> Exterior Brown Caulking					
	PCBs in Solid	<0.5	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
2	<u>Sample ID.:</u> Roofing Material					
	PCBs in Solid	<0.5	mg/kg	0.5		LAB-M06 (EPA 3550C/8082A modified)
	Comment(s)	-	N/A	N/A	"mg/kg" is equivalent to "ppm"	N/A

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

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.

Information regarding the approximate quantity, 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 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 EPA¹ 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.

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).

Pinchin submits the bulk samples to a NVLAP² 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.

¹ Environmental Protection Agency

² National Voluntary Laboratory Accreditation Program

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.

1.3 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 in accordance with EPA Method No. 3050B/Method No. 7420; flame atomic absorption at an accredited laboratory.

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.

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

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 were identified by visually inspection only. Dismantling of equipment suspected of containing mercury was not performed. Sampling of these materials for laboratory analysis of mercury content was not performed.

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

1.6 Polychlorinated Biphenyls

Pinchin 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.

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

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

Pinchin decides to sample exterior caulking or sealants for PCBs based on the date of construction or installation. Caulking installed after 1985 is presumed to be free of PCBs and hence not sampled. If sampled, analysis for PCBs is performed using an ASTM³ test method appropriate to the sample matrix at an accredited laboratory.

1.7 Ozone Depleting Substances (ODS)

Pinchin determines the potential presence of ODS (chlorofluorocarbon, hydrochlorofluorocarbon, hydrofluorocarbon, halon, etc.) in air conditioning units, chillers, commercial coolers and fire suppression systems by visual inspection of manufactures' labels or plates, maintenance records, or log books, etc.

Domestic type equipment such as window mounted and small central air conditioners, refrigerators, and freezers are not evaluated for the presence of ODS.

1.8 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.

³ American Society for Testing and Materials