DESIGNATED SUBSTANCE AND HAZARDOUS MATERIALS SURVEY
PIN: No PIN
3 Reesor Road, Toronto, ON

Rouge National Urban Park

March 27, 2020

Prepared for:

Public Services and Procurement Canada on behalf of Parks Canada Agency
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Stantec Project No: 122151011
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Executive Summary

Stantec Consulting Ltd. (Stantec) was engaged by Public Services and Procurement Canada (PSPC) on behalf of Parks Canada Agency (PCA) to conduct a designated substances and hazardous materials survey of the house located at 3 Reesor Road in Toronto, Ontario. This site does not have a Property Identification Number (PIN).

The purpose of the survey was to identify actual and potential designated substances and hazardous building materials and update the asbestos inventory in the PCA asbestos management plan for the Rouge National Urban Park (RNUP). The work was carried out in accordance with the requirements of the *Canada Labour Code Part II*, *Canada Occupational Health and Safety Regulations*, *National Joint Council Occupational Health and Safety Directive,* PCA *Asbestos Management Standard & Procedures* (December 2018) and provincial regulations including Ontario Regulation 278/05 Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05). The designated substances assessment list includes those substances designated under the *Ontario Occupational Health and Safety Act* and included (but were not limited to) asbestos, lead, mercury and silica as the most likely to be present. In addition to designated substances, the hazardous building materials considered in this assessment included: polychlorinated biphenyls (PCBs); halocarbons; urea-formaldehyde foam insulation (UFFI); mould; fuel oil and/or waste oil storage; chemical storage; and radioactive materials.

The following designated substances and hazardous materials were identified to be present.

- Asbestos
- Lead
- Silica
- Mould
- Radioactive sources

Mercury, PCBs, halocarbons, UFFI and fuel oil and/or waste oil storage and chemical storage were not observed to be present.

Other Designated Substances (acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, vinyl chloride) are not typically a concern in building materials, and therefore these substances were not investigated.

BGIS is the Property Manager for the RNUP and the National Service Call Centre (NSCC) is where tenants can address maintenance requests, including emergencies.

Asbestos-Containing Materials

Samples of suspect asbestos-containing materials (ACMs) were collected and analyzed for asbestos. Building materials suspected to be asbestos-containing have been identified by laboratory analysis to contain asbestos. A material is considered to be asbestos-containing if it has an asbestos content of 0.5% or more as defined by O. Reg. 278/05.

The ACMs can be left in place, and no abatement operations are required.

On an annual basis, the ACMs and PACMs inventory should be updated through a reassessment based primarily on change in condition and quantity.

Lead

Samples of paint applications were collected and submitted for lead content analysis. Paint applications were identified by laboratory analysis to contain lead over 90 ppm. PCA uses the *Surfacing Coating Materials Regulation SOR/2016-193* limit of 90 ppm as the criteria to manage paint applications.

Lead may also be present in the following materials:

- Other coating applications not tested
- Older electrical wiring materials and sheathing
- Solder used on domestic water lines
- Solder used in bell fittings for cast iron pipes
- Solder used in electrical equipment
- Ceramic tile glaze
- Vent and pipe flashings

Paint applications observed to be in poor condition should be cleaned up by removing loose paint following proper lead abatement procedures and repainting. Paint applications in good condition can remain in place.

Silica

Silica in its undisturbed states does not pose a concern in its present state.

Precautions should be taken as required during renovation projects impacting materials expected to contain silica (i.e., coring through concrete slabs, demolition of masonry or concrete units, ceramic tiles, brick, etc.) where dust may be generated. Whenever practical, changing how a process is preformed to lower the silica exposure is preferable. Wet methods reduce dust and should be used whenever practical, particularly in cutting, grinding, and drilling operations.

Mould

Suspect mould should be remediated by a competent person, who is knowledgeable about the potential hazards of mould exposure. Remediation should be completed in accordance with industry guidelines.

Radioactive Sources

Most household detectors contain a very small amount of americium-241, a radioactive isotope. The slight amount of radiation that can be measured outside the unit does not pose any health risk. The average annual radiation dose from smoke detectors per person represents 0.01 percent of the dose they receive from natural background radiation. The safe encapsulation and low amount of radioactive material make these devices completely safe under all conditions, even during or after a fire.

Table 1: Summary of Designated Substance and Hazardous Materials

Material	Sample ID	Description	Floor	Room	Estimated Quantity	Condition	Action	Photo
Asbestos	3 Ressor-BS-05A	12"x12" vinyl floor tile - beige	First	Hallway	3 sq. m	Good	ACTION 7	2
Lead	3 Reeser-PS-01	White coloured paint	First	Washroom	35 sq. m	Poor	Remove damaged paint and repair	3
	3 Reeser-PS-02	Black coloured paint	Second	Storage room 2	1 sq. m	Poor	Remove damaged paint and repair	4
	3 Reeser-PS-03	Green coloured paint	Second	Bedroom 7	12 sq. m	Poor	Remove damaged paint and repair	5
	3 Reeser-PS-04	White coloured paint	Exterior	Exterior	nq	Good	No action	-
Silica	Not sampled	Concrete, stone, and brick	Throughout	Throughout	nq	Good	No action	-
Mould	Not sampled	Suspect mould	First, second	Throughout	nq	Poor	No action	7, 8
Radioactive Sources	Not sampled	Smoke alarms	Throughout	Throughout	nq	Good	No action	-

Asbestos Action Levels

ACTION 1 Immediate clean-up of debris that is likely to be disturbed
ACTION 2 Entry into areas with asbestos-containing material debris requires intermediate risk precautions
ACTION 3 Asbestos-containing material removal required for compliance
ACTION 4 Access into areas where asbestos-containing material is present and likely to be disturbed by access requires intermediate risk precautions
ACTION 5 Proactive asbestos-containing material removal
ACTION 6 Asbestos-containing material repair
ACTION 7 Routine surveillance

Legend

nq – not quantified
sq. m – square meter
Ref – reference
BS – bulk sample

1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) was engaged by Public Services and Procurement Canada (PSPC) on behalf of Parks Canada Agency (PCA) to conduct a designated substances and hazardous materials survey of the house located at 3 Reesor Road in Toronto, Ontario. This site does not have a Property Identification Number (PIN).

The purpose of the survey was to identify actual and potential designated substances and hazardous building materials and update the asbestos inventory in the PCA asbestos management plan for the Rouge National Urban Park (RNUP). The work was carried out in accordance with the requirements of the *Canada Labour Code Part II*, *Canada Occupational Health and Safety Regulations*, *National Joint Council Occupational Health and Safety Directive,* PCA *Asbestos Management Standard & Procedures* (December 2018) and provincial regulations including Ontario Regulation 278/05 Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05). The designated substances assessment list includes those substances designated under the *Ontario Occupational Health and Safety Act* and included (but were not limited to) asbestos, lead, mercury and silica as the most likely to be present. In addition to designated substances, the hazardous building materials considered in this assessment included: polychlorinated biphenyls (PCBs); halocarbons; urea-formaldehyde foam insulation (UFFI); mould; fuel oil and/or waste oil storage; chemical storage; and radioactive materials.

The site work was conducted by Ronald Ng on November 5, 2019.

Parks Canada Agency commissioned this assessment as a measure of diligence in maintaining compliance with the aforementioned legislative framework. Following the identification of asbestos-containing materials (ACMs) or presumed asbestos-containing material (PACMs) the asbestos inventory will be updated in the PCA asbestos management plan for the RNUP.

2.0 SCOPE

The scope of work for this assessment involved the following:

- A review of existing information, including previous assessment and/or abatement documentation and discussions with site personnel, where available
- A visual assessment of readily accessible areas for the presence of designated substances and hazardous building materials
- The collection of representative bulk samples from building materials suspected of containing asbestos fibres
- The collection of paint chip samples for the determination of the lead content in paint finishes
- Submission of samples collected for laboratory analysis
- Evaluation and interpretation of field findings and previous analytical results to develop conclusions and recommendations pertaining to designated substances and hazardous building materials identified to be present
- Preparation of a report summarizing the field finding, laboratory results and providing recommendations for the management of designated substances and hazardous materials

3.0 DESIGNATED SUBSTANCES AND HAZARDOUS BUILDING MATERIALS ASSESSMENT

The results of the assessment for each of the considered designated substances and hazardous materials are provided in the following sub-sections. Refer to **Appendix A** for the completed and detailed regulatory framework and relevant legislation with respect to designated substances and hazardous building materials.

3.1 FACILITY DESCRIPTION

The house is located at 3 Reesor Road in Toronto, Ontario and consists of a two-storey building with a basement. The reported construction date of the house is unknown. The typical structural components and finishes associated with this building consist of brick exterior walls, various types of flooring including cement, vinyl floor tile, wood and interior plaster and drywall walls and ceilings.

The building was observed to be in a state of dilapidation. The ceiling was observed to be collapsed in various areas. The stairwell to basement 2 was observed to be partially collapsing.

3.2 DOCUMENT REVIEW

Stantec was not provided with previous reports for review for this property.

3.3 PROJECT-SPECIFIC LIMITATIONS

The assessment was limited to the house only. The roof area was assessed visually from the ground only due to the height of the roof.

The following areas were not accessed, for the reasons indicated:

- Basement 2 (no access – stairwell did not appear structurally sound)

3.4 ASBESTOS

3.4.1 Methodology

A visual assessment of accessible areas was undertaken in order to check for the presence and condition of materials suspected of containing asbestos. Locations to collect discrete bulk asbestos samples of suspect building materials were identified. Samples of representative materials were then collected at these locations.

The PCA *Asbestos Management Standard & Procedures* (December 2018) was used as the basis for the criteria that was applied in evaluating the presence of ACMs and PACMs, where applicable.

The sampling of representative suspect ACMs involved identifying homogeneous areas of suspect materials and collection of three to seven representative samples depending on the size of area occupied by the identified homogeneous material. O. Reg. 278/05 provides guidelines on bulk sampling of suspect ACMs based on type of material and quantity; the requirements are summarized in Table 2 below. Samples of suspect ACMs were collected using hand tools and placed in clearly labelled plastic bags. Labels identify the project specific sample ID, a description of the material sampled, and the specific location and date the sample was collected. A laboratory chain of custody was completed, and cross referenced with the labels on the sample bags for quality assurance purposes prior to submitting the samples for analysis.

Table 2: Summary of O. Reg 278/05 Sampling Requirements

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

Samples of suspect ACMs from various building materials were collected and submitted to EMSL Canada Inc. (EMSL), located in Mississauga, ON for analysis using Polarized Light Microscopy (PLM) with dispersion staining and Transmission Electron Microscopy (TEM) analysis for vinyl floor tile. The analysis was conducted following the U.S. EPA/600/R-93/116 Method. EMSL is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples. ACMs in Ontario are defined as a material that contains 0.5 per cent or more asbestos by dry weight.

A positive stop option is used during the analysis of samples. Multiple samples of visually similar material are collected and submitted for laboratory analysis. Once a sample within the set is identified to contain asbestos, further analysis of the subsequent samples is deemed to be unnecessary and not conducted and they are assumed to contain asbestos.

3.4.2 Findings

3.4.2.1 Asbestos-Containing Materials

Samples of 51 suspect asbestos-containing building materials were collected. A summary list of the bulk samples that were collected including a description of the material, sampling location, type of analysis and laboratory test results is provided in **Appendix D**. A copy of the laboratory Certificate of Analysis is provided in **Appendix E.**

Building materials suspected to be asbestos-containing have been identified to be asbestos-containing by laboratory analysis. A material is considered to be asbestos-containing if it has an asbestos content of 0.5% or more as defined by O. Reg. 278/05.

Presumed asbestos-containing materials were not observed to be present.

A summary of occurrences of ACMs is provided in **in** Table 5 below. Asbestos-containing materials were observed to be in good condition.

Photographs of the identified ACMs including damaged materials are provided in **Appendix B.** Floor plans showing the locations of ACMs and bulk samples are provided in **Appendix C.** The evaluation criterion for assessing ACMs and PACMs is provided in **Appendix H**.

Table 3: Asbestos-Containing Material Occurrences

Level	Room	Specific Location	Material Description	Estimated Quantity	Sample Number	Asbestos Content	Friable ?	Access	Condition	Action Level	Photo
1	Hallway	Floor	12"x12" vinyl floor tile - beige	3 sq. m	3 Ressor-BS-05A	1.1% chrysotile	No	A	Good	ACTION 7	2

Asbestos Actions

ACTION 1 Immediate clean-up of debris that is likely to be disturbed
ACTION 2 Entry into areas with asbestos-containing material debris requires intermediate risk precautions
ACTION 3 Asbestos-containing material removal required for compliance
ACTION 4 Access into areas where asbestos-containing material is present and likely to be disturbed by access requires intermediate risk precautions
ACTION 5 Proactive asbestos-containing material removal
ACTION 6 Asbestos-containing material repair
ACTION 7 Routine surveillance

Asbestos Accessibility

Access A Areas of the building within reach (from floor level) of all building users
Access B Frequently entered maintenance areas within reach of maintenance staff, without the need for a ladder
Access C Areas of the building above 8'0" where use of a ladder is required to reach the asbestos-containing material
Access D Areas of the building behind inaccessible solid ceiling systems, walls, or mechanical equipment, etc.

Legend

nq – not quantified
sq. m – square meter
Ref – reference
BS – bulk sample

3.4.2.2 Potential for Vermiculite Insulation

Based on building construction vermiculite is not suspected to be present.

3.4.2.3 Non-Asbestos-Containing Materials

A summary list of the bulk samples collected during this assessment and confirmed to be non-ACMs by laboratory analysis is provided in **Appendix D**.

3.4.3 Recommendations

The disturbance of ACMs on construction and demolition projects is governed by the Occupational Health and Safety Regulations, PCA AMP for RNUP, PSPC *Asbestos Management Standard (June 5, 2017, updated October 24, 2018)*, and O. Reg. 278/05. These regulations classify asbestos disturbances as Type 1 (Low Risk), Type 2 (Moderate Risk) and Type 3 (High Risk) and define the precautionary measures and handling and disposal precautions for each type of operation.

Based on the visual assessment and laboratory analysis, ACMs and PACMs have been identified. Stantec recommends the following with regards to meeting the regulatory requirements:

- Asbestos-containing 12”x12” vinyl floor tile - beige can be left place, as the material was observed to be in good condition. No further abatement actions are required. Prior to demolition activities remove asbestos-containing 12”x12” vinyl floor tile - beige following Type 1 (Low Risk) operations.
- On an annual basis, the ACM inventory should be updated through a reassessment based primarily on change in condition and quantity (Action 7).
- Prior to renovation and/or demolition activities, undertake a pre-construction designated substances and hazardous building materials assessment and testing of suspect ACMs and/or PACMs that may be impacted to determine their asbestos content. Confirmed asbestos materials should be handled in accordance with PCA *Asbestos Management Standard & Procedures* (December 2018).
- Should a material suspected to contain asbestos fibres become uncovered during the project, all work in the areas that may disturb the material should be stopped. Samples of the suspect material should be submitted for laboratory analysis to determine if asbestos fibres are present. Confirmed asbestos materials should be handled in accordance with the PCA *Asbestos Management Standard & Procedures* (December 2018).
- The report findings should be added to the Asbestos Management Plan.

The following are Type 1 (Low Risk) operations:

- Installing or removing non-friable asbestos-containing material other than ceiling tiles if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating of non-friable materials if the work is wetted to control the spread of dust and done by means of non-powered hand tools.
- Removing less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used.

3.5 LEAD

3.5.1 Methodology

A visual assessment of accessible areas was undertaken in order to check for the presence of materials that may contain lead. These materials included paint applications, wiring and plumbing etc.

Samples of visibly different paint applications were collected using hand tools and placed in clearly labelled plastic bags. Labels identify the project specific sample ID, a description of the material sampled, and the specific location and date the sample was collected. The sampling of paint applications involved the collection of paint chip samples of paint layers to the substrate. A minimum volume of 5 cc or ½ teaspoon of paint chips was typically collected. Wherever necessary and possible, paint was separated from any backing material such as paper, concrete or wood and placed in a sealed clearly labelled plastic bag.

Samples of suspect paint chips were collected. A laboratory chain of custody was completed, and cross referenced with the labels on the sample bags for quality assurance purposes prior to submitting the samples for analysis

Representative paint samples were collected and submitted to EMSL Canada Inc. (EMSL) located in Mississauga, Ontario for lead content analysis by Flame Atomic Absorption Spectrophotometry, following US EPA Method No. 7420.

3.5.2 Findings

A summary list of the samples collected including a description of the samples, sampling locations and laboratory analytical results is provided in **Appendix E**. A copy of the laboratory Certificate of Analysis for the paint chip testing is included in **Appendix F**. The sampling locations are indicated on the floor plans provided in **Appendix C**.

Four samples of major paint applications were collected in the form of paint chip samples and submitted to EMSL for lead content analysis.

Based on the laboratory results, the following paint samples contain lead in concentrations that are >90 ppm. PCA uses the *Surfacing Coating Materials Regulation SOR/2016-193* limit of 90 ppm as the criteria to manage paint applications.

Table 4: Lead-Containing Paint Samples

Sample Number	Description	Room	Specific Location	Lead Content	Condition	Photo
3 Reeser-PS-01	White coloured paint	Washroom	Door	68,000 ppm	Poor	3
3 Reeser-PS-02	Black coloured paint	Storage room 2	Ceiling	160 ppm	Poor	4
3 Reeser-PS-03	Green coloured paint	Bedroom 7	Wall	8,600 ppm	Poor	5
3 Reeser-PS-04	White coloured paint	Exterior	Wall	82,000 ppm	Good	6

Lead-containing paint applications were observed to be in poor condition in the following locations:

- White coloured paint (35 m^2 flaking) on walls and ceilings throughout various locations on the first and second floor
- Black coloured paint (1 m^2 flaking) on walls in second floor storage room 2
- Green coloured paint (12 m^2) flaking in second floor bedroom 7

Lead may also be present in the following materials:

- Other coating applications not tested
- Lead-acid batteries used in emergency lighting
- Older electrical wiring materials and sheathing
- Solder used on domestic water lines
- Solder used in bell fittings for cast iron pipes
- Solder used in electrical equipment
- Vent and pipe flashings

3.5.3 Recommendations

The Ministry of Labour (MOL) guideline *Lead on Construction Projects,* dated April 2011 and the Environmental abatement Council of Ontario (*EACO)* guideline *Lead Guideline for Construction, Maintenance or Repair*, dated October 2014 sets out requirements when disturbing any lead-containing paints. The document outlines the following with respect to lead: Legal Requirements, Health Effects, Controlling the Lead Hazard, Classification on Work (Type 1/Class 1, Type 2/Class 2, Type 3/Class 3) and Measures and Procedures for Working with Lead.

Damaged paint throughout the house should be cleaned up and loose paint removed following lead precautions.

The safety precautions to be followed when removing lead based paint are determined by the classification level of the operation and associated risk.

Minimum lead precautions are to be followed when performing the following Class 1 operations on lead-containing paint applications.

- Removal of lead-containing coatings with a chemical gel or paste and fibrous laminated cloth wrap
- Removal of lead-containing coatings or materials using a power tool with an effective dust collection system equipped with a HEPA filter.
- Removal of lead-containing coatings or materials with non-powered hand tool, other than manual scraping and sanding.

Moderate lead precautions are to be followed when performing the following Class 2 operations on lead-containing paint applications.

- Removal of lead-containing paint by scraping or sanding using non-powered hand tools.

Maximum lead precautions are to be followed when performing the following Class 3 operations on lead-containing paint and lead containing paint applications.

- Removal of lead-containing paint using power tools without an effective dust collection system equipped with HEPA filter.
- Abrasive blasting of lead-containing paint.

The work tasks required and the ways in which lead based paints will be impacted will determine the appropriate respirators, measures and procedures that should be followed to protect workers from lead exposure, and protect the natural environment including soils, water, and other adjacent surfaces. This is to be determined by the Contractor through their own Risk Assessment.

Actions that will disturb lead-containing materials, including paints and materials are to be conducted in such a manner to keep airborne exposure to lead dust to less than limit in O. Reg. 490/09 respecting Designated Substances - Lead made under the Occupational Health and Safety Act as amended by O. Reg. 148/12 and O. Reg. 149/12.

Prior to removal from the site and disposal, materials containing lead should be subject to toxicity characteristic leaching procedure (TCLP) testing to determine toxicity with respect to lead prior to disposal in accordance with R.R.O. 1990, Regulation 347 General - Waste Management, as amended (R.R.O. 1990, Reg. 347) under the Environmental Protection Act (EPA). If TCLP testing is not completed, contractor to assume paint to be disposed of as lead waste.

3.6 MERCURY

3.6.1 Methodology

A visual assessment for the presence of mercury-containing equipment was conducted.

3.6.2 Findings

Mercury containing equipment was not observed. Mercury may also be present in paints and adhesives but is not expected to pose a hazard.

3.6.3 Recommendations

Mercury vapour within light fixtures or other equipment such as thermostats poses no risk to workers or occupants provided the mercury containers remain intact and undisturbed. Complete removal of mercury-containing equipment is required prior to demolition activities that may disturb the equipment. Prior to demolition work or renovation, the light tubes and thermostats must be removed and stored in a safe, secure location or disposed of following the requirements of R.R.O. 1990, Reg. 347 under the EPA.

Recommendations outlined in 3.5.3 of this report, regarding the handling of lead, will also be sufficient for the handling of mercury in paints and adhesives.

3.7 SILICA

3.7.1 Methodology

An assessment for the presence of silica was conducted. The presence of silica in building materials such as concrete, masonry, stone, terrazzo, refractory brick, ceramic tile, ceiling tile etc. was noted.

3.7.2 Findings

Silica is expected to be present in concrete, stone, and brick observed in throughout the house.

3.7.3 Recommendations

The Guideline: Silica on Construction Projects issued by the MOL, dated April 2011 outlines: legal requirements, health effects, controlling the silica hazard, classification on work and measures, and procedures for working with silica and should be followed during disturbance of silica-containing materials.

The Guideline defines the classification of work. It is the classification of the work that determines the appropriate respirators, measures and procedures that should be followed to protect the worker from silica exposure. In the guideline, silica-containing construction operations are classified into three groups, Type 1, Type 2, and Type 3 operations, and can be thought of as being of low, medium, and high risk. From Type 1 to Type 3 operations, the corresponding respirator, and measures and procedures become increasingly stringent.

Precautions should be taken as required during renovation projects impacting materials expected to contain silica (i.e., coring through concrete slabs, demolition of masonry or concrete units, ceramic tiles, brick, etc.) where dust may be generated. Whenever practical changing how a process is preformed to lower the silica exposure is preferable. Wet methods reduce dust and should be used whenever practical, particularly in cutting, grinding, and drilling operations.

Silica is included in O. Reg. 490/09 and the regulation provides information on the application of the regulation as well as allowable exposure levels, where the maximum TWA for respirable airborne silica (cristobalite) is 0.05 mg/m^3 and 0.10 mg/m^3 for quartz/Tripoli. However, the more stringent level of 0.025 mg/m^3 for respirable crystalline silica (quartz, cristobalite) applies as noted in the ACGIH 2018 TLVs for Chemical Substances and Physical Agents. The assessment and control program and medical surveillance requirements are for non-construction projects as defined in O. Reg. 490/09.

3.8 POLYCHLORINATED BIPHENYLS

3.8.1 Methodology

A visual review for the presence of PCBs in electrical equipment is completed. Equipment that is generally suspected of containing PCBs includes lamp ballasts, transformers, hydraulic systems, compressors, switchgear and capacitors.

3.8.2 Findings

Equipment suspected of containing PCBs was not observed.

Although they may also be present in other items in limited amounts (e.g. plastics, molded rubber parts, applied dried paints, coatings or sealants, caulking, adhesives, paper, sound-deadening materials, insulation, or felt and fabric products such as gaskets), PCBs are not expected to be present in those materials in concentrations that would necessitate the requirement for PCB-specific handling procedures, separate removal and/or disposal considerations for renovation or demolition. As such, these items were not considered in our assessment.

3.8.3 Recommendations

Should a material suspected to contain PCBs become uncovered during demolition activities (i.e., dielectric fluids, hydraulic fluids), all work in the areas that may disturb the material should be stopped. Samples of the suspect material should be submitted for laboratory analysis to determine if PCBs are present. Confirmed PCBs should be handled in accordance with Federal Regulation SOR/2008-273 and R.R.O. 1990, Reg. 362, under the EPA.

3.9 HALOCARBONS

3.9.1 Methodology

An assessment for equipment likely to contain halocarbons was completed. Information on the type of equipment, manufacturer and type and quantity of refrigerants was recorded, where available.

3.9.2 Findings

Suspect building related cooling and refrigeration equipment suspected to contain halocarbons was not observed.

3.9.3 Recommendations

As evidence of equipment containing halocarbon was not observed, no recommendations have been provided.

3.10 MOULD

3.10.1 Methodology

An assessment for the potential presence of mould was completed. This involved a visual assessment of accessible surfaces for obvious evidence of mould, moisture or water damage.

3.10.2 Findings

Suspect mould and water staining was observed as follows:

Table 5: Mould and Water Damage Findings

Description	Location	Quantity	Photo
Suspect mould on plaster and drywall walls and ceilings	Throughout first and second floors	nq	7, 8

3.10.3 Recommendations

A mould assessment should be undertaken to determine the extent of suspect mould impacted and/or moisture damaged building materials and the likely source(s) of moisture.

Suspect mould and mould impacted building materials should be remediated in accordance with the documents entitled

- *CCA Mould Guidelines for the Canadian Construction Industry*, dated 2004
- *EACO Mould Abatement Guidelines, Edition 3*, dated 2015

Remediation should be done by a competent person, who is knowledgeable of potential hazards of mould exposure, following remediation precautions.

Precautions in accordance with industry guidelines for mould should be followed when entering the house and during demolition.

3.11 UREA FORMALDEHYDE FOAM INSULATION

3.11.1 Methodology

An assessment for the potential presence of UFFI was completed. This involved the assessment of exterior and interior walls for evidence of repaired openings (i.e., nozzle holes) made to facilitate the installation of the insulation. Wherever possible, an assessment of wall cavities through existing openings was made.

3.11.2 Findings

Evidence of the application of UFFI was not observed to be present.

3.11.3 Recommendations

As evidence of the application of UFFI was not observed, no recommendations have been provided.

3.12 OTHER DESIGNATED SUBSTANCES: ACRYLONITRILE, ARSENIC, BENZENE, COKE OVEN EMISSIONS, ETHYLENE OXIDES, ISOCYANATE, VINYL CHLORIDE

3.12.1 Methodology

Designated substances including acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxides, isocyanates, and vinyl chloride are not typically a concern in building materials, and therefore these substances were not investigated. However, some common sources are shown below.

Acrylonitrile may be present in stable form in paints and adhesives.

Arsenic or arsenic compounds may be present in paints and adhesives.

Benzene as a constituent of hydrocarbon-based mixtures and is present in a stable form in roofing materials, paints and adhesives. Benzene in these forms is not expected to be of a worker exposure concern.

Uncured Isocyanate may be present in paint finishes, varnishes, polyurethane plastics, synthetic rubbers, foams and adhesives.

Vinyl chloride (monomer) is generally likely to be present in stable form within the PVC piping and conduits, where applicable.

3.13 RADIOACTIVE SOURCES

3.13.1 Methodology

There are two primary technologies used in smoke detectors. One type uses a photoelectric sensor to detect the change in light level caused by smoke. The other type, ionizing smoke detectors, use a small amount of radioactive material to sense smoke. Ionizing smoke detectors are used in Canada because they are best at detecting quick burning fires, such as many of the fires which occur in North American buildings, which contain significant amounts of wood.

An assessment for the presence of smoke detectors was completed.

3.13.2 Findings

Smoke detectors were observed within the house at the time of the assessment.

3.13.3 Recommendations

Most household detectors contain a very small amount of americium-241, a radioactive isotope. The slight amount of radiation that can be measured outside the unit does not pose any health risk. The average annual radiation dose from smoke detectors per person represents 0.01 percent of the dose they receive from natural background radiation. The safe encapsulation and low amount of radioactive material make these devices completely safe under all conditions, even during or after a fire.

3.14 FUEL OIL AND/OR WASTE OIL STORAGE AND CHEMICAL STORAGE

3.14.1 Methodology

An assessment for the presence of fuel oil and or waste oil storage and chemical storage was completed.

3.14.2 Findings

Evidence of fuel oil and/or waste oil storage and chemical storage was not observed.

3.14.3 Recommendations

As evidence of fuel and oils was not observed, no recommendations have been provided.

3.15 LIMITATIONS

This report reflects observations made within areas accessed and results of analyses performed on specific materials sampled, as indicated herein. Analytical results reflect the sampled materials at the specific sampling locations.

3.15.1 Physical and Sampling Limitations

Sampling is exclusive to suspected ACMs and suspected lead-containing paints (LCPs) only. The assessment for the presence of other designated substances and hazardous building materials is visual in nature and is conducted pertaining to readily visible surfaces within accessible spaces only. Concealed spaces are assessed via existing access panels, where present. Interior and exterior finishes, solid ceilings, walls, flooring and structural elements are not removed to access concealed areas.

Due to limitations on the agreed to scope of work for this project, as well as physical limitations in accessing concealed areas and limitations associated with working in occupied/operational spaces. There are specific limitations to the information that can be provided to each hazardous building material considered in this assessment. As outlined below, the presence and the asbestos content of some building materials can neither be confirmed nor denied.

Building materials that may contain asbestos but are generally not accessible for sampling include, but are not limited to the following:

- Woven tape inside duct connection joints
- Mechanical (e.g., piping and ducting) insulation within wall cavities, crawl spaces tunnels or other concealed or confined spaces
- Insulation materials inside building materials, including fire doors and window frames
- Heating, ventilation and air conditioning (HVAC) units mechanical inner linings and/or inner ducting insulation
- Heat protection and insulating materials inside mechanical and electrical installations and light fixtures

Samples of paint applications suspected to contain lead are collected from surfaces of major paint applications where visually different paint colours and/or types are identified. Although the surfaces where samples are collected may be covered with more than one coat of paint, the paint samples are described by the surface (visible) colour only. Attempts are made to represent all layers of paint in the samples collected. As analytical results are referenced to the surface paint colour only, the lead content of all painted surfaces similar to that represented by the surface paint colour will be presumed to be the same, regardless of differing sub surface paints, if any.

The presence of mercury or mercury-containing equipment in inaccessible areas or as internal parts of HVAC mechanisms or other equipment, are not assessed.

Due to height restrictions and the risk of electrical shock in handling operational light fixtures, ballasts present in fixtures observed are not inspected for PCB labels or other PCB identifiers. Conclusions and recommendations regarding the presence of PCBs are based on limited observations and information provided regarding lighting renovations and is presented to provide guidance regarding the likelihood that PCB-containing equipment is or is not present. The exact extent and/or number of fluorescent lamp ballasts containing PCBs, if any, are not commented on.

The assessment is limited to a visual review in accessed areas of readily accessible cooling and refrigeration equipment which could contain halocarbons; testing is not conducted. Equipment or materials that are not included as part of this assessment but that may contain halocarbons; include: flexible plastic foam or rigid insulation foam, solvents, aerosol spray propellants and fire extinguishing equipment.

Visual assessment for the presence of suspected visible mould and/or suitable conditions for mould growth (e.g., moist and/or water-stained building materials) is conducted. The conclusions made in this report provide description(s) of the potential source(s) of moisture that may have led to suitable conditions for mould growth, only in those cases where potential source(s) of moisture were identified. The visual assessment does not include an intrusive assessment. These conclusions will not necessarily identify all sources of moisture leading to suitable conditions for mould growth within the impacted area(s). This assessment does not constitute a building envelope/building systems assessment, which would include an intrusive investigation to assess the internal condition, potential moisture sources, and expected remaining service life of the various components and systems comprising the envelope of a building.

In general, the assessment for the presence of other designated substances and hazardous building materials is visual in nature and is conducted pertaining to readily visible surfaces within accessible accessed spaces only. The potential presence of hazardous building materials in inaccessible areas which are not assessed includes, but is not limited to: ceiling spaces, wall cavities, crawl spaces, and buried materials.

4.0 CLOSURE

This report has been prepared for the sole benefit of the Parks Canada Agency and Public Services and Procurement Canada.

Any use which a third party makes of this report, or any reliance on decisions based on it, is the responsibility of such third parties. Stantec Consulting Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The information and conclusions contained in this report are based upon work undertaken by trained professionals and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. Conclusions presented in this report should not be construed as legal advice.

The conclusions presented in this report represent the best technical judgment of Stantec Consulting Ltd. based on the data obtained from the work.

The conclusions are based on the site conditions encountered by Stantec Consulting Ltd. at the time the work was performed at the specific assessment and/or sampling locations and can only be extrapolated to an undefined limited area around these locations. The extent of the limited area depends on building construction and conditions, weather, building usage and other factors. Due to the nature of the investigation and the limited data available, Stantec Consulting Ltd. cannot warrant against undiscovered environmental liabilities.

If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

We trust that the above is satisfactory for your purposes at this time. Should you have any questions or concerns, or require additional information, please do not hesitate to contact the Stantec Project Manager at your convenience.

This report was prepared by Michael Shortt and reviewed by Linda Fleet and Martin Ling.

Regards,

STANTEC CONSULTING LTD.

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APPENDICES

Appendix A REGULATORY FRAMEWORK

DESIGNATED SUBSTANCES

Asbestos

Asbestos is typically found in plaster, mechanical insulation, gaskets, thermal insulation on pipes, refractory material, roofing felts, floor tiles, ceiling tiles and parging, heat resistant panels, incandescent light fixture reflector plates, and any other material requiring a high degree of durability or thermal resistance. The common use of potential (breakable by hand) asbestos-containing materials (ACMs) in construction ceased voluntarily in the mid-1970s; however, the spray application of asbestos-containing fireproofing was not prohibited until 1986.

Asbestos-containing materials are grouped into two classifications, friable and non-friable materials. Friable ACMs are those that can easily be crumbled or broken apart by mere hand pressure. When these materials break apart asbestos fibres are then released into the atmosphere. Non-friable ACMs or "manufactured products" are materials that by the nature of their manufacturing/construction do not readily allow the release of asbestos fibres. These materials should not be cut or shaped with power tools, since this procedure may allow for the release of the asbestos fibres. Some materials or "manufactured products", such as plaster, drywall and ceiling tiles that are considered to be non-friable in an undisturbed state can become friable when damaged or disturbed. These are often referred to as "potentially" friable materials.

Canada Labour Code (Part II) defines the requirements for an asbestos exposure control plan to be developed before undertaking any work activities that involves asbestos-containing materials. The Canada Labour Code *(Part II)* also stipulate the requirements for air monitoring during removal procedures.

Ontario Regulation 490/09 Designated Substances (O. Reg. 490/09), as amended, under the Ontario Occupational Health and Safety Act (OHSA) primarily regulates worker exposure to asbestos during manufacturing of asbestos-containing products, but also includes requirements related to respiratory equipment, measurement of airborne fibres, and medical surveillance of exposed workers.

Ontario Regulation R.R.O 1990, Regulation 833, Control of Exposure to Biological or Chemical Agents, as amended (R.R.O. 1990, Reg. 833) made under the OHSA, sets the same time weighted average limit (TWA) value based on 8-hour work days.

Ontario Regulation 278/05 Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05), as amended, made under the OHSA defines an ACM as a material that contains 0.5% per cent or more asbestos by dry weight. Ontario Regulation 278/05 requires that an Asbestos Management Program (AMP) be implemented in buildings that have been identified to contain asbestos.

The general waste management regulation for the province of Ontario *R.R.O. 1990, Regulation 347 General - Waste Management,* as amended (R.R.O. 1990, Reg. 347) sets out the requirements for the proper disposal of asbestos waste in Ontario.

The waste must be placed in a double sealed container, properly labelled, free of cuts, tears or punctures and disposed of at a licensed waste station which has been properly notified of the shipment(s) of asbestos waste. Asbestos waste must be hauled in a vehicle operating under a Certificate of Approval (CofA) from the Ontario Ministry of the Environment and Climate Change (MOECC). The vehicle must have a trained operator as well as an asbestos spill kit. The asbestos waste must be immediately buried at the licensed landfill operation operating under a CofA from the MOECC.

The transport of asbestos waste to the disposal site is covered by the federal *Transportation of Dangerous Goods Act.* Asbestos waste is to be transported in a proper vehicle with appropriate placards and transportation numbering.

Lead

Lead may be used in its pure metallic form or combined chemically with other elements to form lead compounds. Metallic lead is used to make products such as electric storage batteries, ammunition, lead solder, radiation shields, pipes, and sheaths for electric cables. Metallic lead is sometimes combined with other metals such as copper, tin and antimony as lead alloys for use in the manufacture of a variety of metal products.

Organic lead compounds contain a lead atom covalently bonded to carbon. Common examples of organic lead compounds include lead “soaps” such as lead oleates, high pressure lubricants, and anti-knock agents in gasoline.

Inorganic lead compounds (or lead salts) result when lead is combined with an element other than carbon. Examples are lead oxide, lead chromate, lead carbonate and lead nitrate. Inorganic lead compounds may occur as solids or in solutions, and are used in insecticides, pigments, paints, frits, glasses, plastics, and rubber compounds.

Lead may affect the health of workers if it is in a form that may be inhaled, ingested or absorbed through the skin. Lead dust consists of small, solid particles of metallic lead or lead compounds that are generated by sanding, grinding, polishing, and sawing operations. Lead fume is produced in significant amounts when solid lead or materials containing lead are heated to temperatures above 500^{o} C, as in welding and flame cutting or burning.

The United States Department of Housing and Urban Development (HUD) set a criteria of lead-based paint as 0.5% lead (by weight) or 5,000 parts per million (ppm) for evaluating whether lead is a hazard in a residential setting.

In Canada, the Surface Coating Materials Regulations (SOR/2005-109) under the Federal Hazardous Products Act provides a concentration of lead that must not be exceeded in surface coatings that are presently sold in this country. This value has recently been reduced from 600 ppm to 90 ppm. However, it is important to note that there is not a direct correlation between the concentration of lead in a material to the potential occupational exposure if the material is disturbed.

O. Reg. 490/09 (which does not apply to construction projects) and R.R.O. 1990 Reg. 833, an occupational exposure limit (OEL) for airborne lead dust or fumes has been set at the TWA value of 0.05 milligram per cubic metre of air (mg/m^3) for workers. The TWA represents the time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse health effects.

The EACO document entitled *Lead Guideline for Construction, Renovation* Maintenance or Repair, issued October 2014 sets out guidelines for operations involving the handling, application, removal, disturbance of clean-up of lead-containing materials. The guideline is intended for the environmental abatement industry, construction industry and painting industry in general and is based on industry standard best-practices for lead abatement and dust control measures.

The Ontario Ministry of Labour (MOL) document entitled *Guideline: Lead on Construction Projects,* issued by the MOL in April 2011, states that the removal of lead paint is not required unless work on these materials are likely to produce airborne lead dust or fumes, for example during welding, torch cutting, sanding and sand blasting. If these operations are likely to occur during building renovations or demolition, it is recommended that the removal of lead paint be carried out in accordance with procedures outlined in the proposed regulation.

Although the TWA and some other requirements under O. Reg. 490/09 and R.R.O. 1990 Reg. 833 do not apply to construction projects, procedures that provide the equivalent level of protection should be implemented on such projects where exposure to lead is possible.

Mercury

Mercury is commonly found in buildings, as it is contained in mercury vapour lighting, thermostats, thermometers, and electrical mercury switches. If mercury is exposed to the air, odourless vapours are formed. The regulated occupational exposure limit for airborne mercury is 0.025 mg/ m^3 (8-hour TWA) as prescribed in (O. Reg. 490/09) and R.R.O. 1990 Reg. 833.

In Canada, the Surface Coating Materials Regulations (SOR/2005-109) under the Federal Hazardous Products Act provides a concentration of mercury that must not be exceeded in surface coatings that are presently sold in this country. This value was set at 10 ppm in 2005. However, it is important to note that there is not a direct correlation between the concentration of mercury in a material to the potential occupational exposure if the material is disturbed.

Mercury is hazardous if it is inhaled or absorbed through the skin, therefore exposure controls (including both respiratory protection and skin protection) are important to consider.

Mercury disposal should be through a scrap dealer (elemental mercury), recycling firm for mercury vapour and returned to the manufacturer for light tubes and fixtures.

Mercury is included in O. Reg. 490/09 and applies to every employer and worker at a workplace where mercury is present, produced, processed, used, handled, or stored and at which the worker is likely to inhale, ingest, or absorb mercury (the maximum TWA for airborne mercury is 0.025 mg/ m^3).

Requirements related to exposure to mercury are detailed, including those relating to worker safety and the use of personal protective equipment.

Ontario's Waste Management (R.R.O. 1990, Reg. 347) under the *Environmental Protection Act* (EPA) provides directives for the disposal of hazardous materials such as mercury.

Silica

Silica, also referred to as free crystalline silica, is found in concrete, cement, mortar, ceramic wall and floor tiles, stucco finishes and acoustic ceiling tiles. Prolonged exposure to, and inhalation of free crystalline silica, may result in respiratory disease known as silicosis, which is characterized by progressive fibrosis of the inner lung tissue and marked shortness of breath or impaired lung function. The maximum TWA for airborne Silica dust is 0.05 mg/ m^3 (O. Reg. 490/09 and R.R.O. 1990, Reg. 833).

Silica is included in O. Reg. 490/09 and the regulation provides information on the application of the regulation as well as allowable exposure levels, where the maximum TWA for airborne Silica dust is 0.05 mg/ m^3. The assessment and control program and medical surveillance requirements are for non-construction projects as defined in O. Reg. 490/09. Refer to the document entitled *Guideline: Silica on Construction Projects,* issued by the MOL in April 2011 for safe silica work practices and personal protective equipment (PPE).

Acrylonitrile

Acrylonitrile is a clear liquid that may be colourless or yellow and that readily reacts with other chemicals to produce long, chain-like molecules (polymers). Acrylonitrile-based polymers are used to produce nitrile rubbers, plastics, acrylic fibres, coatings and adhesives. Workers are typically exposed to acrylonitrile at manufacturing facilities that produce the aforementioned products through inhaling its vapour, direct skin contact, or through ingestion. Although acrylonitrile may be present in some of the building materials, including adhesives and coatings, the chemical will likely be bonded in the polymer form. Therefore, it is not expected that an adverse exposure to acrylonitrile will occur unless the building materials are heated to extreme temperatures. Acrylonitrile vapours may become released from the acrylonitrile-based polymers during a process where high temperatures are applied.

The TWA for a worker with respect to Acrylonitrile is 2 ppm as prescribed in O. Reg. 490/09 and R.R.O. 1990 Reg. 833. The Short term Exposure Limit (STEL) for Acrylonitrile is 10 ppm for any 15-minute exposure period.

Arsenic

The presence of arsenic in the paint coating on interior and exterior finishes is possible. As the painted surfaces will be handled as per the proposed lead regulation, it is not expected that arsenic concentrations in the air will exceed the TWA for a worker to arsenic (10 µg/m^3) as prescribed by O. Reg. 490/09 and R.R.O. 1990, Reg. 833. The STEL for arsenic is 50 µg/m^3 for any 15-minute exposure period.

Benzene

Historically, benzene has been produced as a by-product of coal gasification and metallurgical coke production in steel making. The light oil product from such processes contains benzene, toluene, ethyl benzene and xylene, and these components are separated by distillation. Today, most benzene is produced from the refining of petroleum.

Benzene has applications as a solvent in synthetic rubber manufacturing and processing, and in paints, varnishes, stains, adhesives, roofing materials and sealants. The use of benzene in tire and other rubber goods manufacturing and as a solvent and component of paints and adhesives has declined considerably as a result of concerns about workplace exposure. Nevertheless, it is often present in trace quantities in petroleum and aromatic solvents, some of which have replaced benzene in many uses. Benzene is also a minor component of gasoline mixtures sold in Canada.

The TWA for a worker to benzene is 0.5 ppm as prescribed by O. Reg. 490/09 and R.R.O. 1990, Reg. 833. It is possible that benzene was present in the paints, adhesives and roofing materials used during the original construction of many buildings. However, over time, the benzene component typically volatilizes out of the paints, solvents and roofing bitumens and is released into the ambient air. Therefore, it is likely that only trace levels of benzene presently exist in these building materials. It is not expected that benzene emissions from any existing building materials on site will exceed the allowable TWA. The STEL for benzene is 2.5 ppm for any 15-minute exposure period.

Coke Oven Emissions

Coke oven emissions are found in the exhaust from the burning process of coke and are typically not a concern in buildings. The TWA for a worker with respect to coke oven emissions is 150 $\mu g/m^3$ as prescribed by O. Reg. 490/09 and R.R.O. 1990, Reg. 833.

Ethylene Oxides

Ethylene oxide is a common by product of fumigation or sterilization procedures.

The TWA for a worker with respect to ethylene oxides is 1 ppm as prescribed in O. Reg. 490/09 and R.R.O. 1990, Reg. 833. The STEL for ethylene oxides is 10 ppm for any 15-minute exposure period.

Isocyanates

Isocyanates are a class of chemicals used in the manufacture of certain types of plastics, foams and roof insulation. The isocyanate (-CNO) group reacts very readily with certain other types of molecules, a property responsible for the usefulness of isocyanates in industry. Due to the high reactivity of the isocyanate group, exposure to isocyanates can result in primary irritation, sensitization and hypersensitivity reactions. The respiratory system, the eyes and the skin are the main areas affected by exposure. Isocyanates in their initial form are found as a vapour, a mist, or a dust which become airborne and then taken into the body. Once the isocyanates are chemically bonded to other chemicals during manufacturing processes, the isocyanates are not readily available to become airborne unless heated.

Therefore, isocyanate exposure is not expected to be a concern as long as the burning of plastics, foams, and insulation is not carried out.

The TWA for a worker with respect to isocyanates, organic compounds is 5 parts per billion (ppb) as prescribed in O. Reg. 490/09 and R.R.O. 1990, Reg. 833. The STEL for isocyanates, organic compounds is 20 ppb for any 15-minute exposure period.

Vinyl Chloride

Vinyl chloride is found in many applications in building such as plumbing pipes, protective coatings on insulated pipes and interior finishes (i.e., vinyl baseboard trim). Vinyl chlorides in the above materials are bound in a solid matrix and are unlikely to become airborne such that it would exceed the maximum allowable TWA of 1 ppm, as prescribed in O. Reg. 490/09 and R.R.O. 1990, Reg. 833.

HAZARDOUS BUILDING MATERIALS

Polychlorinated Biphenyls (PCBs)

The use of PCBs in electrical equipment such as transformers and capacitors, including capacitors found in fluorescent lamp ballasts, was common up to 1980. R.R.O 1990 Regulation 362 Waste Management – PCB's (R.R.O. 1990, Reg. 362) under the EPA, prohibits the use of PCBs in electrical equipment installed after July 1, 1980.

The TWA for a worker with respect to PCBs is 0.05 mg/ m^3as prescribed in R.R.O. 1990, Reg. 833.

As of September 5, 2008, under Subsection 93(1) of the *Canadian Environmental Protection Act,* (CEPA), Federal PCB regulations have been published by the Canada Gazette Part II (SOR/2008-273) that impose specific deadlines for the elimination of all PCBs in concentrations at or above 50 milligrams/kilogram (mg/kg). The regulation requires the elimination of all PCBs and PCB-containing materials currently in-use and in storage and limits the period of time PCB materials can be stored before being eliminated. Other aspects of the regulation govern the labelling and reporting of stored PCB materials and equipment as well as improved practices for the management of PCBs that remain in use (i.e., those with PCB concentrations less than 50 mg/kg) until their eventual elimination.

Halocarbons

Halocarbon are chemical agents including ozone-depleting substances (ODSs), chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) used in various refrigeration equipment including air-conditioning, heat pump, refrigeration or freezer units. They have also been used in solvents, as aerosol additives in the production of foam insulation and in fire extinguishing equipment.

On federal land, aboriginal land and federal works, buildings and undertakings, *Federal Halocarbon Regulation 2003* (SOR/2003-289) applies. All other buildings and uses of refrigerants and other agents are under the *Ozone-Depleting Substances Regulations 1998* (SOR/99-7), under CEPA.

The regulations prohibit the release of halocarbons contained in refrigeration systems, air conditioning systems, fire extinguishers (except to fight a fire that is not a fire caused for training purposes) or containers or equipment used in the re-use, recycling, reclamation or storage of a halocarbon.

The regulations also imposes restrictions on the servicing and dismantling, disposing of or decommissioning of any system containing halocarbons and requires the recovery of halocarbons into an appropriate container by a certified individual. The regulation also details an owner's record-keeping obligations.

Ontario Regulation 463/10, *Ozone Depleting Substances and Other Halocarbons* (O. Reg. 463/10), under the EPA. The regulation imposes restrictions on the purchasing of refrigerants and on the servicing, dismantling, disposing of or decommissioning of equipment containing refrigerants or halon fire extinguishing agents.

Mould

Mould can be found everywhere in the outside environment, on plants, in soil and on dead and decaying matter (i.e., dead leaves). Mould requires two main conditions in order to grow - a source of food (a substrate typically comprised of cellulose) and water. Sources of food for mould are plentiful in outdoor and indoor environments; however, it is the presence of water in an indoor environment that will determine mould growth. The source of water can be a result of a water pipe leak or even excess condensation. Thus, the key to controlling mould indoors is to control the presence of water.

At present, there are no specific laws or regulations governing acceptable levels of mould in buildings. The lack of specific regulatory standards is due in part to an inability to establish exposure-response relationships. Variation in individual susceptibility, limitations in sampling and analytical techniques, and the vast number of fungal agents and their products make it difficult to establish safe levels of exposure for all individuals. With a lack of defined exposure criteria, current Health Canada and other agency guidelines on the assessment and control of mould contamination in public buildings are largely based on prudent avoidance (i.e., remove any indoor growth or amplification site of mould, regardless of the concentration of moulds or their products in the indoor environment).

Although there are currently no regulations in Canada pertaining specifically to mould in buildings, based on an Ontario MOL alert, employers are required by Section 25(2)(h) of the Occupational Health and Safety Act to take every precaution reasonable in the circumstances for the protection of workers.

The OHSA places a responsibility on constructors (Section 23), employers (Section 25), and supervisors (Section 27) to ensure the health and safety of workers. This includes protecting workers from mould in workplace buildings. Various sections of the Industrial, Construction, Mining or Health Care regulations may also apply to maintenance and remediation activities.

The Ontario MOL has published an Alert (MOL, 2000) indicating that sustained and/or extensive growth of visible mould on interior surfaces of a building is unacceptable and stating that mould growth on the interior surfaces of buildings is a risk factor for health problems.

Several guidelines and other resources describe procedures for the investigation and remediation of mould. The following documents indicate that mould observed in occupied building should be remediated in accordance with these procedures:

- *Environmental Abatement Council of Ontario's (EACO) Mould Abatement Guidelines,* 2015 – Edition 3;
- *Mould Guidelines for The Canadian Construction Industry,* Canadian Construction Association – 82, 2004;
- *Guidelines on Assessment and Remediation of Fungi in Indoor Environment,* New York City Department of Health and Mental Hygiene, November 2008
- *Bioaerosols: Assessment and Control,* American Conference of Governmental Industrial Hygienists (ACGIH), 1999
- *Fungal Contamination in Public Buildings: Health Effects and Investigation Methods,* Federal-Provincial Committee on Environmental and Occupational Health, 2004
- *Field Guide for the Determination of Biological Contaminants in Environmental Samples,* American Industrial Hygiene Association (AIHA), 1996
- *Clean-Up Procedures for Mould in Houses,* Canada Mortgage and Housing Corporation (CMHC), 2004
- *Standard and Reference Guide for Professional Water Damage Restoration* – IICRC S500, Institute of Inspection, Cleaning and Restoration Certification, 2015
- *Reference Guide for Professional Mould Remediation* – IICRC S520, Institute of Inspection, Cleaning and Restoration Certification, 2015

Urea Formaldehyde Foam Insulation

Urea-formaldehyde foam insulation (UFFI) was developed in Europe in the 1950s as an improved means of insulating difficult-to-reach cavities in building walls. It is typically made at a construction site from a mixture of urea-formaldehyde resin, a foaming agent and compressed air. When the mixture is injected into the wall, urea and formaldehyde unite and "cure" into an insulating foam plastic.

During the 1970s, when concerns about energy efficiency led to efforts to improve home insulation in Canada, UFFI became an important insulation product for existing houses. Most installations occurred between 1977 and its ban in Canada in 1980.

In the insulating process, a slight excess of formaldehyde was often added to ensure complete "curing" with the urea to produce the urea-formaldehyde foam. Formaldehyde is a pungent, colourless gas commonly used in water solution as a preservative and disinfectant. It is also a basis for major plastics, including durable adhesives. It occurs naturally in the human body and in the outdoor environment. Formaldehyde is used to bond plywood, particleboard, carpets and fabrics. Formaldehyde is also a by-product of combustion; it is found in tobacco smoke, vehicle exhaust and the fumes from furnaces, fireplaces and wood stoves.

While small amounts of formaldehyde are harmless, it is an irritating and toxic gas in significant concentrations. Symptoms of overexposure to formaldehyde include irritation to eyes, nose and throat; persistent cough and respiratory distress; skin irritation; nausea; headache; and dizziness.

Health Canada has determined that 0.1 parts per million (ppm) is a safe level of formaldehyde in the home. Sensitivity to this level may vary based on individual age and health.

Tests show that UFFI is not a source of over-exposure to formaldehyde after the initial curing and release of excess gas. As it was last installed in 1980, it would certainly not be causing excess indoor formaldehyde today. Buildings with UFFI show no higher formaldehyde levels than those without it. However, if UFFI comes in contact with water or moisture, it could begin to break down. Wet or deteriorating UFFI should be removed by a specialist and the source of the moisture problem should be repaired.

There are currently no regulations in Canada pertaining specifically to UFFI in buildings. However, the Occupational Health and Safety Act places a responsibility on constructors (Section 23), employers (Section 25), and supervisors (Section 27) to ensure the health and safety of workers.

Appendix B SITE PHOTOGRAPHS

Photo 1: 3 Reesor Road, Toronto, Ontario.

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Photo 2: Asbestos-containing vinyl floor tiles – beige in the first floor hallway.

Photo 3: Flaking lead-containing white coloured paint on first floor washroom door.

Photo 4: Flaking lead-containing paint on the second floor storage room 2 ceiling.

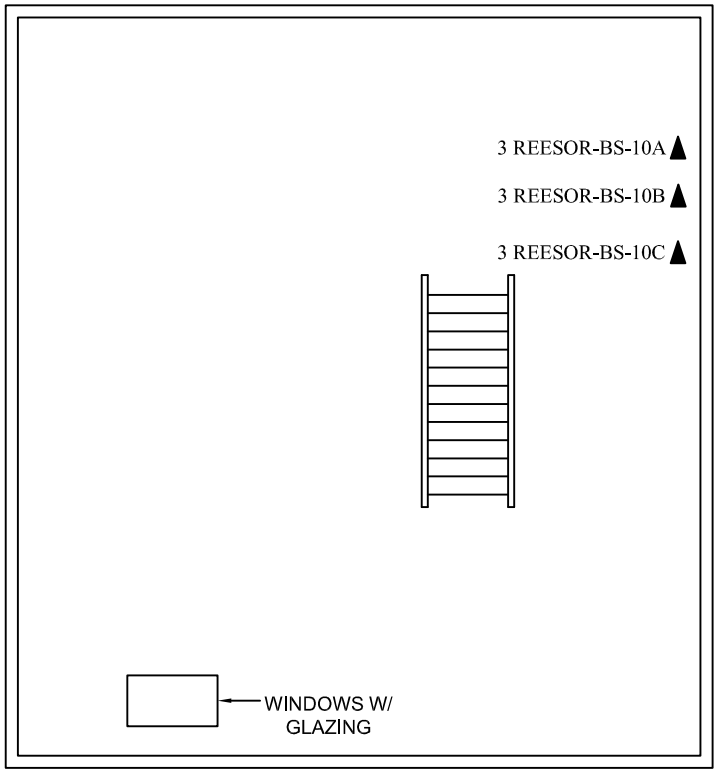
Photo 5: Flaking lead-containing green coloured paint on the walls and ceiling of 2nd floor bedroom 7.

Photo 6: Lead-containing white paint on the exterior.

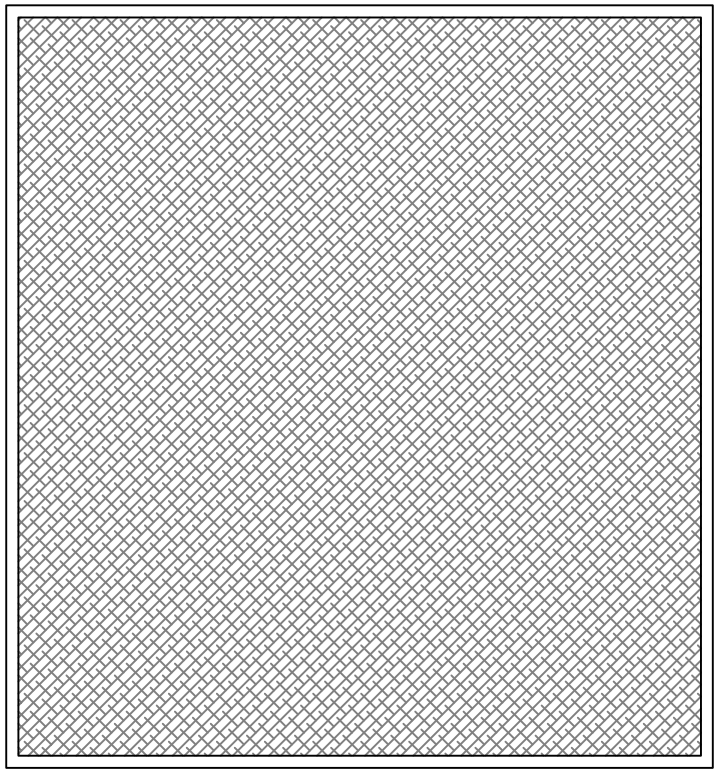
Photo 7: Suspect mould growth and ceiling collapsing in storage room 1 on the first floor.

Photo 8: Suspect mould growth on ceiling in second floor hallway.

Appendix C FLOOR PLANS



BASEMENT 1



BASEMENT 2

LEGEND

BULK SAMPLE

INACCESSIBLE AREA

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

FLOOR PLAN

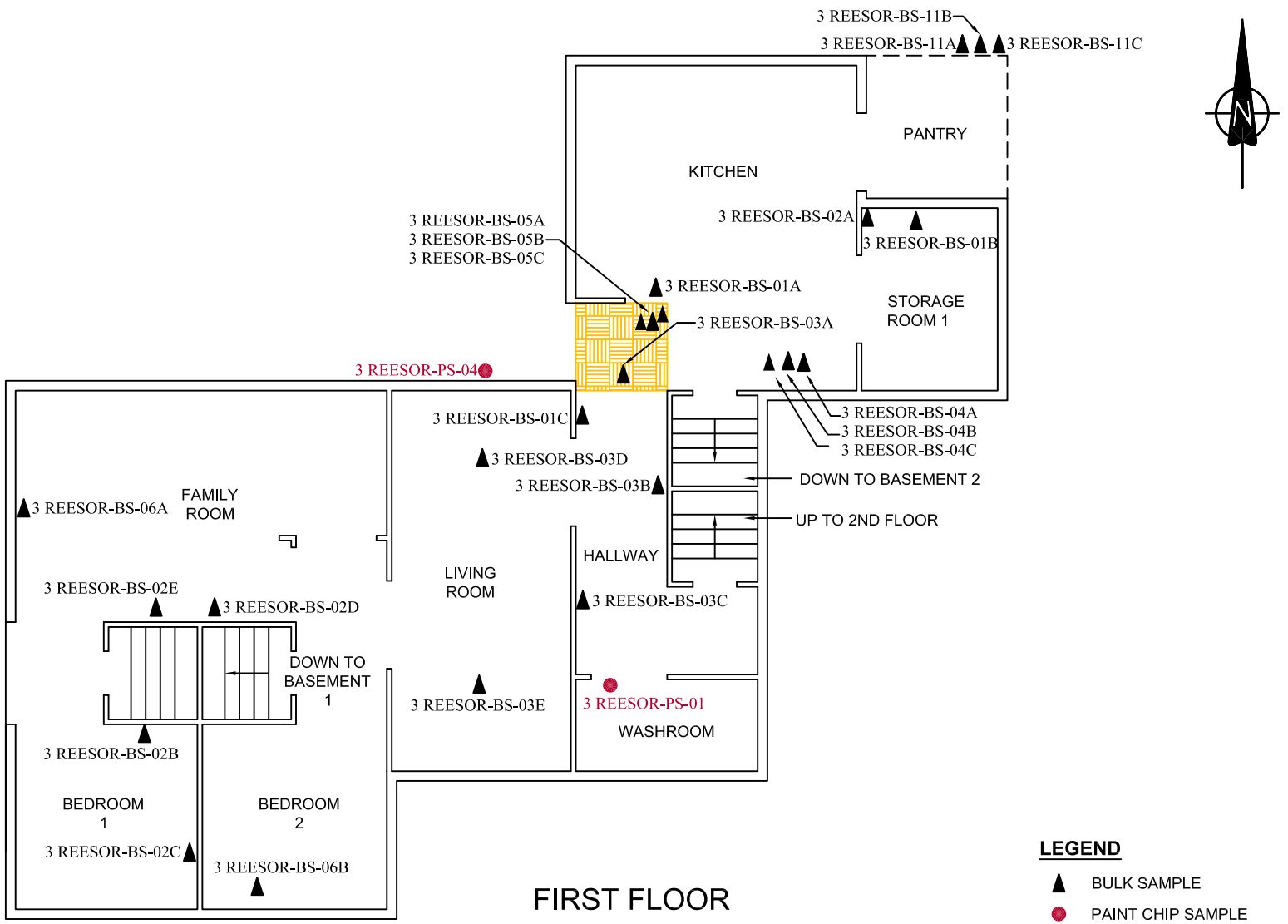
3 REESOR ROAD, TORONTO, ONTARIO

Client: PUBLIC SERVICES AND PROCUREMENT CANADA

Project No.:	122151011
Scale:	N.T.S.
Date:	19/11/21
Dwn. By:	CD SL2019110132 CS/DM
App'd By:	LF

Dwg. No.: 1

Stantec



NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

FLOOR PLAN

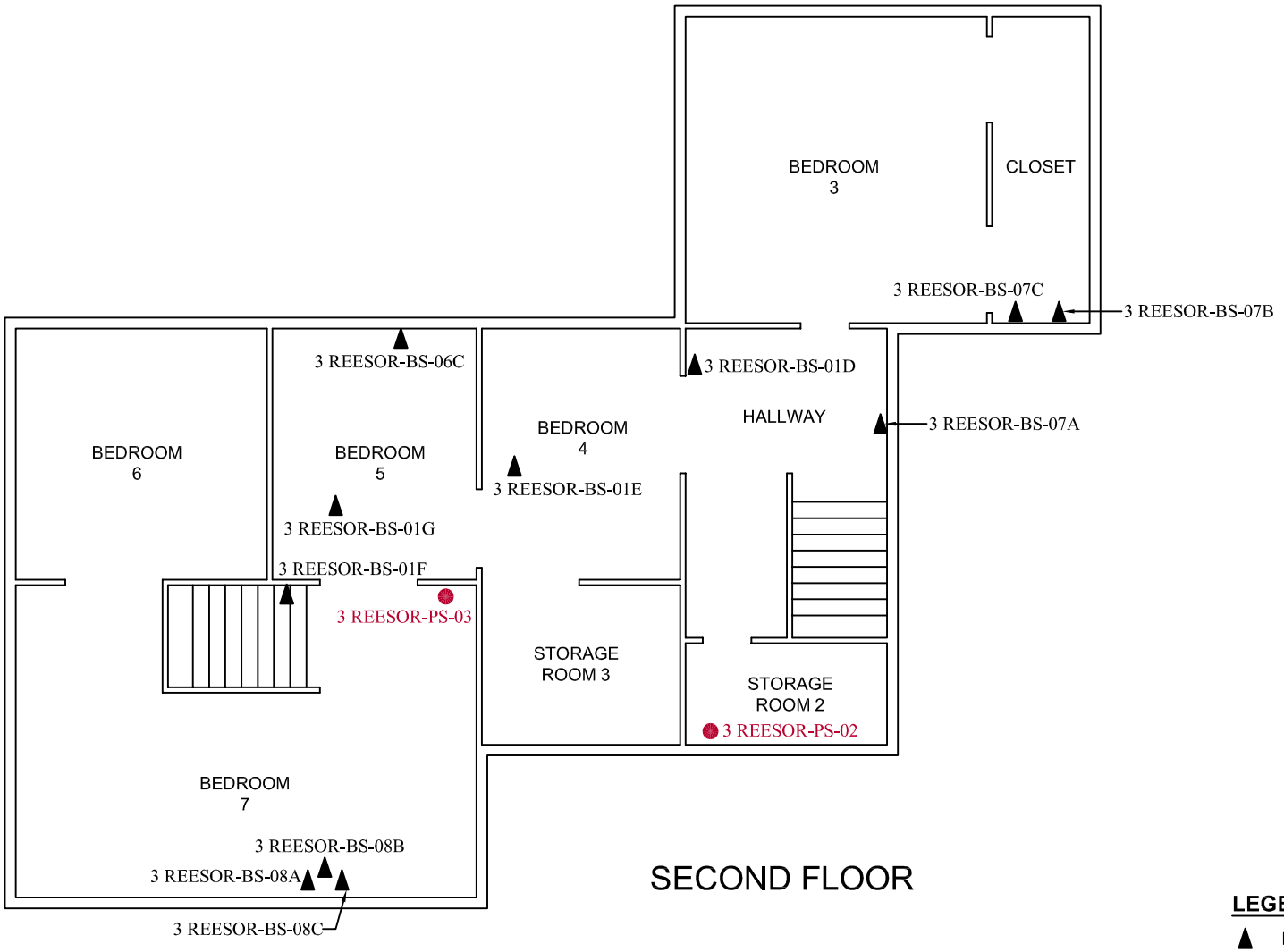
3 REESOR ROAD, TORONTO, ONTARIO

Client: PUBLIC SERVICES AND PROCUREMENT CANADA

Project No.:	122151011
Scale:	N.T.S.
Date:	19/11/21
Dwn. By:	CD SL2019110133 CS/DM
App'd By:	LF

Dwg. No.: 2

Stantec



SECOND FLOOR

LEGEND

- BULK SAMPLE
- PAINT CHIP SAMPLE

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

FLOOR PLAN

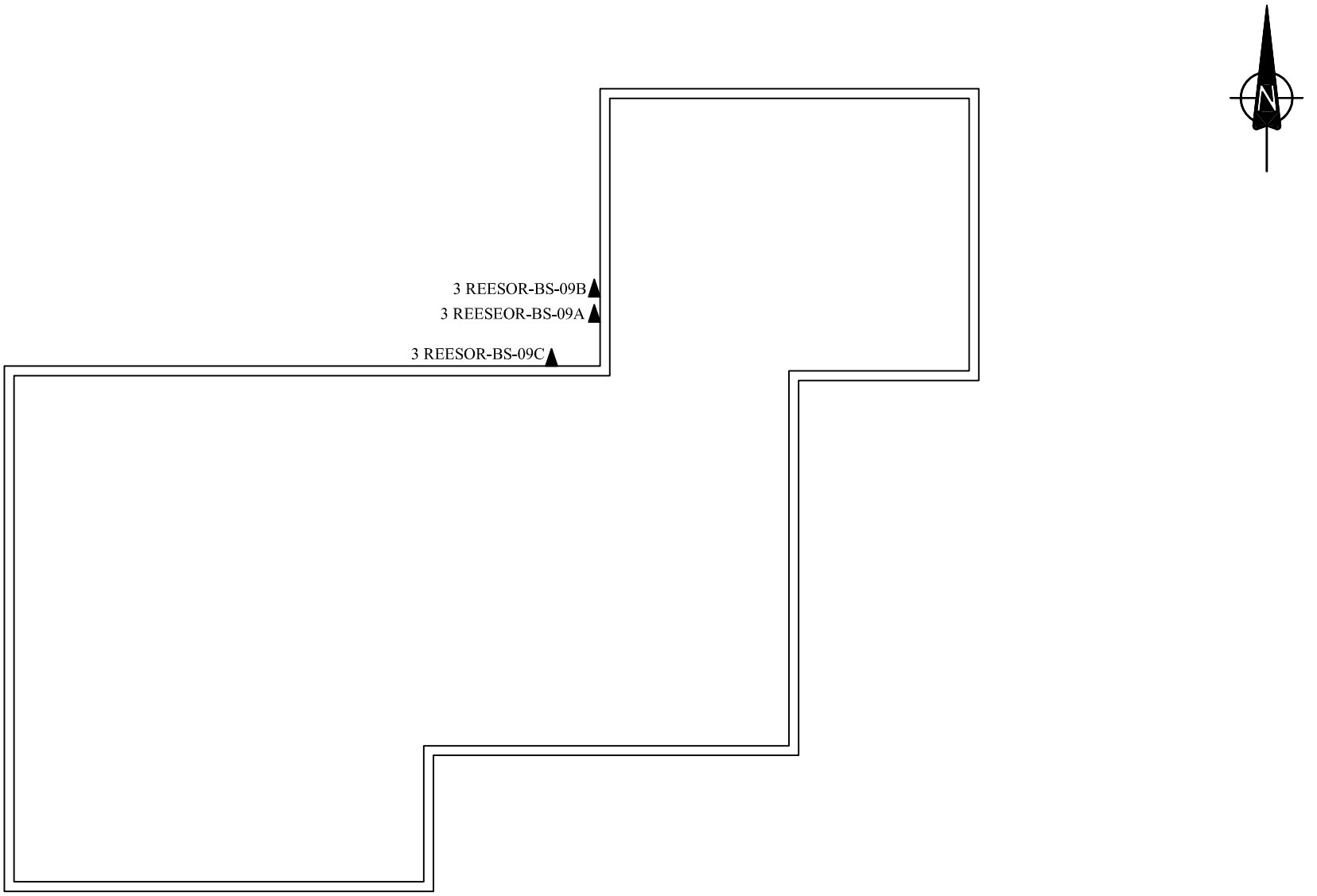
3 REESOR ROAD, TORONTO, ONTARIO

Client: PUBLIC SERVICES AND PROCUREMENT CANADA

Project No.:	122151011
Scale:	N.T.S.
Date:	19/11/21
Dwn. By:	CD SL2019110134 CS/DM
App'd By:	LF

Dwg. No.: 3

Stantec



NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

FLOOR PLAN

3 REESOR ROAD, TORONTO, ONTARIO

Client: PUBLIC SERVICES AND PROCUREMENT CANADA

Project No.:	122151011
Scale:	N.T.S.
Date:	19/11/21
Dwn. By:	CD DM SL2019110135
App'd By:	LF

Dwg. No.: 4

Stantec

Appendix D SUMMARY OF RESULTS OF ANALYSIS OF BULK SAMPLES FOR ASBESTOS

Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content
3 REESER-BS-01A-ROUGH COAT	First floor - kitchen, wall	Plaster	None Detected
3 REESER-BS-01A-SKIM COAT	First floor - kitchen, wall	Plaster	None Detected
3 REESER-BS-01B-ROUGH COAT	First floor - storage room 1, wall	Plaster	None Detected
3 REESER-BS-01B-SKIM COAT	First floor - storage room 1, wall	Plaster	None Detected
3 REESER-BS-01C-ROUGH COAT	First floor - hallway, wall	Plaster	None Detected
3 REESER-BS-01C-SKIM COAT	First floor - hallway, wall	Plaster	None Detected
3 REESER-BS-01D-ROUGH COAT	Second floor - hallway, wall	Plaster	None Detected
3 REESER-BS-01D-SKIM COAT	Second floor - hallway, wall	Plaster	None Detected
3 REESER-BS-01E-ROUGH COAT	Second floor - bedroom 4, ceiling	Plaster	None Detected
3 REESER-BS-01E-SKIM COAT	Second floor - bedroom 4, ceiling	Plaster	None Detected
3 REESER-BS-01F-ROUGH COAT	Second floor - bedroom 7, wall	Plaster	None Detected
3 REESER-BS-01F-SKIM COAT	Second floor - bedroom 7, wall	Plaster	None Detected
3 REESER-BS-01G-ROUGH COAT	Second floor - bedroom 5, ceiling	Plaster	None Detected
3 REESER-BS-01G-SKIM COAT	Second floor - bedroom 5, ceiling	Plaster	None Detected
3 REESER-BS-02A	First floor - storage room 1, wall	Drywall joint-fill compound	None Detected

BS - Bulk Sample

Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content
3 REESER-BS-02B	First floor - bedroom 1, wall	drywall joint-fill compound	None Detected
3 REESER-BS-02C	First floor - bedroom 1, wall	drywall joint-fill compound	None Detected
3 REESER-BS-02D	First floor - family room, wall	drywall joint-fill compound	None Detected
3 REESER-BS-02E	First floor - family room, wall	drywall joint-fill compound	None Detected
3 REESER-BS-03A	First floor - hallway, ceiling	Texture coat	None Detected
3 REESER-BS-03B	First floor - hallway, wall	Texture coat	None Detected
3 REESER-BS-03C	First floor - hallway, wall	Texture coat	None Detected
3 REESER-BS-03D	First floor - living room, ceiling	Texture coat	None Detected
3 REESER-BS-03E	First floor - living room, ceiling	Texture coat	None Detected
3 REESER-BS-04A	First floor - kitchen	12"x12" peel and stick tile - blue	None Detected
3 REESER-BS-04B	First floor - kitchen	12"x12" peel and stick tile - blue	None Detected
3 REESER-BS-04C	First floor - kitchen	12"x12" peel and stick tile - blue	None Detected
3 REESER-BS-05A	First floor - hallway	12"x12" vinyl floor tile - beige	1.1% chrysotile
3 REESER-BS-05B	First floor - hallway	12"x12" vinyl floor tile - beige	Positive Stop (Not Analyzed)
3 REESER-BS-05C	First floor - hallway	12"x12" vinyl floor tile - beige	Positive Stop (Not Analyzed)
3 REESER-BS-06A	First floor - family room, window	Interior window caulking - grey	None Detected
3 REESER-BS-06B	First floor - family room, window	Interior window caulking - grey	None Detected

BS - Bulk Sample

Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content
3 REESER-BS-06C	Second floor - bedroom 5, window	Interior window caulking - grey	None Detected
3 REESER-BS-07A	Second floor - hallway, window	Interior window glazing compound - white	None Detected
3 REESER-BS-07B	Second floor - bedroom 3 closet, window	Interior window glazing compound - white	None Detected
3 REESER-BS-07C	Second floor - bedroom 3 closet, window	Interior window glazing compound - white	None Detected
3 REESER-BS-08A	Exterior - window	Exterior window glazing compound - white	None Detected
3 REESER-BS-08B	Exterior - window	Exterior window glazing compound - white	None Detected
3 REESER-BS-08C	Exterior - window	Exterior window glazing compound - white	None Detected
3 REESER-BS-09A	Roof	Roofing shingle	None Detected
3 REESER-BS-09B	Roof	Roofing shingle	None Detected
3 REESER-BS-09C	Roof	Roofing shingle	None Detected
3 REESER-BS-10A	Basement 1 - wall	Stone mortar	None Detected
3 REESER-BS-10B	Basement 1 - wall	Stone mortar	None Detected
3 REESER-BS-10C	Basement 1 - wall	Stone mortar	None Detected
3 REESER-BS-11A-SHINGLE	Exterior - pantry, wall	Asphalt siding	None Detected
3 REESER-BS-11A-TAR PAPER	Exterior - pantry, wall	Asphalt siding	None Detected
3 REESER-BS-11B-SHINGLE	Exterior - pantry, wall	Asphalt siding	None Detected
3 REESER-BS-11B-TAR PAPER	Exterior - pantry, wall	Asphalt siding	None Detected

BS - Bulk Sample

Summary of Bulk Sample Analysis for Asbestos Type and Content

Sample Number	Sampling Location	Description of Sampled Material	Asbestos Type and Content
3 REESER-BS-11C-SHINGLE	Exterior - pantry, wall	Asphalt siding	None Detected
3 REESER-BS-11C-TAR PAPER	Exterior - pantry, wall	Asphalt siding	None Detected

BS - Bulk Sample

Appendix E LABORATORY ANALYTICAL REPORT – ASBESTOS: POLARIZED LIGHT MICROSCOPY

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Attn: Will Madden-Macavellia
Stantec Consulting Ltd.
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Phone: (905) 474-7700
Fax: (905) 479-9326
Collected: 11/ 5/2019
Received: 11/08/2019
Analyzed: 11/13/2019

Proj: 3 Reeser Road

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-01A-Skim Coat ***Lab Sample ID:*** **551913637-0001**
Sample Description: First floor - kitchen, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01A-Rough Coat ***Lab Sample ID:*** **551913637-0001A**
Sample Description: First floor - kitchen, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01B-Skim Coat ***Lab Sample ID:*** **551913637-0002**
Sample Description: First floor - storage room, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01B-Rough Coat ***Lab Sample ID:*** **551913637-0002A**
Sample Description: First floor - storage room, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01C-Skim Coat ***Lab Sample ID:*** **551913637-0003**
Sample Description: First floor - hallway, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01C-Rough Coat ***Lab Sample ID:*** **551913637-0003A**
Sample Description: First floor - hallway, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01D-Skim Coat ***Lab Sample ID:*** **551913637-0004**
Sample Description: Second floor - hallway, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

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Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-01D-Rough Coat ***Lab Sample ID:*** **551913637-0004A**

Sample Description: Second floor - hallway, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01E-Skim Coat ***Lab Sample ID:*** **551913637-0005**

Sample Description: Second floor - bedroom 4, ceiling/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01E-Rough Coat ***Lab Sample ID:*** **551913637-0005A**

Sample Description: Second floor - bedroom 4, ceiling/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01F-Skim Coat ***Lab Sample ID:*** **551913637-0006**

Sample Description: Second floor - bedroom 7, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01F-Rough Coat ***Lab Sample ID:*** **551913637-0006A**

Sample Description: Second floor - bedroom 7, wall/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01G-Skim Coat ***Lab Sample ID:*** **551913637-0007**

Sample Description: Second floor - bedroom 5, ceiling/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-01G-Rough Coat ***Lab Sample ID:*** **551913637-0007A**

Sample Description: Second floor - bedroom 5, ceiling/plaster

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-02A ***Lab Sample ID:*** **551913637-0008**

Sample Description: First floor - storage 1, wall/drywall joint-fill compound

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

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Customer ID: 55JACQ30J
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Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-02B ***Lab Sample ID:*** **551913637-0009**

Sample Description: First floor - bedroom 1, wall/drywall joint-fill compound

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-02C ***Lab Sample ID:*** **551913637-0010**

Sample Description: First floor - bedroom 1, wall/drywall joint-fill compound

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-02D ***Lab Sample ID:*** **551913637-0011**

Sample Description: First floor - family room, wall/drywall joint-fill compound

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-02E ***Lab Sample ID:*** **551913637-0012**

Sample Description: First floor - family room, wall/drywall joint-fill compound

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-03A ***Lab Sample ID:*** **551913637-0013**

Sample Description: First floor - hallway, ceiling/texture coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-03B ***Lab Sample ID:*** **551913637-0014**

Sample Description: First floor - hallway, wall/texture coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-03C ***Lab Sample ID:*** **551913637-0015**

Sample Description: First floor - hallway, wall/texture coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-03D ***Lab Sample ID:*** **551913637-0016**

Sample Description: First floor - living room, ceiling/texture coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

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Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-03E ***Lab Sample ID:*** **551913637-0017**

Sample Description: First floor - living room, ceiling/texture coat

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-04A ***Lab Sample ID:*** **551913637-0018**

Sample Description: First floor - kitchen/12"x12" peel and stick tile - blue

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Gray	0.0%	100%	None Detected	
TEM Grav. Reduction	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-04B ***Lab Sample ID:*** **551913637-0019**

Sample Description: First floor - kitchen/12"x12" peel and stick tile - blue

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Gray	0.0%	100%	None Detected	
TEM Grav. Reduction	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-04C ***Lab Sample ID:*** **551913637-0020**

Sample Description: First floor - kitchen/12"x12" peel and stick tile - blue

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Gray	0.0%	100%	None Detected	
TEM Grav. Reduction	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-05A ***Lab Sample ID:*** **551913637-0021**

Sample Description: First floor - hallway/12"x12" vinyl floor tile - beige

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Beige	0.0%	98.9%	**1.1% Chrysotile**	

Client Sample ID: 3 REESER-BS-05B ***Lab Sample ID:*** **551913637-0022**

Sample Description: First floor - hallway/12"x12" vinyl floor tile - beige

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019				Positive Stop (Not Analyzed)	

Client Sample ID: 3 REESER-BS-05C ***Lab Sample ID:*** **551913637-0023**

Sample Description: First floor - hallway/12"x12" vinyl floor tile - beige

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019				Positive Stop (Not Analyzed)	

Client Sample ID: 3 REESER-BS-06A ***Lab Sample ID:*** **551913637-0024**

Sample Description: First floor - family room, window/interior window caulking - grey

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Blue	0.0%	100%	None Detected	

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Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-06B ***Lab Sample ID:*** **551913637-0025**

Sample Description: First floor - family room, window/interior window caulking - grey

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Blue	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-06C ***Lab Sample ID:*** **551913637-0026**

Sample Description: Second floor - bedroom 5, window/interior window caulking - grey

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Blue	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-07A ***Lab Sample ID:*** **551913637-0027**

Sample Description: Second floor - hallway, window/interior window glazing compound - white

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-07B ***Lab Sample ID:*** **551913637-0028**

Sample Description: Second floor - bedroom 3 closet, window/interior window glazing compound - white

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-07C ***Lab Sample ID:*** **551913637-0029**

Sample Description: Second floor - bedroom 3 closet, window/interior window glazing compound - white

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Gray	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-08A ***Lab Sample ID:*** **551913637-0030**

Sample Description: Exterior - window/exterior window glazing compound - white

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	White	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-08B ***Lab Sample ID:*** **551913637-0031**

Sample Description: Exterior - window/exterior window glazing compound - white

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	White	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-08C ***Lab Sample ID:*** **551913637-0032**

Sample Description: Exterior - window/exterior window glazing compound - white

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	White	0.0%	100%	None Detected	

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Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-09A **Lab Sample ID:** **551913637-0033**
Sample Description: Roof/roofing shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-09B **Lab Sample ID:** **551913637-0034**
Sample Description: Roof/roofing shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-09C **Lab Sample ID:** **551913637-0035**
Sample Description: Roof/roofing shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-10A **Lab Sample ID:** **551913637-0036**
Sample Description: Basement 1 - wall/stone mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-10B **Lab Sample ID:** **551913637-0037**
Sample Description: Basement 1 - wall/stone mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-10C **Lab Sample ID:** **551913637-0038**
Sample Description: Basement 1 - wall/stone mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	11/13/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 3 REESER-BS-11A-Shingle **Lab Sample ID:** **551913637-0039**
Sample Description: Exterior - pantry, wall/asphalt siding

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Red/Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-11A-Tar Paper **Lab Sample ID:** **551913637-0039A**
Sample Description: Exterior - pantry, wall/asphalt siding

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Black	0.0%	100%	None Detected	

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Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: 3 REESER-BS-11B-Shingle ***Lab Sample ID:*** **551913637-0040**

Sample Description: Exterior - pantry, wall/asphalt siding

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Red/Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-11B-Tar Paper ***Lab Sample ID:*** **551913637-0040A**

Sample Description: Exterior - pantry, wall/asphalt siding

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-11C-Shingle ***Lab Sample ID:*** **551913637-0041**

Sample Description: Exterior - pantry, wall/asphalt siding

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Red/Black	0.0%	100%	None Detected	

Client Sample ID: 3 REESER-BS-11C-Tar Paper ***Lab Sample ID:*** **551913637-0041A**

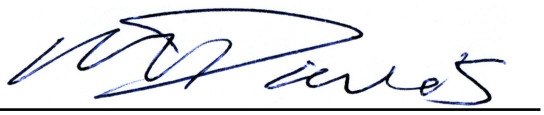
Sample Description: Exterior - pantry, wall/asphalt siding

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	11/13/2019	Black	0.0%	100%	None Detected	

Analyst(s):

Anne Balayboa	TEM Grav. Reduction (3)
Kira Ramphal	PLM Grav. Reduction (7)
Natalie D'Amico	PLM Grav. Reduction (15)
Shorthri Kalikutty	PLM (27)

Reviewed and approved by:



Matthew Davis or other approved signatory
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 11/13/201916:45:47

Appendix F SUMMARY OF RESULTS OF ANALYSIS OF PAINT CHIP SAMPLES FOR LEAD CONTENT

Summary Results of Analysis of Paint Samples for Lead Content

Sample Number	Floor	Sampling Locatio	Specific Location	Description	Lead Content
3 Reeser-PS-01	First	Washroom	Door	White coloured paint	68,000 ppm
3 Reeser-PS-02	Second	Storage room 2	Ceiling	Black coloured paint	160 ppm
3 Reeser-PS-03	Second	Bedroom 7	Wall	Green coloured paint	8,600 ppm
3 Reeser-PS-04	Exterior	Exterior	Wall	White coloured paint	82,000 ppm

nd - None Detected
ppm - Parts Per Million
PS - Paint Sample

Appendix G LABORATORY ANALYTICAL REPORT – LEAD: PAINT CHIP ANALYSIS

EMSL Canada Inc.
2756 Slough Street, Mississauga, ON L4T 1G3
Phone/Fax: (289) 997-4602 / (289) 997-4607
http://www.EMSL.com torontolab@emsl.com

EMSL Canada Or	551913623
CustomerID:	55JACQ30J
CustomerPO:	122151011.200
ProjectID:	

Attn: **Will Madden-Macavellia**
Stantec Consulting Ltd.
300-675 Cochrane Drive, West Tower
Markham, ON L3R 0B8

Phone: (905) 474-7700
Fax: (905) 479-9326
Received: 11/08/19 4:30 PM
Collected: 11/5/2019

Project: **122151011.200 - 3 Reeser Road**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*Weight*	*RDL*	*Lead Concentration*
3Reeser-PS-01	11/5/2019	11/11/2019	0.2488 g	4000 ppm	68000 ppm
551913623-0001	Site: First - Washroom - Door Desc: White coloured paint				
3Reeser-PS-02	11/5/2019	11/11/2019	0.2500 g	80 ppm	160 ppm
551913623-0002	Site: Second - Storage room 2 - Ceiling Desc: Black coloured paint				
3Reeser-PS-03	11/5/2019	11/11/2019	0.2499 g	400 ppm	8600 ppm
551913623-0003	Site: Second - Bedroom 7 - Wall Desc: Green coloured paint				
3Reeser-PS-04	11/5/2019	11/11/2019	0.2473 g	4000 ppm	82000 ppm
551913623-0004	Site: Exterior - Exterior - Wall Desc: White coloured paint				

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Cert #2845.08; AIHA-LAP, LLC - ELLAP #196142

Initial report from 11/14/2019 09:42:57

Appendix H EVALUATION CRITERIA FOR ASSESSING ASBESTOS-CONTAINING MATERIALS

CRITERIA FOR ASSESSING ASBESTOS-CONTAINING MATERIALS

A description of the criteria used in evaluating the condition, accessibility and exposure risk of asbestos-containing materials is provided below. The criteria are generally based on the PSPC A*sbestos Management Standard* and industry standards of practice.

ASSESSMENT OF CONDITION

Spray Applied Fireproofing, Insulation and Textured Finishes

In evaluating the condition of asbestos-containing material 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 of the surface area having 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 un-encapsulated or unpainted fireproofing, insulation or texture finishes where no delamination or damage is observed, and encapsulated fireproofing, insulation 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 asbestos-containing material 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 survey or reassessment form.

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

The evaluation of asbestos-containing material 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 asbestos-containing material debris prior to accessing or working above ceilings in areas of buildings with asbestos-containing material, regardless of the reported condition.

Detection Limit of Bulk Analysis

Asbestos-containing material is defined as any material found to contain asbestos at or above the limit defined by provincial/territorial standards for an asbestos-containing material, as determined by the allowable analytical method for the analysis of bulk samples. Except in the case of vermiculite, the provincially/territorially regulated limits or generally accepted guidelines to consider a material as an asbestos-containing material, subject to asbestos in buildings regulation, are provided as follows:

The minimum concentration to consider as an asbestos-containing material in Ontario is 0.5%

Vermiculite is considered an asbestos-containing material in the presence of any concentration of asbestos measured in a composite sample taken in accordance with provincial/territorial sampling standards.

Mechanical Insulation

In evaluating the condition of mechanical insulation (on boilers, breeching, 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, i.e. 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 should range from 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, but can become friable if disturbed by drilling or abrading.

However, some non-friable materials, e.g. 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.

Asbestos-Containing Material Debris

The presence of fallen friable asbestos-containing material is noted separately from the presumed friable asbestos-containing material source (sprayed fireproofing, thermal insulation, texture, decorative or acoustic finishes or mechanical insulation) and is referred to as debris.

The presence of fallen asbestos-containing material from damaged non-friable asbestos-containing material is reported separately from the non-friable asbestos-containing material source. Fallen non-friable asbestos-containing material that has become friable is reported as debris. Workers are advised to be watchful for the presence of debris prior to accessing, or working in proximity to, mechanical insulation or above ceiling areas of buildings with asbestos-containing material, regardless of the reported presence or absence of debris.

Evaluation of Accessibility

The accessibility of building materials known or suspected of being asbestos-containing material is rated according to the following criteria:

ACCESS (A) Areas of the building within reach (from floor level) of all building users. Includes areas such as gymnasiums, workshops, and storage areas where activities of the building users (e.g. basketball on gym ceiling) may result in disturbance of asbestos-containing material 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, e.g. tops of equipment, mezzanines.

ACCESS (C) EXPOSED Areas of the building above 8'0" where use of a ladder is required to reach the asbestos-containing material. Only refers to asbestos-containing material 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 such as a ventilation plenum. 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 asbestos-containing material. Evaluation of condition and extent of asbestos-containing material is limited or impossible, depending on the assessor’s ability to visually examine the materials in areas rated Access (D).

ACTION MATRIX AND ACTION DESCRIPTIONS

The action matrix prioritizes the corrective actions in terms of potential health risk based on condition, accessibility, and potential for future disturbance.

The following factors are considered in making site-specific recommendations for corrective actions in conformance with the existing applicable regulation or codes of practice, and for the practical implementation of asbestos management:

1. Asbestos-containing material in POOR condition is not routinely repairable. If an abatement action is necessary, removal is the recommended action (enclosure is a viable option in unusual circumstances, e.g. where removal is difficult or costly and the asbestos-containing material can be thoroughly enclosed).
2. Mechanical insulation in FAIR condition will be repaired or removed based on the following general recommendations, applied on a case-by-case basis:
    a. Asbestos-containing mechanical insulation found in FAIR condition in ACCESS (B) or ACCESS (C) EXPOSED areas is to be repaired.
    b. Asbestos-containing mechanical insulation found in FAIR condition in ACCESS (B) and ACCESS (C) EXPOSED areas, where future damage to the asbestos-containing material is likely to occur, is to be removed.
3. Asbestos-containing material in GOOD condition present in ACCESS (A) can be managed by surveillance, as long as it is not disturbed by future renovation, maintenance or demolition. Proactive removal of the asbestos-containing material in ACCESS (A) will be considered where damage is possible by ongoing occupant activity (accidental or intentional).
4. Non-friable or manufactured products are considered in the action matrix as follows:
    a. Non-friable and manufactured products reported in POOR condition, or friable DEBRIS resulting from the deterioration of non-friable asbestos-containing material, are treated as friable materials and the appropriate action, depending on accessibility, is determined from the action matrix for friable asbestos-containing material.
    b. For non-friable or manufactured products reported in GOOD condition, Action 7 (surveillance) is recommended regardless of accessibility.
5. All asbestos-containing material from a particular area is to be removed where small quantities of asbestos are present, and removal will negate the need for the use of an Asbestos Management Program in that area.

The action matrix provided below establishes the recommended asbestos control action. The ACTIONS themselves are described in full following the table.

ASBESTOS-CONTAINING MATERIAL				
ACCESS	CONDITION			DEBRIS
	GOOD	FAIR	POOR	
(A)	ACTION 5/7[1]	ACTION 5/6[2]	ACTION 3	ACTION 1
(B)	ACTION 7	ACTION 6/5[3]	ACTION 3	ACTION 1
(C) exposed	ACTION 7	ACTION 6	ACTION 4	ACTION 2
(C) concealed	ACTION 7	ACTION 7	ACTION 4	ACTION 2
(D)	ACTION 7	ACTION 7	ACTION 7	ACTION 7

[1] If material in **ACCESS (A)/GOOD** condition is not removed, **ACTION 7** is required.

[2] If material in **ACCESS (A)/FAIR** condition is not removed, **ACTION 6** is required.

[3] Remove asbestos-containing material in **ACCESS (B)/FAIR** condition if asbestos-containing material is likely to be disturbed.

ACTION 1 Immediate clean-up of debris that is likely to be disturbed.

Access that is likely to cause a disturbance of the ASBESTOS-CONTAINING MATERIAL DEBRIS is to be restricted and clean up ASBESTOS-CONTAINING MATERIAL DEBRIS is to be done immediately. Use correct asbestos procedures. This action is required for compliance with regulatory requirements and good practice. The assessor should immediately notify the Asset or Property and Facility Manager, or Regional/Area Asbestos Management Coordinator of this condition.

ACTION 2 Entry into areas with asbestos-containing material debris requires intermediate risk precautions.

At locations where ASBESTOS-CONTAINING MATERIAL DEBRIS can be isolated in lieu of removal or cleaned up, appropriate means to limit entry to the area is to be used. Access to the area is restricted to persons using intermediate risk asbestos-work precautions. The precautions will be required until the ASBESTOS-CONTAINING MATERIAL DEBRIS has been cleaned up, and the source of the DEBRIS has been stabilized or removed following intermediate risk (if minor) or high-risk precautions.

ACTION 3 Asbestos-containing material removal required for compliance.

Asbestos-containing material must be removed for compliance with regulatory requirements and good practice. Use asbestos procedures appropriate to the scope of the removal work.

ACTION 4 Access into areas where asbestos-containing material is present and likely to be disturbed by access requires intermediate risk precautions.

Intermediate risk asbestos precautions are to be used when entry or access into an area is likely to disturb the asbestos-containing material. ACTION 4 must be used until the asbestos-containing material is removed (Use ACTION 1 or 2 if DEBRIS is present). Intermediate risk or high-risk precautions should be used for removal (depending on extent of removal).

ACTION 5 Proactive asbestos-containing material removal.

Removal of asbestos-containing material in lieu of repair may be considered, even if it is in GOOD condition at locations, where asbestos-containing material is easily accessible, limited in quantity, and removal would be cost-effective.

ACTION 6 Asbestos-containing material repair.

Asbestos-containing material may be repaired if 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, asbestos-containing material is to be treated as being in GOOD condition and ACTION 7 is to be implemented. If asbestos-containing material is likely to be damaged or disturbed during normal use of the area or room, ACTION 5 is to be implemented.

ACTION 7 Routine Surveillance.

Routine surveillance of the asbestos-containing material is to be instituted. Trained workers or service providers must use appropriate asbestos precautions (low, intermediate or high) during disturbance of the remaining asbestos-containing material.