DESIGNATED SUBSTANCES SURVEY
2502-601

4428 Old Kingston Road
Portland, Ontario

PREPARED FOR:

Jewell Engineering Inc.
Municipality of Rideau Lakes

March 12, 2025

Prepared by:

Skootamatta
Environmental Consulting Inc.

TABLE OF CONTENTS

1.0 INTRODUCTION & BACKGROUND

1.1 INTRODUCTION

Skootamatta Environmental Consulting Inc. (Skootamatta) was retained by Jewell Engineering Inc. to complete a designated substance survey for the building located at 4428 Old Kingston Road, Portland, Ontario.

The assessment was performed by Laura Reavie, H. B. Sc., on February 24, 2025.

1.2 OBJECTIVES

The objective was to complete a designated substance survey the building. The approach taken was as follows:

- To identify, through a sampling program and visual assessment, the presence of designated substances listed in the Ontario Occupational Health and Safety Act (OHSA) and other special handling materials;
- To quantify the amounts of designated substances and special handling materials on the site; and,
- To evaluate if such substances pose a health risk to constructors, and make recommendations to eliminate such risks.

1.3 SCOPE OF WORK

To accomplish the asbestos sampling objectives, the following scope of work was conducted in the building located at 4428 Old Kingston Road, Portland, Ontario during the survey:

- Conducted a systematic inspection of the building to document the location, type, quantity and condition of designated substances and special handling materials;
- Collect and record representative building material samples for potential laboratory analysis;
- Submit representative samples for bulk asbestos and lead laboratory analyses; and,
- Interpret analytical results and prepare a detailed stand-alone survey report identifying the type, location and condition of the designated substances and special handling materials located in the building located at 4428 Old Kingston Road, Portland, Ontario.

The DSS included a review of all of the designated substances defined by the OHSA, with particular emphasis placed on (but not limited to):

- Asbestos-containing materials;
- Lead based paints and plumbing;
- Mercury-containing equipment; and,
- Potential sources of silica.

Special handling materials that were incorporated into the survey include:

- PCB-containing equipment;
- Mould.

The following Ontario Designated Substances are not typically found in the building materials in a composition/state that is hazardous and were not included in this survey:

- Arsenic
- Acrylonitrile
- Benzene
- Coke Oven Emissions
- Ethylene Oxide
- Iscocyanates
- Vinyl Chloride Monomer

2.0 PRODUCT AND LEGISLATION HISTORY

2.1 LEGISLATION

Section 30 of the Ontario OHSA R.S.O. 1990 states the following: *"Before beginning a project, the Owner shall determine whether any designated substances are present at the project site and shall prepare a list of all designated substances that are present at the site." A designated substance is defined by OHSA as "a biological, chemical or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled."* The OHSA has enacted a regulation for eleven designated substances. Section 30 of OHSA further requires that a list of designated substances be provided to prospective construction workers on the project.

More specific legislation, as well as a brief discussion of the potential health and safety issues and manufacturing history for asbestos is provided below.

2.2 ASBESTOS-CONTAINING MATERIALS

In accordance with O. Reg. 278/05, asbestos-containing materials (ACM) are defined as material is that contains 0.5 % or more (dry weight) of any of the following fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite or tremolite.

Although asbestos has apparently been in use for more than 2,000 years, it was not until the industrial revolution in the late 1800s that it became popular for such things as insulation, fireproofing, floor tiles, ceiling tiles, cement piping, and corrugated pipe insulating wrap because of its incombustibility, heat resistance, chemical resistance, and reinforcing properties.

Health concerns related to airborne friable asbestos fibres, which include the diseases called asbestosis, mesothelioma, and lung cancer, resulted in a ban of its use as insulation in Ontario in 1973. Provincial occupational health and safety requirements with respect to ACMs are contained within Ontario Regulation 278/05 and 837 (amended to O. Reg. 279/05). Disposal of asbestos waste is governed by Environmental Protection Act – R.R.O. 1990, Regulation 347 (amended to O. Reg. 461/05). The Transportation of Dangerous Goods Act and Regulations prescribe additional requirements related to the transportation of asbestos waste.

2.3 LEAD-BASED PAINTS AND LEAD-CONTAINING MATERIALS

It is believed that lead has been used for over 6,000 years. Its long history and widespread use is due to some of its properties which make it commercially attractive, including: easy workability, low melting point, ability to form carbon metal compounds, hold pigments well, very easily recycled, stands up well to the outside weather elements, a high degree of corrosion resistance, and is inexpensive. As a result, lead has historically been used for many things. The following is a list of some areas in a building where lead might typically be found: interior and/or exterior paint, batteries, pigments, solders, plumbing, cable coverings, caulking, glazes, varnishes, glass and pipes.

The above products may produce air, dust, water and soil lead contamination, which can result in exposures through ingestion, absorption and/or inhalation. Lead exposure can result in damage to the kidneys, nervous system, and reproductive system. Lead exposure is a particular concern from lead paint dust during renovation, demolition, or construction activities, or from deterioration of wall coverings.

The 1975 Hazardous Products Act prohibited the use of lead-based pigments in interior consumer paint. The Federal Hazardous Products Act (1976) originally limited the quantity of

lead permissible in newly manufactured paints to 0.5% (5,000 ppm). However, on April 19, 2005, the federal Surface Coating Materials Regulations came into force, thereby amending Schedule I of the Hazardous Products Act. According to the new regulation, paints having a lead content greater than 600 mg/kg (600 ppm) are considered to be lead-based. In October 2010, this was revised to 0.009% (90ppm).

Under the provincial OHSA Regulation 843 (amended to O. Reg. 109/04) respecting lead, workers shall be protected from exposure to airborne lead. Workers are not at risk of being exposed to lead unless they are undertaking an activity that disturbs surfaces covered with lead based paint. Special precautions are required during renovation or demolition activities to ensure that worker exposure to lead does not exceed the limits specified in the Occupational Health and Safety Act, and its associated regulations.

2.4 MERCURY-CONTAINING EQUIPMENT

Mercury may be present in thermostats, batteries, level gauges, recording devices, thermometers, fluorescent light tubes and some paints. Workers and building occupants may be exposed during demolition/renovation activities.

Mercury can be present in three forms: elemental, inorganic and monomethyl. Over exposure can affect the nervous system, organs, skin, eyes, respiratory system, gastro-intestinal system and reproductive system. Short-term exposure to high levels of metallic mercury vapours may cause lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

The 1975 Hazardous Products Act prohibits the use of mercury in decorative or protective coatings applied on toys, equipment and other products for use by a child in learning or play. In 1991, a voluntary agreement between Health Canada and the Canadian Paint and Coatings Association resulted in the removal of mercury compounds from interior latex paints. In accordance with the Surface Coating Materials Regulations, the concentration of total mercury present in a surface coating material must not be more than 10 mg/kg (10 ppm).

Under the OHSA Regulation 844 (amended to O. Reg. 110/04) respecting mercury, workers shall be protected from exposure to airborne mercury. Workers are not at risk of being exposed to mercury unless they are undertaking an activity that disturbs surfaces covered with mercury containing paint or equipment containing mercury. Special precautions are required during renovation or demolition activities to ensure that worker exposure to mercury does not exceed

the limits specified in the OHSA, and its associated regulations. Regulation 490/09 specifies a TWAEV of 0.025mg/m^3 for all forms of mercury except alkyl mercury and 0.01 mg/m^3 for alkyl mercury.

In 1991, the MOL published the "Safe Handling of Mercury, A Guideline for the Construction Industry". This guideline describes potential health effects of mercury exposure, potential sources of mercury on construction sites and provides remedial measures, and worker protection procedures.

2.5 SILICA

Silica refers to the chemical compound silicon dioxide (SiO_2), which occurs in a crystalline or non crystalline (amorphous) form. Crystalline silica is a common component of soil and rocks, and is produced in some industrial operations when heated (such as foundry processes, brick and ceramics manufacturing, and silicon carbide production). Silica is present in cement, masonry, drywall and sand.

Occupational exposure to respirable crystalline silica occurs in a large variety of industries and occupations due to its widespread natural occurrence and the common use of materials and products containing it. Activities such as drilling, quarrying brick/block/concrete cutting and demolition activities can create an airborne silica exposure hazard. Inhalation of silica can produce silicosis, a disabling, dust-related disease of the lungs. Depending on the length of exposure, silicosis is a progressive and many times a fatal disease. Inhaling silica dust has also been associated with other diseases, such as tuberculosis and lung cancer.

Primary routes of exposure include inhalation, skin absorption and ingestion. Over exposure can affect the blood, organs and reproductive system. Regulation 490/09 specifies a TWAEV of 0.05mg/m^3 for cristobalite and 0.1mg/m^3 for quartz/Tripoli.

The Ontario Ministry of Labour also enforces the Guideline Respecting Silica on Construction Sites. This regulation recommends procedures to minimize the workers exposure to silica following Type 1, 2 and 3 procedures similar to those identified in the asbestos regulations and recommends that workers wear personal protective equipment.

There are no restrictions on the disposal of silica under O.Reg. 347.

2.6 POLYCHLORINATED BIPHENYLS (PCBS)

Polychlorinated biphenyls (PCBs) are a group of chemicals based on a combination of chlorine and a derivative of benzene called biphenyl. PCBs are toxic and persistent chemicals primarily used as insulating fluids in heavy-duty electrical equipment in power plants, industries, and large buildings. Other uses were as a plasticizer in sealant, caulking, synthetic resins, rubber, paints, waxes, and asphalt, and a flame retardant in lubricating oils. Health concerns over PCBs, including their potential as carcinogens, resulted in the ban of their manufacture in 1977.

The PCB regulations (SOR/2008-273) took effect in 2008 and are governed under the Canadian Environmental Protection Act, 1999. These regulations have provided deadlines for ending PCB usage at concentrations above 50 mg/kg, limit the time that PCB can be stored and limit the time that PCBs can be stored prior to destroying them. The disposal of PCB waste is governed by O.Reg. 362 of the Environmental Protection Act. PCBs must be managed on-site or disposed of under manifest to a licensed waste disposal site.

2.7 MOULD

Moulds and fungi are found in nature and are necessary for the breakdown of leaves, wood and other plant debris. These micro-organisms can enter a building directly or by their spores being carried in by the air. All moulds require both a source of nutrients and humidity to survive and flourish. Generally, nutrients are not a limiting factor and, when moisture is high, mould will grow on wood, drywall, upholstery, fabric, wallpaper, drapery, ceiling tiles, and carpeting. In modern buildings, moisture is present as the result of: flooding, leaks in the roof or plumbing, sealed buildings that do not allow excess moisture to escape, sources such as cooking facilities, showers, etc., or excess humidity.

Some of the more common types of mould found in buildings include: *Stachybotrys chartarum* (also known as *Stachybotrys atra*), *Aspergillus* sp., *Penicillium* sp., *Fusarium* sp., *Trichoderma* sp., *Memnoniella* sp., *Cladosporum* sp. and *Alternaria* sp.. In general, it is the very young, the elderly, and immune-compromised individuals who are most at risk. It is also important to note that sensitivity to mould varies dramatically from individual to individual. In addition, many of these moulds make mycotoxins, which are metabolites or by-products from the moulds that have been identified as being toxic to humans. These toxins can slowly wear down the immune system and can lead to allergic or respiratory problems.

Mould exposure from homes or workplaces can cause a variety of symptoms ranging from minor allergic reactions to extremely severe, life threatening disease. Documented health

effects from mould exposure include headache, fatigue, and cough, shortness of breath, congestion, fever, nausea, and eye, ear and throat irritation.

3.0 SURVEY METHODOLOGY AND ASSESSMENT CRITERIA

Ms. Laura Reavie of Skootamatta conducted the survey of the building located at 4428 Old Kingston Road, Portland, Ontario on February 24, 2025.

The asbestos survey consisted of a thorough systematic inspection of the building to document the location, type, quantity and condition of asbestos containing materials. As part of the survey, bulk material samples were collected for asbestos analysis and paint samples were collected for lead analysis.

Selected photographs taken during the survey have been included in Appendix A. Details regarding the approach used in conducting the field investigation including sampling procedure and analytical methodology are outlined in the following sections.

3.1 ASBESTOS-CONTAINING MATERIALS

The asbestos survey included but was not limited to recording visual observations of the flooring, walls and ceilings. In accordance with applicable regulations, "friable material" is defined as: *material that, when dry, can be crumbled, pulverized or powdered by hand pressure, or is crumbled, pulverized or powdered*.

The asbestos survey was undertaken in general conformance with Ontario Regulation 278/05, *Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations*, which is the current governing Regulation on detection and handling of asbestos. As described above, the survey methodology included a visual inspection of all accessible building components. Minor destructive test openings were made in some materials where access permitted. Table 1 guidelines were followed for the sampling program.

Table 1: Minimum Asbestos Bulk Material Sample Requirements

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

Based on the above, a total of 21 bulk samples were collected from 7 possible asbestos containing materials and submitted for asbestos analysis. This number of samples was considered representative based on observations pertaining to like building materials, and was consistent with the sampling requirements of O. Reg. 278/05.

Spatial representation is not only achieved in a designated substance survey through sampling but also through visual observation. For example, drywall compound material from one wall is considered to be the same as another wall if the material appears to be homogeneous. A building material sample collected from a certain area can be extrapolated to represent other areas within the building. This stems from the visual evidence relating to the similarity of the building materials and the assumption that these materials would have been placed / erected at the same time during the same construction project. Where evidence indicates that this is not the case, additional characterization is required.

Samples were collected using appropriate wetting techniques and sampling tools. The collected bulk samples were placed in sealable plastic bags and labelled before being sent to EMC Scientific Incorporated, Mississauga, Ontario for bulk asbestos analysis.

The results of the asbestos sampling are summarized in Table 3 in **Section 4.1.**

3.2 Lead-Based Paints and Lead-Containing Materials

All accessible areas of the building were inspected for various painted surfaces that may contain lead-based paint or other building materials (such as wiring and plumbing) that may contain lead. The selection of sampling locations was based on the paint colours, area of coverage, and suspected age of the paint.

There were seven painted surfaces that were sampled and analyzed for lead. Areas where several layers of paint existed did not necessarily have identification of each layer unless the paint was in poor condition.

A scraper blade was used to collect bulk lead paint samples. Paint was scraped directly off the substrate and into a plastic-sampling bag, which was then sealed and labelled. Special care was made to ensure that all layers of paint were removed equally.

Seven paint samples were submitted for lead analysis to Caduceon Environmental Laboratories in Kingston. Since paint is processed in large batches, paint composition is assumed to be spatially consistent during and after application.

According to the Surface Coating Materials Regulations, paints having a lead content greater than 0.009% (90 ppm) are considered to be lead-based.

The results of the lead sampling are summarized in Table 3 in **Section 4.2.**

3.3 Mercury-Containing Equipment

The buildings were visibly inspected for materials that could release mercury liquid/vapour during on-going building maintenance. The results of the mercury inspection are summarized in **Section 4.3**.

3.4 Silica

The building was visibly inspected for free silica and materials that could release silica dust as a result of on-going building maintenance. No samples for silica were collected during the survey. Areas that commonly contain silica materials were noted during the DSS.

Materials that contain crystalline silica are not hazardous unless they are disturbed, generating small-sized particles that can get in your lungs (“respirable crystalline silica”). Silica exposure

can occur when blasting, cutting, chipping, drilling and grinding materials that contain silica. This can result in silica dust that is hazardous for construction workers and others to breathe.

OSHA regulation 29 CFR 1926.55(a) requires construction employers to keep worker exposures at or below a Permissible Exposure Level (PEL) of 0.1 mg/m3. The National Institute for Occupational Safety and Health has a lower Recommended Exposure Level of 0.05 mg/m3.

The results of the silica survey are summarized in **Section 4.4**.

3.5 Polychlorinated Biphenyls (PCBs)

A cursory inspection for equipment that may potentially contain PCBs was conducted. During the survey, if any PCB wastes and/or storage sites were identified, their presence and location were also recorded in the field. The results of the PCB inspection are summarized in **Section 4.5**.

3.6 Mould

The mould inspection consisted of looking for visible signs of mould in areas where mould growth is likely. Such areas include those with building materials containing cellulose (e.g. paper, cardboard, wood, etc.), where these materials are exposed from time to time to water or high humidity. The results of this inspection are included in **Section 4.6**.

4.0 SURVEY RESULTS

The following findings are for the building located at 4428 Old Kingston Road, Portland, Ontario.

4.1 Asbestos-Containing Materials

Several bulk material samples were collected and submitted for asbestos analysis and are shown in the table below. Analytical results are provided in **Appendix B**. The following is a brief summary of the survey.

Table 2: Summary of Asbestos Analysis

Sample ID	Material	Description	Location	Asbestos Content
2502-601 1a	Floor Tile	Brown Floor Backing	Kitchen	Non Detect
2502-601 1b	Floor Tile	Brown Floor Backing		Non Detect
2502-601 1c	Floor Tile	Brown Floor Backing		Non Detect
2502-601 2a	Drywall Mud	White joint compound	1st Floor	Non Detect
2502-601 2b	Drywall Mud	White joint compound		Non Detect
2502-601 2c	Drywall Mud	White joint compound		Non Detect
2502-601 3a	Drywall	White joint compound	1st Floor	Non Detect
2502-601 3b	Drywall	White joint compound		Non Detect
2502-601 3c	Drywall	White joint compound		Non Detect
2502-601 4a	Drywall	Grey Drywall	2nd Floor	Non Detect
2502-601 4b	Drywall	Grey Drywall		Non Detect
2502-601 4c	Drywall	Grey Drywall		Non Detect
2502-601 5a	Window Caulking	White Caulking	2nd floor windows	Non Detect
2502-601 5b	Window Caulking	White Caulking		Non Detect
2502-601 5c	Window Caulking	White Caulking		Non Detect
2502-601 6a	Window Caulking	Colourless Caulking	1st floor windows	Non Detect
2502-601 6b	Window Caulking	Colourless Caulking		Non Detect
2502-601 6c	Window Caulking	Colourless Caulking		Non Detect
2502-601 7a	Sink Glaze	Black Mastic	Kitchen Sink	**1% Chrysotile**

Chrysotile asbestos was detected in the black glaze that was found on the under side of the sink in the kitchen.

4.2 Lead-Based Paints and Lead-Containing Materials

A total of seven samples were collected and submitted for lead paint analysis and are shown in the tables below. Analytical results are provided in **Appendix C**. The following is a brief summary of the lead paint survey.

Table 3: Summary of Lead Paint Analysis

Sample ID	Colour	Location	Results (µg/g)
2502-601 #1	Green	1st floor	<5
2502-601 #2	Grey	1st floor bathroom	<5
2502-601 #3	Dark Grey	1st floor bathroom trim	<5
2502-601 #4	Pink	2nd Floor Hallway	6
2502-601 #5	Yellow	2nd floor bathroom	<5
2502-601 #6	White	Bedroom	7
2502-601 #7	Brown	Outside Deck	13

The analytical results from the sampling indicated that all types paint have a lead concentration below the applicable criterion of 90 ppm.

Lead may be present in a number of materials which were not assessed and/or sampled. The following materials, when found, should be considered lead containing.

- Plumbing solder, electrical components including wiring connectors, fibre optic cable sheathing and grounding conductors.

4.3 Mercury-Containing Equipment

No mercury containing equipment was identified during the inspection.

4.4 Silica

Silica is present in ceiling tiles, cement, plaster, masonry and other cement materials throughout the building. The building is a cement foundation and brick construction.

It is recommended that the Ministry of Labour's Guideline "Silica on Construction Projects", September, 2004 be followed during the demolition for the handling of silica based products.

4.5 Polychlorinated Biphenyls (PCBs)

No electrical equipment (such as transformers, capacitors, and light ballasts) present within the area(s) assessed is expected to contain PCBs.

4.6 MOULD

Water damage was observed around the skylight and along the joint between the wall and ceiling in the south west bedroom on the second floor of the house. The extend of the water damage is not known.

5.0 CONCLUSIONS & RECOMMENDATIONS

On February 24, 2025 Skootamatta Environmental Consulting Inc. completed a designated substance survey for the arena located at 4428 Old Kingston Road, Portland, Ontario. Skootamatta has identified the presence of asbestos and silica throughout the building.

- Asbestos containing materials
    - Sink Glaze

- Silica containing materials (assumed)
    - Plaster, cement, masonry and other cement materials

5.1 ASBESTOS RECOMMENDATIONS

When presence of asbestos containing material is confirmed an Asbestos Management Plan must be implemented, unless the material is removed. The Asbestos Management Plan includes building drawings that depict where the asbestos containing material is located. An annual inspection of the area is to be completed to ensure that there are no damages to the area where the material is located. If asbestos containing material happens to be damaged, repairs should be made immediately so as to decrease the amount of potentially airborne asbestos fibers. It is the owner's responsibility to provide any contractor, worker or resident of the building with information of the asbestos that is present as per *Ontario Regulation 278/05* "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations".

Should the owner decide to remove asbestos containing material, removal must proceed in accordance with the Type 1, 2 or 3 operations and specified controls as per *Ontario Regulation*

278/05 "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations". A description of these operations is defined below.

5.1.1 Type 1 Operations

The following activities are classified as Type 1 operations.

- Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- 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 non-friable asbestos containing material if,
    - o the material is wetted to control the spread of dust or fibres, and
    - o the work is done only by means of non-powered hand-held tools.
- Removing less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used.

5.1.2 Controls for Type 1 Operations

- Prohibit eating, drinking, smoking and gum chewing in the work area.
- Provide workers with NIOSH approved respirators as specified in the regulation. (if requested).
- Provide worker training and implement a respiratory protection program per the CSA standards.
- Provide workers with protective clothing impervious to asbestos.
- Remove visible dust in the work area before beginning work with by damp wiping or HEPA vacuum.
- Prohibit use of compressed air to clean asbestos dust from surfaces.
- Use hand-powered tools and water when disturbing non-friable asbestos.
- Use polyethylene drop sheets to control the dust.
- Clean up asbestos waste frequently by damp wiping or HEPA vacuum.
- Wet the ACM before removal to minimize the spread of dust.
- Decontaminate personal protective equipment before leaving the work area.

- Decontaminate and dispose of protective clothing, drop sheets and non-rigid barriers as asbestos waste.
- Clean containers or bags with damp cloth or HEPA vacuum.
- Double – bag all asbestos waste.
- Dispose of asbestos waste to an approved waste disposal site.
- Provide a wash basin, soap, water and towels to workers to wash before leaving the work area, eating, drinking, smoking, etc.

5.1.3 Type 2 Operations

- Removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling.
- The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.
- Enclosing friable asbestos-containing material.
- Applying tape or a sealant or other covering to pipe or boiler insulation that is asbestos containing material.
- Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area of 7.5 square metres or more and are installed or removed without being broken, cut,
- drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos containing material if,
    - o the material is not wetted to control the spread of dust or fibres, and
    - o the work is done only by means of non-powered hand-held tools.
- Removing one square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos containing material if the work is done by means of power tools that are attached to dust collecting devices equipped with HEPA filters.
- Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag.
- Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material.
- An operation that,
    - o is not mentioned above,
    - o may expose a worker to asbestos, and

o is not classified as a Type 1 or Type 3 operation.

5.1.4 Controls for Type 2 Operations

The following controls apply to Type 2 Operations in addition to those described for Type 1 Operations.

- Add a wetting agent to the water used to wet asbestos.
- Post warning signs outside and at the entrances to the work area.
- Construct enclosures to prevent the spread of dust.
- Disable ventilation systems that are present within the enclosed area.
- Provide workers with NIOSH approved respirators as specified in the regulation.
- Provide worker training and implement a respiratory protection program per the CSA standards.

5.1.5 Type 3 Operations

- The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.
- The spray application of a sealant to friable asbestos-containing material.
- Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.
- Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos containing material, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.
- Repairing, altering or demolishing all or part of any building in which asbestos is or was used in the manufacture of products, unless the asbestos was cleaned up and removed before March 16, 1986.
- Work on ceiling tiles, drywall or friable asbestos-containing material is classified according to the total area on which work is done consecutively in a room or enclosed area, even if the work is divided into smaller jobs.

5.1.6 Controls for Type 3 Operations

The following controls apply to Type 3 Operations in addition to those described for Type 1 and 2 Operations.

- Disable and seal off the air handling systems servicing the work area.
- Damp wipe or HEPA vacuum movable objects and remove them from the work area.
- Seal with polyethylene sheets all objects that cannot be removed.
- Isolate the work area utilizing existing or polyethylene walls.
- Seal off all openings to the work area.
- Line the walls and floor with polyethylene sheeting.
- Install negative air systems to provide 0.02 inches of water pressure inside the chamber relative to outside the chamber.
- Shutdown, isolate, lock/tag out electrical power when using wet removal methods and install a temporary ground fault circuit interrupter (GFCI) supply.
- Construct a three stage entry decontamination facility, with showers and overlapping doors.
- Decontaminate all equipment and workers that are leaving the work area.
- Clean-up asbestos frequently before it dries out.

5.2 SILICA RECOMMENDATIONS

Exposure to airborne silica is regulated under Ontario Regulation 490/09 regarding silica under the OHSA. Airborne silica can be generated through such processes as blasting, grinding, crushing, and sandblasting silica-containing material such as concrete block walls, poured concrete flooring and other materials. Where possible utilize hand tools when disturbing silica. Precautions must be taken to prevent silica-containing particles from becoming airborne during the application of such processes. Such precautions include wetting of silica-containing area(s) to be disturbed and daily wet sweeping or HEPA vacuuming of silica dust. Additionally, appropriate respiratory protection and ventilation must be utilized during disturbance of silica-containing structures. The aforementioned recommendations and precautions should be adhered to during the demolition of on-site buildings.

It is recommended that the Ministry of Labour's Guideline "Silica on Construction Projects",

September, 2004 is followed during the proposed building demolition for the handling of silica based products. Cutting, grinding, drilling or demolition of materials containing silica should be completed only with proper respiratory protection and other worker safety precautions that comply with provincial standards or guidelines.

.

6.0 LIMITATIONS

The work performed by Skootamatta was conducted in accordance with generally accepted scientific practices current in this geographical area at the time work was performed. No warrant is either expressed or implied by furnishing written reports or findings. The client acknowledges that subsurface and concealed conditions may vary from those encountered or inspected. Skootamatta can only comment on the environmental conditions observed on the date(s) the survey was performed. The work is limited to those materials or areas of concern identified by the client. Other areas of concern may exist but were not investigated within the scope of this project.

Skootamatta makes no other representations whatsoever, including those concerning the legal significance of its finding or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issue, regulatory statutes are subject to interpretation and these interpretations may change over time. Skootamatta accepts no responsibility for consequential financial effects on transactions or property values, or requirements for follow up actions and costs.

The liability of Skootamatta or our officers, directors, shareholders or staff will be limited to the lesser of the fees paid or actual damages incurred by the client. Skootamatta will not be responsible for any consequential or indirect damages. Skootamatta will only be liable for damages resulting from the negligence of Skootamatta.

Information provided by Skootamatta is intended for client use only. Skootamatta will not provide results or information to any party unless disclosure by Skootamatta is required by law. Any use by a third party of reports or documents authorized by Skootamatta or any reliance by

a third party decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Skootamatta accepts no responsibility for damage suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

We trust this report is satisfactory for your purposes. If you have any questions regarding our report, please do not hesitate to contact the office.

Skootamatta Environmental Consulting Inc.

Laura Reavie, H. B.Sc.

7.0 REFERENCES

Asbestos on Construction Projects and in Buildings and Repair Operations, Ontario Regulation 278/05.

Designated Substances, Ontario Regulation 490/09.

Section 30 of the Occupational Health and Safety Act

Lead on Construction Projects, Ministry of Labour Guidance Document

Silica on Construction Projects, Ministry of Labour Guidance Document

Ministry of the Environment Regulation, R.R.O. 1990 Regulation 347 as amended

Alert-Mould in Workplace Buildings, Ontario Ministry of Labour

APPENDIX A

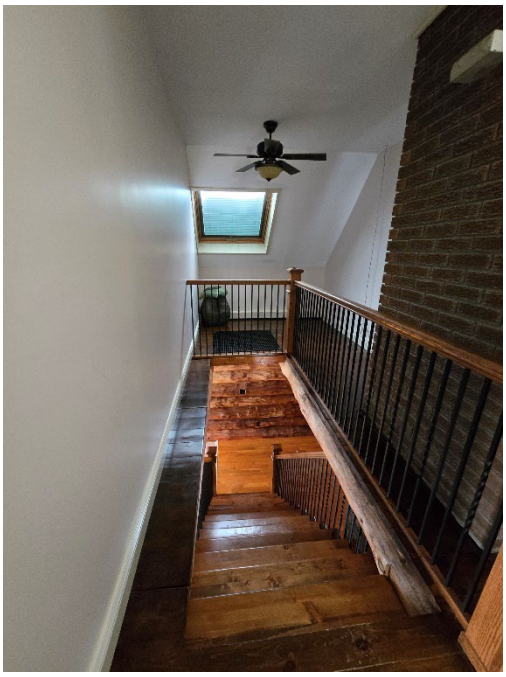
Site Photographs

Skootamatta
Environmental Consulting Inc.

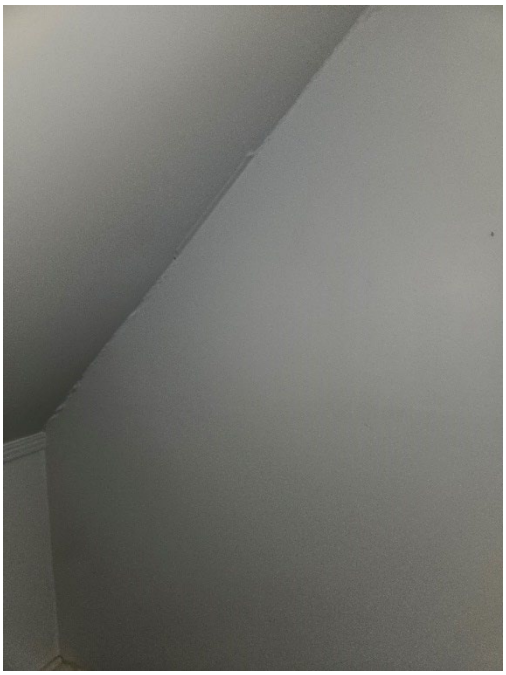
Picture 1: House located at 4428 Old Kingston Road, Portland, Ontario.

Picture 2: Under side of the kitchen sink. The glaze contains 1% chrysotile asbestos.

Picture 3: The attic contained fibreglass insulation.



Picture 4: The sky light on the second floor that has evidence of past water damage.



Picture 5: Evidence of water damage on the second floor south west bedroom.

APPENDIX B

Asbestos Laboratory Reports

EMC Scientific Inc.

Skootamatta
Environmental Consulting Inc.

emcscientific
INCORPORATED

Laboratory Analysis Report

To:

Laura Reavie
Skootamatta Environmental Consulting Inc.
974 Elzevir Road
Flinton, Ontario
K0H 1P0

EMC LAB REPORT NUMBER: A115983
Job/Project Name:
Analysis Method: Polarized Light Microscopy – EPA 600
Date Received: Feb 27/25 **Date Analyzed:** Mar 6/25
Analyst: John Paul Cantillon
Reviewed By: Malgorzata Sybydlo

Job No: 2502-601
Number of Samples: 21
Date Reported: Mar 6/25

Client's Sample ID	Lab Sample No.	Description/Location	Sample Appearance	SAMPLE COMPONENTS (%)			
				Asbestos Fibres		Non-asbestos Fibres	Non-fibrous Material
2502-601 1A	A115983-1	Kitchen floor tile	Brown, floor backing	**ND**		60	40
2502-601 1B	A115983-2	Kitchen floor tile	Brown, floor backing	**ND**		60	40
2502-601 1C	A115983-3	Kitchen floor tile	Brown, floor backing	**ND**		60	40
2502-601 2A	A115983-4	Drywall mud (1st floor)	White, joint compound	**ND**			100
2502-601 2B	A115983-5	Drywall mud (1st floor)	White, joint compound	**ND**			100
2502-601 2C	A115983-6	Drywall mud (1st floor)	White, joint compound	**ND**			100
2502-601 3A	A115983-7	Drywall (1st floor)	White, joint compound	**ND**			100
2502-601 3B	A115983-8	Drywall (1st floor)	White, joint compound	**ND**			100
2502-601 3C	A115983-9	Drywall (1st floor)	White, joint compound	**ND**			100
2502-601 4A	A115983-10	Drywall (2nd floor)	Grey, drywall	**ND**		1	99
2502-601 4B	A115983-11	Drywall (2nd floor)	Grey, drywall	**ND**		1	99

emcscientific INCORPORATED

Laboratory Analysis Report

EMC LAB REPORT NUMBER: A115983
Client's Job/Project Name/No.: 2502-601
Analyst: John Paul Cantillon

Client's Sample ID	Lab Sample No.	Description/Location	Sample Appearance	SAMPLE COMPONENTS (%)			
				Asbestos Fibres		Non-asbestos Fibres	Non-fibrous Material
2502-601 4C	A115983-12	Drywall (2nd floor)	Grey, drywall	**ND**		1	99
2502-601 5A	A115983-13	Window caulking (2nd floor)	White, caulking	**ND**			100
2502-601 5B	A115983-14	Window caulking (2nd floor)	White, caulking	**ND**			100
2502-601 5C	A115983-15	Window caulking (2nd floor)	White, caulking	**ND**			100
2502-601 6A	A115983-16	Window caulking (1st floor)	Colourless, caulking	**ND**			100
2502-601 6B	A115983-17	Window caulking (1st floor)	Colourless, caulking	**ND**			100
2502-601 6C	A115983-18	Window caulking (1st floor)	Colourless, caulking	**ND**			100
2502-601 7A	A115983-19	Sink glaze (kitchen sink)	Black, mastic	**Chrysotile**	**1**		99
2502-601 7B	A115983-20	Sink glaze (kitchen sink)	NA	**NA**			
2502-601 7C	A115983-21	Sink glaze (kitchen sink)	NA	**NA**			

Note:
1. Bulk samples are analyzed using Polarized Light Microscopy (PLM) and dispersion staining techniques. The analytical procedures are in accordance with EPA 600/R-93/116 method.
2. The results are only related to the samples analyzed. **ND** = None Detected (no asbestos fibres were observed), **NA** = Not Analyzed (analysis stopped due to a previous positive result).
3. This report may not be reproduced, except in full without the written approval of EMC Scientific Inc. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.
4. The Ontario Regulatory Threshold for asbestos is 0.5%. The limit of quantification (LOQ) is 0.5%.

APPENDIX C

Lead Laboratory Reports

Caduceon Environmental Laboratories

Skootamatta
Environmental Consulting Inc.

CADUCEON ENVIRONMENTAL LABORATORIES

Client committed. Quality assured. Proudly Canadian.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: 2502-601 **REPORT No: 25-004876 - Rev. 0**

Report To:
Skootamatta Environmental Consulting Inc.
974 Elzevir Rd.
Flinton, ON K0H 1P0

CADUCEON Environmental Laboratories
285 Dalton Ave
Kingston, ON K7K 6Z1

Attention: Laura Reavie

DATE RECEIVED: 2025-Feb-25
DATE REPORTED: 2025-Mar-04
SAMPLE MATRIX: Paint Chips

CUSTOMER PROJECT: 2502-601
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
ICP/OES (Solid)	7	OTTAWA	APRUDYVUS	2025-Mar-03	D-ICP-02	EPA 6010

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

Client I.D.	Sample I.D.	Parameter / Date Collected	Lead
		Units	µg/g
		R.L.	5
		Date Collected	-
2502-601 #1	25-004876-1	2025-Feb-24	<5
2502-601 #2	25-004876-2	2025-Feb-24	<5
2502-601 #3	25-004876-3	2025-Feb-24	<5
2502-601 #4	25-004876-4	2025-Feb-24	6
2502-601 #5	25-004876-5	2025-Feb-24	<5
2502-601 #6	25-004876-6	2025-Feb-24	7
2502-601 #7	25-004876-7	2025-Feb-25	13

Michelle Dubien
Data Specialist