



HAZARDOUS MATERIALS ASSESSMENT

Provincial Correctional Centre

275 Sleepy Hollow Road, Charlottetown, PE

Prepared For:

PEI Department of Transportation & Infrastructure
P.O. Box 2000
Charlottetown, PE

May 12, 2023

ALL-TECH Project No.: PE22400

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EXECUTIVE SUMMARY

ALL-TECH Environmental Services Limited was contracted by the PEI Department of Transportation & Infrastructure (DTI) to conduct a hazardous material assessment for the Provincial Correctional Centre located at 275 Sleepy Hollow Road in Charlottetown, Prince Edward Island.

The purpose of the assessment was to identify hazardous materials within the building which may require safe handling procedures and disposal requirements in accordance with their applicable regulations prior to any planned work, renovations, or demolition and to assist in the Asbestos Management Plan (AMP) of any in place asbestos containing materials (ACM).

This report has been prepared to document the identities, usages and locations of any designated substances and hazardous materials identified within the building.

The on-site assessment was conducted in December 2022. During the assessment hazardous materials including asbestos and lead (paint) were sampled. In addition, lamp ballasts and electrical transformers were visually assessed for Polychlorinated Biphenyls (PCBs) and reported if identified.

Based on the findings from the Hazardous Materials Assessment, the following conclusions and recommendations are presented.

A summary of the Hazardous Materials identified within the building is provided below in Table A based on our assessment as well as safe handling requirements. Areas identified with visually same ACM materials are outlined in Appendix III Site drawing with ACM locations.

Asbestos containing parging cement on fittings was detected in two samples and has been identified in the Summary of ACM conditions and action report in Appendix IV. Floor plans have been added to Appendix III to assist in locating these areas.

Several other samples were found to be non-asbestos containing. In addition, previous sample reports have had some asbestos containing fittings and other non-detected. Based on the inconsistent results from this survey and other test results, it is hard to distinguish between potential ACM fittings and new fittings that have been replaced or may not have been ACM previously installed. Therefore, all pipe parging shall be treated as ACM unless determined otherwise. A labelling program (as noted in section 6.1) should be initiated for this facility to have any updated work labelled as non-asbestos containing to avoid duplication of sampling and unnecessary ACM removals.

Assessment Summary of ACM conditions and action report is outlined in Appendix IV and shall be used in conjunction with PEI Department of Transportation & Infrastructure's Asbestos Management Plan (2023) and shall be subject to annual review.

Other hazardous materials identified through sampling or visual assessment are noted in section 4 and are summarized in Appendix V.

Upon review of this report and based on any planned work, renovations or demolition, a full scope of work should be developed. This scope of work will be dependent upon which materials need to be

disturbed or removed prior to the renovations. Should ACM not require disturbance or removal, then those identified shall remain in place and be part of the Management Plan.

TABLE A
Summary of Hazardous Materials for Management Plan
Provincial Correctional Centre

Hazardous Materials	Description / Comments	Safe Handling Requirements	Disposal Requirements
ASBESTOS	Asbestos containing mechanical insulation. (Parging cement on mechanical pipe fittings)	Licensed contractor to obtain work permit prior to handling from PEI Dept. of WCB/OSH Division and all other pertinent sections of the <i>Occupational Health and Safety Act</i> R.S.P.E.I.	Regulatory approval from PEIELJ Disposal at approved facility such as EPWMF in Wellington, PEI
	Brown duct mastic		
LEAD PAINT	Maroon paint on metal doors / Boiler Room	TDG – manifest Trained personnel in the safe handling of lead coated surfaces and all other pertinent sections of the <i>Occupational Health and Safety Act</i> R.S.P.E.I	Regulatory approval from PEIELJ
	Blue paint on boiler jacket / Boiler room		Additional analysis required for TCLP for disposal purposes, if required.
	Yellow paint on concrete walls / Penthouse		
SILICA	Presumed in the following building components: <ul style="list-style-type: none"> Concrete base structure (exterior) Poured or pre-cast concrete (main and penthouse floors) Interior concrete block walls / mortar Exterior brick and mortars 	Trained personnel in the safe handling of silica dust and all other pertinent sections of the <i>Occupational Health and Safety Act</i> R.S.P.E.I	Regulatory approval from PEIELJ
MERCURY	fluorescent lamp tubes	Do not break lamps or separate liquid mercury from components	Recycle and reclaim mercury from fluorescent lamps when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with applicable Regulations.

This summary should not be used alone. The report must be read in its entirety.



Larry Koughan, CET, CRSP
Project Principal
ALL-TECH Environmental Services Limited

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Appendix IV Summary of ACM conditions report

Appendix V Summary of other Hazardous Materials report

SITE / CLIENT INFORMATION

Project No: PE22400

Assessment Date: December 2022

Client Name: PEI Department of Transportation & Infrastructure

Address: Provincial Correctional Centre
275 Sleepy Hollow Road
Charlottetown, PE

1 INTRODUCTION

ALL-TECH Environmental Services Limited was contracted by the PEI Department of Transportation & Infrastructure (DTI) to conduct a hazardous material assessment for the Provincial Correctional Centre located at 275 Sleepy Hollow Road in Charlottetown, Prince Edward Island.

The purpose of the assessment was to identify hazardous materials within the building which may require safe handling procedures and disposal requirements in accordance with their applicable regulations prior to any planned work, renovations, or demolition and to assist in the Asbestos Management Plan (AMP) of any in place asbestos containing materials (ACM).

This report has been prepared to document the identities, usages and locations of any designated substances and hazardous materials identified within the building.

The on-site assessment was conducted in December 2022. During the assessment hazardous materials including asbestos and lead (paint) were sampled. In addition, lamp ballasts and electrical transformers were visually assessed for Polychlorinated Biphenyls (PCBs) and reported if identified.

1.1 SURVEY OBJECTIVES

The scope of the survey was to conduct a non-destructive assessment to identify asbestos, lead, and PCBs within the subject building as well as any other suspect hazardous materials if encountered.

ALL-TECH inspected both interior and exterior spaces of the subject building to determine whether designated substances and hazardous materials were present. Representative sampling for suspect asbestos and lead paint materials was conducted as required based on industry standards and the consultant's experience.

1.2 BACKGROUND BUILDING INFORMATION

**TABLE 1
BUILDING FRAMEWORK**

Building Use	Provincial Correctional Centre
Number of Floors	1 floor plus penthouse
Total Area	Approximately 3,936 m ²
Year of Construction	1978
Structure	Steel; concrete; brick
Exterior Cladding	Brick; metal
HVAC	Fiberglass insulation or non-insulated
Roof	Not assessed
Flooring	Ceramic tile; concrete; vinyl sheet flooring, vinyl floor tiles
Interior Walls	Drywall; concrete block; brick
Ceilings	Suspended ceiling tiles; drywall

2 REGULATIONS & GUIDELINES

A summary table (Table 2) is provided for the applicable regulations, policies, codes, and / or guidelines of hazardous materials assessed for the purpose of this report. This information was used as reference to assess suspect hazardous materials and make recommendations based on the findings.

**TABLE 2
SUMMARY OF REGULATORY FRAMEWORK**

ASBESTOS	<ul style="list-style-type: none">▪ <i>Occupational Health and Safety Act R.S.P.E.I. 1988, Cap. O-1.01 General Regulations – Part 49 (Including any amendments to May 2021).</i>▪ <i>Guide to Asbestos Management, Workers Compensation Board of PEI.</i>▪ <i>Environmental Protection Act Chapter E-9 Waste Management Regulations, Prince Edward Island</i>▪ <i>Transportation of Dangerous Goods Act (TDGA)</i>
LEAD	<ul style="list-style-type: none">▪ <i>Hazardous Products Act</i>▪ <i>Prince Edward Island Department of Environment, Labour and Justice (PEIELJ)</i>▪ <i>Transportation of Dangerous Goods Act (TDGA)</i>▪ <i>The Environmental Abatement Council of Canada (EACC) Lead Guideline for Construction, Renovation, Maintenance or Repair.</i>▪ <i>Surface Coating Materials Regulations, SOR/2016-193, Canada Consumer Product Safety Act.</i>
PCB's	<ul style="list-style-type: none">▪ <i>Environmental Contaminants Act, Chlorophenyl Regulations</i>▪ <i>Environment Canada – “Identification of Lamp Ballasts Containing PCB's,” report EPS 2/CC/2 (revised) August 1991</i>▪ <i>PCB Regulations, SOR/2008-273, Canadian Environmental Protection Act.</i>

2.1 ASBESTOS

Asbestos materials can be found in one of two forms: friable asbestos or a non-friable type. Friable asbestos material refers to material that when dry, can be crumbled, pulverized, or reduced to a powder by hand pressure. This type of asbestos material is hazardous due to its potential to become airborne, if damaged or disturbed.

Friable asbestos building products used that have been used in the past are sprayed acoustic and fire protection insulation which were installed on mechanical room ceilings, building structures, ceiling finishes, etc., and mechanical insulation on piping, tanks, boilers, vessels, etc. Some non-friable building products are vinyl acoustic floor tiles, gaskets, transite panels, piping, and shingles.

Non-friable materials if handled improperly during removal or renovations, such as cutting transite panels with an electrical tool, can cause high fiber releases.

Asbestos is classified as a hazardous material under the TDGA and must adhere to specific requirements for transfer including but not limited to waste transfer manifests and proper placards. All asbestos waste must be disposed of at an approved municipal solid waste disposal site. Recent changes from the Prince Edward Island's Department of Environment's Environmental Protection Act, Waste Resource Management Regulations have defined asbestos as "special waste" as asbestos containing materials containing 1% or greater by weight for the purpose of disposal.

All work should be carried out by personnel trained and licensed with the provincial department of the Workers Compensation Board / Occupational Health and Safety Division for asbestos abatement.

2.2 LEAD

Lead in paints is regulated under the Canadian Environmental Protection Act (CEPA) as published in Canada Gazette Part II. The lead content limit has been set to 600 mg/kg (0.06 percent by weight) for surface coating materials.

Any disturbance or removal of lead-based materials which may generate lead dust shall have to conform to the federal and provincial Occupational Health and Safety Act and Regulations. All work should be carried out by personnel trained in the safe handling of lead-based paint coatings and shall be trained in the use of respirators and be properly fit tested.

PEIELJ has established guidelines that restrict hazardous materials from municipal landfills and Construction and Demolition (C&D) waste disposal sites which potentially may migrate / leach into groundwater and cause adverse environmental impacts. Lead coated surfaces may leach from their base materials into soil and subsequent groundwater. PEIELJ has established guidelines that materials containing 1000 mg/kg or 0.1% lead by weight shall be classified as lead-based paints. If materials are

found to be above this guideline and require removal and disposal, then the materials must undergo leachate testing to assess total concentrations which could potentially leach into the ground soil and groundwater. Presently provincial requirements for lead leachate testing shall not exceed 5 mg/L. Disposal criteria for lead containing paints are based on total and leachable concentrations are as follows:

- Materials with total lead concentrations below the applicable Total guidelines can be disposed of at any C&D disposal site.
- Materials with *total lead concentrations above* the applicable Total guidelines and *leachable lead concentrations below* the applicable Leachate guidelines must be disposed of at an approved municipal solid waste landfill that has a composite liner and leachate collection system (i.e., East Prince Waste Management Facility in Wellington, PEI). A waste generator permit must first be approved and obtained by PEIELJ.
- Materials with total and leachable lead concentrations above provincial guidelines must be transported to an approved hazardous waste disposal site.

Materials with leachable lead concentrations above provincial guidelines must be manifested as dangerous goods during transport under the federal TDGA. Hazardous materials that are being disposed of out of province must comply with Interprovincial Movement of Hazardous Waste Regulations under the Canadian Environmental Protection Act (CEPA).

2.3 POLYCHLORINATED BIPHENYLS (PCB's)

In 1976, the Canadian Environment Contaminants Act passed regulations which prohibited the use of PCBs in transformer equipment. Under the same Act, the Chlorophenyl Regulations No. 1, states that PCBs cannot be used as a constituent of electrical capacitors, electrical transformers and associated electrical equipment manufactured in or imported into Canada after July 1, 1980.

There is currently no regulatory requirement to remove in-use PCBs from service. However, should suspect PCB containing light ballasts be removed from service, they should be treated as PCB waste or if confirmed to contain PCB oil in excess of 0.5 kg.

3 METHODOLOGY

The scope of work for the survey was to visually identify controlled hazardous materials for the safe handling and disposal of hazardous materials prior to renovations within the building. Where visual identification of asbestos containing materials and lead based paints were suspected but unable to be determined, samples were collected and sent to an approved laboratory for analysis.

There was limited destructive testing of structural members (i.e., walls, flooring) during the assessment. Where accessible, areas above ceiling cavities and behind walls were visually assessed to identify potentially concealed hazardous materials.

3.1 ASBESTOS

Using standard bulk sampling methodologies, representative suspect asbestos containing materials were sampled from ceiling & wall finishes, floor coverings, located throughout the building. Samples were placed in sealed plastic bags, labelled and a chain of custody form completed to be forwarded to IATL Laboratory via courier for analysis.

The asbestos assessment involved a visual investigation of suspect materials for the presence of asbestos containing materials. If these materials were suspected to contain asbestos, a bulk sample was collected of the representative material to be analysed with Polarized Light Microscopy.

It should be noted that asbestos containing materials may be present behind unrevealed areas. During demolition of these materials, precautions should be taken such as the use of personal protective equipment in the event of exposing concealed asbestos materials. If suspect materials are revealed, have them tested immediately.

3.2 LEAD

During the assessment, suspect lead-based paints were sampled from surfaces as determined by the consultant. Where practical, all layers of paint were removed and placed in sealed plastic bags, labelled and a chain of custody form completed to be forwarded to IATL Laboratory via courier for analysis.

3.3 POLYCHLORINATED BIPHENYLS

During the assessment, suspect PCB containing light ballasts were examined for PCB identification or by recording serial numbers for reference. Ballasts were inspected and manufacturers name, date and serial numbers were recorded when visible. The manufacturers identification numbers were then compared to Environment Canada's "Identification of Lamp Ballasts Containing PCB's," Report EPS 2/CC/2 9(revised), August 1991.

It should be noted that the assessment did not include the sampling / testing or analysis of the suspect PCB containing materials.

4 ASSESSMENT FINDINGS

4.1 ASBESTOS

During the survey, the consultant collected individual bulk material samples of suspect ACMs within the structure. Laboratory analysis certificates are presented in Appendix I.

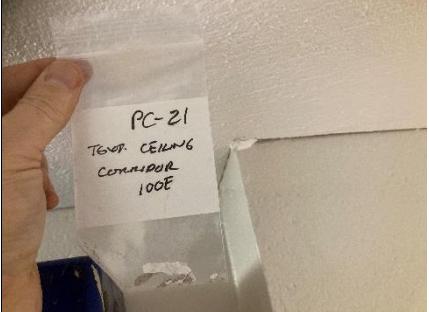
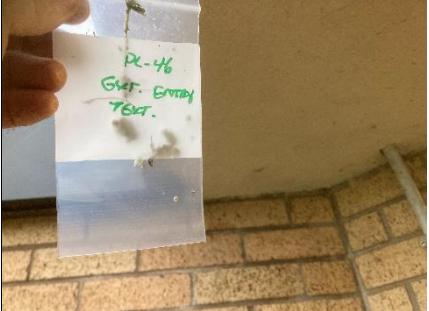
A total of forty-eight (48) bulk material samples were collected within the building during the survey. Some of these samples such as tile pipe wraps, floor coverings and joint compounds were separated and a total of seventy-two (72) samples were analyzed. Of the 72 samples analyzed, two (2) were found to be asbestos containing. In addition, previous testing on brown duct mastic was found to contain 2.6% chrysotile asbestos.

Other materials such as pipe and duct insulations visually identified as fiberglass insulation were noted and not sampled.

For details on approximate quantities, condition, friability, accessibility and locations of hazardous materials; refer to the **Summary of ACM conditions report** in Appendix IV.

Individual items sampled and ACM materials identified are itemized in each sub-section below.

4.1.1 Texture Coat Finishes

<p>Texture coat finishes were observed and sampled in three various locations within the building. None of the sampled were found to be asbestos containing.</p>	
<p>Texture coat finishes were observed and sampled in two locations on the exterior of the building. None of the sampled were found to be asbestos containing.</p>	

4.1.2 Pipe Insulation

ACM parging cement is present on pipe fittings as identified through various samples within the building. A total of seven (7) parging cement samples were collected. Two of the samples were found to contain **1.5 – 5.7% Chrysotile Asbestos**.

Straight sections of pipe are insulated with fibreglass insulation as identified through visual observations (see Photos 2 & 3).

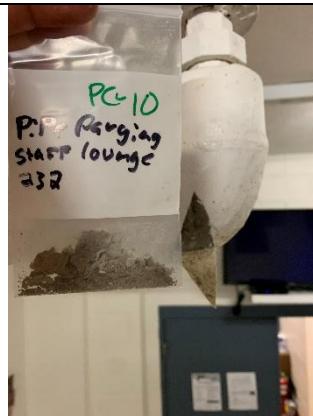


Photo 1



Photo 2

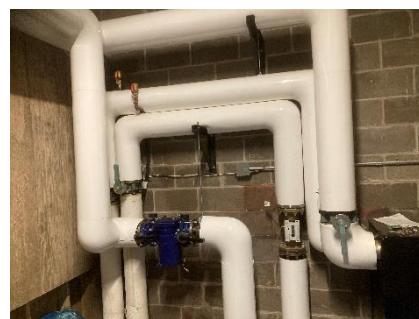


Photo 3

4.1.3 Duct Insulation

Penthouse mechanical room observed with either non-insulated or fiberglass insulation with canvas covering with no parging observed under wrap. No suspect asbestos coverings were noted or reported.



Photo 1



Photo 2



4.1.4 Mechanical Equipment Insulation

Modern mechanical equipment in exterior mechanical room 174 (photo 1). No insulated covering on boiler system.

Mechanical equipment in boiler room 231 (photo 2). No insulated covering on boiler system.



Mechanical breeching in boiler room sampled as non-asbestos containing (Photo 3 - Sample PC-48; Photo 4 – Sample PC5)



4.1.5 Plaster

No plaster walls or ceilings were noted or reported within the building.

4.1.6 Drywall Joint Compound

Drywall joint compound walls and ceilings were noted and sampled in various random locations throughout the building.

Representative sampling was completed on each floor of the building.

A total of five (5) joint compound samples were collected during the assessment. None of the samples were found to contain asbestos.

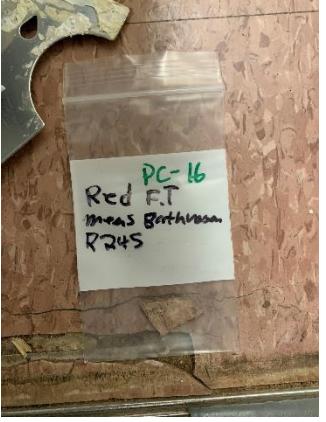


4.1.7 Vinyl Sheet Flooring

No suspect vinyl sheet floor coverings were noted or reported within the building.

4.1.8 Vinyl Floor Tiles

Sample No.:	Flooring Description	Location	Asbestos Type / Content (%)	Photo
PC-7; PC-45	12" x 12" tan vinyl floor tile with black mastic and levelling compound	Room 228 Clothing stores	None Detected in floor tile, mastic or levelling compound	
PC-12	12" x 12" brown vinyl floor tile with black mastic and levelling compound	Room 232 Staff lounge	None Detected in floor tile, mastic or levelling compound	

PC-13; PC-17; PC-19	12" x 12" white floor tile with black mastic	Room 232 Staff lounge	None Detected in floor tile or mastic	
PC-14	12" x 12" white / blue paint	Room 233	None Detected	
PC-16	12" x 12" red floor tile with yellow mastic	Room 245	None Detected in floor tile or mastic	
PC-34; PC-20; PC-35	12" x 12" blue floor tile with black mastic and levelling compound	Room 172	None Detected in floor tile, mastic or levelling compound	

PC-28; PC-30	12" x 12" grey floor tile with black mastic	Room 206	None Detected in floor tile or mastic	
PC-29	12" x 12" green floor tile with black mastic	Room 209	None Detected in floor tile or mastic	
PC-31	12" x 12" orange floor tile with yellow mastic	Room 104	None Detected in floor tile or mastic	

4.1.9 Ceiling Tiles

In-lay acoustic ceiling tiles were observed and sampled in various random locations throughout the building. The ceiling tiles were observed as fissure designs throughout. A total of five (5) ceiling tile samples were collected during the assessment. None of the samples were found to contain asbestos.

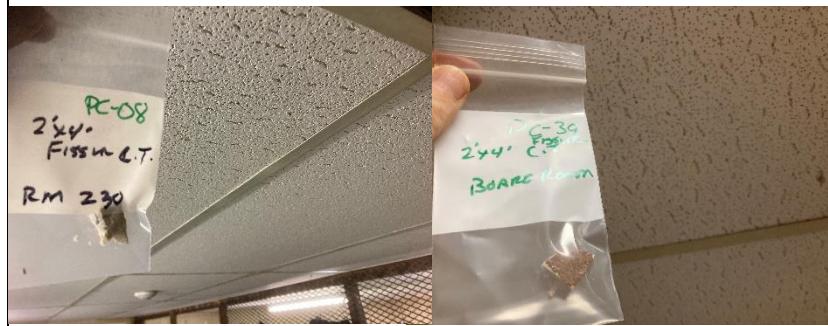
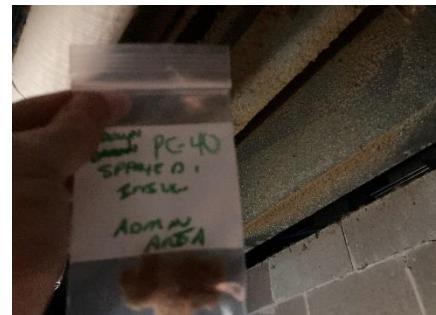


Photo 1

Photo 2

4.1.10 Other Building Materials

Sprayed fireproofing material samples were collected in the boiler room and admin room. Samples were analyzed as non-asbestos containing materials.



Boiler gaskets were sampled and analyzed as non-asbestos containing materials.



Brown duct mastic previously identified as containing 1.8 – 2.6% chrysotile asbestos (PLM report 09-25-2017).



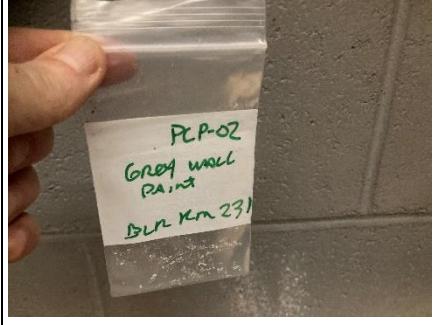
<p>Parging on grey boiler breeching end caps previously identified as containing 50% chrysotile asbestos (PLM report 02-26-2021).</p>	
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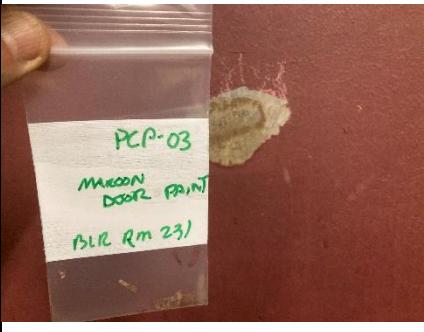
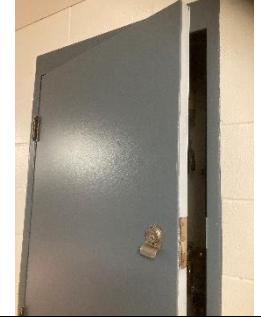
4.2 LEAD-BASED PAINTS

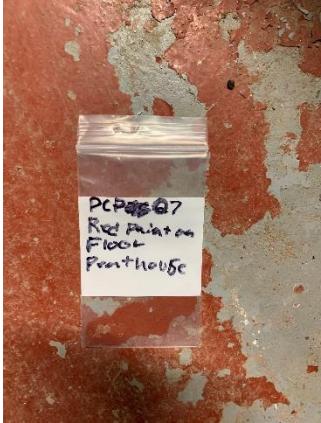
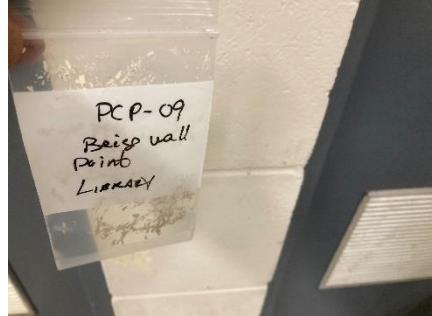
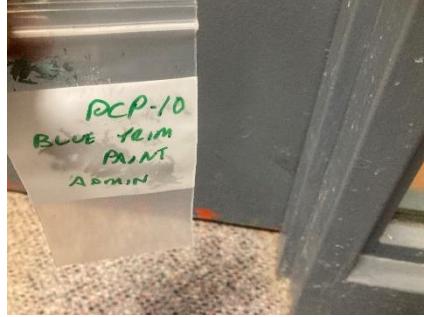
Based on the age of the buildings, lead based paints were sampled. A total of ten (10) painted surface coatings were sampled within the building and sent to the laboratory for analysis for lead in paint.

Based on the assessment findings, three (3) of the paint layers sampled exceeded CEPA guidelines of 0.06 percent by weight for surface coating materials. Exceedances are noted in bold red in table below.

Laboratory analysis certificate is presented in Appendix II.

Sample No.:	Colour / Substrate Description	Location	Lead Content (%)	Photo
PCP-01	Red paint / Concrete floor	Boiler Room 231	0.0071	
PCP-02	Grey paint / Concrete wall	Boiler Room 231	0.031	

PCP-03	Maroon paint / Metal door	Boiler Room 231	1.6	
PCP-04	Cream paint / Trim	Boiler Room 231	< 0.014	
PCP-05	Blue paint / Boiler surface	Boiler Room 231	0.25	
PCP-06	Grey paint / Trim	Room 238	0.015	

PCP-07	Red paint / Concrete floor	Penthouse	0.016	
PCP-08	Yellow paint / Concrete wall	Penthouse	0.069	
PCP-09	Beige paint / Concrete wall	Library	0.0075	
PCP-10	Blue paint / Trim	Admin	< 0.01	

4.3 POLYCHLORINATED BIPHENYLS (PCB's)

Mostly wall mounted light fixtures were observed throughout the building. Typical ballasts found and reported are noted below in section 4.3.1. Manufacturer's labels were marked as non-PCB containing.

Through referencing and markings on lamp ballasts, it was determined that the ballasts observed on site are non-PCB containing.

4.3.1 *Lighting Lamp Ballasts*

Photo 1 – GE Gold Label lamp ballasts with serial number 17A240E. Through referencing the ballasts are non PCB containing.

Photo 2 – Typical wall mounted light fixtures for these ballasts.



Photo 1



Photo 2

4.3.2 *Transformers*

Electrical transformers were not found or reported during the assessment.

4.4 SILICA

Crystalline silica is a presumed component of the following materials:

- Concrete base structure (exterior)
- Poured or pre-cast concrete (main and penthouse floors)
- Interior concrete block walls / mortar
- Exterior brick and mortars

4.5 MERCURY

4.5.1 *Lighting*

Mercury vapour is present in fluorescent lamp tubes.

4.5.2 Mercury Containing Devices

No mercury containing thermostats ampules were reported.

5 SUMMARY OF HAZARDOUS MATERIALS

A summary of the Hazardous Materials identified within the building is provided below in Table 3 based on our assessment as well as safe handling requirements. Areas identified with visually same ACM materials are outlined in Appendix III Site drawing with ACM locations.

Asbestos containing parging cement on fittings was detected in two samples and has been identified in the Summary of ACM conditions and action report in Appendix IV. Floor plans have been added to Appendix III to assist in locating these areas.

Several other samples were found to be non-asbestos containing. In addition, previous sample reports have had some asbestos containing fittings and other non-detected. Based on the inconsistent results from this survey and other test results, it is hard to distinguish between potential ACM fittings and new fittings that have been replaced or may not have been ACM previously installed. Therefore, all pipe parging shall be treated as ACM unless determined otherwise. A labelling program (as noted in section 6.1) should be initiated for this facility to have any updated work labelled as non-asbestos containing to avoid duplication of sampling and unnecessary ACM removals.

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	Brown duct mastic		Disposal at approved facility such as EPWMF in Wellington, PEI
LEAD PAINT	Maroon paint on metal doors / Boiler Room	TDG – manifest Trained personnel in the safe handling of lead coated surfaces and all other pertinent sections of the <i>Occupational Health and Safety Act</i> R.S.P.E.I	Regulatory approval from PEIELJ
	Blue paint on boiler jacket / Boiler room		Additional analysis required for TCLP for disposal purposes, if required.
	Yellow paint on concrete walls / Penthouse		
SILICA	Presumed in the following building components: <ul style="list-style-type: none"> Concrete base structure (exterior) Poured or pre-cast concrete (main and penthouse floors) Interior concrete block walls / mortar Exterior brick and mortars 	Trained personnel in the safe handling of silica dust and all other pertinent sections of the <i>Occupational Health and Safety Act</i> R.S.P.E.I	Regulatory approval from PEIELJ
MERCURY	fluorescent lamp tubes	Do not break lamps or separate liquid mercury from components	Recycle and reclaim mercury from fluorescent lamps when taken out of service. Mercury is classified as a hazardous waste and must be disposed of in accordance with applicable Regulations.

6 ON-GOING MANAGEMENT & MAINTENANCE

The following recommendations are made regarding on-going management and maintenance work involving the hazardous materials identified.

Perform a detailed intrusive assessment prior to building renovation or demolition operations. The assessment should include; destructive testing (e.g., coring and/or removal of building finishes and components), and other materials not previously tested (e.g., roofing materials).

6.1 Asbestos

Ensure policies and procedures outlined in the buildings Asbestos Management Plan (AMP) are followed when conducting asbestos-related work at this facility.

Perform a re-assessment of asbestos-containing materials (ACM) on an annual basis. The next reassessment of ACM should be performed prior to April 2024 to remain in compliance.

Remove ACM prior to alteration or maintenance work if ACM may be disturbed by the work. Follow 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.

<p>Update the asbestos inventory upon completion of the abatement and removal of asbestos-containing materials and any other relevant findings. Upon completion, update mechanical and pipe insulation that have been re-insulated with Asbestos Free labelling (figure 1).</p>	
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Figure 1

6.2 Lead

For lead-containing or lead-based paints (i.e., greater than the CEPA guidelines of 600 mg/kg (0.06 percent by weight) for surface coating materials, work procedures, engineering controls and personal protective equipment should be assessed on a site-specific basis to comply with Occupational Health and Safety regulations and Lead guidelines.

Dispose of painted materials exceeding the criteria for leachable lead as hazardous waste.

6.3 Silica

Disturbance of silica-containing products during maintenance activities 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 applicable regulations and guidelines.

6.4 Mercury

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

7 DISCLAIMER

The recommendations detailed in this report were carried out in a manner consistent with the level of care and skill normally exercised by reasonable members of the environmental and industrial hygiene consulting profession currently practicing under similar conditions in the area.

In preparing this report, ALL-TECH Environmental Services Limited relied on information supplied by others, including independent laboratories, and testing services. Except as expressly set out in this report, we have not made any independent verification of such information.

The recommendations in this report have been made in the context of existing industry accepted guidelines which were in place at the date of this report.

We trust this information is beneficial for assisting you in better understanding the process that has been carried out as well as the benefits and limitations of air sample results.

Should you have any questions or concerns pertaining to this report, please contact the undersigned directly.



Larry G. Koughan, CET, CRSP
Senior Project Consultant



APPENDIX I

Laboratory Certificate of Analysis – Asbestos PLM Samples

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541691
Client No.: PC-1
Percent Asbestos:
None Detected

Analyst Observation: Grey/White Insulation
Client Description: Fire Proof Spray Insulation
Percent Non-Asbestos Fibrous Material:
75 Mineral Wool

Location: Boiler Room 231
Facility:
Percent Non-Fibrous Material:
25

Lab No.: 7541692
Client No.: PC-2
Percent Asbestos:
None Detected

Analyst Observation: White Wrap
Client Description: Pipe Parging
Percent Non-Asbestos Fibrous Material:
65 Cellulose

Location: Boiler Room 231
Facility:
Percent Non-Fibrous Material:
35

Lab No.: 7541692(L2)
Client No.: PC-2
Percent Asbestos:
PC 5.7 Chrysotile

Analyst Observation: Grey Insulation
Client Description: Pipe Parging
Percent Non-Asbestos Fibrous Material:
45 Mineral Wool

Location: Boiler Room 231
Facility:
Percent Non-Fibrous Material:
49.3

Lab No.: 7541693
Client No.: PC-3
Percent Asbestos:
None Detected

Analyst Observation: Boiler gasket
Client Description: Boiler gasket
Percent Non-Asbestos Fibrous Material:
80 Fibrous Glass

Location: Boiler Room 231
Facility:
Percent Non-Fibrous Material:
20

Lab No.: 7541694
Client No.: PC-4
Percent Asbestos:
None Detected

Analyst Observation: Grey/White Insulation
Client Description: Fire Proof Spray Insulation
Percent Non-Asbestos Fibrous Material:
70 Mineral Wool

Location: Boiler Room 231
Facility:
Percent Non-Fibrous Material:
30

Lab No.: 7541695
Client No.: PC-5
Percent Asbestos:
None Detected

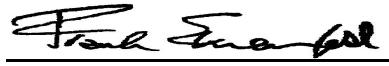
Analyst Observation: Off-White Insulation
Client Description: Pipe Insulation
Percent Non-Asbestos Fibrous Material:
15 Cellulose

Location: Boiler Room 231
Facility:
Percent Non-Fibrous Material:
85

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
Date Analyzed: 12/21/2022
Signature: 
Analyst: Linda Price

Approved By:


Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

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	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

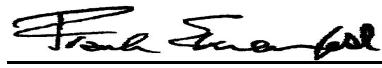
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541696 Client No.: PC-6 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White Gasket Client Description: Boiler Gasket Percent Non-Asbestos Fibrous Material: 85 Mineral Wool	Location: Boiler Room 231 Facility: Percent Non-Fibrous Material: 15
Lab No.: 7541697 Client No.: PC-7 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Tan Floor Tile Client Description: 12x12 Light Brown Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Clothing Stores R-228 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541697(L2) Client No.: PC-7 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Black Mastic Client Description: 12x12 Light Brown Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Clothing Stores R-228 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541697(L3) Client No.: PC-7 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White Leveling Compound Client Description: 12x12 Light Brown Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Clothing Stores R-228 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541698 Client No.: PC-8 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White/Tan Ceiling Tile Client Description: 2x4 Fissure Ceiling Tile Percent Non-Asbestos Fibrous Material: 55 Cellulose 40 Mineral Wool	Location: R-230 Facility: Percent Non-Fibrous Material: 5
Lab No.: 7541699 Client No.: PC-9 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Grey Insulation Client Description: Pipe Elbow Parging Percent Non-Asbestos Fibrous Material: 5 Cellulose 55 Mineral Wool	Location: Room 230 Facility: Percent Non-Fibrous Material: 40

Please refer to the Appendix of this report for further information regarding your analysis.

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 Signature: 
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Approved By:


 Frank E. Ehrenfeld, III
 Laboratory Director

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Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

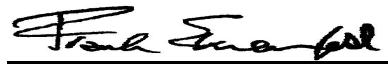
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541700 Client No.: PC-10 Percent Asbestos: PC 1.5 Chrysotile	Analyst Observation: Grey/White Insulation Client Description: Pipe Elbow Parging Percent Non-Asbestos Fibrous Material: 5 Cellulose 45 Mineral Wool	Location: Staff Lounge Room 232 Facility: Percent Non-Fibrous Material: 48.5
Lab No.: 7541701 Client No.: PC-11 Percent Asbestos: None Detected	Analyst Observation: White Plaster Client Description: Ceiling Plaster Percent Non-Asbestos Fibrous Material: None Detected	Location: Staff Lounge Room 232 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541701(L2) Client No.: PC-11 Percent Asbestos: None Detected	Analyst Observation: Grey Plaster Client Description: Ceiling Plaster Percent Non-Asbestos Fibrous Material: 1 Hair	Location: Staff Lounge Room 232 Facility: Percent Non-Fibrous Material: 99
Lab No.: 7541702 Client No.: PC-12 Percent Asbestos: PC Trace Chrysotile	Analyst Observation: Brown Floor Tile Client Description: Brown Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Staff Lounge Room 232 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541702(L2) Client No.: PC-12 Percent Asbestos: None Detected	Analyst Observation: Black Mastic Client Description: Brown Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Staff Lounge Room 232 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541702(L3) Client No.: PC-12 Percent Asbestos: None Detected	Analyst Observation: Off-White Leveling Compound Client Description: Brown Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Staff Lounge Room 232 Facility: Percent Non-Fibrous Material: 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
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 Signature: 
 Analyst: Linda Price

Approved By:


 Frank E. Ehrenfeld, III
 Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

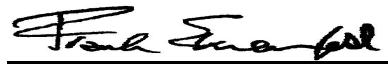
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541703	Analyst Observation: White/Off-White Floor Tile	Location: Staff Lounge Room 232
Client No.: PC-13	Client Description: White Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541703(L2)	Analyst Observation: Black Mastic	Location: Staff Lounge Room 232
Client No.: PC-13	Client Description: White Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541704	Analyst Observation: Blue/White Floor Tile	Location: Room 233
Client No.: PC-14	Client Description: Blue Floor Tile	Facility:
Percent Asbestos: <i>PC Trace Chrysotile</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Recommend TEM analysis Insufficient mastic to analyze		
Lab No.: 7541705	Analyst Observation: White Joint Compound	Location: Room 245
Client No.: PC-15	Client Description: Drywall Joint Compound	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541706	Analyst Observation: Red Floor Tile	Location: Room 245
Client No.: PC-16	Client Description: Red Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541706(L2)	Analyst Observation: Yellow Mastic	Location: Room 245
Client No.: PC-16	Client Description: Red Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:	12/16/2022
Date Analyzed:	12/21/2022
Signature:	
Analyst:	Linda Price

Approved By:


Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

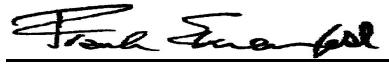
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541707 Client No.: PC-17 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White/Off-White Floor Tile Client Description: White Speckle Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Room 249 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541707(L2) Client No.: PC-17 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Black Mastic Client Description: White Speckle Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Room 249 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541707(L3) Client No.: PC-17 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Off-White Leveling Compound Client Description: White Speckle Floor Tile Percent Non-Asbestos Fibrous Material: 2 Cellulose	Location: Room 249 Facility: Percent Non-Fibrous Material: 98
Lab No.: 7541708 Client No.: PC-18 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White/Grey Joint Compound Client Description: Drywall Joint Compound Percent Non-Asbestos Fibrous Material: None Detected	Location: Room 249 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541709 Client No.: PC-19 Percent Asbestos: <i>PC Trace Chrysotile</i> Recommend TEM analysis	Analyst Observation: White Floor Tile Client Description: White Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Room 249 Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541709(L2) Client No.: PC-19 Percent Asbestos: <i>None Detected</i> Layers not separable.	Analyst Observation: Black/Tan Mastic Client Description: White Floor Tile Percent Non-Asbestos Fibrous Material: None Detected	Location: Room 249 Facility: Percent Non-Fibrous Material: 100

Please refer to the Appendix of this report for further information regarding your analysis.

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 Signature: 
 Analyst: Linda Price

Approved By:


 Frank E. Ehrenfeld, III
 Laboratory Director

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Client: ALL131	Project No.: PE22400

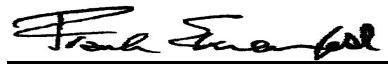
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541710	Analyst Observation: Blue/Grey Floor Tile	Location: Room 172
Client No.: PC-20	Client Description: 12x12 Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541710(L2)	Analyst Observation: Black Mastic	Location: Room 172
Client No.: PC-20	Client Description: 12x12 Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541711	Analyst Observation: White Ceiling Texture	Location: Corridor 100E
Client No.: PC-21	Client Description: Texture Ceiling Coat	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541711(L2)	Analyst Observation: Grey Plaster	Location: Corridor 100E
Client No.: PC-21	Client Description: Texture Ceiling Coat	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541712	Analyst Observation: Red Floor Tile	Location: Corridor 100E
Client No.: PC-22	Client Description: Red Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541712(L2)	Analyst Observation: Black Mastic	Location: Corridor 100E
Client No.: PC-22	Client Description: Red Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
 Date Analyzed: 12/21/2022
 Signature: 
 Analyst: Linda Price

Approved By:


 Frank E. Ehrenfeld, III
 Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541712(L3)

Client No.: PC-22

Percent Asbestos:

None Detected

Analyst Observation: Grey Cementitious

Client Description: Red Floor Tile

Location: Corridor 100E

Facility:

Percent Non-Fibrous Material:

100

Lab No.: 7541713

Client No.: PC-23

Percent Asbestos:

None Detected

Analyst Observation: White Insulation

Client Description: Fire Proof Spray Insulation

Location: Penthouse

Facility:

Percent Non-Fibrous Material:

45

Lab No.: 7541714

Client No.: PC-24

Percent Asbestos:

None Detected

Analyst Observation: White Wrap

Client Description: Pipe Elbow Parging

Location: Penthouse

Facility:

Percent Non-Fibrous Material:

35

Lab No.: 7541714(L2)

Client No.: PC-24

Percent Asbestos:

None Detected

Analyst Observation: White/Grey Insulation

Client Description: Pipe Elbow Parging

Location: Penthouse

Facility:

Percent Non-Fibrous Material:

55

Lab No.: 7541715

Client No.: PC-25

Percent Asbestos:

None Detected

Analyst Observation: White/Brown Insulation

Client Description: Pipe Six Inch Elbow Parging

Location: Penthouse

Facility:

Percent Non-Fibrous Material:

52

Lab No.: 7541716

Client No.: PC-26

Percent Asbestos:

None Detected

Analyst Observation: White/Grey Insulation

Client Description: Pipe Elbow Parging

Location: Penthouse

Facility:

Percent Non-Fibrous Material:

55

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022

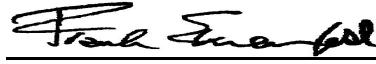
Date Analyzed: 12/21/2022

Signature:



Analyst: Linda Price

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

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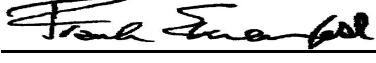
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541717	Analyst Observation: White Ceiling Texture	Location: Room 205
Client No.: PC-27	Client Description: Texture Ceiling Coat	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541717(L2)	Analyst Observation: Grey Plaster	Location: Room 205
Client No.: PC-27	Client Description: Texture Ceiling Coat	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541718	Analyst Observation: Grey Floor Tile	Location: Room 206
Client No.: PC-28	Client Description: 12x12 Grey Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Recommend TEM analysis		
Lab No.: 7541718(L2)	Analyst Observation: Black Mastic	Location: Room 206
Client No.: PC-28	Client Description: 12x12 Grey Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541719	Analyst Observation: Green Floor Tile	Location: Gym Room 209
Client No.: PC-29	Client Description: 12x12 Green Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100
Lab No.: 7541719(L2)	Analyst Observation: Black Mastic	Location: Gym Room 209
Client No.: PC-29	Client Description: 12x12 Green Floor Tile	Facility:
Percent Asbestos: <i>None Detected</i>	Percent Non-Asbestos Fibrous Material: None Detected	Percent Non-Fibrous Material: 100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received:	12/16/2022
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Signature:	
Analyst:	Linda Price

Approved By:


Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

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Client: ALL131	Project No.: PE22400

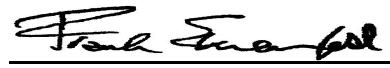
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541720 Client No.: PC-30 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Grey Floor Tile Client Description: 12x12 Grey Floor Tile <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Library Facility: <u>Percent Non-Fibrous Material:</u> 100
<hr/>		
Lab No.: 7541721 Client No.: PC-31 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Orange Floor Tile Client Description: 12x12 Orange Floor Tile <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 104 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 7541721(L2) Client No.: PC-31 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Yellow Mastic Client Description: 12x12 Orange Floor Tile <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Room 104 Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 7541722 Client No.: PC-32 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Brown Mastic Client Description: Brown Mastic on Duct Work <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Common Room Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 7541723 Client No.: PC-33 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White/Tan Ceiling Tile Client Description: 2x4 Ceiling Tile <u>Percent Non-Asbestos Fibrous Material:</u> 55 Cellulose 25 Mineral Wool	Location: Common Room Facility: <u>Percent Non-Fibrous Material:</u> 20
Lab No.: 7541724 Client No.: PC-34 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Blue Floor Tile Client Description: 12x12 Blue Floor Tile <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Max Centre Facility: <u>Percent Non-Fibrous Material:</u> 100

Please refer to the Appendix of this report for further information regarding your analysis.

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 Laboratory Director

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	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541724(L2)
Client No.: PC-34

Percent Asbestos:
None Detected

Lab No.: 7541724(L3)
Client No.: PC-34

Percent Asbestos:
None Detected

Lab No.: 7541725
Client No.: PC-35

Percent Asbestos:
None Detected

Lab No.: 7541725(L2)
Client No.: PC-35

Percent Asbestos:
None Detected

Lab No.: 7541726
Client No.: PC-36

Percent Asbestos:
None Detected

Lab No.: 7541727
Client No.: PC-37

Percent Asbestos:
None Detected

Analyst Observation: Black Mastic
Client Description: 12x12 Blue Floor Tile

Percent Non-Asbestos Fibrous Material:
None Detected

Analyst Observation: Off-White Leveling Compound
Client Description: 12x12 Blue Floor Tile

Percent Non-Asbestos Fibrous Material:
None Detected

Analyst Observation: Lt Blue Floor Tile
Client Description: 12x12 Light Blue Floor Tile

Percent Non-Asbestos Fibrous Material:
None Detected

Analyst Observation: Yellow Mastic
Client Description: 12x12 Light Blue Floor Tile

Percent Non-Asbestos Fibrous Material:
None Detected

Analyst Observation: White Joint Compound
Client Description: Drywall Joint Compound

Percent Non-Asbestos Fibrous Material:
None Detected

Analyst Observation: White Joint Compound
Client Description: Drywall Joint Compound

Percent Non-Asbestos Fibrous Material:
None Detected

Location: Max Centre
Facility:

Percent Non-Fibrous Material:
100

Location: New Pod
Facility:

Percent Non-Fibrous Material:
100

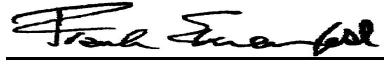
Location: New Pod
Facility:

Percent Non-Fibrous Material:
100

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
Date Analyzed: 12/21/2022
Signature: 
Analyst: Linda Price

Approved By:


Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

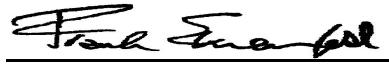
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541728 Client No.: PC-38 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White Joint Compound Client Description: Drywall Joint Compound Percent Non-Asbestos Fibrous Material: None Detected	Location: New Pod Facility: Percent Non-Fibrous Material: 100
Lab No.: 7541729 Client No.: PC-39 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White/Tan Ceiling Tile Client Description: 2x4 Fissure Ceiling Tile Percent Non-Asbestos Fibrous Material: 65 Cellulose 15 Mineral Wool	Location: Board Room Facility: Percent Non-Fibrous Material: 20
Lab No.: 7541730 Client No.: PC-40 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Brown Insulation Client Description: Brown Spray Proof Insulation Percent Non-Asbestos Fibrous Material: 90 Cellulose	Location: Admin Room Facility: Percent Non-Fibrous Material: 10
Lab No.: 7541731 Client No.: PC-41 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Brown Insulation Client Description: Brown Spray Proof Insulation Percent Non-Asbestos Fibrous Material: 90 Cellulose	Location: Admin Room Facility: Percent Non-Fibrous Material: 10
Lab No.: 7541732 Client No.: PC-42 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Brown Insulation Client Description: Brown Spray Proof Insulation Percent Non-Asbestos Fibrous Material: 90 Cellulose	Location: Admin Room Facility: Percent Non-Fibrous Material: 10
Lab No.: 7541733 Client No.: PC-43 Percent Asbestos: <i>None Detected</i>	Analyst Observation: White/Tan Ceiling Tile Client Description: 2x4 Fissure Ceiling Tile Percent Non-Asbestos Fibrous Material: 65 Cellulose 20 Mineral Wool	Location: Admin Corridor Facility: Percent Non-Fibrous Material: 15

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
 Date Analyzed: 12/21/2022
 Signature: 
 Analyst: Linda Price

Approved By:


 Frank E. Ehrenfeld, III
 Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited 20 Duke St., Suite 109 Bedford NS B4A 2Z5	Report Date: 12/21/2022
	Report No.: 674724 - PLM
	Project: Provincial Correctional Centre
Client: ALL131	Project No.: PE22400

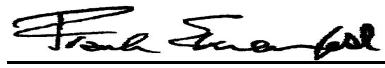
PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 7541734 Client No.: PC-44 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Grey/Tan Insulation Client Description: Pipe Elbow Parging <u>Percent Non-Asbestos Fibrous Material:</u> 3 Cellulose 42 Mineral Wool	Location: Admin Corridor Facility: <u>Percent Non-Fibrous Material:</u> 55
Lab No.: 7541735 Client No.: PC-45 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Beige Floor Tile Client Description: 12x12 Beige Floor Tile <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Washroom Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 7541735(L2) Client No.: PC-45 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Yellow Mastic Client Description: 12x12 Beige Floor Tile <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: Washroom Facility: <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 7541736 Client No.: PC-46 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Grey/White Stucco Client Description: Texture Coat <u>Percent Non-Asbestos Fibrous Material:</u> 20 Fibrous Glass	Location: Exterior - On Canopy Facility: <u>Percent Non-Fibrous Material:</u> 80
Lab No.: 7541737 Client No.: PC-47 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Grey/White Stucco Client Description: Texture Coat <u>Percent Non-Asbestos Fibrous Material:</u> 25 Fibrous Glass	Location: Exterior - Entrance Facility: <u>Percent Non-Fibrous Material:</u> 75
Lab No.: 7541738 Client No.: PC-48 Percent Asbestos: <i>None Detected</i>	Analyst Observation: Orange Insulation Client Description: Pipe Insulation Straight Run <u>Percent Non-Asbestos Fibrous Material:</u> 30 Cellulose	Location: Boiler Room 251 Facility: <u>Percent Non-Fibrous Material:</u> 70

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
 Date Analyzed: 12/21/2022
 Signature: 
 Analyst: Linda Price

Approved By:


 Frank E. Ehrenfeld, III
 Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/21/2022
Report No.: 674724 - PLM
Project: Provincial Correctional Centre
Project No.: PE22400

Client: ALL131

Appendix to Analytical Report

Customer Contact:

Method: 40 CFR Appendix E to Subpart E of Part 763, interim method for the Determination of Asbestos in Bulk Insulation Samples, USEPA 600, R93-116 and NYSDOH ELAP 198.1 as needed.

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: wchampion@iatl.com

iATL Account Representative: Semih Kocahasan

Sample Login Notes: See Batch Sheet Attached

Sample Matrix: Bulk Building Materials

Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

Certifications:

- NIST-NVLAP No. 101165-0
- NYSDOH-ELAP No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. PC Trace represents a <0.25% amount. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB) See additional information at the end of this appendix.

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/21/2022
Report No.: 674724 - PLM
Project: Provinical Correctional Centre
Project No.: PE22400

Client: ALL131

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.
- 16) Note: This sample contains >10% vermiculite mineral. See Appendix for Recommendations for Vermiculite Analysis.

Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gange, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

For New York State customers, NYSDOH requires disclaimers and qualifiers for various vermiculite containing samples that direct analysis via ELAP198.6 and ELAP198.8 for samples that contain >10% vermiculite mineral where ELAP198.6 may be used to evaluate the asbestos content of the material. However, any test result using ELAP198.6 will be reported with the following disclaimer: "ELAP198.6 method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing >10% vermiculite."

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional. NYS customers please follow current NYSDOH ELAP requirements per policy on subject of surfacing and vermiculite, May 6, 2016, Testing Requirements for Surfacing Material Containing Vermiculite (https://www.wadsworth.org/sites/default/files/WebDoc/I198_8_02_2.pdf)

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

1) Analytical Step/Method: Initial Screening by PLM, EPA 600R-93/116

Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% for most samples.

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/21/2022
Report No.: 674724 - PLM
Project: Provincial Correctional Centre
Project No.: PE22400

Client: ALL131

2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.

3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Floats" only.

4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.

5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Suspension" only.

*With advance notice and confirmation by the laboratory.

**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

New York State Department of Health requires that samples originating from NYS that they categorize as Non-friable Organically Bound materials can only be confirmed as None Detected for asbestos by method 198.4. See the table below for a list of those materials. (ENVIRONMENTAL LABORATORY APPROVAL PROGRAM CERTIFICATION MANUAL - ITEM No. 198.1, Revision Date 5/6/16)

*Asphalt Shingles, Caulking, Ceiling Tiles with Cellulose, Duct Wrap, Glazing, Mastic, Paint Chips, Resilient Floor Tiles, Rubberized Asbestos Gaskets, Siding Shingles, Vinyl Asbestos Tile, NOB materials (other than SM-V) with <10% vermiculite, Any material (Friable or NOB other than SM-V) with >10% vermiculite.

Statistically derived uncertainty with any measure should be taken into consideration when reviewing and interpreting all reported data and results. A more comprehensive listing of accuracy, precision, and uncertainty as it impacts this method is available upon request.

PLM Asbestos Bulk Sample Report

Client Information:	PEI Dept. of Transportation & Infrastructure Energy P.O. Box 2000, Charlottetown, PE C1A 7N8
Attention:	Jonathan Gauthier
Project Location:	Sleepy Hollow Correctional Centre
Project Number:	PE7157
Date:	September 25, 2017



BACKGROUND: On September 14, 2017, ALL-TECH Environmental Services Limited was retained to collect mastic samples from ductwork within the Sleepy Hollow Correctional Centre located at 508 Sleepy Hollow Road in Milton, Prince Edward Island. A total of four (4) bulk materials were collected from various areas for the determination of asbestos content.

Samples were analyzed by International Asbestos Testing Laboratory (IATL) for Polarized Light Microscopy (PLM) analysis. A summary of results is listed below in Table A.

TABLE A

Sample ID	Material Description / Location	Asbestos Content (%)	Asbestos Content (%) Additional Layers	Photo
SA-01	Red compound mastic / Boardroom	2.1% Chrysotile	NA	

Sample ID	Material Description / Location	Asbestos Content (%)	Asbestos Content (%) Additional Layers	Photo
SA-02	Red compound mastic / File Room	2.4% Chrysotile	NA	
SA-03	Red compound mastic / outside admin clerk cubicle	1.8% Chrysotile	NA	

Sample ID	Material Description / Location	Asbestos Content (%)	Asbestos Content (%) Additional Layers	Photo
SA-04	Red compound mastic / Com 5 Room	2.6% Chrysotile	NA	

Asbestos containing material is defined under the Prince Edward Island's Occupational Health and Safety Act R.S.P.E.I. 1988, Cap. O-1.01 General Regulations as installed materials containing more than 1% asbestos by dry weight.

If you have any questions regarding this report, please do not hesitate to contact our office (902) 569-0172.



Larry Koughan, CET, CRSP
Branch Manager

Inc. lab certificate of analysis

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 9/21/2017
Report No.: 546578 - PLM
Project: DTIE Sleepy Hollow PLM Sampling
Project No.: PE7157

Client: ALL131

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6343868

Client No.: SA-01

Percent Asbestos:

PC 2.1 Chrysotile

Description: Red Compound Sealant

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Location: Board Room

Lab No.: 6343869

Client No.: SA-02

Percent Asbestos:

PC 2.4 Chrysotile

Description: Red Compound Sealant

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Location: File Room

Percent Non-Fibrous Material:

97.6

Lab No.: 6343870

Client No.: SA-03

Percent Asbestos:

PC 1.8 Chrysotile

Description: Red Compound Sealant

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Location: Main Area Outside Admin Clerk Cubical

Percent Non-Fibrous Material:

98.2

Lab No.: 6343871

Client No.: SA-04

Percent Asbestos:

PC 2.6 Chrysotile

Description: Red Compound Sealant

Facility:

Percent Non-Asbestos Fibrous Material:

None Detected

Location: Com 5 Room

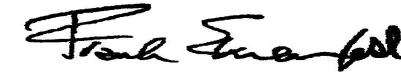
Percent Non-Fibrous Material:

97.4

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/15/2017

Approved By:



Date Analyzed: 09/21/2017

Frank E. Ehrenfeld, III
Laboratory Director

Signature: 

Analyst: Christopher Bistline

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5
Client: ALL131

Report Date: 9/21/2017
Report No.: 546578 - PLM
Project: DTIE Sleepy Hollow PLM Sampling
Project No.: PE7157

Appendix to Analytical Report

Customer Contact:

Analysis: US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: cdavis@iatl.com

iATL Account Representative: Cassie Doherty

Sample Login Notes: See Batch Sheet Attached

Sample Matrix: Bulk Building Materials

Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited

20 Duke St., Suite 109

Bedford NS B4A 2Z5

Report Date: 9/21/2017

Report No.: 546578 - PLM

Project: DTIE Sleepy Hollow PLM Sampling

Project No.: PE7157

Client: ALL131

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gangue, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

1) Analytical Step/Method: Initial Screening by PLM, EPA 600R-93/116

Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.

2) Analytical Step/Method: Wet Separation by PLM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.

3) Analytical Step/Method: Wet Separation by PLM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Floats" only.

4) Analytical Step/Method: Wet Separation by TEM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.

5) Analytical Step/Method: Wet Separation by TEM Gravimetric Technique, EPA R-04/004

Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

*With advance notice and confirmation by the laboratory.

**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).

APPENDIX II

Laboratory Certificate of Analysis – Lead Paint Samples

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/22/2022
Report No.: 674709 - Lead Paint
Project: Provincial Correctional Centre
Project No.: PE22400

Client: ALL131

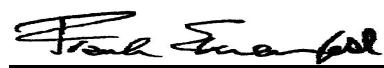
LEAD PAINT SAMPLE ANALYSIS SUMMARY

Lab No.: 7541442 Client No.: PCP-01	Description: Red Floor Paint Location: Boiler Rm 231	Result (% by Weight): 0.0071 Result (ppm): 71 Comments:
Lab No.: 7541443 Client No.: PCP-02	Description: Grey Wall Paint Location: Boiler Rm 231	Result (% by Weight): 0.031 Result (ppm): 310 Comments: *
Lab No.: 7541444 Client No.: PCP-03	Description: Maroon Door Paint Location: Boiler Rm 231	Result (% by Weight): 1.6 Result (ppm): 16000 Comments:
Lab No.: 7541445 Client No.: PCP-04	Description: Green Trim Paint Location: Boiler Rm 231	Result (% by Weight): <0.014 Result (ppm): <140 Comments: *
Lab No.: 7541446 Client No.: PCP-05	Description: Blue Boiler Paint Location: Boiler Rm 231	Result (% by Weight): 0.25 Result (ppm): 2500 Comments:
Lab No.: 7541447 Client No.: PCP-06	Description: Green Paint Location: Rm 238	Result (% by Weight): 0.015 Result (ppm): 150 Comments:
Lab No.: 7541448 Client No.: PCP-07	Description: Red Floor Paint Location: Penthouse	Result (% by Weight): 0.016 Result (ppm): 160 Comments:
Lab No.: 7541449 Client No.: PCP-08	Description: Yellow Wall Paint Location: Penthouse	Result (% by Weight): 0.069 Result (ppm): 690 Comments:

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
Date Analyzed: 12/22/2022
Signature: 
Analyst: Mark Stewart

Approved By:


Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/22/2022
Report No.: 674709 - Lead Paint
Project: Provincial Correctional Centre
Project No.: PE22400

Client: ALL131

LEAD PAINT SAMPLE ANALYSIS SUMMARY

Lab No.: 7541450 Client No.: PCP-09	Description: Beige Wall Paint Location: Library	Result (% by Weight): 0.0075 Result (ppm): 75 Comments:
Lab No.: 7541451 Client No.: PCP-10	Description: Blue Trim Paint Location: Admin	Result (% by Weight): <0.0100 Result (ppm): <100 Comments:

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 12/16/2022
Date Analyzed: 12/22/2022
Signature: 
Analyst: Mark Stewart

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/22/2022
Report No.: 674709 - Lead Paint
Project: Provincial Correctional Centre
Project No.: PE22400

Client: ALL131

Appendix to Analytical Report:

Customer Contact:

Method: ASTM D3335-85a, US EPA SW846 3050B:7000B

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com

iATL Office Manager: wchampion@iatl.com

iATL Account Representative: Semih Kocahasan

Sample Login Notes: See Batch Sheet Attached

Sample Matrix: Paint

Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by ASTM D3335-85a by AAS

Certification:

- National Lead Laboratory Program (NLLAP): AIHA-LAP, LLC No. 100188
- NYSDOH-ELAP No. 11021

This report meets the standards set forth in the EPA's National Lead Laboratory Accreditation Program (NLLAP) through the Laboratory Quality System Requirements (LQSR) Revision 3.0 November 5, 2007. All Environmental Lead Proficiency Analytical Testing (ELPAT) is through the AIHA-PAT established program.

Regulatory limit is 0.5% lead by weight (EPA/HUD guidelines). Recommend multiple sampling for all samples less than regulatory limit for confirmation. All results are based on the samples as received at the lab. iATL assumes that appropriate sampling methods have been used and that the data upon which these results are based have been accurately supplied by the client.

Method Detection Limit (MDL) per EPA Method 40CFR Part 136 Appendix B.

Reporting Limit (RL) based upon Lowest Standard Determined (LSD) in accordance with AIHA-ELLAP policies.

LSD=0.2 ppm MDL=0.006% by weight. RL= 0.010% by weight (based upon 100 mg sampled).

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a complete list with highlighted disclaimers pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

CERTIFICATE OF ANALYSIS

Client: ALL-TECH Environmental Services Limited
20 Duke St., Suite 109
Bedford NS B4A 2Z5

Report Date: 12/22/2022
Report No.: 674709 - Lead Paint
Project: Provincial Correctional Centre
Project No.: PE22400

Client: ALL131

- * Insufficient sample provided to perform QC reanalysis (<200 mg)
- ** Not enough sample provided to analyze (<50 mg)
- *** Matrix / substrate interference possible.

< less than sign, signifies none-detected below the empirical value based upon sub-sampled mass. This is often below the Reporting Limit (see above).

APPENDIX III

Site Drawings with sample locations and ACM locations

ASBESTOS SURVEY BY



ALL-TECH
ENVIRONMENTAL SERVICES LIMITED

162 TRIDER CRESCE
DARTMOUTH, NOVA SCOTIA
B3B 1K6

BESTOS LEGEND

- = CEILING
- = FLOOR
- = CEILING AND FLOOR
- = UNSURVEYED AREA
- = APPLIANCE
- = MECHANICAL
- = PIPE MATERIAL
- = DUCT WORK
- = ELECTRICAL
- = ACM WALL
- = LEAD PAINT WALL
- 00 = SAMPLE NUMBER ASBESTOS DETECTED
- 00 = SAMPLE NUMBER NO ASBESTOS DETECTED
- 00 = SAMPLE NUMBER LEAD DETECTED
- 00 = SAMPLE NUMBER NO LEAD DETECTED

PE22400
PROVINCIAL
CORRECTIONAL CENTRE
SLEEPY HOLLOW RD
WILTON STATION PEI

dessin

PROVINCIAL
RECREATIONAL CENTRE
MAIN FLOOR

DRAWING SHOULD BE USED
REFERENCE PURPOSES ONLY
OR TO THE ASBESTOS AND
SURVEYS FOR THE ROOM BY
DATE FOR SPECIFIC DETAILS

Page 1 of 1

1 OF 2

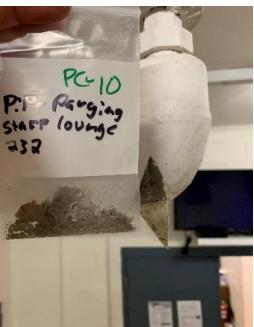
Date _____



APPENDIX IV

Summary of ACM conditions report

Provincial Correctional Centre (Main Floor) - Summary of ACM Conditions Report (2022)

Room No.	Description	Sample No.	Material description	Asbestos Type & Content (%)	Estimated Quantity	Friable (F) Non-friable (NF)	Access	Condition	Action Code (refer to legend)	Photo
100	Corridor	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	14	F	C	good	5	
100G	Corridor	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	1	F	C	good	5	
100H	Corridor	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	15	F	C	good	5	
110	Exit door	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	6	F	C	good	5	
230	Central stores	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	4	F	C	good	5	
231	Boiler room	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	16	F	C	good	5	
232	Staff lounge	PC-10	Parging cement on pipe fitting	Chrysotile 1.5%	2	F	C	good	5	
234	Maintenance	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	4	F	C	good	5	
236	File room	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	6	F	C	good	5	

Room No.	Description	Sample No.	Material description	Asbestos Type & Content (%)	Estimated Quantity	Friable (F) Non-friable (NF)	Access	Condition	Action Code (refer to legend)	Photo
239	Corridor	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	10	F	C	good	5	
	washroom by corridor 239	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	6	F	C	good	5	
	janitor room by corridor 239	VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	2	F	C	good	5	
250		VPC-10	Parging cement on pipe fitting	Chrysotile 1.5%	2	F	C	good	5	
	Boardroom File room Com 5 Room various other areas	PE7157 2017-09-25	Red mastic on duct	Chrysotile 1.8 - 2.6%		NF	C	good	5	

LEGEND

Sample Number Identifiers

PC-##	actual sample number
VPC-##	visually identified same as this sample number

Units

EA	Each
m	meters
m ²	square metres
m ³	cubic metres
PACM	presumed asbestos containing material

ASSESSMENT CODES

ACCESS

ACCESS	CONDITION
A	Accessible to all building occupants
B	Accessible to maintenance and operations staff without a ladder
C	Accessible to maintenance and operations staff with a ladder. Also rarely entered, locked areas
D	Not normally accessible

Room No.	Description	Sample No.	Material description	Asbestos Type & Content (%)	Estimated Quantity	Friable (F) Non-friable (NF)	Access	Condition	Action Code (refer to legend)	Photo
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ACTION CODES										
1	Immediate Clean-up of Debris that is likely to be disturbed.			4	ACM repair					
2	ACM Removal required for compliance.			5	Continued management and surveillance.					
3	Proactive ACM Removal.									

Provincial Correctional Centre (Penthouse 1) - Summary of ACM Conditions Report (2022)

Room No.	Description	Sample No.	Material description	Asbestos Type & Content (%)	Estimated Quantity	Friable (F) Non-friable (NF)	Access	Condition	Action Code (refer to legend)	Photo
	Penthouse 1	VPC-2	Parging cement on pipe fitting	Chrysotile 5.7%	100	F	B	good	5	

LEGEND

Sample Number Identifiers		Units	
PC-##	actual sample number	EA	Each
VPC-##	visually identified same as this sample number	m	meters
		m ²	square metres
		m ³	cubic metres
		PACM	presumed asbestos containing material

ASSESSMENT CODES

ACCESS		CONDITION	
A	Accessible to all building occupants	GOOD	ACM is completely covered and/or exhibits no evidence of damage or deterioration
B	Accessible to maintenance and operations staff without a ladder	FAIR	Minor penetrating damage to ACM (cuts, tears, nicks, deterioration, or delamination).
C	Accessible to maintenance and operations staff with a ladder. Also rarely entered, locked areas	POOR	ACM is damaged, deteriorated or delaminated
D	Not normally accessible		

ACTION CODES

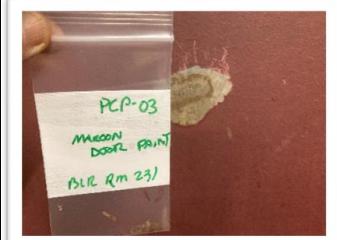
1	Immediate Clean-up of Debris that is likely to be disturbed.	4	ACM repair
2	ACM Removal required for compliance.	5	Continued management and surveillance.
3	Proactive ACM Removal.		

APPENDIX V

Summary of other Hazardous Materials report

Provincial Correctional Centre (Main floor) - Summary of Hazardous Materials Report (2022)

Lead Paint

Room No.	Location	Sample No.	Paint colour / substrate	Lead Content (%)	Comments	Photo
231	Boiler Room	PCP-03	red maroon paint / Metal door	1.6	All like painted doors / trim to be treated as lead based paints	
231	Boiler Room	PCP-05	Blue paint on boiler jacket	0.25	Boiler jacket paints to be treated as lead based paints	
NA	Penthouse 1	PCP-08	Yellow paint / Concrete walls	0.069	All like painted penthouse walls to be treated as lead based paints	

Room No.	Location	Sample No.	Paint colour / substrate	Lead Content (%)	Comments	Photo
<i>Silica</i>						
Room No.	Location	Sample No.	Material		Comments	Photo
NA	throughout	NA	Concrete base structure; Poured or pre-cast concrete (main and penthouse floors); Interior concrete block walls / mortar Exterior brick and mortars			