

**Hazardous Building Materials Assessment
Visitor Centre
Point Pelee National Park
Leamington, Ontario**



Prepared for:
Parks Canada
407 Monarch Lane, R.R. #1
Leamington, Ontario
N8H 3V4

Attention: Karen Linauskas

Pinchin File: 91797

March 7, 2014

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EXECUTIVE SUMMARY

Pinchin Environmental Ltd. (Pinchin) was retained by Parks Canada (Client) to conduct an assessment of hazardous building materials in the Visitor Centre located in the Point Pelee National Park in Leamington, Ontario.

The assessed area was limited to the parts of the building within the upcoming planned renovation area, as described by the client, and included the Theatre, adjacent Storage Rooms, A/V Booth and Three Furnace Rooms in the building. The extent of the assessed area was outlined by the Client and is shown on the attached drawings (Refer to Appendix V).

Summary of Findings

Hazardous materials were confirmed to be present as follows:

Friable Asbestos was confirmed to be present in the following materials in this building:

There were no friable asbestos-containing materials found in the assessed areas of the building.

Non-Friable Asbestos was confirmed, or presumed, to be present in the following materials in the assessed areas of the building:

Asbestos-containing drywall joint compound is present on the walls and ceilings throughout the assessed areas of the building.

Asbestos-containing vinyl floor tiles and mastic adhesive is present in the Upper A/V Booth (Location 2) and the Lower A/V Booth (Location 3) and the Stairwell (Location 4) in the assessed areas of the building.

Mercury

- Four (4) mercury bulbs are present in the thermostat located in the Theatre (Location 1) of the assessed areas of the building.
- Mercury vapour is present in all fluorescent light tubes and HID lighting in the assessed areas of the building.

Lead

- The analytical result for the sample (Sample PT-02) collected of the dark brown paint finish present on the walls in the Theatre (Location 1) indicated that this paint contains 0.11% lead content by weight.
- The analytical results for the yellow (Sample PT-01) and black (Sample PT-03) paint samples collected indicated that these paint finishes were less than the RDL (Reliable Detection Limit) for the analytical test method used.

- Lead is present as caulking in bell and spigot fitting in cast iron piping.
- Lead is present in wiring connectors, electrical cable sheathing, and other electrical applications.
- Lead is present in solder joints on copper piping, and as a component in brass fittings and fixtures throughout the facility.
- Back-up emergency lights, present throughout the planned renovation areas, are powered with lead-acid batteries.

Summary of Recommendations

Asbestos-containing materials (ACM) that may be disturbed during the project must be removed prior to any renovation, demolition etc.

Refer to recommendations section for procedures required when disturbing or removing hazardous building materials.

No remedial asbestos work is required.

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1.0 INTRODUCTION AND SCOPE

1.1 Introduction

Pinchin Environmental Ltd. (Pinchin) was retained by Parks Canada (Client) to conduct an assessment of hazardous building materials in the Visitor Centre located in the Point Pelee National Park in Leamington, Ontario

This report was prepared to fulfil the Owner's requirements under Section 30 of the Ontario Occupational Health and Safety Act, Revised Statutes of Ontario 1990, (as amended). Prior to tendering project work in the building, the building owner or owner's agent must provide this report to constructors bidding on the project work. In turn, the constructor must provide this report to contractors and subcontractors prior to requesting bids. This report also fulfills the requirements of Section 10 of O.Reg. 278/05, Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations. This requires that owners report the presence of both friable and non-friable asbestos to constructors as part of the tendering process or prior to arranging for work.

The assessment was performed as a prerequisite to the upcoming planned renovation. This assessment is intended for pre-construction purposes only, and may not provide sufficient detail for long term management of asbestos-containing materials (ACM) as required in Section 8 (3) of O.Reg. 278/05.

The assessment was performed by Chris Croft of Pinchin on February 19, 2014. The surveyor was not accompanied during the assessment.

1.2 Facility Description

The facility was constructed in 1966. The following provides a basic description of the planned renovation areas building systems.

System	Description
Structure	Structural steel
Exterior Cladding	Pre-cast concrete and brick
HVAC	Forced Air Gas Furnace
Roof	Built-up roofing
Flooring	Vinyl tile, concrete and carpet
Interior Walls	Drywall, plaster and wood

System	Description
Ceilings	Drywall, plaster and acoustic ceiling tiles

1.3 Scope of Assessment

The assessed area was limited to the parts of the building within the upcoming planned renovation area, as described by the client, and included the Theatre, adjacent Storage Rooms, A/V Booth and Three Furnace Rooms in the building. The extent of the assessed area was outlined by the Client and is shown on the attached drawings (Refer to Appendix V). The assessment was performed to establish the location and type of hazardous building materials incorporated in the structure(s) and its finishes. For the purpose of the assessment, and this report, hazardous building materials are defined as those containing the following substances:

The following Ontario Ministry of Labour Designated Substances:

- Asbestos
- Lead
- Mercury
- Silica (free crystalline silica)

The investigation included an examination for the presence of:

- Polychlorinated Biphenyls (PCBs)

2.0 ASSESSMENT METHODOLOGIES AND CRITERIA

2.1 Methodology

The surveyor entered each room, corridor, service area, etc. where access was possible within the extent of the assessed area and inspected for the presence of hazardous building materials. Relevant information was recorded where hazardous building materials were observed, including approximate quantities, locations, condition, sample information and sample locations. Quantities reported are an approximate visual estimate. As-built drawings were referenced where provided.

The investigation was limited to non-intrusive testing at the request of the Client. Concealed locations such as spaces above solid ceilings, and within shafts and pipe chases were accessed via existing access panels only. Walls, solid ceilings, flooring, structural items, interior finishes or exterior building finishes were not removed to determine the presence of concealed materials.

2.2 Asbestos

The surveyor inspected for the presence of friable and non-friable ACM. Typical examples of friable ACM include sprayed fireproofing, acoustic/texture finish, and mechanical insulation. Typical examples of non-friable ACM include asbestos cement sheets or pipes, vinyl floor tiles, vinyl sheet flooring, drywall compound and asbestos textile products. Typical examples of non-friable ACM, which have the potential to become friable during construction, include plaster and acoustic ceiling tiles. Refer to Appendix I for a definition of friability.

2.2.1 Asbestos Sampling Exclusions

A number of materials which might contain asbestos were *not* sampled during our assessment for various reasons. Reasons for not sampling these materials include;

- Sampling the material may be hazardous to the surveyor (e.g. electrical hazard);
- Sampling the materials may cause consequential damage to the property (e.g. sampling roofing may cause leaks);
- The material is inaccessible without major demolition (e.g. inside boilers etc.) or;
- The material is present in such an inconsistent fashion that without complete removal of finishes, the extent of ACM cannot be determined (e.g. floor levelling compound).

If present, these materials must be presumed to be asbestos-containing and are best sampled *immediately* prior to commencing renovation (see list of presumed ACM in Findings Section).

2.2.2 Asbestos Sampling Strategy and Frequency

Asbestos bulk samples were collected at a rate that was in compliance with the requirements of O.Reg. 278/05. The Regulation identifies the minimum number of samples to be collected and analyzed (1, 3, 5, or 7 depending on quantity, application and friability) from each homogeneous material, in order for the material to be considered non-asbestos. This frequency is indicated in Table 1 of the Regulation (see Appendix I). A homogeneous material is defined in Regulation 278/05 as one that is uniform in colour and texture. The surveyor used information obtained on site by visual examination, available information on the phases of the construction and any information on renovations provided by the client, to determine the extent of each homogeneous area and the number of samples required.

The use of asbestos in drywall joint compound was banned in Canada under the Federal Hazardous Products Act of 1980 but it could possibly contain asbestos as late as 1986 (due to stored material and non-compliance with the ban). Most buildings undergo constant renovation, including the removal and replacement of drywall partitions. Attempts to distinguish and delineate asbestos-containing drywall compound from new non-asbestos drywall compound is often unachievable. Therefore, drywall joint compound was sampled at exterior walls, columns

or other locations which are unlikely to have been renovated in an attempt to determine the presence of asbestos in the original drywall compound.

Ontario was the first Canadian Province to ban the use of friable asbestos (March 1986, O.Reg. 654/85). Of the many non-friable materials, only drywall joint compound has been banned in Canada. Therefore in theory, all other non-friable materials and surfaces in which asbestos could have been used, should be sampled for total certainty that it is non-asbestos, even to the present day. In practice however, asbestos ceased being used in most materials by manufacturers as a result of asbestos concerns. Pinchin is aware of many of the dates that certain materials ceased being manufactured with asbestos. Based on this knowledge, we suggest that sampling of certain materials is not required after specific dates and our sampling strategy was based on this knowledge. In addition, to be conservative we allow several years past these dates in our strategy. This allows additional time so that stored ACM products would have worked through the supply chain, and allows for some uncertainty in the exact start/finish date of construction and associated usage of ACM. We believe this is a prudent and responsible limitation and that the sampling strategy is appropriate.

2.2.3 Basis of Evaluation and Recommendations regarding ACM

The condition and the potential for disturbance of any ACM observed were evaluated. The evaluation criteria were based on the conclusions of published studies, particularly the “Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario”, existing Ontario regulation, and our experience involving buildings that contain ACM.

An ACM was considered damaged if it is sprayed material that is delaminating, mechanical insulation with damaged/missing insulation or jacketing, or non-friable materials that have been pulverized or damaged so that they have become friable.

The priority for remedial action is based not only on the evaluation of condition but is also based on several other factors which include:

- Accessibility or potential for direct contact and disturbance.
- Practicality of repair (for example, will damage to the ACM continue even if it is repaired).
- Visibility of the material.
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition).

Recommendations also include removal of ACM that may be disturbed by any planned renovation or demolition activity known to Pinchin.

2.3 Lead

Each distinctive paint finish present in more than very limited application was sampled for lead content. Paint samples were collected and submitted to a laboratory for analysis. Locations at which lead paint samples are collected were recorded on small scale plans.

The Ontario Ministry of Labour (MOL) has not established a lower limit for concentrations of lead in paint, below which precautions do not need to be considered. The MOL will not accept U.S. Environmental Protection Agency (EPA) or U.S. Housing and Urban Development (HUD) limits (greater than 0.5%) for lead for this purpose. For this report, all paints containing lead at a concentration greater than the RDL (Reliable Detection Limit) for the test method have been discussed.

Building materials suspected of containing lead (e.g. lead sheeting) were identified by appearance and age, and knowledge of historic applications.

2.4 Mercury

Building materials suspected of containing mercury were identified by appearance, age, and knowledge of historic applications. Sampling was not performed. Dismantling of equipment suspected of containing mercury was not performed.

2.5 Silica

Building materials suspected of containing crystalline silica were identified by knowledge of current and historic applications. Sampling was not performed.

2.6 Polychlorinated Biphenyls (PCBs)

Information labels on electrical equipment such as transformers and capacitors for motors were examined where available to determine PCB content. The information was compared against information available in the "Handbook on PCB's in Electrical Equipment" issued by Environment Canada, in order to determine PCB content of materials. Bulk sampling was not performed at live cables, or of dielectric fluids or materials in transformers or capacitors.

Based on the on-site assessment, the rooms within the assessed contained pot lighting only and therefore no PCB ballasts were present.

This assessment is intended for pre-construction or pre-demolition purposes only, and may not provide sufficient detail for long term management of PCBs or to determine end-of-use inventories as required in SOR/2008-273.

2.7 Analytical Methods

2.7.1 Asbestos

Bulk samples collected for asbestos identification were analyzed at Scientific Analytical Institute (SAI). Preliminary identification of asbestos fibres was made using polarized light microscopy, with confirmation of the presence and type of asbestos by dispersion staining optical microscopy. The analysis was performed in accordance with Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, July 1993. SAI is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples.

The asbestos analysis was completed using a stop positive approach. Only one result of greater than 0.5% asbestos content is required to determine that a material is asbestos-containing, but all samples must be analyzed to conclusively determine that a material is non-asbestos (O. Reg. 278/05). The laboratory stopped analyzing samples from a homogeneous material once greater than 0.5% asbestos was detected in any of the samples of that material. All samples of a homogeneous material were analyzed if no asbestos was detected. Where building materials are described in this report as non-asbestos, or described as containing no asbestos, this is subject to the limitations of the analytical method used, and should be understood to mean no asbestos was detected.

Analytical results are presented in Appendix II.

2.7.2 Lead

The bulk analysis for lead was performed in accordance with EPA Method No. 3050B, Flame Atomic Absorption at Scientific Analytical Institute (SAI). SAI is accredited by the American Industrial Hygiene Association (AIHA).

Analytical results are presented in Appendix III.

2.8 Photographs

Photographs are presented in Appendix IV.

2.9 Drawings

Included on the drawings in Appendix V are locations that samples were collected.

3.0 FINDINGS

3.1 Asbestos

3.1.1 Sprayed Fireproofing and Thermal Insulation

Sprayed fireproofing or sprayed thermal insulation was not found in the planned renovation area of this building.

3.1.2 Texture Finishes (Acoustic/Decorative)

A texture finish is present on the surface of plaster ceilings throughout the planned renovation areas. Five (5) samples of the texture finish were collected (samples 0006 A-E) and laboratory analysis determined that this material is non-asbestos.

Refer to photograph 5 in Appendix IV.

3.1.3 Pipe Insulation

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

Pipes insulated with friable asbestos insulations may be present in inaccessible spaces such as above solid ceilings, in chases, in column enclosures and within shafts.

3.1.4 Duct Insulation

Ducts are either un-insulated or insulated with non-asbestos fibreglass and jacketed with either canvas or foil in the planned renovation area of this building.

3.1.5 Mechanical Equipment Insulation

Asbestos-containing insulations were not found on mechanical equipment in the planned renovation area of this building. All mechanical equipment is insulated with non-asbestos fibreglass or not insulated.

3.1.6 Acoustic Ceiling Tiles

One (1) visually distinct type of acoustic ceiling tile is present in the planned renovation area of the building, as follows:

Tile Size (inches)	Type of Tile	Pattern	Locations (Quantity in Square Feet)	Sample Number/Date Code	Asbestos Type
12" x 12"	Splined	AT-01, Long fissure and medium pinhole	Lower A/V Booth (Location 3)	Visually assessed as non-asbestos (consists of cellulose materials)	None

Refer to photograph 4 in Appendix IV.

3.1.7 Vermiculite

Loose fill vermiculite was not found in the assessed areas of the building. Demolition of concrete block walls or solid ceilings was not performed.

3.1.8 Plaster

Plaster is present on walls and ceilings throughout the planned renovation areas. Five (5) samples of plaster were collected (samples S 0003 A-C). No asbestos was detected in the plaster.

3.1.9 Drywall Compound

The use of asbestos in drywall joint compound was banned under the Federal Hazardous Products Act of 1980 but it could possibly contain asbestos as late as 1986 (due to stored material and non-compliance with the ban). Most buildings undergo constant renovation, including the removal and replacement of drywall partitions. Attempts to distinguish and delineate asbestos-containing drywall compound from new non-asbestos drywall compound is often unachievable. Therefore, drywall joint compound was sampled at exterior walls, columns or other locations which are unlikely to have been renovated in an attempt to determine the presence of asbestos in the original drywall compound.

Drywall (gypsum board) is present as a wall and ceiling finish throughout the planned renovation areas of the building. Three (3) samples of drywall joint compound were collected (samples 0001 A-C). Drywall joint compound was found to contain chrysotile asbestos in at least one sample. Assume *all* drywall joint compound to contain chrysotile asbestos unless further sampling proves otherwise. Drywall joint compound is a non-friable material and is in good condition.

3.1.10 Asbestos Cement Products (Transite)

No asbestos cement products were found in the planned renovation areas of the building.

3.1.11 Vinyl Sheet Flooring

Vinyl sheet flooring was not found in the planned renovation areas of the building.

3.1.12 Vinyl Floor Tile and Mastic

Three (3) visually distinct types of vinyl floor tile are present in the building, as follows:

Tile Size (inches)	Colour	Locations (Quantity in Square Feet)	Sample Numbers	Asbestos Type - Vinyl Floor Tile	Asbestos Type - Mastic
12" x 12"	Dark grey with white specs	Upper A/V Booth (Location 2 – 130 sq. ft.) Lower A/V Booth (Location 3 – 10 sq. ft.)	S0002 A-C	Chrysotile	Chrysotile
12" x 12"	Light grey with white and grey flecks	Stairwell (Location 4 – 40 sq. ft.)	S0004 A-C	None Detected	Chrysotile
9" x 9"	Dark grey with white streaks	Lower A/V Booth (Location 3 – 120 sq. ft.)	S0005 A-C	Chrysotile	Chrysotile

If either the vinyl floor tile or the mastic contains asbestos, the composite of the materials are considered an asbestos-containing material.

All vinyl floor tiles are non-friable materials and were observed in good condition.

Refer to photographs 1 to 3 in Appendix IV.

3.2 Presumed Asbestos-Containing Materials

A number of materials which might contain asbestos were *not* sampled during our assessment. If present, these materials must be presumed to be asbestos-containing and are best sampled *immediately* prior to commencing renovation or demolition. Materials¹ presumed to contain asbestos include;

- adhesives
- caulking
- components or wiring within motor control centers, breakers, motors or lights
- concrete levelling compound (for floors)

¹ Materials are non-friable except where noted.

- fire resistant metal clad finishes
- fire-door cores
- roofing, roofing felt and tar

3.3 Lead

3.3.1 Lead-Containing Paint and Coatings

Appendix III presents the lead testing or bulk sample analytical results.

Paint was in good condition and not flaking, peeling or delaminating.

3.3.2 Other Lead Applications

Lead is present in wiring connectors, grounding conductors and solder throughout the building.

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

Back-up emergency lights, present throughout the building, are powered with lead-acid batteries.

3.4 Mercury

Mercury vapour is present in all fluorescent lamps, mercury vapour lamps, metal halide lamps, high pressure sodium lamps and neon lamps.

Mercury is present as a liquid in a thermostat present in the Theatre (Location 1) of the assessed areas of the building. Four mercury bulbs in total are present in this thermostat.

Refer to photograph 6 in Appendix IV.

3.5 Silica

Free crystalline silica (common construction sand) will be present in concrete, mortar, brick, masonry, ceramics, granite, slate, stone, asphalt, etc., where present in the building.

3.6 Polychlorinated Biphenyls (PCBs)

All transformers in the building are dry type transformers and do not contain PCB-containing dielectric fluids.

Based on the on-site assessment, all rooms within the planned renovation area contained incandescent pot lighting only and therefore PCB ballasts are not present in the assessed areas of the building.

4.0 RECOMMENDATIONS

4.1 General

This report must be given to the constructor. In turn the constructor must provide this report to contractors and sub-contractors.

4.2 Asbestos

4.2.1 Renovation Work

We recommend from practical experience that ACM be removed if it may be disturbed by maintenance, construction, renovation or demolition activities. Pinchin has identified the following ACM that may be disturbed during the upcoming planned renovation work and should be removed prior to disturbance.

Material	Location	Recommended Abatement Procedure
Vinyl floor tiles and floor tile adhesive	Upper A/V Booth (Location 2), Lower A/V Booth (Location 3) and the Stairwell (Location 4)	Type 1 Abatement
Drywall Joint Compound (DJC)	Theatre (Location 1), Upper A/V Booth (Location 2), Lower A/V Booth (Location 3), the Stairwell (Location 4), the Furnace Room #1 (Location 5), the Furnace Room #2 (Location 6), Storage #1 (Location 8), Storage #1 (Location 7) and Furnace Room #3 (Location 9)	Type 2 Abatement

If the identified ACM will not be removed prior to commencement of the work, disturbance of ACM must follow the appropriate asbestos precautions for the classification of work being performed (see headings below for general procedures):

Sample all materials excluded from sampling or presumed to contain asbestos immediately prior to removal where required.

4.2.2 Drywall Compound

If the drywall with drywall joint compound must be removed as a result of planned demolition, renovation, etc. use Type 1 procedures as outlined within Ontario Regulation 278/05 to remove less than 1 square metre of drywall with asbestos-containing drywall joint compound, or Type 2 procedures for larger quantities.

4.2.3 *Vinyl Floor Tiles*

If vinyl floor tiles must be removed as a result of planned demolition, renovation, etc., use Type 1 procedures as outlined within Ontario Regulation 278/05 if the work is done using wet methods and using hand-held non-powered tools.

4.2.4 *Mastic*

Mastic is considered a non-friable material and removal of mastic requires the use of Type 1 asbestos procedures as outlined within Ontario Regulation 278/05 if the work is done using wet methods and using hand-held non-powered tools. If the mastic is to be removed using hand-held non-powered tools, Pinchin recommends that any adhering asbestos-containing mastic be removed to a thin film (considered a trivial amount or surface staining).

4.3 **Lead**

Construction disturbance of lead-containing products may result in exposure to lead. Cutting, grinding, drilling, removing, stripping or demolition of materials containing or coated with lead should be completed only with proper respiratory protection and other worker safety precautions as outlined in the Ministry of Labour Guideline – Lead on Construction Projects, 2004. The Ministry has not established a lower limit for concentrations of lead in paint (or other materials) below which precautions do not need to be considered, and will not accept US EPA or HUD limits (0.5% lead) for this purpose. Therefore the need for precautions and details of worker safety will need to be assessed on a project by project basis. Pinchin recommends that the building owner and contractor seek advice to develop a site-specific safety plan (including air monitoring) that considers the various factors that would affect worker exposure to lead from paint and other materials. Performing an exposure assessment during work that disturbs lead-containing coatings may be able to alleviate the use of some of the precautions that are required.

4.4 **Mercury**

Do not break lamps or separate liquid mercury from components. Mercury-containing materials and lamps should be recycled to reclaim the mercury. Disposal in significant quantities would require mercury-containing materials to be disposed of as hazardous waste.

4.5 **Silica**

Construction disturbance of silica-containing products may result in excessive exposures to airborne silica, especially if performed indoors and dry. Cutting, grinding, drilling or demolition of materials containing silica should be completed only with proper respiratory protection and other worker safety precautions as outlined in the Ministry of Labour Guideline – Silica on Construction Projects, 2004.

5.0 LIMITATIONS

This report details the hazardous building materials found within or forming part of the building envelope. The assessment only included inspections of the structure and finishes, including mechanical equipment. The assessment did not include inspection of current or past owner or occupant articles within the building (i.e. process materials or equipment, portable equipment, curriculum items, etc.) and does not report on possible contaminants in the soil and groundwater of the site, underground storage tanks, buried piping, inside drums, vessels, production equipment, or in areas not accessed by the surveyor.

The work performed by Pinchin was conducted in accordance with generally accepted engineering or scientific practices current in this geographical area at the time the work was performed. The Client acknowledges that subsurface and concealed conditions may vary from those encountered or inspected. Pinchin can only comment on the environmental conditions observed on the date(s) the assessment is performed. The work is limited to those materials or areas of concern identified by the Client or outlined in our proposal. Other areas of concern may exist but were not investigated within the scope of this assignment.

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

No warranty is either expressed or implied, or intended by this agreement or by furnishing oral or written reports or findings. The liability of Pinchin or our officers, directors, shareholders or staff will be limited to the lesser of the fees paid or actual damages incurred by the Client. Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from negligence of Pinchin. Pinchin will not be liable for any losses or damage if client has failed, within a period of (2) years following the date upon which the claim is discovered within the meaning of the Limitations Act, 2002 (Ontario), to commence legal proceedings against Consultant to recover such losses or damage.

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party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted by any party.

6.0 CLOSURE

Should there be any questions regarding the contents of this report, please contact Tina Manning at 519-682-4492 ext. 3301.

Yours truly,

Pinchin Environmental Ltd.

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APPENDIX I
FRIABILITY AND REGULATIONS

1.0 FRIABILITY

As per regulation 278/05, “friable material” means material that, (a) when dry, can be crumbled, pulverized or powdered by hand pressure, or (b) is crumbled, pulverized or powdered. Asbestos-containing material (ACM) that is friable has a much greater potential than non-friable ACM to release airborne asbestos fibres when disturbed. The most common friable ACM used in the past are surfacing materials (usually sprayed fireproofing, texture, decorative or acoustic sprayed finishes) and thermal insulations on mechanical systems. Asbestos-containing non-friable materials include vinyl floor tiles, drywall joint compound, gasket materials, asbestos cement pipe or board, asbestos textiles, etc. Note that though a product may be considered non-friable when new, if the product releases fine dust due to deterioration or during removal, the free dust is considered friable. Potentially friable materials (or sometimes called miscellaneous friable materials) include materials such as ceiling tiles and plaster. These materials are non-friable in place, but can generate dust upon removal.

2.0 TABLE 1 REGULATION 278/05 – ASBESTOS SAMPLING FREQUENCY

Type of Material	Size of Area of Homogeneous Material	Minimum Number of Samples
Surfacing material, including without limitation material that is applied to surfaces by spraying, by troweling or otherwise, such as acoustical plaster on ceilings, fireproofing materials on structural members and plaster	Less than 90 square metres	3
	90 or more square metres, but less than 450 square metres	5
	450 or more square metres	7
Thermal insulation, except as described below	Any size	3
Thermal insulation patch	Less than 2 linear metres or 0.5 square metres	1
Other material	Any size	3

3.0 REGULATIONS - ONTARIO

Section 30 of the Occupational Health and Safety Act requires building owners or their agents (architects, general contractors, construction managers, etc.) to prepare or have prepared, a list of designated substances present in the area of construction or facility undergoing construction

work. There are eleven designated substances subject to special regulation under the Occupational Health and Safety Act. Of these eleven, asbestos, lead, mercury, and silica are commonly found in buildings and can impact construction, demolition, and renovation projects. The owner must ensure that a prospective constructor has received a designated substance report before entering into a binding contract with the constructor/contractor.

The disturbance of asbestos-containing materials (ACM) on construction projects is controlled by Ontario Ministry of Labour Regulation 278/05 made under the Occupational Health and Safety Act (Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations). The Regulation classifies all disturbances as Type 1, Type 2, or Type 3, each of which has defined work practices. All ACM are subject to special handling and disposal, and must be removed before partial or full demolition. The Ministry of Labour must be notified prior to any project involving removal of more than a minor amount of friable ACM (Type 3 or Glove Bag abatement).

The Ministry of Labour released two documents in December 2004, Ministry of Labour Guideline - Lead on Construction Projects, and Ministry of Labour Guideline - Silica on Construction Projects. Although these documents were not released as Regulations, to quote the Ministry of Labour *“These guidelines will raise awareness of the potential hazards associated with Lead and Silica for common construction activities and tasks, and will provide assistance to employers, constructors and workers in how to take reasonable precautions to protect workers from exposure to Lead and Silica. These Guidelines include specific measures and procedures for typical construction activities and operations and can be used as best practices by the industry.”* These guidelines are expected to be widely enforced by the Ministry of Labour, via the general duty clause 25 (2) (h) of the Occupational Health and Safety Act, since there is no other construction regulation regarding lead and silica available for them to draw upon as a resource. The Ministry of Labour has also issued guidelines or proposed regulations for coal tar products and handling of mercury on construction sites.

Management, handling and transfer of PCBs are controlled by R.R.O. 1990, Reg. 362, Waste Management-PCB's Regulation, made under the Ontario Environmental Protection Act, and the PCB Regulation (SOR/2008-273) made under the federal Environmental Protection Act.

The Ontario Ministry of Labour published the hazard alert “Mould in Workplace Buildings”, in December 2000. To quote from the alert, “The sustained and/or extensive growth of any visible mould on the interior surfaces of a building is unacceptable. Mould growth on the interior surfaces of buildings is a risk factor for health problems.” The Ministry of Labour has enforced work stoppages as a result of indoor mould growth and has enforced removal using work practices similar to those required for asbestos abatement.

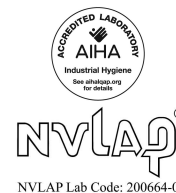
Waste disposal is controlled by Ministry of the Environment Regulation, R.R.O. 1990 Reg. 347 as amended.

APPENDIX II
RESULTS OF BULK SAMPLE ANALYSIS FOR ASBESTOS



Bulk Asbestos Analysis

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



Customer: Pinchin Environmental Ltd
30 Queen St S
Tilbury Ontario N0P 2L0

Attn: Chris Croft
Sam Clark
Tina Manning

Lab Order ID: 1402992

Analysis ID: 1402992_PLM

Date Received: 2/21/2014

Date Reported: 2/26/2014

Project: 91797, Point Pelee National Park Visitor
Centre-Bldg 680, 407 Monarch Lane,
Leamington

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0001A	Drywall joint compound, Loc 2	2% Chrysotile		98% Other	Cream Non Fibrous Homogeneous
1402992PLM_1					Crushed
0001B	Drywall joint compound, Loc 1	Not Analyzed			
1402992PLM_2					
0001C	Drywall joint compound, Loc 5	Not Analyzed			
1402992PLM_3					
0002A - A	12x12 dark grey vinyl floor tile with white specs, Loc 2	3% Chrysotile		97% Other	Brown, Gray Non Fibrous Heterogeneous
1402992PLM_4	tile				Dissolved
0002A - B	12x12 dark grey vinyl floor tile with white specs, Loc 2	5% Chrysotile		95% Other	Black Non Fibrous Homogeneous
1402992PLM_23	mastic				Dissolved
0002B - A	12x12 dark grey vinyl floor tile with white specs, Loc 2	Not Analyzed			
1402992PLM_5	tile				
0002B - B	12x12 dark grey vinyl floor tile with white specs, Loc 2	Not Analyzed			
1402992PLM_24	mastic				
0002C - A	12x12 dark grey vinyl floor tile with white specs, Loc 3	Not Analyzed			
1402992PLM_6	tile				

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Sharon Donald (38)

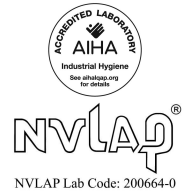
Analyst

Approved Signatory



Bulk Asbestos Analysis

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



Customer: Pinchin Environmental Ltd
30 Queen St S
Tilbury Ontario N0P 2L0

Attn: Chris Croft
Sam Clark
Tina Manning

Lab Order ID: 1402992

Analysis ID: 1402992_PLM

Date Received: 2/21/2014

Date Reported: 2/26/2014

Project: 91797, Point Pelee National Park Visitor
Centre-Bldg 680, 407 Monarch Lane,
Leamington

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0002C - B	12x12 dark grey vinyl floor tile with white specs, Loc 3	Not Analyzed			
1402992PLM_25	mastic				
0003A	Plaster, Loc 2	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_7	finish layer only				Crushed
0003B	Plaster, Loc 2	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_8	finish layer only				Crushed
0003C - A	Plaster, Loc 3	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_9	finish				Crushed
0003C - B	Plaster, Loc 3	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_26	base				Crushed
0003D - A	Plaster, Loc 1	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_10	finish				Crushed
0003D - B	Plaster, Loc 1	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_27	base				Crushed
0003E - A	Plaster, Loc 6	None Detected	10% Cellulose	90% Other	White Non Fibrous Heterogeneous
1402992PLM_11	finish				Crushed

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Sharon Donald (38)

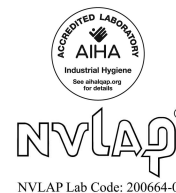
Analyst

Approved Signatory



Bulk Asbestos Analysis

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



Customer: Pinchin Environmental Ltd
30 Queen St S
Tilbury Ontario N0P 2L0

Attn: Chris Croft
Sam Clark
Tina Manning

Lab Order ID: 1402992

Analysis ID: 1402992_PLM

Date Received: 2/21/2014

Date Reported: 2/26/2014

Project: 91797, Point Pelee National Park Visitor
Centre-Bldg 680, 407 Monarch Lane,
Leamington

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0003E - B	Plaster, Loc 6	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_28	base				Crushed
0004A - A	12x12 light grey vinyl floor tile with white and grey flecks, Loc 4	None Detected		100% Other	Gray, White Non Fibrous Heterogeneous
1402992PLM_12	tile				Dissolved
0004A - B	12x12 light grey vinyl floor tile with white and grey flecks, Loc 4	5% Chrysotile		95% Other	Black Non Fibrous Homogeneous
1402992PLM_29	mastic				Dissolved
0004B - A	12x12 light grey vinyl floor tile with white and grey flecks, Loc 4	None Detected		100% Other	Gray, White Non Fibrous Heterogeneous
1402992PLM_13	tile				Dissolved
0004B - B	12x12 light grey vinyl floor tile with white and grey flecks, Loc 4	Not Analyzed			
1402992PLM_30	mastic				
0004C - A	12x12 light grey vinyl floor tile with white and grey flecks, Loc 4	None Detected		100% Other	Gray, White Non Fibrous Heterogeneous
1402992PLM_14	tile				Dissolved
0004C - B	12x12 light grey vinyl floor tile with white and grey flecks, Loc 4	Not Analyzed			
1402992PLM_31	mastic				
0005A - A	9x9 dark grey vinyl floor tile with white streaks, Loc 3	3% Chrysotile		97% Other	Gray Non Fibrous Heterogeneous
1402992PLM_15	tile				Dissolved

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Sharon Donald (38)

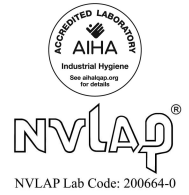
Analyst

Approved Signatory



Bulk Asbestos Analysis

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



Customer: Pinchin Environmental Ltd
30 Queen St S
Tilbury Ontario N0P 2L0

Attn: Chris Croft
Sam Clark
Tina Manning

Lab Order ID: 1402992

Analysis ID: 1402992_PLM

Date Received: 2/21/2014

Date Reported: 2/26/2014

Project: 91797, Point Pelee National Park Visitor
Centre-Bldg 680, 407 Monarch Lane,
Leamington

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0005A - B	9x9 dark grey vinyl floor tile with white streaks, Loc 3	5% Chrysotile		95% Other	Black Non Fibrous Homogeneous
1402992PLM_32	mastic				Dissolved
0005B - A	9x9 dark grey vinyl floor tile with white streaks, Loc 3	Not Analyzed			
1402992PLM_16	tile				
0005B - B	9x9 dark grey vinyl floor tile with white streaks, Loc 3	Not Analyzed			
1402992PLM_33	mastic				
0005C - A	9x9 dark grey vinyl floor tile with white streaks, Loc 3	Not Analyzed			
1402992PLM_17	tile				
0005C - B	9x9 dark grey vinyl floor tile with white streaks, Loc 3	Not Analyzed			
1402992PLM_34	mastic				
0006A - A	Pebbled pattern texture coat, Loc 1	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_18	texture				Crushed
0006A - B	Pebbled pattern texture coat, Loc 1	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_35	base				Crushed
0006B - A	Pebbled pattern texture coat, Loc 1	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_19	texture				Crushed

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Sharon Donald (38)

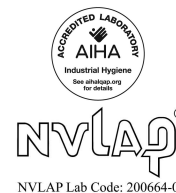
Analyst

Approved Signatory



Bulk Asbestos Analysis

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



Customer: Pinchin Environmental Ltd
30 Queen St S
Tilbury Ontario N0P 2L0

Attn: Chris Croft
Sam Clark
Tina Manning

Lab Order ID: 1402992

Analysis ID: 1402992_PLM

Date Received: 2/21/2014

Date Reported: 2/26/2014

Project: 91797, Point Pelee National Park Visitor
Centre-Bldg 680, 407 Monarch Lane,
Leamington

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
0006B - B	Pebbled pattern texture coat, Loc 1	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_36	base				Crushed
0006C	Pebbled pattern texture coat, Loc 1	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_20	texture only				Crushed
0006D - A	Pebbled pattern texture coat, Loc 7	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_21	texture				Crushed
0006D - B	Pebbled pattern texture coat, Loc 7	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_37	base				Crushed
0006E - A	Pebbled pattern texture coat, Loc 8	None Detected		100% Other	White Non Fibrous Heterogeneous
1402992PLM_22	texture				Crushed
0006E - B	Pebbled pattern texture coat, Loc 8	None Detected		80% Other 20% Quartz	Gray Non Fibrous Heterogeneous
1402992PLM_38	base				Crushed

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Sharon Donald (38)

Analyst

Approved Signatory

APPENDIX III
RESULTS OF TESTING FOR LEAD IN PAINT

Sample	Colour and Substrate	Test Result (% by weight)
PT-01	Yellow paint on walls	<0.010%
PT-02	Dark Brown paint on walls	0.11%
PT-03	Black paint on walls	<0.006%



Analysis for Lead Concentration in Paint Chips

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



Customer: Pinchin Environmental Ltd
30 Queen St S
Tilbury Ontario N0P 2L0

Attn: Chris Croft
Tina Manning
Sam Clark

Lab Order ID: 1403011

Analysis ID: 1403011_PBP

Date Received: 2/21/2014

Date Reported: 2/28/2014

Project: 91797

Sample ID	Description	Mass (g)	Analytical Sensitivity (% by weight)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
PT-01	Yellow paint on wall, loc 3	0.0393	0.003%	< 0.010%
1403011PBP_1				
PT-02	Dark brown paint on wall, loc 1	0.1332	0.001%	0.11%
1403011PBP_2				
PT-03	Black paint on wall, loc 8	0.0641	0.002%	< 0.006%
1403011PBP_3				

The quality control samples run with the samples in this report have passed all AIHA required specifications unless otherwise noted. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by AIHA or any other agency of the U.S. government. (R.L. = 0.01 wt.%)

Kristin Cooke (3)

Analyst

Laboratory Director

APPENDIX IV
PHOTOGRAPHS



Photo 1

Asbestos-containing 12"x12" vinyl floor tiles (S 0002 A-C) in the Upper A/V Booth (Location 2).



Photo 2

Asbestos-containing 12"x12" vinyl floor tiles (S 0004 A-C) in the Stairway (Location 4).

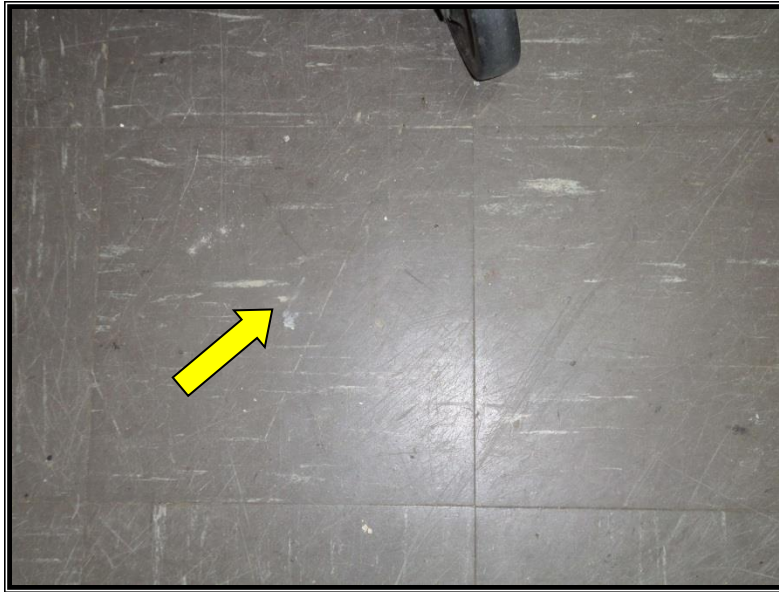


Photo 3

Asbestos-containing 9"x9" vinyl floor tiles (S 0005 A-C) in the lower A/V Booth (Location 3)



Photo 4

Non-asbestos splined ceiling tiles located in the lower A/V Booth (Location 3)



Photo 5

Non-asbestos texture coat (S 0006 A-C) present on the surface of the plaster ceilings in the Theatre (Location 1).

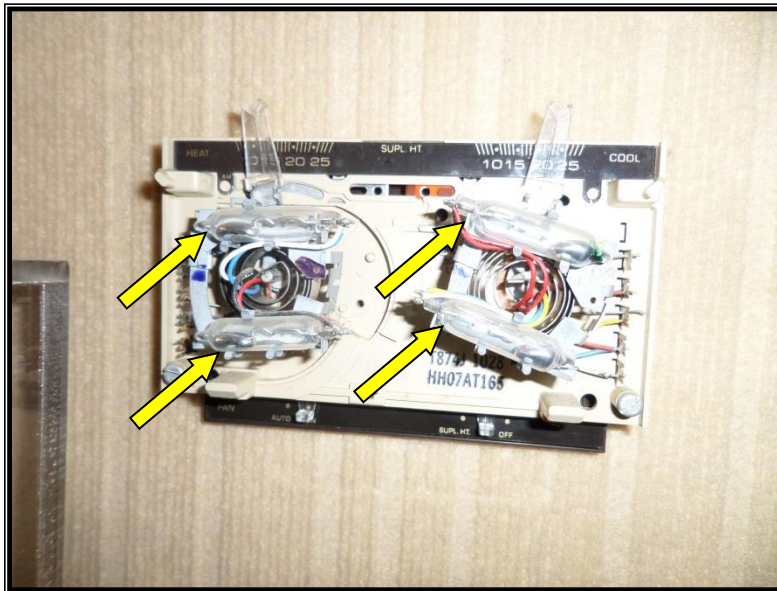
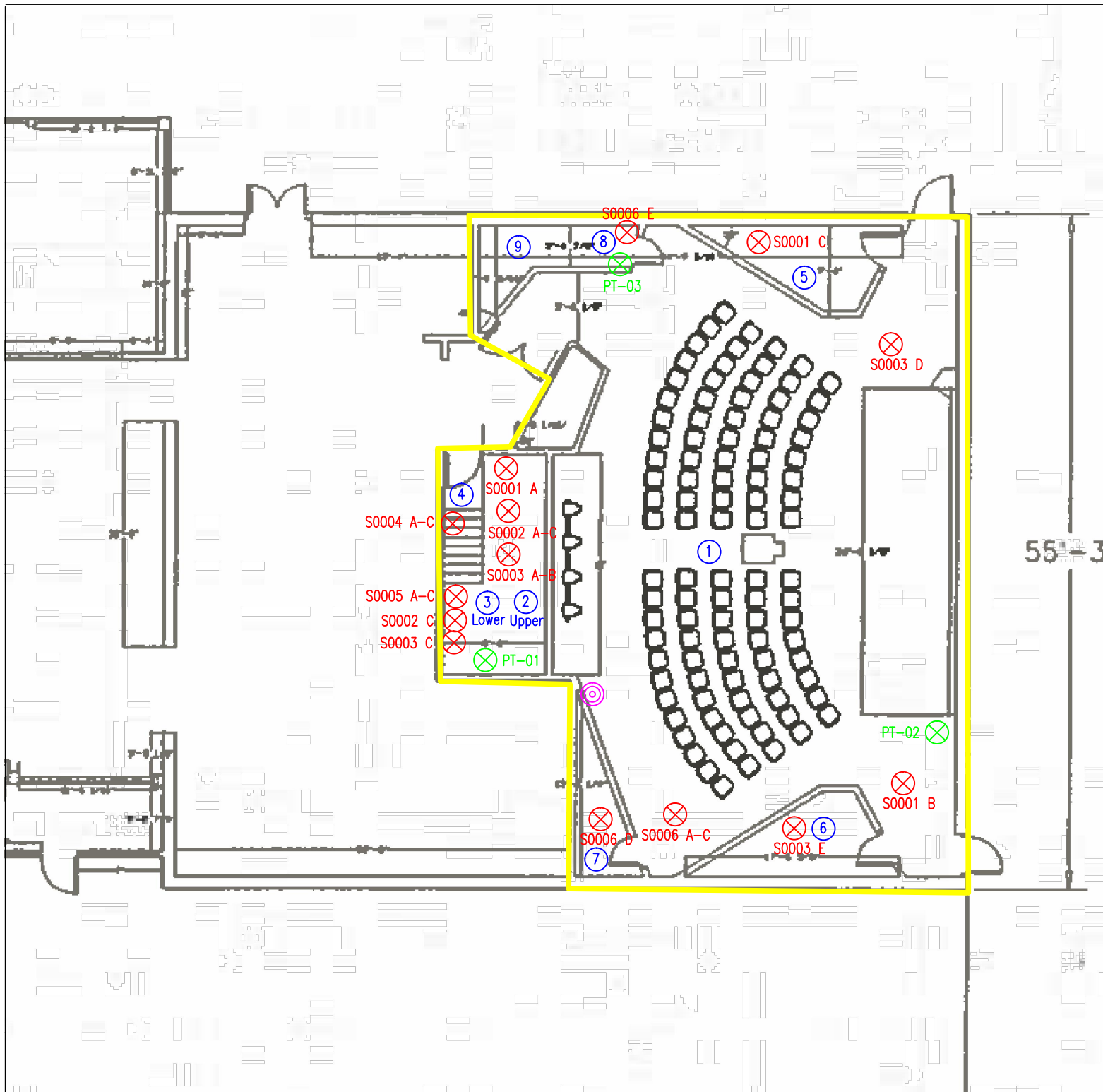


Photo 6

Mercury-containing thermostat present in the Theatre (Location 1).

APPENDIX V
DRAWINGS



LEGEND

- Ⓝ Pinchin Location Number
- ⊗ Asbestos Sample Location
- ⊗ Lead Sample Location
- ⊗ Mercury Thermostat
- Planned Renovation Areas



30 Queen St. South
 P.O. Box 399
 Tilbury, ON, NOP 2L0
 Phone: 1-519-682-4492

PROJECT NAME

Visitor Centre
 Floorplan
 Point Pelee National Park
 Leamington, Ontario

DRAWING NAME

Designated Substance
 Survey
 Parks Canada

PROJECT NUMBER 91797	REVISION NUMBER -
DRAWN BY CC	CHECKED BY TM
SCALE NTS	DRAWING NUMBER 1 OF 1
DATE 02/19/2014	