

CORPORATION OF THE TOWN OF PRESCOTT

DESIGNATED SUBSTANCES SURVEY

FORWARDERS MUSEUM AND VISITORS INFORMATION CENTRE - 201 WATER STREET, PRESCOTT, ON

NOVEMBER 9, 2017

CONFIDENTIAL





**DESIGNATED
SUBSTANCES SURVEY
FORWARDERS MUSEUM AND
VISITORS INFORMATION
CENTRE - 201 WATER STREET,
PRESCOTT, ON**

CORPORATION OF THE TOWN OF PRESCOTT

VERSION 1
CONFIDENTIAL

PROJECT NO.: 171-15057-01
DATE: NOVEMBER 2017

WSP
1345 ROSEMOUNT AVENUE
CORNWALL, ON, CANADA K6J 3E5

WSP.COM



November 9, 2017

CONFIDENTIAL

Corporation of the Town of Prescott
360 Dibble Street West
Prescott, ON
K0E 1T0

Attention: Dan Beattie, Director - Public Works and Infrastructure

Dear Sir:

Subject: Designated Substances Survey – 201 Water Street, Prescott, ON

WSP Canada Inc. (WSP) was retained by the Corporation of the Town of Prescott to complete a Designated Substances Survey (DSS) at the Forwarders Museum and Visitors Information Centre located at 201 Water Street in Prescott, Ontario.

The purpose of this survey is to determine the presence/absence of designated substances within the building.

The following report discusses the methodologies and findings of this survey.

We trust that the attached report is satisfactory for your purposes at this time. Please contact the undersigned should you have any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads 'Jason White'.

Jason White, B.Sc.
Environmental Technician

A handwritten signature in black ink that reads 'Lyle Casselman'.

Lyle Casselman, B.Eng., C.E.T.
Team Lead - Environment

WSP ref.: 171-15057-01

QUALITY MANAGEMENT

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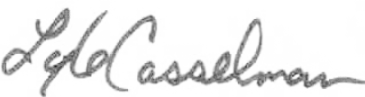
SIGNATURES

PREPARED BY



Jason White, B.Sc.
Environmental Technician

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Team Lead - Environment

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PRODUCTION TEAM

CLIENT - CORPORATION OF THE TOWN OF PRESCOTT

Director – Public Works and Infrastructure Dan Beattie

WSP

Field Technician Jason White

Senior Project Manager Lyle Casselman

EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by Corporation of the Town of Prescott to carry out a Designated Substances Survey (DSS) of the Forwarders Museum and Visitors Information Centre located at 201 Water Street in Prescott, Ontario (the “subject property”). It is WSP’s understanding that the survey was completed for due diligence purposes to identify the absence/presence of asbestos-containing materials and other designated substances.

The subject site, Forwarders Museum and Visitors Information Centre, is located on the south side of Water Street, east of George Street and west of Centre Street, addressed at 201 Water Street in Prescott, Ontario.

The subject site consists of a two storey structure with full basement. The grade is approximately 1m above the level of the 1st floor. The property slopes down to the south along the sides of the building and at the rear, facing the waterfront, grade is at level of the basement floor slab. The walls are stone rubble masonry but have been covered in stucco. The floor at the main and second level and the roof are timber framed. The roof is improved with asphalt shingles.

The purpose of this survey is to determine the presence/absence of designated substances within the building for due diligence purposes and to ensure complete and correct removal or handling of materials prior to renovations/demolition.

No previous Designated Substances Survey or Hazardous Materials Assessments were provided to WSP for review.

A summary of the results of WSP’s site inspection and bulk sampling is presented below:

Table 1 - Designated Substances & Hazardous Materials Survey Findings at 201 Water Street.

MATERIAL	SURVEY FINDINGS
Asbestos	<p>Based on the laboratory results, the following building material samples collected and analyzed are considered to be asbestos-containing (defined as material that contains 0.5% or more asbestos by dry weight).</p> <p>Friable & Non-Friable</p> <ul style="list-style-type: none"> — No asbestos-containing materials were identified. <p>Notes:</p> <ul style="list-style-type: none"> — Asbestos-containing materials may be present in inaccessible areas (i.e. wall and ceiling cavities).
Lead	<p>Based on the laboratory results, four (4) of the five (5) paint samples collected and analyzed have detectable concentrations of lead greater than the applicable criteria.</p> <ul style="list-style-type: none"> — Beige paint applied to interior surfaces within the building; — White paint applied to interior surfaces within the building; — Light grey paint applied to interior surfaces within the building; and — Blue paint applied to exterior surfaces within the building. <p>Notes:</p> <p>Lead is also expected to be present in the following building components:</p> <ul style="list-style-type: none"> — in lead acid batteries in emergency lighting throughout the building; — as a component in ceramic building products such as tiles and bricks;

MATERIAL	SURVEY FINDINGS
	<ul style="list-style-type: none"> — as a component of the solder on sweated joints between copper pipe and fittings; — as a component of the solder on wire connections of electric components; — as a component of solder used to seal the bell fitting of cast iron rain water leader pipes; and — as a malleable metal sheeting/flashing around roof edges, vent stacks, HVAC fixtures, etc.
Mercury	Although no samples were analyzed for mercury, it is presumed to be present as a gas in fluorescent light tubes.
Silica	Building materials and components known to contain silica such as glass, concrete, masonry, stone and mortar etc., were observed throughout the subject building.
PCBs	Based on the age of the building, Polychlorinated Biphenyls (PCBs) may be present within the fluorescent light ballasts located throughout the subject building.
Radioactive Materials	Smoke/heat detectors were observed in various locations throughout the building.

RECOMMENDATIONS

If asbestos is detected, removal of all asbestos-containing materials must be conducted before any renovation activities that may damage these materials. Removal of all ACM (non-friable and friable) must be conducted before any work that may damage these materials. Removal must be conducted in accordance with the Occupational Health and Safety Act (OSHA) regarding worker protection, to avoid the inhalation or ingestion of asbestos fibres. Non-friable ACM identified can be removed using Type 1 or Type 2 removal procedures, depending on removal procedures used by the contractor as specified in Ontario Regulation 278/05. Confirmation that the asbestos removal has been conducted in accordance with the OSHA is recommended prior to any contract work in areas proposed for renovation.

Except for asbestos, all other Designated Substance Regulations apply to industrial establishments and not to construction. Due to this condition, it is imperative that any contractor retained for renovations has a proven record in managing designated substances and operates under a control program. All designated substances must be handled in accordance with the appropriate guidelines and regulations. Designated Substance and Hazardous Material information will require updating if corrective measures have been instituted and materials have been removed from the building.

The positive identification of asbestos-containing materials within the building requires the preparation and establishment of an Asbestos Management Plan for the building, in accordance with O. Reg. 278/05, if the ACM is to remain in place.

Special precautions should be taken when disturbing any concrete or painted surfaces given the presence of silica, lead and potentially arsenic. All designated substances must be handled in accordance with the appropriate guidelines and regulations. The Ministry of Labour (MOL) has published guidelines for handling and controlling lead and silica in construction and it is recommended that these guidelines be followed when removing and cutting into the concrete. Coring, sawing or breaking up the materials containing silica, lead and potentially arsenic should be completed only with appropriate dust suppression methods, proper respiratory protection and general worker safety precautions as outlined in the MOL Guidance documents and in the Occupational Health and Safety Act.

The presence of mercury within assembled units (e.g. fluorescent light bulbs) should not be considered a hazard provided that the assembled units remain sealed and intact. Avoid direct skin contact with mercury and avoid inhalation of mercury vapour. Dispose of mercury following applicable legislative requirements.

It is the intention of the federal government to phase out the use of ODSs by the year 2030 in order to protect the upper atmosphere. The MOE has issued Regulation 356 regarding the use, disposal and recycling of ODS's. Recapturing of ODS's during servicing must be done by licensed personnel.

If units/equipment are discovered and observed to contain ODSs (i.e. R-22) the units should be recycled following Ontario Regulation 189/94, Refrigerants (O. Reg. 189/94), as amended. All equipment containing ODSs must be serviced by an individual holding a valid Ozone Depletion Prevention (ODP) Card, issued by the MOE and the refrigerant drained from the unit and collected for recycling or disposal in accordance with all applicable legislation.

No significant mould or water damage was observed in the building. The Town of Prescott has stated that they previously have had a mould and water damage issue in the building. If mould is discovered during demolition and/or renovation, mould contaminated materials should be removed/handled in accordance with the Canadian Construction Association document CCA 82/2004. Contractors should be warned of the potential presence of mould and every precaution should be taken to prevent airborne exposure to workers where mould is present and where workers are likely to inhale or ingest mould.

Atomic Energy Control Board (AECB) guidelines state that smoke detectors containing more than 5 μCi of Am-241 or any amount of Radium -226 must be disposed of through a consultant or AECB licensed waste facility. The current AECB guidelines allow for the disposal of smoke detectors with an Am-241 isotope source of less than 5.0 μCi to a regular landfill site. Smoke detectors must be disposed of in packages containing a maximum of ten smoke detectors per package.

If during renovation or demolition, additional materials suspected of containing asbestos are encountered, they must be handled in accordance with the appropriate guidelines and regulations. It should be noted that asbestos may be present in the enclosed spaces not accessible at the time of the site visit.

Complete commentary on each of the designated substances in the project area will be discussed in the report to follow. This executive summary is not intended to substitute for the complete report, nor does it discuss certain specific issues documented within the report.



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DRAWINGS

FIGURE 1 FLOOR PLAN

1 INTRODUCTION

1.1 BACKGROUND

WSP Canada Inc. (WSP) was retained by the Corporation of the Town of Prescott to carry out a Designated Substances Survey (DSS) of the Forwarders Museum and Visitors Information Centre located at 201 Water Street in Prescott, Ontario (the “subject property”).

The survey was conducted by WSP representatives on October 24, 2017 during regular business hours.

The subject site, Forwarders Museum and Visitors Information Centre, is located on the south side of Water Street, east of George Street and west of Centre Street, addressed at 201 Water Street in Prescott, Ontario. The subject site consists of a two storey structure with full basement. The grade is approximately 1m above the level of the 1st floor. The property slopes down to the south along the sides of the building and at the rear, facing the waterfront, grade is at level of the basement floor slab. The walls are stone rubble masonry but have been covered in stucco. The floor at the main and second level and the roof are timber framed. The roof is improved with asphalt shingles.

1.2 SURVEY OBJECTIVES

This survey is required to satisfy a building owner’s requirements under Section 30 of the Ontario Occupational Health & Safety Act (OHSA) which requires building owners to determine if there are any Designated Substances present, prior to commencement of a project, which may involve construction, renovation or demolition related activities. This information allows workers to take appropriate steps to prevent accidental exposure to these harmful substances. This report should be provided to all maintenance workers, prospective contractors (and in turn to their sub-trades) who are likely to handle, come into contact with, or disturb building materials. Contractors who may work in close proximity to the identified materials and who may also disturb the materials should also be notified.

The primary objectives of the survey were to:

- Develop an up-to-date inventory, and gain a better understanding of the Designated Substances and/or hazardous materials that are present in areas of the subject building scheduled for an upcoming repair/upgrade project;
- Document their locations, applications, concentrations, quantities, and conditions in the subject building in order to provide workers, and prospective contractors, with adequate information to prevent accidental exposures; and
- Provide recommendations for the safe removal, handling and disposal of the identified Designated Substances and hazardous materials as necessary.

The asbestos information in this survey report complies with the requirements of the Occupational Health & Safety Act, Ontario Regulation 278/05: Designated Substance - Asbestos on Construction Projects and in Building and Repair Operations with respect to asbestos-containing materials for the structures.

Regulation 490/09 states that all necessary measures and procedures are to be taken to ensure the time-weighted average exposure of a worker to any form of airborne asbestos does not exceed 0.1 fibres per cubic centimeter of air, averaged over an 8-hour work period. In order to abide by this regulation, contractors specializing in asbestos removal are required to remove all asbestos-containing building materials from the buildings prior to any renovation or demolition that will disturb these materials.

1.3 SCOPE OF WORK

The scope of this work program was to identify suspect or possible designated substances within the subject building. The objective of this survey was to conduct a thorough survey of the materials considered to be suspect lead-containing and asbestos-containing materials. This Designated Substances and Hazardous Materials Survey entailed:

- A room by room visual inspection of the accessible subject areas for designated substances and hazardous materials;
- Collection of bulk samples of materials suspected to contain asbestos according to the requirements stipulated in O. Reg. 278/05 (see Table 5);
- Assessment of the condition of the asbestos-containing materials;
- Collection of a representative number of bulk paint samples;
- Inventory of (visibly) evident sources of mercury (e.g. thermostats);
- Assessment of the likelihood of exposure to designated substances with recommendations for appropriate corrective action where required;
- Visual identification of suspected and/or obvious signs of mould; and
- Visual identification of other Designated Substances and hazardous materials including equipment containing ODS, fuel, oil and/or waste oil storage, chemical storage, and/or radioactive materials. Where possible name plate/label information and quantities were recorded.

The survey did not involve destructive sampling (i.e. inspection within plaster/drywall (false) walls or ceilings, within mechanical equipment such as boilers, furnaces, HVAC systems, or within electrical equipment), except those which may be accessed by moveable (non-fixed) barriers such as above suspended ceiling tiles, access doors, hatches, panels etc. These areas are considered not accessible to the surveyor and as such materials suspected to contain asbestos and other Designated Substances and hazardous materials may be present within these inaccessible areas.

The survey included the identification of potential friable and non-friable asbestos-containing materials within the structures. Asbestos means any of the following fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite or tremolite. According to the above-mentioned Ontario Regulation 278/05, the term 'friable material' is applied to a material that when dry, can be crumbled, pulverized or powdered with moderate hand pressure. Asbestos materials that are friable have a greater potential to release airborne asbestos fibres when disturbed. Common friable asbestos-containing buildings materials used in the past include sprayed fireproofing, stucco texture coat, and thermal pipe and jacket insulation.

Common non-friable asbestos containing materials include vinyl floor tiles, gasket materials, asbestos cement (Transite™) pipe, Transite™ board and asbestos textiles. If these materials do however release fine dust due to deterioration or during removal, the free dust is considered friable.

2 METHODOLOGY

2.1 GENERAL SURVEY METHODOLOGY

WSP's survey sought to identify those substances defined as Designated Substances under the *Ontario Occupational Health and Safety Act* including: asbestos (friable and non-friable), lead, mercury, silica, benzene, acrylonitrile, arsenic, coke oven emissions, ethylene oxide, isocyanates, and vinyl chloride. In addition, other hazardous materials, such as PCBs, ozone-depleting substances (ODS), urea-formaldehyde foam insulation (UFFI) and other stored chemicals and wastes were included in the survey scope.

WSP's surveyors performed a systematic survey of the subject building and structures for the purposes of identifying Designated Substances and hazardous materials and documenting observations made about their locations, estimated quantities and respective conditions. These observations form the basis for developing the recommendations provided within this report.

The survey of the building for designated substances consisted of a walk through and physical examination of suspected materials in accessible areas of the building. A physical examination was completed to assess the condition of materials and to examine for underlying layers. In situations where asbestos-containing materials or other Designated Substances extended into a non-accessible area, such as asbestos cement parging on mechanical pipes it was assumed that the asbestos-containing materials were also present in these areas and were reported as such.

Survey procedures specific to asbestos and lead are documented in the following sections of this report.

2.2 ASBESTOS SURVEY METHODOLOGY

The surveyor inspected the subject building for the presence of friable and non-friable asbestos-containing materials (ACM). Examples of ACM commonly found in buildings may include:

- Sprayed insulation
- Acoustic/texture plaster
- Drywall joint compound
- Mechanical insulation
- Asbestos cement
- Piping
- Acoustic ceiling tiles
- Vinyl floor tiles and vinyl sheet flooring
- Plaster

Bulk samples were collected from suspect materials (i.e. materials known as having the potential to be asbestos-containing) and analyzed to identify or confirm the presence/absence of asbestos. Asbestos samples are collected by taking a small volume of material (approximately two square centimeters in size) from either intact material or preferably from a damaged section. The collected samples were placed in zipper storage plastic bags, sealed and forwarded to an analytical laboratory.

No samples were collected from the roof. The scope of work did not include roof coring. It should be noted that new asphalt shingles were installed on the roof after 2013, and as such should not contain asbestos.

The bulk samples collected were then submitted to an accredited, independent laboratory for analysis (accompanied by a chain of custody form) of asbestos content via US EPA Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials in accordance with the requirements of O. Reg. 278/05. The laboratory was instructed to use “stop-positive” analysis when asbestos is identified via Polarized Light Microscopy (PLM) analysis.

The number of bulk samples required, in order to establish whether a material is asbestos-containing according O. Reg. 278/05, is summarized in Table 3.

Table 2 - Minimum Number of Bulk Samples to be collected under O. Reg. 278/05 According to Material Area, Application and Friability

TYPE OF MATERIAL	SIZE OF HOMOGENEOUS MATERIAL	MINIMUM NUMBER OF BULK 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 m ²	3
	90 m ² or more, but less than 450 m ²	5
	450 m ² or more	7
Thermal insulation, except as described below	Any size	3
Thermal insulation patch	Less than 2m or 0.5 m ²	1
Other material	Any size	3

As per the requirements set out in Table 1 of O. Reg. 278/05, a total of twenty-seven (27) samples were collected and submitted for asbestos analysis as part of this survey. Fibrous glass insulation was not submitted for analysis as it can be identified visually and was never manufactured with asbestos.

In accordance with the analysis techniques required by O. Reg. 278/05:

- for layered materials, subsamples are taken from each individual or discrete layer and each subsample is then treated as a discrete sample; and
- if a material is found to contain greater than 0.5% asbestos, additional bulk material samples taken from the same homogeneous material are not required to be analyzed.

As per these requirements, a total of thirty-four (34) samples were analyzed by the laboratory for this assessment.

2.3 LEAD SURVEY METHODOLOGY

Bulk paint samples (paint chips) were collected from each distinct colour of paint observed within the subject areas. Samples were collected with the aid of a thin-bladed knife, which was cleaned prior to each sampling event. WSP’s surveyor selected sample locations where it appeared that the paint application was most

representative of all areas on which it was applied. Each paint chip sample was placed in a clear bag with a tight closure, uniquely labelled and then placed in a second, similar bag. A chain of custody form was completed and accompanied the bulk samples to an accredited, independent laboratory for analysis of lead content. Lead analysis was performed following ASTM Method, ASTM D3335-85A “*Standard Method to Test for Low Concentrations of Lead in Paint by Atomic Absorption Spectrophotometry*”.

2.4 SILICA

The surveyor inspected the subject areas for the presence of materials known to contain silica. Silica is present in materials such as glass, concrete, masonry, stone and mortar which are prevalent materials in building construction. No samples were collected or analyzed.

2.5 MERCURY

The surveyor inspected the subject areas for equipment which is likely to contain mercury. Pertinent information of the suspected equipment including: manufacturer, dates, model and serial numbers, and quantities were recorded when available. No samples were collected or analyzed.

2.6 POLYCHLORINATED BIPHENYLS (PCB)

The surveyor inspected the subject areas for equipment which may contain PCBs. Equipment that is generally suspected of containing PCBs includes lamp ballasts, transformers, hydraulic fluid, compressors, switchgears, capacitors and other electric equipment. Pertinent information of the suspected equipment including: manufacturer, dates, model and serial numbers, and quantities were recorded when available. No samples were collected or analyzed.

2.7 MOULD

The surveyor inspected the subject areas for the presence of mould. This included a non-intrusive visual assessment of exterior and interior building material surfaces and components for evidence of obvious visible mould, and/or areas conducive to mould growth (i.e. demonstrating significant moisture saturation and water damage). No samples were collected or analyzed.

3 SITE OVERVIEW

3.1 SITE DESCRIPTION

The subject site, Forwarders Museum and Visitors Information Centre, is located on the south side of Water Street, east of George Street and west of Centre Street, addressed at 201 Water Street in Prescott, Ontario. The subject site consists of a two storey structure with full basement. The grade is approximately 1m above the level of the 1st floor. The property slopes down to the south along the sides of the building and at the rear, facing the waterfront, grade is at level of the basement floor slab. The walls are stone rubble masonry but have been covered in stucco. The floor at the main and second level and the roof are timber framed. The roof is improved with asphalt shingles.

The floors on the first and second levels were constructed of wood. The basement floor was constructed with poured concrete. First level interior walls were generally improved with plaster or stucco. The interior walls and ceiling of the second level were improved with plaster and some drywall. The basement walls were improved with plaster, while the ceilings were either improved with plaster or wood.

3.2 RECORDS REVIEW

No previous asbestos or designated substances surveys were provided to WSP.

3.3 HEATING/MECHANICAL SYSTEM

The building is heated with a natural gas furnace. The pipes and associated ductwork were not insulated.

3.4 SITE INSPECTION

The building was inspected by WSP representative Mr. Jason White on October 24th, 2017.

4 REGULATORY CONTEXT

4.1 DESIGNATED SUBSTANCES

Section 30 of the *Occupational Health and Safety Act* (the Act) stipulates that prior to the commencement of a project a list shall be prepared of all Designated Substances that are present at the project site (i.e. a Designated Substances survey). In accordance with the Act, the locations of Designated Substances must be identified in writing to all prospective constructors, contractors and sub-contractors who may work, disturb or come into contact with this type of material, at the same time as, or prior to, project tendering.

The term “Designated Substance” refers to the eleven chemical or physical agents specifically identified within the Act. Each of these substances is governed by a consolidated regulation, Designated Substances - Ontario Regulation 490/09 (O. Reg. 490/09) that defines the minimum health and safety requirements for assuring safe worker-substance interaction as well as the obligations of employers and workers in workplaces containing these substances. O. Reg. 490/09 further stipulates the maximum concentrations of each of the respective substance to which a worker may be exposed, according to short-term exposure values and time-weighted average exposure values.

4.2 ADDITIONAL REGULATORY REQUIREMENTS FOR ASBESTOS

Among the Designated Substances, asbestos is unique in that it is governed by two regulations under the Act - one for the general mining and processing operations of asbestos and one for asbestos on construction projects and in buildings and repair operations.

Ontario Regulation 278/05 (O. Reg. 278/05), made under the Act, entitled “Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations” came into effect on November 1, 2005, with some sections contained therein becoming effective on November 1, 2007. This regulation revoked and replaced the previous asbestos regulation, *O. Reg. 838/90*.

4.3 ADDITIONAL REGULATORY REQUIREMENTS FOR LEAD

The Ontario Ministry of Labour (MOL) has not prescribed specific criteria for classification of lead-containing paints or other surface coatings and construction materials. The Surface Coating Materials Regulation (SOR/2005-109) made under the federal Hazardous Products Act (HPA) prescribes an acceptable level of 0.009% (90 ppm) lead by dry weight or less, as determined by bulk chemical analysis in accordance with good laboratory practises. Under the Surface Coating Materials Regulation (SOR/2005-109) Section 4.2, the following paints and surface coatings are excluded from the above noted acceptable lead level:

- 1 as an anti-corrosive or an anti-weathering coating applied on the interior or exterior surface of any building or equipment that is used for an agricultural or industrial purpose;
- 2 as an anti-corrosive or an anti-weathering coating applied on any structure other than a building, that is used for an agricultural, industrial or public purpose;
- 3 as a touch-up coating for metal surfaces;
- 4 on traffic signs;
- 5 for graphic art on billboards or similar displays;

- 6 for identification marks in industrial buildings; or
- 7 as materials for the purposes of arts, crafts or hobbies, other than material for use by children.

However, based on a recent publication (EACO Lead Guideline For Construction, Renovation, Maintenance or Repair dated October 2014) from the Environmental Abatement Council of Ontario (EACO), an industry group representing consultants and contractors in the Ontario abatement industry, various occupational and workplace safety authorities and agencies consider that any detectable amount of lead in paint and similar materials has the potential to produce an airborne hazard to workers and building occupants when these materials are disturbed.

As such, for the purpose of this survey, WSP has classified any material containing detectable/measurable amounts of lead as “lead-containing” materials and recommends that all disturbances to these materials be conducted in accordance with the EACO or MOL document Guidelines, Lead on Construction Projects.

4.4 ADDITIONAL REGULATORY REQUIREMENTS FOR WASTE MANAGEMENT

The disposal of Designated Substances is regulated under the Ontario *Environmental Protection Act*, specifically R.R.O. 1990, *Regulation 347, General - Waste Management* (most recently amended by O. Reg. 334/13). The regulation details the minimum requirements for the appropriate transport and disposal of wastes.

4.5 OTHER APPLICABLE REGULATIONS AND GUIDELINES

The following regulations and guidance documents may also apply to this survey:

- Guideline for Lead on Construction Projects (MOL, September 2004, as amended)
- Guideline for Silica on Construction Projects (MOL, September 2004, as amended)
- The United States Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint in Housing
- Canadian PCB Regulations (SOR/2008-273)
- O. Reg. 362 Waste Management – PCBs
- Mercury-Containing Products Pollution Prevention Fact Sheet #21 (Ministry of Environment (MOE), September 2001, as amended)
- O. Reg. 347/90 General Waste Management
- Canadian Construction Association document CCA 82/2004
- Canadian Chlorofluorocarbon Regulations (SOR/90-127), Ozone-depleting, Substances Regulation (SOR/94-408) and Ozone Depleting Substances Products Regulations (SOR/90-584)
- O. Reg. 463/10 ODS and Other Halocarbons
- Lead Guideline For Construction, Renovation, Maintenance or Repair (Environmental Abatement Council of Ontario – October 2014)
- EACO Lead Guideline for Construction, Renovation, Maintenance and Repair, October 2014.
- EACO Mould Abatement Guidelines, 2010

5 OBSERVATIONS AND RESULTS

Information in this section of the report should be provided to all prospective contractors, tenants, and/or workers who are likely to handle, come into contact with, or disturb asbestos or other designated substances. Detailed specifications that outline specific abatement procedures are recommended when tendering the renovation/demolition work.

This information may require updating upon the removal of Designated Substances from various sections of the building upon completion of the renovations or demolition. A close out report stating that the materials are no longer present is also required once the materials are removed. If ACM is to remain in place, O. Reg. 278/05 requires the preparation and establishment of an Asbestos Management Plan for the building.

Contractors and maintenance personnel should be warned of the possibility of undisclosed materials when breaking into enclosed areas. Friable and Non-Friable building materials discovered in enclosed areas should be treated as asbestos until proven otherwise and other substances, self-evident as designated substances, should be handled in a likewise fashion.

5.1 ASBESTOS

5.1.1 ASBESTOS-CONTAINING MATERIALS

In accordance with the requirements of O. Reg. 278/05, homogenous materials (i.e. materials uniform in color and texture) must be considered to be asbestos-containing, if any sample which is collected from that homogeneous material, is identified to have an asbestos concentration of 0.5% or greater.

A total of twenty-seven (27) building material samples were collected and submitted for laboratory analysis, and a total of thirty-four (34) samples were analyzed for asbestos content. The table below summarizes only those materials which were previously determined to be asbestos-containing, subsequently identified, confirmed or presumed to be asbestos-containing materials and are presented along with recommended remedial actions for each respective material.

Recommended actions for management, repair or removal of these materials, are based on the requirements and procedures specified by O. Reg. 278/05 and have been suggested based on the type of disturbance which is anticipated or likely. Alternate handling, repair and removal procedures must comply with the requirements of O. Reg. 278/05 (as amended). Refer to Appendix C for condition, accessibility and action definitions.

Table 3 - Asbestos-Containing Materials

MATERIAL DESCRIPTION & LOCATION	ASSESSMENT	ACTION ¹	PHOTO ²
<u>None</u>	<i>Asbestos was not identified in the samples collected.</i>	<i>Not Applicable</i>	

5.1.2 SUSPECTED ASBESTOS-CONTAINING MATERIALS

Certain building materials which have historically contained asbestos were not included in the survey since they were inaccessible, are used in a random fashion, or have a low risk of asbestos fibre release.

These materials include:

- Buried services such as underground piping; these pipes were commonly manufactured from a non-friable form of asbestos cement but are inaccessible for sampling without excavation work. Site drawings should be consulted and reviewed to ascertain the presence or absence of such structures.
- Floor levelling compounds; these materials were used in a random fashion, may or may not contain asbestos, and require demolition of floor finishes to access for sample collection. Floor levelling compounds were not observed but may be present.
- Packing materials in valves, fittings, etc., may be present but are inaccessible without demolition activities (e.g. within concealed areas behind bulkheads).

In addition, inspection of mechanical equipment such as furnaces, HVAC systems, chimneys or within electrical equipment was not conducted due to safety limitations. These areas are considered not accessible to the surveyor and as such materials suspected to contain asbestos may be present within these inaccessible areas, including:

- electrical wiring insulation,
- underground utilities such as sewers or drain lines,
- electrical conductors,
- high temperature gaskets,
- incandescent light fixture backing,
- ductwork connections,
- thermal insulator around electrical elements around baseboard heaters,
- interior of chimneys,
- interior of boilers.

Once services are decommissioned, these areas should be inspected and/or sampled for presence or absence of asbestos.

If renovation or demolition activities are likely to disturb the materials, it is required that all identified asbestos-containing materials be removed in accordance with O. Reg. 278/05. If any potential asbestos-containing materials are encountered unexpectedly, WSP should be contacted to sample, monitor and/or document the removal of asbestos-containing materials, and to ensure that appropriate procedures are being followed.

5.1.3 SUMMARY OF BULK SAMPLES IDENTIFIED AS “NON-ASBESTOS”

The table below summarizes the results of bulk material samples collected from suspect materials during this survey, which had either no detectable concentrations of asbestos, or had asbestos concentrations less than the regulated threshold limit of 0.5% (by weight), and therefore can be considered as “non-asbestos” in accordance with O. Reg. 278/05.

Table 4 - Summary of Bulk Samples Identified as "Non-Asbestos"

MATERIAL DESCRIPTION / LOCATION	SAMPLE ID ¹
Plaster – Type A, white and grey coat, observed throughout building	FM-1-52A-A,B,C; FM-6-52A-A,B; FM-8-52A-A,B
Plaster – Type B, grey coat only, observed in Rooms 10, 11, 12, and 13	FM-10-52B; FM-11-52B; FM-12-52B
Wall stucco – Type A, interior, observed in Room 1	FM-1-60-A,B,C
Exterior Wall Stucco – Type B, exterior walls	FM-Ext-60B-A,B,C,D,E
Stone mortar – Type A, observed in Room 8	FM-8-47A-A,B,C
Drywall – observed in Rooms 6, 9, and 13	FM-9-51-A,B,C
Drywall joint compound – observed in Rooms 9 and 13	FM-9-59-A,B,C

1 – Laboratory confirmation of non-asbestos-containing material is provided in the laboratory results found within Laboratory Certificates of Analysis.

5.2 LEAD

A total of five (5) paint samples were collected and analyzed at the time of the investigation. The table below summarizes the results of laboratory analyses for the bulk paint and surface coating samples collected during the survey as well as the lead-containing paints which were identified during the previous investigation.

Table 5 - Summary of Lead Concentrations in Bulk Paint Samples

MATERIAL DESCRIPTION	ASSESSMENT	ACTION ¹
Beige paint Applied to interior surfaces.	Sample ID: FM-4-301(Beige) Concentration: <u>69000 µg/g</u> Condition: Good	In general, the following procedures are recommended if/when removing lead-containing materials, coatings and paint applications: <ul style="list-style-type: none"> – Follow Type 1 – if the coating is to be removed with a chemical gel or paste; – Follow Type 2a – if the coating is to be removed by scraping or sanding using non-powered hand tools, or manual demolition of lead-painted building components by striking with sledgehammer or similar tool;
White paint Applied to interior surfaces.	Sample ID: FM-4-301(White) Concentration: <u>3630 µg/g</u> Condition: Good	

MATERIAL DESCRIPTION	ASSESSMENT	ACTION ¹
Light grey paint Applied to interior surfaces.	Sample ID: FM-6-301(Light Grey) Concentration: <u>635 µg/g</u> Condition: Good	<ul style="list-style-type: none"> – Follow Type 3a – if the coating is to be removed using power tools; or, – Follow Type 3b – if the coating is to be removed by abrasive blasting. If lead-containing paint applications and surface coatings are not removed prior to demolition, ensure that demolition waste complies with the requirements of General – Waste Management Regulation, R.R.O. 1990, Regulation 347.
Blue Paint Applied to exterior surfaces.	Sample ID: FM-Ext-301(Blue) Concentration: <u>36200 µg/g</u> Condition: Good	
White paint Applied to exterior surfaces	Sample ID: FM-Ext-301(White) Concentration: 70 µg/g Condition: Good	
1 For sample ID and concentration levels refer to Appendix A: Analytical Results – Asbestos & Lead.		

Lead is also expected to be present in the following building components:

- in lead acid batteries in emergency lighting throughout the building;
- as a component in ceramic building products such as tiles and bricks;
- as a component of the solder on sweated joints between copper pipe and fittings;
- as a component of the solder on wire connections of electric components;
- as a component of solder used to seal the bell fitting of cast iron rain water leader pipes; and
- as a malleable metal sheeting/flashing around roof edges, vent stacks, HVAC fixtures, etc.

Work that will disrupt and/or pulverize (including drilling, cutting, grinding or abrading) confirmed or suspected lead-containing materials must follow the recommendations provided in the EACO Lead Abatement Guidelines (dated 2014) or Ministry of Labour Guideline for Lead on Construction Projects, dated September 2004 (Revised April 2011). In addition, the aforementioned painted surfaces (containing lead) should be handled with appropriate health and safety precautions so as to comply with requirements of the Designated Substances regulation, O. Reg. 490/09, and disposal of these materials must also comply with the requirements of O. Reg. 347 – General – Waste Management.

5.3 OTHER DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS

The following table summarizes other Designated Substances and hazardous materials which were also included in the survey. Identification of these materials and substances were based on visual observations only, and where appropriate, recommendations and necessary actions have been provided.

All designated substances must be handled in accordance with the appropriate guidelines and regulations. Designated Substance and Hazardous Material information will require updating as corrective measures are instituted and materials have been removed from various sections of the building.

MATERIAL	DESCRIPTION	FINDINGS	ACTION
Mercury	Mercury is used in thermometers, batteries and some electrical switches. It is also used in dental fillings and in latex paint to protect against fungal attack and mildew. Mercury vapour is also present as a vapour in fluorescent lights, metal halide lights and mercury vapour lights.	Although no samples were analyzed for mercury, it is presumed to be present in the following building components: <ul style="list-style-type: none"> — as a gas in fluorescent light tubes; and — as a bactericide or stabilizer in paints. 	The presence of mercury within assembled units (e.g. fluorescent light bulbs, piping thermometers, and thermostat bulbs) should not be considered a hazard provided that the assembled units remain sealed and intact. Avoid direct skin contact with mercury and avoid inhalation of mercury vapour. Dispose of mercury following applicable legislative requirements.
Polychlorinated Biphenyls (PCBs)	The federal Regulation SOR/2008-273 (September 5, 2008) states that any solid material containing 50 parts per million (ppm) or more of PCBs must be handled as a PCB-containing material in accordance with all applicable regulations.	Fluorescent light ballasts were observed within the subject building. Based on the date of construction, PCBs may be present in some of the lamp ballasts within the subject building.	When decommissioned, ballasts which do not have a “No PCBs” indicator on the label, manufacturer’s codes should be compared with Environment Canada’s Identification of Lamp Ballasts Containing PCBs EPS 2/CC/2 (revised). Handle, store and dispose of PCB-containing materials in accordance with <i>Federal PCB Regulation SOR/92-507</i> and <i>R.R.O. 1990 – Reg. 347 – General – Waste Management</i> regulations.
Ozone Depleting Substances (ODSs)	It is the intention of the federal government to phase out the use of ODSs by the year 2030 in order to protect the upper atmosphere. The MOE has issued Regulation 356 regarding the use, disposal and recycling of ODSs. Recapturing of ODSs during servicing must be done by licensed personnel.	A fridge was observed in the building and may contain ODSs.	In the event of removal, the units should be recycled following Ontario Regulation 189/94, <i>Refrigerants</i> (O. Reg. 189/94), as amended. All equipment containing ODSs must be serviced by an individual holding a valid Ozone Depletion Prevention (ODP) Card, issued by the MOE and the refrigerant drained from the unit and collected for recycling or disposal in accordance with all applicable legislation.

MATERIAL	DESCRIPTION	FINDINGS	ACTION
Silica	Silica, or silicon dioxide (SiO ₂), is the basic component of sand, quartz and granite rock. Crystalline Silica (the designated substance) is encountered in industry in three forms: quartz, tridymite, and cristobalite.	Crystalline Silica should be assumed to be present in brick, concrete, asphalt, cement and mortar.	<p><i>O. Reg. 490/09</i> regarding silica as a designated substance applies to areas where airborne silica is present and where workers are likely to inhale, ingest or absorb silica. Every precaution and procedure should be taken during demolition or renovation activities to control the time-weighted exposure of a worker to airborne silica and exposure should not exceed 0.05 milligrams Cristobalite per cubic meters of air, or 0.1 milligrams Quartz or Tripoli per cubic meters of air.</p> <p>Coring, sawing, or breaking up the materials containing silica should be completed only with appropriate dust suppression methods, proper respiratory protection and general worker safety precautions as outlined in the MOL Guidance document and in the Occupational Health and Safety Act.</p>
Radioactive Materials	Smoke/heat detectors may contain a radioactive power source. Atomic Energy Control Board (AECB) guidelines state that smoke detectors containing more than 5 µCi of Am-241 or any amount of Radium -226 must be disposed of through a consultant or AECB licensed waste facility. The current AECB guidelines allow for the disposal of smoke detectors with an Am-241 isotope source of less than 5.0 µCi to a regular landfill site.	Smoke/heat detectors were observed in various locations throughout the building.	Smoke detectors must be disposed of in packages containing a maximum of ten smoke detectors per package.

MATERIAL	DESCRIPTION	FINDINGS	ACTION
Mould	<p>Mould is a group of various species of simple, microscopic organisms found in every ecological niche, indoors and outdoors. Moulds are necessary for recycling of organic materials in nature.</p> <p>To grow, mould needs:</p> <ul style="list-style-type: none"> — A mould spore — An organic food source (i.e. paper, drywall, wood, dirt, paint, etc.) — Moisture — Time (this will vary depending on the site-specific conditions, including the cleanliness of the water source) 	<p>No significant mould or water damage was observed in the building.</p> <p>The Town of Prescott has stated that they previously have had a mould and water damage issue in the building.</p>	<p>It is recommended that mould contaminated materials should be removed/handled in accordance with the Canadian Construction Association document CCA 82/2004. Contractors should be warned of the presence of mould and every precaution should be taken to prevent airborne exposure to workers where mould is present and where workers are likely to inhale or ingest mould.</p>
Arsenic	<p>Arsenic is used with other metals (chiefly copper, lead and zinc) to make alloys. Arsenic compounds are also used in pigments, animal poisons, insecticides, paints, wallpaper, ceramics, and poison gases for chemical warfare, glass making, in calico and indigo printing, pyrotechnics, integrated circuits and transistors. Arsenic is also a major waste material from the gold mining industry.</p>	<p>Arsenic is not expected to be present in the buildings.</p>	N/A
Vinyl Chloride	<p>Vinyl chloride is the parent compound of polyvinyl chloride (PVC) which is a widely used plastic. Vinyl chloride is also used in various resins (e.g. plastic food wrap), and in the glass, rubber, and paper industries. Vinyl chloride is also formed by the degradation of the chlorinated solvents trichloroethylene (TCE), 1,1,1-trichloroethane (111TCA) and tetrachloroethylene (also known as perchloroethylene or dry cleaning solvent), especially in soil or groundwater that has been contaminated with these solvents.</p>	<p>No solvents, tanks or process operations that use vinyl chloride were observed or appear to have been present in the building. Vinyl chloride could be present within plastic components of the plumbing system, vinyl flooring and countertops, etc.</p>	N/A

MATERIAL	DESCRIPTION	FINDINGS	ACTION
Acrylonitrile	Acrylonitrile is mostly used as a feedstock or chemical aid in the production of nitrile-butadiene rubber and in acrylonitrile-butadiene-styrene and styrene-acrylonitrile polymers. Acrylonitrile is also used to make other chemicals such as plastics, synthetic rubber, and acrylic fibre (e.g. clothing, blankets, carpeting) and nitrile rubber for oil-resistant hoses.	Acrylonitrile is not expected to be present in the building.	N/A
Benzene	Benzene is widely used in the chemical industry as a starting material and solvent. Benzene occurs naturally in crude oil and is present in all gasoline products, automobile emissions and cigarette smoke. Benzene is highly volatile, and will release into the atmosphere over a short time.	Benzene is not expected to be present in the building.	N/A
Coke Oven Emissions	Coke oven emissions are complex mixtures of coal and coke particles, various vapors, gases and tars emitted during carbonization of coal to produce coke. The primary use of coke (pure carbon) is in the manufacture of iron and steel. Coke is also used to synthesize calcium carbide and to manufacture graphite and electrodes.	Coke oven emissions are not expected to be present in the building.	N/A
Ethylene Oxide	Ethylene Oxide is an extremely flammable gas used in the manufacture of several industrial chemicals including textiles, detergents, polyurethane foam, antifreeze (especially ethylene glycol), solvents, medicinal products, adhesives, and other related products. It is also used as a fumigant and as a sterilizing agent for food (spices), cosmetics, and surgical tool and plastic devices in hospitals as an alternative to steam.	Ethylene Oxide is not expected to be present in the building.	N/A

MATERIAL	DESCRIPTION	FINDINGS	ACTION
Isocyanates	Isocyanates are the raw materials from which all polyurethane products are made. Isocyanates are widely used in the manufacture of flexible and rigid foams, fibres, coatings such as paints and varnishes, elastomers, and also in materials used in auto body repair and building insulation.	Isocyanates are not expected to be present in the building.	N/A

6 LIMITATIONS

As this survey was generally non-destructive in nature, asbestos could be present in areas not accessible to the surveyors for identification. Contractors and maintenance personnel should be warned of the possibility of unidentified materials when breaking into enclosed areas. Suspect friable and non-friable building materials discovered in these areas should be treated as asbestos until proven otherwise. Materials equivalent or identical in description to those listed in **Table 3**, should be considered to be ACM and handled appropriately.

This report is prepared for the sole use of the Corporation of the Town of Prescott, who are responsible for its distribution to any third parties. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third party. The conclusions and recommendations contained in this assessment report are based upon professional opinions with regard to the subject matter. These opinions are in accordance with currently accepted industry practices for asbestos surveys and regulatory requirements for sampling and identifying asbestos and are subject to the following inherent limitations:

1. The data and findings presented in this report are valid as of the date(s) of the investigation only. The passage of time, manifestation of latent conditions or occurrence of future events may warrant further exploration of the Site, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report.
2. The findings, observations, conclusions, and recommendations expressed by WSP Canada Inc. in this report do not represent an opinion concerning compliance of any past or present owner or operator of the Site with any federal, provincial or local laws or regulations.
3. WSP Canada Inc.'s assessment presents professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental and occupational health & safety laws and regulations, the report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental and occupational health and safety laws, rules, regulations or policies of federal, provincial, or local governmental agencies. WSP Canada Inc. liability extends only to its client and not to other parties who may obtain this assessment report. Issues raised by the report should be reviewed by appropriate legal counsel.

APPENDIX

A

ANALYTICAL RESULTS – ASBESTOS & LEAD



Certificate of Analysis

WSP Canada Inc. (Cornwall)

1345 Rosemount Ave.
Cornwall, ON K6J 3E5
Attn: Jason White

Client PO: 171-15057-01
Project: Prescott Forwarders Museum
Custody:

Report Date: 1-Nov-2017
Order Date: 26-Oct-2017

Order #: 1743396

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

Paracel ID	Client ID
1743396-01	FM-1-52A-A (White Plaster)
1743396-02	FM-1-52A-B (White Plaster)
1743396-03	FM-1-52A-C (White Plaster)
1743396-04	FM-6-52A-A (White Plaster)
1743396-05	FM-6-52A-B (White Plaster)
1743396-06	FM-8-52A-A (White Plaster)
1743396-07	FM-8-52A-B (White Plaster)
1743396-08	FM-1-52A-A (Grey Coat)
1743396-09	FM-1-52A-B (Grey Coat)
1743396-10	FM-1-52A-C (Grey Coat)
1743396-11	FM-6-52A-A (Grey Coat)
1743396-12	FM-6-52A-B (Grey Coat)
1743396-13	FM-8-52A-A (Grey Coat)
1743396-14	FM-8-52A-B (Grey Coat)
1743396-15	FM-10-52B
1743396-16	FM-11-52B
1743396-17	FM-12-52B
1743396-18	FM-1-60-A
1743396-19	FM-1-60-B
1743396-20	FM-1-60-C
1743396-21	FM-Ext-60B-A
1743396-22	FM-Ext-60B-B
1743396-23	FM-Ext-60B-C
1743396-24	FM-Ext-60B-D
1743396-25	FM-Ext-60B-E
1743396-26	FM-8-47A-A

Approved By:



Emma Diaz
Senior Analyst

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis

Report Date: 01-Nov-2017

Client: **WSP Canada Inc. (Cornwall)**

Order Date: 26-Oct-2017

Client PO: 171-15057-01

Project Description: Prescott Forwarders Museum

1743396-27	FM-8-47A-B
1743396-28	FM-8-47A-C
1743396-29	FM-9-51-A
1743396-30	FM-9-51-B
1743396-31	FM-9-51-C
1743396-32	FM-9-59-A
1743396-33	FM-9-59-B
1743396-34	FM-9-59-C

Certificate of Analysis
 Client: **WSP Canada Inc. (Cornwall)**
 Client PO: **171-15057-01**

Report Date: 01-Nov-2017
 Order Date: 26-Oct-2017

Project Description: **Prescott Forwarders Museum**

Asbestos, PLM Visual Estimation **MDL - 0.5%**

<i>Parcel I.D.</i>	<i>Sample Date</i>	<i>Layers Analyzed</i>	<i>Colour</i>	<i>Description</i>	<i>Asbestos Detected:</i>	<i>Material Identification</i>	<i>% Content</i>
1743396-01	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-1-52A-A (White Plaster) Non-Fibers	100
1743396-02	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-1-52A-B (White Plaster) Non-Fibers	100
1743396-03	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-1-52A-C (White Plaster) Non-Fibers	100
1743396-04	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-6-52A-A (White Plaster) Non-Fibers	100
1743396-05	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-6-52A-B (White Plaster) Non-Fibers	100
1743396-06	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-8-52A-A (White Plaster) Non-Fibers	100
1743396-07	25-Oct-17	sample homogenized	White	Plaster	No	Client ID: FM-8-52A-B (White Plaster) Non-Fibers	100
1743396-08	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-1-52A-A (Grey Coat) Non-Fibers	100
1743396-09	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-1-52A-B (Grey Coat) Non-Fibers	100
1743396-10	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-1-52A-C (Grey Coat) Non-Fibers	100
1743396-11	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-6-52A-A (Grey Coat) Non-Fibers	100
1743396-12	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-6-52A-B (Grey Coat) Non-Fibers	100
1743396-13	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-8-52A-A (Grey Coat) Non-Fibers	100
1743396-14	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-8-52A-B (Grey Coat) Non-Fibers	100
1743396-15	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-10-52B Non-Fibers	100
1743396-16	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-11-52B Non-Fibers	100
1743396-17	25-Oct-17	sample homogenized	Grey	Plaster	No	Client ID: FM-12-52B Non-Fibers	100

Certificate of Analysis
 Client: **WSP Canada Inc. (Cornwall)**
 Client PO: **171-15057-01**

Report Date: 01-Nov-2017
 Order Date: 26-Oct-2017

Project Description: **Prescott Forwarders Museum**

Asbestos, PLM Visual Estimation **MDL - 0.5%**

<i>Parcel I.D.</i>	<i>Sample Date</i>	<i>Layers Analyzed</i>	<i>Colour</i>	<i>Description</i>	<i>Asbestos Detected:</i>	<i>Material Identification</i>	<i>% Content</i>
1743396-18	25-Oct-17	sample homogenized	White	Stucco	No	Client ID: FM-1-60-A Non-Fibers Other fibers	99 1
1743396-19	25-Oct-17	sample homogenized	White	Stucco	No	Client ID: FM-1-60-B Non-Fibers Other fibers	99 1
1743396-20	25-Oct-17	sample homogenized	White	Stucco	No	Client ID: FM-1-60-C Non-Fibers Other fibers	99 1
1743396-21	25-Oct-17	sample homogenized	Grey	Stucco	No	Client ID: FM-Ext-60B-A Non-Fibers	100
1743396-22	25-Oct-17	sample homogenized	Grey	Stucco	No	Client ID: FM-Ext-60B-B Non-Fibers	100
1743396-23	25-Oct-17	sample homogenized	Grey	Stucco	No	Client ID: FM-Ext-60B-C Non-Fibers	100
1743396-24	25-Oct-17	sample homogenized	Grey	Stucco	No	Client ID: FM-Ext-60B-D Non-Fibers	100
1743396-25	25-Oct-17	sample homogenized	Grey	Stucco	No	Client ID: FM-Ext-60B-E Non-Fibers	100
1743396-26	25-Oct-17	sample homogenized	Grey	Stone Mortar	No	Client ID: FM-8-47A-A Non-Fibers	100
1743396-27	25-Oct-17	sample homogenized	Grey	Stone Mortar	No	Client ID: FM-8-47A-B Non-Fibers	100
1743396-28	25-Oct-17	sample homogenized	Grey	Stone Mortar	No	Client ID: FM-8-47A-C Non-Fibers	100
1743396-29	25-Oct-17	sample homogenized	Grey/Brown	Drywall	No	Client ID: FM-9-51-A Cellulose Non-Fibers	10 90
1743396-30	25-Oct-17	sample homogenized	Grey/Brown	Drywall	No	Client ID: FM-9-51-B Cellulose Non-Fibers	10 90
1743396-31	25-Oct-17	sample homogenized	Grey/Brown	Drywall	No	Client ID: FM-9-51-C Cellulose Non-Fibers	10 90

Certificate of Analysis
 Client: **WSP Canada Inc. (Cornwall)**
 Client PO: **171-15057-01**

Report Date: 01-Nov-2017
 Order Date: 26-Oct-2017

Project Description: Prescott Forwarders Museum

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1743396-32	25-Oct-17	sample homogenized	White	Drywall Joint Compound	No	Client ID: FM-9-59-A Non-Fibers	100
1743396-33	25-Oct-17	sample homogenized	White	Drywall Joint Compound	No	Client ID: FM-9-59-B Non-Fibers	100
1743396-34	25-Oct-17	sample homogenized	White	Drywall Joint Compound	No	Client ID: FM-9-59-C Non-Fibers	100

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code *	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	2 - Ottawa West Lab	200812-0	31-Oct-17

** Reference to the NVLAP term does not permit the user of this report to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.*

Work Order Revisions / Comments

None



Parcel ID: 1743396



Laurent Blvd.
 rio K1G 4J8
 1947
 paracellabs.com

Chain of Custody

(Lab Use Only)

Page 1 of 3

Client Name: WSP	Project Reference: Prescott Forwarders Museum	Turnaround Time: <input type="checkbox"/> Immediate <input type="checkbox"/> 1 Day <input type="checkbox"/> 4 Hour <input type="checkbox"/> 2 Day <input type="checkbox"/> 8 Hour <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Regular Date Required: _____
Contact Name: Jason White	Quote #: #17-295 WSP Cornwall	
Address: 1345 Rosemount Avenue Cornwall, ON	PO #: 171-15057-01	
Telephone: 613-933-5602	Email Address: jason.white@wsp.com	

ASBESTOS & MOLD ANALYSIS

Matrix: Air Bulk Tape Lift Swab Other Regulatory Guideline: ON QC AB SK Other: _____

Analyses: Microscopic Mold Culturable Mold Bacteria GRAM PCM Asbestos PLM Asbestos Chatfield Asbestos TEM Asbestos

Parcel Order Number: 1743396		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk		
Sample ID	Identify Distinct Building Materials to Be Analyzed * see below				Combine Identified Materials? **see below	Positive Stop?	
1	FM-1-52A-A	October 25/17		PLM	Plaster, white and grey cont	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	-B				" " " "	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	-C				" " " "	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	FM-6-52A-A				" " " "	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	-B				" " " "	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	FM-8-52A-A				" " " "	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	-B				" " " "	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	FM-10-52B				Plaster, grey cont only	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	FM-11-52B				" " " "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	FM-12-52B				" " " "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	FM-1-60-A				Wall stucco	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	-B				" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

* If left blank, Paracel will analyze all materials identified during analysis ** If left blank, Paracel will analyze all materials as individual samples (at additional cost) per EPA 600/R-93/116

Comments: red bracket indicates groupings for stop positive testing Method of Delivery: Paracelator

Relinquished By (Sign): <u>Jason White</u>	Received at Depot:	Received at Lab: <u>Karen Cull</u>	Verified By: <u>Karen Cull</u>
Relinquished By (Print): <u>Jason White</u>			
Date/Time: <u>October 25 2017</u>	Date/Time:	Date/Time: <u>Oct 26/17 9:10</u>	Date/Time: <u>Oct 26/17 10:24</u>



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Parcel ID: 1743396



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Chain of Custody
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Page 2 of 3

Client Name: WSP	Project Reference: Prescott Forwarders Museum	Turnaround Time: <input type="checkbox"/> Immediate <input type="checkbox"/> 1 Day <input type="checkbox"/> 4 Hour <input type="checkbox"/> 2 Day <input type="checkbox"/> 8 Hour <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Regular
Contact Name: Jason White	Quote #: #17-295 WSP Cornwall	
Address: 1345 Rosemount Avenue Cornwall, ON	PO #: 171-15057-01 Email Address: jason.white@wsp.com	
Telephone: 813-933-5602		

Date Required: _____

ASBESTOS & MOLD ANALYSIS

Matrix: Air Bulk Tape Lift Swab Other Regulatory Guideline: ON QC AB SK Other: _____

Analyses: Microscopic Mold Culturable Mold Bacteria GRAM PCM Asbestos PLM Asbestos Chatfield Asbestos TEM Asbestos

Paracel Order Number: 1743396		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk		
Sample ID	Identify Distinct Building Materials to Be Analyzed * see below				Combine Identified Materials? **see below	Positive Stop?	
1	FM-1-60-C	October 25/17		PLM	Wall Stucco	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	FM-Ext-60B-A				Exterior wall stucco	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	-B				" " "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	-C				" " "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	-D				" " "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	-E				" " "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	FM-8-47A-A				Stone mortar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	-B				" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	-C				" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	FM-9-51-A				Drywall	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	-B				" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	-C				" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

* If left blank, Paracel will analyze all materials identified during analysis ** If left blank, Paracel will analyze all materials as individual samples (at additional cost) per EPA 600/R-93/116

Comments: red bracket indicates groupings for stop positive testing

Method of Delivery:

Purolator

Relinquished By (Sign): <i>Jason White</i>	Received at Depot:	Received at Lab: <i>Karen Gull</i>	Verified By: <i>Karen Gull</i>
Relinquished By (Print): Jason White		Date/Time: Oct 26/17 9:10	Date/Time: Oct 26/17 10:24



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Chain of Custody
(Lab Use Only)

Page 3 of 3

Client Name: WSP	Project Reference: Prescott Forwarders Museum	<input type="checkbox"/> Immediate <input type="checkbox"/> 1 Day <input type="checkbox"/> 4 Hour <input type="checkbox"/> 2 Day <input type="checkbox"/> 8 Hour <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Regular
Contact Name: Jason White	Quote #: #17-295 WSP Cornwall	
Address: 1345 Rosemount Avenue Cornwall, ON	PO #: 171-15057-01	
Telephone: 813-933-5602	Email Address: jason.white@wsp.com	

Date Required: _____

ASBESTOS & MOLD ANALYSIS

Matrix: Air Bulk Tape Lift Swab Other
 Regulatory Guideline: ON QC AB SK Other: _____

Analyses: Microscopic Mold Culturable Mold Bacteria GRAM PCM Asbestos PLM Asbestos Chatfield Asbestos TEM Asbestos

Parcel Order Number: 1743396		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk		
Sample ID	Identify Distinct Building Materials to Be Analyzed * see below				Combine Identified Materials? **see below	Positive Stop?	
1 FM-9-59-A	October 25/17		PLM	Joint compound	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2 -B	↓		↓	" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3 -C	↓		↓	" "	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4					<input type="checkbox"/>	<input type="checkbox"/>	
5					<input type="checkbox"/>	<input type="checkbox"/>	
6					<input type="checkbox"/>	<input type="checkbox"/>	
7					<input type="checkbox"/>	<input type="checkbox"/>	
8					<input type="checkbox"/>	<input type="checkbox"/>	
9					<input type="checkbox"/>	<input type="checkbox"/>	
10					<input type="checkbox"/>	<input type="checkbox"/>	
11					<input type="checkbox"/>	<input type="checkbox"/>	
12					<input type="checkbox"/>	<input type="checkbox"/>	

* If left blank, Paracel will analyze all materials identified during analysis ** If left blank, Paracel will analyze all materials as individual samples (at additional cost) per EPA 600/R-93/116

Comments: red bracket indicates groupings for stop positive testing

Method of Delivery: Purulator

Relinquished By (Sign): <i>Jason White</i>	Received at Depot:	Received at Lab: <i>Karen Cull</i>	Verified By: <i>Karen Cull</i>
Relinquished By (Print): Jason White			
Date/Time: October 25 2017	Date/Time:	Date/Time: Oct 26/17 9:10	Date/Time: Oct 26/17 10:24

Certificate of Analysis

WSP Canada Inc. (Cornwall)

1345 Rosemount Ave.
Cornwall, ON K6J 3E5
Attn: Jason White

Client PO: 171-15057-01
Project: Prescott Forwarders Museum
Custody:

Report Date: 30-Oct-2017
Order Date: 26-Oct-2017

Order #: 1743413

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

Parcel ID	Client ID
1743413-01	FM-4-301 (Beige)
1743413-02	FM-4-301 (White)
1743413-03	FM-6-301 (Light Grey)
1743413-04	FM-Ext-301 (Blue)
1743413-05	FM-Ext-301 (White)

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis
Client: **WSP Canada Inc. (Cornwall)**
Client PO: 171-15057-01

Report Date: 30-Oct-2017

Order Date: 26-Oct-2017

Project Description: **Prescott Forwarders Museum**

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-OES	based on MOE E3470, ICP-OES	27-Oct-17	27-Oct-17

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

- n/a: not applicable
- ND: Not Detected
- MDL: Method Detection Limit
- Source Result: Data used as source for matrix and duplicate samples
- %REC: Percent recovery.
- RPD: Relative percent difference.

Certificate of Analysis
 Client: WSP Canada Inc. (Cornwall)
 Client PO: 171-15057-01

Report Date: 30-Oct-2017
 Order Date: 26-Oct-2017
 Project Description: Prescott Forwarders Museum

Sample Results

Lead				Matrix: Paint
				Sample Date: 24-Oct-17
Paracel ID	Client ID	Units	MDL	Result
1743413-01	FM-4-301 (Beige)	ug/g	20	69000
1743413-02	FM-4-301 (White)	ug/g	20	3630
1743413-03	FM-6-301 (Light Grey)	ug/g	20	635
1743413-04	FM-Ext-301 (Blue)	ug/g	20	36200
1743413-05	FM-Ext-301 (White)	ug/g	20	70

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	20	ug/g						
Matrix Duplicate									
Lead	8150	20	ug/g	7570			7.5	30	
Matrix Spike									
Lead	4090		ug/L	3780	124	70-130			



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Parcel ID: 1743413



Chain of Custody
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Page 1 of 1

Client Name: WSP Canada Inc.	Project Reference: Prescott Forwarders Museum	TAT: <input checked="" type="checkbox"/> Regular <input type="checkbox"/> 3 Day
Contact Name: Jason White	Quote #: #17-295 WSP Cornwall	<input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day
Address: 1345 Rosemount Ave Cornwall, ON K6J 3E5	PO #: 171-15057-01	Date Required: _____
Telephone: 613-933-5602	Email Address: jason.white@wsp.com	

Criteria: O. Reg. 153/04 (As Amended) Table RSC Filing O. Reg. 558/00 PWO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm Sanitary Sewer) P (Paint) A (Air) O (Other) **Required Analyses**

Parcel Order Number: 1743413		Matrix	Air Volume	# of Containers	Sample Taken		PHCS F1-F4+BTEX	VOCS	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Lead						
Sample ID/Location Name					Date	Time														
1	FM-4-301 (beige)	P			02/24/17	PM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	FM-4-301 (White)	P			↓	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	FM-6-301 (Light Green)	P			↓	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	FM-Ext-301 (Blue)	P			↓	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	FM-Ext-301 (White)	P			↓	↓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: Lead paint samples. Method of Delivery: Purclator

Relinquished By (Sign): <i>Jason White</i>	Received by Driver/Depot: <i>Karen Gull</i>	Received at Lab: <i>Backed submit</i>	Verified By: <i>[Signature]</i>
Relinquished By (Print): Jason White	Date/Time: Oct 26/17 9:10	Date/Time: Oct 26/17	Date/Time: Oct 26/17 11:36
Date/Time: October 25 2017	Temperature: _____ °C	Temperature: _____ °C	pH Verified By: _____

APPENDIX

B

SITE PHOTOGRAPHS





PHOTO NO.	MATERIAL DESCRIPTION & LOCATION	PHOTO
1	<p><u>Forwarders Museum and Visitor Information Centre</u> (“subject building”) building exterior.</p>	
2	<p><u>Plaster - Type A, white and grey coat</u> (Non-Asbestos) observed in Room 1 and throughout the subject building.</p>	




PHOTO NO.	MATERIAL DESCRIPTION & LOCATION	PHOTO
3	<p><u>Fibreglass insulation</u> (Non-Asbestos) observed in the attic of the subject building.</p>	
4	<p><u>Drywall</u> (Non-Asbestos) and <u>joint compound</u> (Non-Asbestos) observed in Room 9.</p>	

PHOTO NO.	MATERIAL DESCRIPTION & LOCATION	PHOTO
5	<p><u>Plaster - Type B, grey coat only</u> (Non-Asbestos) observed in Rooms 10, 11, 12, and 13.</p>	
6	<p><u>Stucco - Type B, exterior wall stucco</u> (Non-Asbestos) observed on the subject building exterior.</p>	

APPENDIX

C

EVALUATION CRITERIA



A description of the criteria used in evaluating the condition, accessibility and exposure risk of asbestos-containing materials (ACM) is provided below.

Assessment of Condition

Spray-Applied Fireproofing, Insulation and Textured Finishes

In evaluating the condition of ACM spray applied as fireproofing, thermal insulation or texture, decorative or acoustic finishes, the following criteria apply:

Good

Surface of material shows no significant signs of damage, deterioration or delamination. Up to one percent visible damage to surface is allowed within range of GOOD. Evaluation of sprayed fireproofing requires the Assessor to be familiar with the irregular surface texture typical of sprayed asbestos products. GOOD condition includes unencapsulated or unpainted fireproofing or texture finishes, where no delamination or damage is observed, and encapsulated fireproofing or texture finishes where the encapsulation has been applied after the damage or fallout occurred.

Poor

Sprayed materials show signs of damage, delamination or deterioration. More than one percent damage to surface of ACM spray.

In observation areas, where damage exists in isolated locations, both GOOD and POOR condition may be reported. The extent or percentage of each condition will be recorded on the Assessor reassessment form.

FAIR condition is not utilized or considered as a valid criterion in the evaluation of sprayed fireproofing, sprayed insulation, or texture coat finishes.

The evaluation of ACM spray applied as fireproofing, non-mechanical thermal insulation, or texture, decorative or acoustic finishes which are present above ceilings, may be limited by the number of observations made, and by building components such as ducts or full height walls that obstruct the above ceiling observations. Persons entering the ceiling area are advised to be watchful for ACM DEBRIS prior to accessing or working above ceilings in areas of building with ACM, regardless of the reported condition.

Other ACM

In evaluating the condition of mechanical insulation (on boilers, breaching, ductwork, piping, tanks, equipment etc.) the following criteria are used:

Good

Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor surface damage (i.e., scuffs or stains), but the jacketing is not penetrated.

Fair

Minor penetration damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that has never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges should be minor to none.

Poor

Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired. The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or full height walls that obstruct observations. In these circumstances, it is not possible to observe each foot of mechanical insulation from all angles.



Non-Friable and Potentially Friable Materials

Non-friable materials generally have little potential to release airborne fibres, even when damaged by mechanical breakage. However, some non-friable materials, i.e., exterior asbestos cement products, may have deteriorated so that the binder no longer effectively contains the asbestos fibres. In such cases of significantly deteriorated non-friable material, the material will be treated as a friable product.

Evaluation of Accessibility

The accessibility of building materials known or suspected of being ACM is rated according to the following criteria:

Access (A)

Areas of the building within reach of all building users. Includes areas such as gymnasiums, workshops, and storage areas where activities of the building users may result in disturbance of ACM not normally within reach from floor level.

Access (B)

Frequently entered maintenance areas within reach of maintenance staff, without the need for a ladder. Includes: frequently entered pipe chases, tunnels and service areas or areas within reach from a fixed ladder or catwalk, i.e., tops of equipment, mezzanines.

Access (C) Exposed

Areas of the building above 8'0" where use of a ladder is required to reach the ACM. Only refers to ACM materials that are exposed to view, from the floor or ladder, without removing or opening other building components such as ceiling tiles, or service access doors or hatches. Does not include infrequently accessed service areas of the building.

Access (C) Concealed

Areas of the building which require the removal of a building component, including lay-in ceilings and access panels into solid ceiling systems. Includes rarely entered crawl spaces, attic spaces, etc. Observations are limited to the extent visible from the access points.

Access (D)

Areas of the building behind inaccessible solid ceiling systems, walls, or mechanical equipment, etc. where demolition of the ceiling, wall or equipment, etc., is required to reach the ACM. Evaluation of the condition and extent of ACM is limited or impossible, depending on the Assessor's ability to visually examine the materials in Access D.

Definition of Action Levels

Based on the results of the inspection and bulk sample analysis of samples collected and submitted for testing, recommendations were provided for compliance with regulation. These include assigned “Action Levels” to assist in the prioritization of corrective measures. The measures that are to be taken for each “Action Level” are described in full in the following table:

Action Level	Required Action
“Action 1”	<p>Immediate Clean-Up of Debris that is Likely to Be Disturbed</p> <p>Restrict access that is likely to cause a disturbance of the ACM DEBRIS and clean up ACM DEBRIS immediately. Utilize correct asbestos procedures. This action is required for compliance with regulatory requirements. The surveyor will immediately notify the owner of this condition.</p>



<p>“Action 2”</p>	<p>Type 2 Precautions for Entry into Areas with ACM DEBRIS</p> <p>At locations where ACM DEBRIS can be isolated in lieu of removal or cleaned up, use appropriate means to limit entry to the area. Restrict access to the area to persons utilizing Type 2 asbestos precautions. The precautions will be required until the ACM DEBRIS has been cleaned up, and the source of the DEBRIS has been stabilized or removed.</p>
<p>“Action 3”</p>	<p>ACM Removal Required for Compliance</p> <p>Remove ACM for compliance with regulatory requirements. Utilize asbestos procedures appropriate to the scope of the removal work.</p>
<p>“Action 4”</p>	<p>Type 2 Precautions for Access into Areas Where ACM is Present and Likely to be Disturbed by Access</p> <p>Use Type 2 asbestos precautions when entry or access into an area is likely to disturb the ACM. ACTION 4 must be used until the ACM is removed (Use ACTION 1 or 2 if DEBRIS is present).</p>
<p>“Action 5”</p>	<p>Proactive ACM Removal</p> <p>Remove ACM in lieu of repair, or at locations where the presence of asbestos in GOOD condition is not desirable.</p>
<p>“Action 6”</p>	<p>ACM Repair</p> <p>Repair ACM found in FAIR condition, and not likely to be damaged again or disturbed by normal use of the area or room. Upon completion of the repair work, treat ACM as material in GOOD condition and implement ACTION 7. If ACM is likely to be damaged or disturbed, during normal use of the area or room, implement ACTION 5.</p>
<p>“Action 7”</p>	<p>Asbestos Management Program with Routine Surveillance</p> <p>Implement an Asbestos Management Program, including routine surveillance of ACM. Trained workers or contractors must use appropriate asbestos precautions (Type 1, Type 2 or Type 3) during disturbance of the remaining ACM.</p>

APPENDIX

D

GLOSSARY OF TERMS



Accessibility: The terms easily accessible, less accessible, and inaccessible are used to describe the ease with which asbestos can be accessed by tenants, the public, employees and contractors in the building. **Easily accessible** indicates that ACM is visible from the floor and can be touched by building occupants, and therefore has a potential for significant damage. **Less accessible** indicates that ACM is not visible from the floor, or if it is visible, it is high enough not to be touched by building occupants, and has a potential for damage. **Inaccessible** indicates that ACM is located behind masonry, drywall, or other types of solid enclosures and is only accessible after destruction of the enclosure, and has a low potential for damage.

ACM: Asbestos-Containing Material. A material that contains greater than 0.5% asbestos by dry weight as per Ontario Regulation 278/05 and is used to refer to the vastly different types of such material.

Amosite: The technical name for 'brown' asbestos.

AMP: Asbestos Management Plan

Asbestos: A mineral fiber that can pollute air or water and cause cancer or asbestosis when inhaled.

Asbestos Abatement: Procedures to control fiber release from asbestos-containing materials in a building or to remove them entirely, including removal, encapsulation, repair, enclosure, encasement, and operations and maintenance programs.

Asbestos Cement: A hard product that contains up to 15% asbestos fibres which can be any of the three main types. This is a relatively safe material provided it remains intact as the cement binds the asbestos fibres; breakage will lead to fibre release. When used for roofing the risks to operatives are far greater from falls than asbestos exposure.

Asbestos Control: Minimizing the generation of airborne asbestos fibres until a permanent solution is developed.

Asbestos Debris: Pieces of an ACM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.

Asbestos Fibres: Fibres with their length being greater than five microns (length to width ratio of 3:1), generated from an asbestos-containing material.

BAS: Building Asbestos Supervisor.

Bulk Sample: A sample of material such as boarding, insulation or debris taken by an accredited surveyor to be tested for asbestos fibre content by an accredited laboratory.

Chrysotile: The technical name for 'white' asbestos.

Condition: The condition of ACM is described using the designations: good, fair and poor. **Good** refers to ACM with no visible damage or deterioration, or showing only very limited damage or deterioration. **Fair** refers to ACM with some damage or deterioration (less than 10% of the material). **Poor** refer to ACM that is significantly damaged or deteriorated (at least 10% of the material).

CRD: Construction, Renovation and/or Demolition related activities.

Crocidolite: The technical name for 'blue' asbestos.

Designated Substances Regulations: A series of Regulations made by the Ministry of Labour under the Occupational Health and Safety Act. The regulations provide management protocols and guidelines to the following eleven substances: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride.

Demolition: Complete dismantling or the complete or partial destruction of a building, structure, ship or plant such that it cannot be used in that form again.

Friable ACM: Any material that contains more than 0.5% asbestos by weight and can be crumbled, pulverized, or reduced to powder by the pressure of an ordinary human hand.

HEPA Filter: High Efficiency Particulate Air Filter.

Homogeneous Area: Defined by the US EPA as containing material that is uniform in texture and appearance, was installed at one time and is unlikely to consist of more than one type or formulation of material.

Major Action: All response actions requiring Type 3 ACM Removal Procedures, or Type 2 Removal Procedures involving the removal of friable ACM and provisions of an enclosure.

Management Survey: A survey carried out without disturbing any part of the fabric, components or finishes. Samples may be taken.

MOL: Ministry of Labour.

O&M: Operations and Maintenance Program.

O. Reg.: Ontario Regulations.

Non-Friable ACM: Any material that contains more than 0.5% asbestos by weight but cannot be pulverized under hand pressure.

PACM: Presumed Asbestos-Containing Materials. All thermal system insulation, surfacing material and asphalt/vinyl flooring in a building constructed prior to 1981 that has not been appropriately tested are presumed asbestos containing materials.

PPE: Personal Protective Equipment such as overalls, masks, gloves etc.

Pre-Demolition Survey: A survey similar to the Refurbishment Survey but also taking core samples from partitions, lifting floorboards and investigating back to the structure where possible.

Refurbishment Survey: A survey similar to the Management Survey but also involves entering into accessible ducts, suspended ceilings and other accessible voids. Samples are almost always taken.

RPE: Respiratory Protective Equipment. The different types of face masks worn appropriate to the risk. Where the risk assessment shows that the Control Limit will be exceeded RPE must be worn.

Surveyor: Any person who contracts to provide professional health and safety services relating to asbestos-containing construction material. The activities of a surveyor include building inspection, abatement project design, contract administration, sample collection, preparation of asbestos management plans, clearance monitoring, and supervision of site surveillance technicians.

Type 1: Asbestos Abatement Operation with ACM as an operation described by O. Reg. 278/05 in subsection 12 (2), generally an operation that does not cause asbestos fibres to become airborne.

Type 2: Asbestos Abatement Operation with ACM as an operation described by O. Reg. 278/05 in subsection 12 (3), generally a major operation with limited scope of work.

Type 3: Asbestos Abatement Operation with ACM as an operation described by O. Reg. 278/05 in subsection 12 (4), generally a major operation.

APPENDIX

E

DRAWINGS

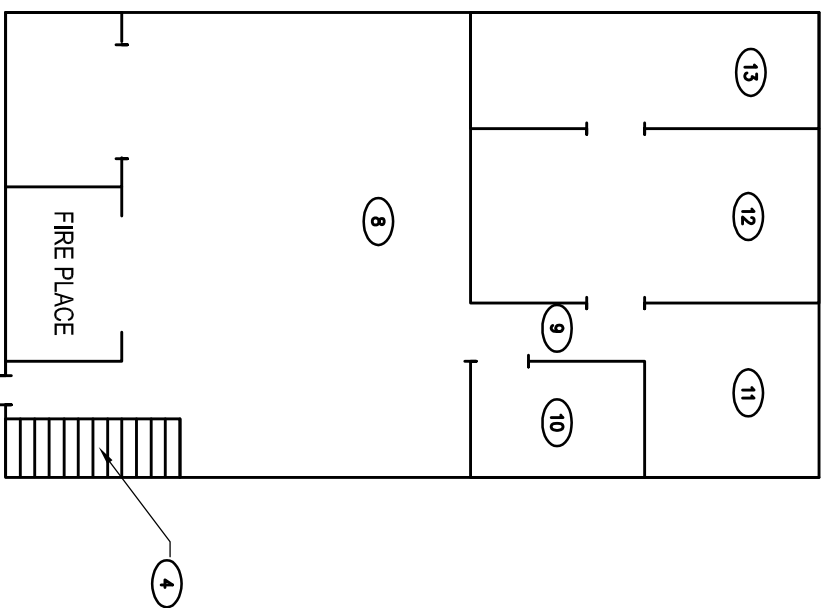


LEGEND

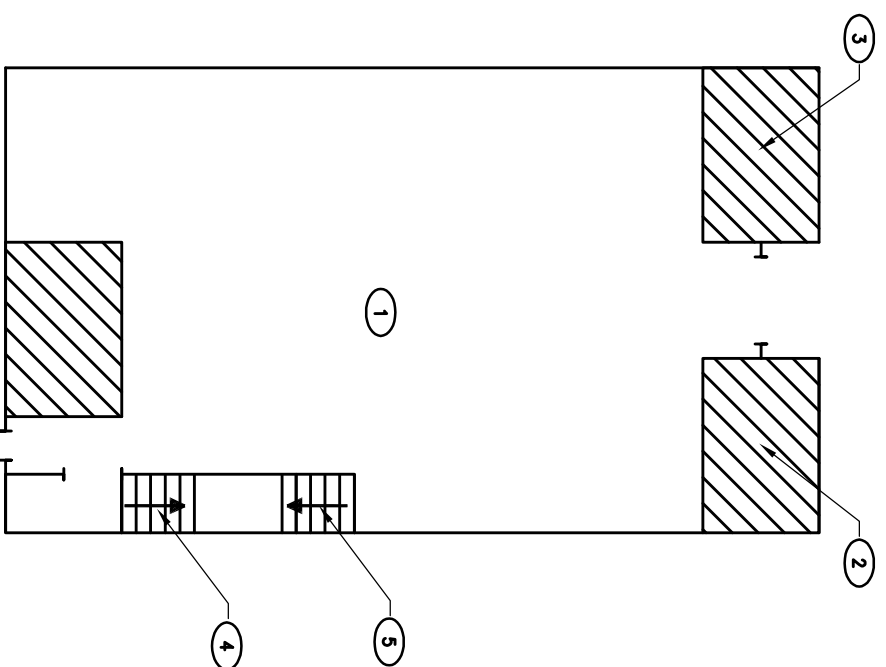
① ROOM NUMBER

THE FOLLOWING MATERIALS CONTAIN
ASBESTOS / HAZARDOUS MATERIALS:

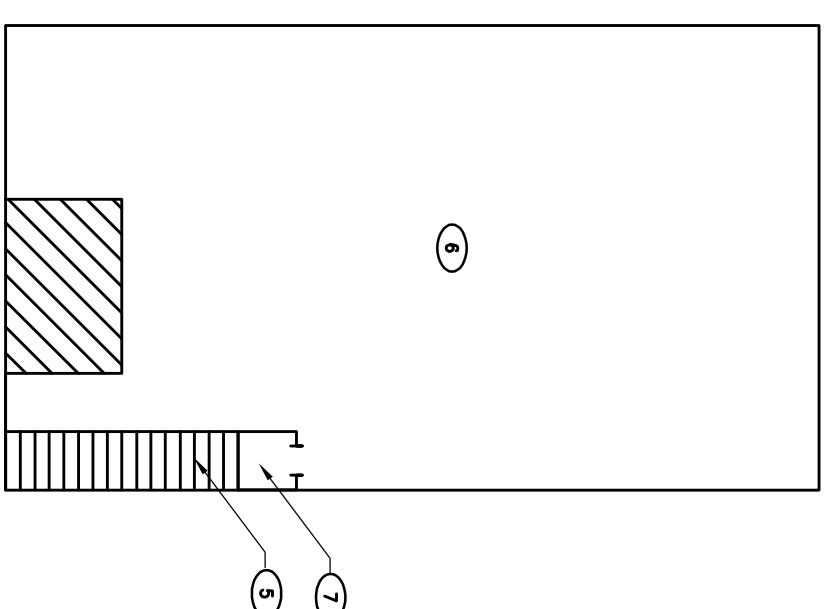
- ASBESTOS WAS NOT IDENTIFIED



BASEMENT



FIRST FLOOR



SECOND FLOOR



1345 ROSEMOUNT AVENUE
CORNWALL, ONTARIO
CANADA K6J 3E5
PHONE: 613-893-8902 FAX: 613-896-0333
WWW.WSPGROUP.COM

PROJECT:

CLIENT: CORPORATION OF THE TOWN OF PRESCOTT
FORWARDERS MUSEUM AND VISITOR INFORMATION CENTRE - 201 WATER STREET, PRESCOTT, ON - DESIGNATED SUBSTANCES SURVEY

TITLE:

FLOOR PLAN

SCALE:
N.T.S.

DATE:
NOVEMBER 2017

PROJECT NO:
171-15057-01

DRAWING NO:

FIG.1