ARCADIS Design & Consultancy for natural and built assets

HALTON DISTRICT SCHOOL BOARD

PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

THOMAS A. BLAKELOCK HIGH SCHOOL

1160 REBECCA STREET, OAKVILLE, ONTARIO

February 8, 2023

30167489

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PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

Thomas A. Blakelock High School

1160 Rebecca Street, Oakville, Ontario

Prepared for:

Halton District School Board

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1 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by the Halton District School Board to conduct a pre-renovation designated substances and hazardous materials survey in designated areas of Thomas A. Blakelock High School located at 1160 Rebecca Street, Oakville, Ontario.

The information in this report is to be provided to all bidders on a project in accordance with the requirements of the *Occupational Health and Safety Act*.

The site is a three-storey masonry structure. The original building was constructed in 1955 with additions constructed in 1959, 1969 and 1989.

It is our understanding that mechanical and electrical upgrades are scheduled to take place in designated areas of the building referred to in this report as the *designated study areas*. The survey was limited to inspecting and testing materials in the designated study areas that may be affected by the renovation project based on information provided by HDSB.

The designated study areas and eras of construction are shown on the floor plans provided in Appendix A.

The survey was undertaken to report on the presence or suspected presence of readily observable designated substances and hazardous materials.

1.1 Scope of Work

The scope of work for our investigation included:

- review of existing information;
- investigation of readily-accessible areas in the designated study areas for the presence of designated substances and hazardous materials used in building construction materials;
- obtaining representative bulk samples of materials suspected of containing asbestos and paint chip samples;
- laboratory analyses of bulk samples for asbestos content;
- laboratory analyses of paint chip samples for lead content; and
- preparation of a report outlining the findings of the investigation.

Mr. Dwayne Kellyman and Ms. Rebecca Hao of Arcadis visited the site on January 30, January 31 and February 3, 2023, to conduct the designated substances and hazardous materials surveys at Thomas A. Blakelock High School.

2 REGULATORY DISCUSSION AND METHODOLOGY

Ontario Occupational Health and Safety Act (OHSA)

The Ontario *Occupational Health and Safety Act* (OHSA) sets out, in very general terms, the duties of employers and others to protect workers from health and safety hazards on the job. These duties include, but are not limited to:

- taking all reasonable precautions to protect the health and safety of workers [clause 25(2)(h)];
- ensuring that equipment, materials and protective equipment are maintained in good condition [clause 25(1)(b)];
- providing information, instruction and supervision to protect worker health and safety [clause 25(2)(a)]; and
- acquainting a worker or a person in authority over a worker with any hazard in the work and in the handling, storage, use, disposal and transport of any article, device, equipment or a biological, chemical or physical agent [clause 25(2)(d)].

In addition, Section 30 of the OHSA deals with the presence of designated substances on construction projects. Compliance with the OHSA and its regulations requires action to be taken where there is a designated substance hazard on a construction project.

Section 30 of the OHSA requires the owner of a project to determine if designated substances are present on a project and, if so, to inform all potential contractors as part of the bidding process. Contractors who receive this information are to pass it onto other contractors and subcontractors who are bidding for work on the project.

Regulation for Construction Projects, O.Reg. 213/91

The *Regulation for Construction Projects*, O.Reg. 213/91, applies to all construction projects. The following sections of the regulation would apply to situations where there is the potential for workers to be exposed to designated substances:

Section 14	(5)	A competent person shall perform tests and observations necessary for the detection of hazardous conditions on a project.
Section 21	(1)	A worker shall wear such protective clothing and use such personal protective equipment or devices as are necessary to protect the worker against the hazards to which the worker may be exposed.
	(2)	A worker's employer shall require the worker to comply with subsection (1).

(3) A worker required to wear personal protective clothing or use personal protective equipment or devices shall be adequately instructed and trained in the care and use of the clothing, equipment or device before wearing or using it.

Section 30 Workers who handle or use substances likely to endanger their health shall be provided with washing facilities with clean water, soap and individual towels.

Section 46 (1) A project shall be adequately ventilated by natural or mechanical means,

(a) if a worker may be injured by inhaling a noxious...dust or fume;

(2) If it is not practicable to provide natural or mechanical ventilation in the circumstances described in clause (1)(a), respiratory protective equipment suitable for the hazard shall be provided and be used by the workers.

Section 59 If the dissemination of dust is a hazard to a worker, the dust shall be adequately controlled or each worker who may be exposed to the hazard shall be provided with adequate personal protective equipment.

Regulation for Designated Substances (O.Reg. 490/09)

The *Designated Substance Regulation* (O.Reg. 490/09) specifies occupational exposure limits (OELs) for designated substances and requires an assessment and a control program to ensure compliance with these OELs.

Although, O.Reg. 490/09 and the OELs do not apply to an employer on a construction project, or to their workers at the project, employers still have a responsibility to protect the health of their workers and to comply with the OHSA and other applicable regulations. Section 25(2)(h) of the OHSA requires that employers take "every precaution reasonable in the circumstances for the protection of a worker".

Other regulatory requirements (and guidelines) which apply to control of exposure to designated substances and hazardous materials are referenced in the sections below.

2.1 Asbestos

Asbestos has been widely used in buildings, both in friable applications (materials which can be crumbled, pulverized or powdered by hand pressure, when dry) such as pipe and tank insulation, sprayed-on fireproofing and acoustic texture material and in non-friable manufactured products such as floor tile, gaskets, cement board and so on. The use of asbestos in friable applications was curtailed around the mid-1970s and, as such, most buildings constructed prior to about 1975 contain some form of friable construction material with an asbestos content. The use of asbestos in certain non-friable materials continued beyond the mid-1970s.

Control of exposure to asbestos is governed in Ontario by Regulation 278/05 – *Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations*. Disposal of asbestos waste

(friable and non-friable materials) is governed by Ontario Regulation 278/05 and by Ontario Regulation 347, *Waste Management – General*. O.Reg. 278/05 classifies asbestos work operations into three types (Type 1, 2 and 3), as shown in Table C-1 in Appendix C, and specifies procedures to be followed in conducting asbestos abatement work.

2.2 Lead

Lead is a heavy metal that can be found in construction materials such as paints, coatings, mortar, concrete, pipes, solder, packings, sheet metal, caulking, glazed ceramic products and cable splices. Lead has been used historically in exterior and interior paints.

The *Surface Coating Materials Regulations* (SOR/2016-193) made pursuant to the Canada Consumer Product Safety Act states that a surface coating material must not contain more than 90 mg/kg total lead. Health Canada defines a lead-containing surface coating as a paint or similar material that dries to a solid film that contains over 90 mg/kg dry weight of lead.

Information from the United States Occupational Health and Safety Administration (OSHA) suggests that the improper removal of lead paint containing 600 mg/kg lead results in airborne lead concentrations that exceed half of the permissible exposure limit. Lead concentrations as low as 90 mg/kg may present a risk to pregnant women and children[(1)].

The *National Plumbing Code* allowed lead as an acceptable material for pipes until 1975 and in solder until 1986.

The Ministry of Labour *Guideline, Lead on Construction Projects*, dated April 2011, provides guidance in the measures and procedures that should be followed when handling lead containing materials during construction projects. In the guideline, lead-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of lead, as shown in Appendix C, Table C-2. Any operation that may expose a worker to lead that is not a Type 1, Type 2, or Type 3b operation, is classified as a Type 3a operation.

2.3 Mercury

Mercury has been used in electrical equipment such as alkaline batteries, fluorescent light bulbs (lamps), high intensity discharge (HID) lights (mercury vapour, high pressure sodium and metal halide), “silent switches” and in instruments such as thermometers, manometers and barometers, pressure gauges, float and level switches and flow meters. Mercury-containing lamps, the bulk of which are 1.22 m (four foot) fluorescent lamps contain between 7 and 40 mg of mercury each. Mercury compounds have also been

(1) *Lead-Containing Paints and Coatings: Preventing Exposure in the Construction Industry.* WorkSafe BC, 2011.

used historically as additives in latex paint to protect the paint from mildew and bacteria during production and storage.

The intentional addition of mercury to Canadian-produced consumer paints for interior use was prohibited in 1991. Mercury may have remained in paints after 1991, however, as a result of impurities in the paint ingredients or cross-contamination due to other manufacturing processes. The *Surface Coating Materials Regulations* made under the *Hazardous Products Act* set a maximum total mercury concentration of 10 mg/kg (0.001 percent) for surface coating materials (including paint). This criterion level applies to the sale and importation of new surface coating materials.

Mercury-containing thermostats and silent light switches are mercury tilt switches which are small tubes with electrical contacts at one end of the tube. A mercury tilt switch is usually present when no switch is visible. Mercury switches often have the word “TOP” stamped on the upper end of the switch, which is visible after removing the cover plate. If mercury switches are to be removed, the entire switch should be removed and placed into a suitable container for storage and disposal.

Waste light tubes generated during renovations or building demolition and waste mercury from equipment must either be recycled or disposed of in accordance with the requirements of Ont. Reg. 347 - *Waste Management, General*.

Waste mercury in amounts less than 5 kg (per month) are exempt from the generator registration requirements prescribed by O.Reg. 347 – *Waste Management – General*. Waste mercury from mercury switches or gauges should, however, be properly collected and shipped to a recycling facility or disposed of as a hazardous waste. Removal of mercury-containing equipment (e.g., switches, gauges, controls, etc.) should be carried out in a manner which prevents spillage and exposure to workers.

2.4 Silica

Silica exists in several forms of which crystalline silica is of most concern with respect to potential worker exposures. Quartz is the most abundant type of crystalline silica. Some commonly used construction materials containing silica include brick, refractory brick, concrete, concrete block, cement, mortar, rock and stone, sand, fill dirt, topsoil and asphalt containing rock or stone.

The Ministry of Labour *Guideline, Silica on Construction Projects*, dated April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of respirable crystalline silica in the form of cristobalite, tridymite, quartz and tripoli as shown in Appendix C, Table C-3.

2.5 Vinyl Chloride

Vinyl chloride vapours may be released from polyvinyl chloride (PVC) products in the event of heating or as a result of decomposition during fire. PVC is used in numerous materials that may be found in building

construction, including, for example, piping, conduits, siding, window and door frames, plastics, garden hoses, flooring and wire and cable protection.

2.6 Acrylonitrile

Acrylonitrile is used to produce nitrile-butadiene rubber, acrylonitrile-butadiene-styrene (ABS) polymers and styrene-acrylonitrile (SAN) polymers. Products made with ABS resins which may be found in buildings include telephones, bottles, packaging, refrigerator door liners, plastic pipe, building panels and shower stalls. Acrylonitrile can be released into the air by combustion of products containing ABS.

2.7 Other Designated Substances

Isocyanates are a class of chemicals used in the manufacture of certain types of plastics, foams, coatings and other products. Isocyanate-based building construction materials may include rigid foam products such as foam-core panels and spray-on insulation and paints, coatings, sealants and adhesives. Isocyanates may be inhaled if they are present in the air in the form of a vapour, a mist or a dust.

Benzene is a clear, highly flammable liquid used mainly in the manufacture of other chemicals. The commercial use of benzene as a solvent has practically been eliminated, however it continues to be used as a solvent and reactant in laboratories.

Arsenic is a heavy metal used historically in pesticides and herbicides. The primary use in building construction materials was its use in the wood preservative chromated copper arsenate (CCA). CCA was used to pressure treat lumber since the 1940's. Pressure-treated wood containing CCA is no longer being produced for use in most residential settings.

Ethylene oxide is a colourless gas at room temperature. it has been used primarily for the manufacture of other chemicals, as a fumigant and fungicide and for sterilization of hospital equipment.

Coke oven emissions are airborne contaminants emitted from coke ovens and are not a potential hazard associated with building construction materials.

2.8 Polychlorinated Biphenyls (PCBs)

The management of equipment classified as waste and containing Polychlorinated Biphenyls (PCBs) at concentrations of 50 parts per million (mg/kg) or greater is regulated by Ontario Regulation 362*, Waste Management – PCBs*. Under this regulation, PCB waste is defined as any waste material containing PCBs in concentrations of 50 mg/kg or greater. Any equipment containing PCBs at or greater than this level, such as transformers, switchgear, light ballasts and capacitors, which is removed from service due to age, failure or as a result of decommissioning, is considered to constitute a PCB waste. Although current federal legislation (effective 1 July 1980) has prohibited the manufacture and sale of new equipment containing PCBs since that time, continued operation of equipment supplied prior to this date and containing PCBs is still permitted. Handling, storage and disposition of such equipment is, however, tightly regulated and must

be managed in accordance with provincial and federal government requirements as soon as it is taken out of service or becomes unserviceable.

In most institutional, commercial facilities and in smaller industrial facilities, the primary source of equipment potentially containing PCBs is fluorescent and H.I.D. light ballasts. Small transformers may also be present. In larger industrial facilities, larger transformers and switch gear containing, or potentially containing, PCBs may also be present.

PCBs were also commonly added to industrial paints from the 1940s to the late 1970s. PCBs were added directly to the paint mixture to act as a fungicide, to increase durability and flexibility, to improve resistance to fires and to increase moisture resistance. The use of PCBs in new products was banned in Canada in the 1970s. PCB amended paints were used in speciality industrial/institutional applications prior to the 1970s including government buildings and equipment such as industrial plants, radar sites, ships as well as non-government rail cars, ships, grain bins, automobiles and appliances.

Removal of in-service equipment containing PCBs, such as fluorescent light ballasts, capacitors and transformers, is subject to the requirements of the federal *PCB Regulations* (discussed below).

The *PCB Regulations*, which came into force on 5 September 2008, were made under the *Canadian Environmental Protection Act*, 1999 (CEPA 1999) with the objective of addressing the risks posed by the use, storage and release to the environment of PCBs, and to accelerate their destruction. The *PCB Regulations* set different end-of-use deadlines for equipment containing PCBs at various concentration levels.

The Regulations Amending the PCB Regulations and Repealing the Federal Mobile PCB Treatment and Destruction Regulations were published on 23 April 2014, in the Canada Gazette, Part II, and came into force on 1 January 2015. The most notable part of the amendments is the addition of an end-of-use deadline date of 31 December 2025 for specific electrical equipment located at electrical generation, transmission and distribution facilities.

When the PCB materials are classified as waste, jurisdiction falls under the Ontario Ministry of the Environment and Climate Change (MOECC) and O.Reg. 362. All remedial and PCB management work must be carried out under the terms of a Director's Instruction issued by an MOECC District Office (for quantities of PCB fluid greater than 50 litres). The PCB waste stream, regardless of quantity, must be registered with the MOECC, in accordance with O.Reg. 347, *General - Waste Management*. O.Reg. 362 applies to any equipment containing greater than 1 kg of PCBs.

2.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

Ontario Regulation 463/10 – *Ozone Depleting Substances and Other Halocarbons*, applies to the use, handling and disposal of Class 1 ozone-depleting substances, including various chlorofluorocarbons (CFCs), halons and other halocarbons, Class 2 ozone-depleting substances, including various hydrochlorofluorocarbons (HCFCs) and halocarbons, and other halocarbons, including fluorocarbons (FCs) and hydrofluorocarbons (CFCs). The most significant requirements for handling of ozone-depleting substances (ODS) and other Halocarbons, which include, for example, refrigerants used in refrigeration equipment and chillers, include the following:

- certification is required for all persons testing, repairing, filling or emptying equipment containing ODS and other halocarbons;
- the discharge of a Class 1 ODS or anything that contains a Class 1 ODS to the natural environment or within a building is prohibited;
- the making, use of, selling of or transferring of a Class 1 ODS is restricted to certain conditions;
- the discharge of a solvent or sterilant that contains a Class 2 ODS is prohibited;
- the making, use of, selling of or transferring of a solvent or sterilant that contains a Class 2 ODS is restricted to certain conditions;
- fire extinguishing equipment that contains a halon may be discharged to fight fires, except fires for firefighting training purposes;
- portable fire extinguishing equipment that contains a halon may be used or stored if the extinguisher was sold for use for the first time before 1 January 1996;
- records of the servicing and repair of equipment containing ODS and other halocarbons must be prepared and maintained by the owner of the equipment; and
- equipment no longer containing ODS and other halocarbons must be posted with a notice completed by a certified person.

Ontario Regulation 347, *General – Waste Management*, has also been amended to provide for more strict control of CFCs. The requirements under the amended regulation apply primarily to the keeping of records for the receipt or recycling of CFC waste.

2.10 Mould

Moulds are forms of fungi that are found everywhere both indoors and outdoors all year round. Outdoors, moulds live in the soil, on plants and on dead and decaying matter. More than 1000 different kinds of indoor

moulds have been found in buildings. Moulds spread and reproduce by making spores, which are all small and light-weight, able to travel through air, capable of resisting dry, adverse environmental conditions, and hence capable of surviving a long time. Moulds need moisture and nutrients to grow and their growth is stimulated by warm, damp and humid conditions.

Control of exposure to mould is required under Section 25(2)(h) of the Ontario *Occupational Health and Safety Act*, which states that employers shall take every precaution reasonable in the circumstances for the protection of workers. Recommended work practices are outlined in the following documents:

- *Mould Guidelines for the Canadian Construction Industry*. Standard Construction Document CCA 82 2004. Canadian Construction Association.
- *Mould Abatement Guidelines*. Environmental Abatement Council of Ontario. Edition 3. 2015.

3 RESULTS AND DISCUSSION

3.1 Asbestos

Arcadis reviewed report prepared by Arcadis for the Halton District School Board entitled *Pre-Renovation Designated Substances and Hazardous Materials Survey, T.A. Blakelock High School, 1160 Rebecca Street, Oakville, Ontario* dated May 24, 2022. Information and/or bulk sample analysis results obtained from this existing report were utilized by Arcadis during the course of our investigation and in the preparation of this report.

During the course of our site investigation, representative bulk samples of material were collected by Arcadis staff. The samples were forwarded to EMSL Canada Inc. (EMSL) for asbestos analyses. Results of bulk sample analysis for asbestos content are provided in Table 3.1. Table 3.1 also include sample results obtained from existing reports and include results that are outside of the designated study areas, which are provided for references purposes only. Laboratory reports are provided in Appendix B. Locations of accessible asbestos-containing materials in the designated study areas and throughout the school are shown on the floor plan provided in Appendix A.

Table 3.1. Summary of Results of Analyses of Bulk Samples for Asbestos Content

Sample No.	Location	Description	Asbestos Content
1-A	Room 263	2’ x 4’ ACT – pinholes and small fissure with brown backing (1969 Construction era)	None Detected
1-B	Room 141	2’ x 4’ ACT – pinholes and small fissure with brown backing (1969 Construction era)	None Detected
1-C	Room 263	2’ x 4’ ACT – pinholes and small fissure with brown backing (1969 Construction era)	None Detected
2-A	Room 144	Tile - 12’’ x 12’’ white VFT with black/brown fleck (1969 Construction era)	None Detected (PLM) None Detected (TEM)
2-B	Room 145	Tile - 12’’ x 12’’ white VFT with black/brown fleck (1969 Construction era)	None Detected
2-C	Room 144	Tile - 12’’ x 12’’ white VFT with black/brown fleck (1969 Construction era)	None Detected
3-A	Room 136	Mastic - 12’’ x 12’’ VFT (1969 Construction era)	None Detected
3-B	Room 135	Mastic - 12’’ x 12’’ VFT (1969 Construction era)	None Detected
3-C	Room 136	Mastic - 12’’ x 12’’ VFT (1969 Construction era)	None Detected
4-A	Room 159B	Mastic - 12’’ x 12’’ white with black VFT (1955 Construction era)	None Detected
4-B	Room 159B	Mastic - 12’’ x 12’’ white with black VFT (1955 Construction era)	None Detected
4-C	Room 159B	Mastic - 12’’ x 12’’ white with black VFT (1955 Construction era)	None Detected

Sample No.	Location	Description	Asbestos Content
5-A	Room 159B	Levelling compound under 12'' x 12'' white with black VFT (1955 Construction era)	None Detected
5-B	Room 159B	Levelling compound under 12'' x 12'' white with black VFT (1955 Construction era)	None Detected
5-C	Room 159B	Levelling compound under 12'' x 12'' white with black VFT (1955 Construction era)	None Detected
6-A	Room 134	Carpet mastic (1969 Construction era)	None Detected
6-B	Room 134	Carpet mastic (1969 Construction era)	None Detected
6-C	Room 134	Carpet mastic (1969 Construction era)	None Detected
7-A	Room 134	Black vinyl baseboard (1969 Construction era)	None Detected (PLM) None Detected (TEM)
7-B	Room 134A	Black vinyl baseboard (1969 Construction era)	None Detected
7-C	Room 134D	Black vinyl baseboard (1969 Construction era)	None Detected
8-A	Room 134	Yellow mastic under black vinyl baseboard (1969 Construction era)	None Detected
8-B	Room 134A	Yellow mastic under black vinyl baseboard (1969 Construction era)	None Detected
8-C	Room 134D	Yellow mastic under black vinyl baseboard (1969 Construction era)	None Detected
9-A	Room 159B	Grey vinyl baseboard (1955 Construction era)	None Detected (PLM) None Detected (TEM)
9-B	Room 159B	Grey vinyl baseboard (1955 Construction era)	None Detected
9-C	Room 159B	Grey vinyl baseboard (1955 Construction era)	None Detected
10-A	Room 159B	Brown mastic under grey baseboard (1955 Construction era)	None Detected
10-B	Room 159B	Brown mastic under grey baseboard (1955 Construction era)	None Detected
10-C	Room 159B	Brown mastic under grey baseboard (1955 Construction era)	None Detected
11-A	Room 134	Black door frame caulking (1969 Construction era)	None Detected (PLM) None Detected (TEM)
11-B	Room 141	Black door frame caulking (1969 Construction era)	None Detected
11-C	Room 259C	Black door frame caulking (1969 Construction era)	None Detected
12-A	Room 158C	2'' x 2'' beige ceramic tile – grout (1955 Construction era)	None Detected
12-B	Room 158C	2'' x 2'' beige ceramic tile – grout (1955 Construction era)	None Detected
12-C	Room 158C	2'' x 2'' beige ceramic tile – grout (1955 Construction era)	None Detected
13-A	Room 158C	2'' x 2'' beige ceramic tile – mortar bed (1955 Construction era)	None Detected

Sample No.	Location	Description	Asbestos Content
13-B	Room 158C	2'' x 2'' beige ceramic tile – mortar bed (1955 Construction era)	None Detected
13-C	Room 158C	2'' x 2'' beige ceramic tile – mortar bed (1955 Construction era)	None Detected
14-A	Room 159C	4'' x 4'' white ceramic tile – grout (1955 Construction era)	None Detected
14-B	Room 159C	4'' x 4'' white ceramic tile – grout (1955 Construction era)	None Detected
14-C	Room 159C	4'' x 4'' white ceramic tile – grout (1955 Construction era)	None Detected
15-A	Room 159C	4'' x 4'' white ceramic tile – mortar bed (1955 Construction era)	None Detected
15-B	Room 159C	4'' x 4'' white ceramic tile – mortar bed (1955 Construction era)	None Detected
15-C	Room 159C	4'' x 4'' white ceramic tile – mortar bed (1955 Construction era)	None Detected
16-A	Room 259A	1'' x 1'' beige ceramic tile – grout (1969 Construction era)	None Detected
16-B	Room 259A	1'' x 1'' beige ceramic tile – grout (1969 Construction era)	None Detected
16-C	Room 259A	1'' x 1'' beige ceramic tile – grout (1969 Construction era)	None Detected
17-A	Room 259A	1'' x 1'' beige ceramic tile – mortar bed (1969 Construction era)	None Detected
17-B	Room 259A	1'' x 1'' beige ceramic tile – mortar bed (1969 Construction era)	None Detected
17-C	Room 259A	1'' x 1'' beige ceramic tile – mortar bed (1969 Construction era)	None Detected
18-A	Room 259A	4'' x 4'' beige ceramic tile – grout (1969 Construction era)	None Detected
18-B	Room 259A	4'' x 4'' beige ceramic tile – grout (1969 Construction era)	None Detected
18-C	Room 259A	4'' x 4'' beige ceramic tile – grout (1969 Construction era)	None Detected
19-A	Room 259A	4'' x 4'' beige ceramic tile – mortar bed (1969 Construction era)	<0.25 Chrysotile (Pt Ct) [(1)]
19-B	Room 259A	4'' x 4'' beige ceramic tile – mortar bed (1969 Construction era)	<0.25 Chrysotile (Pt Ct) [(1)]
19-C	Room 259A	4'' x 4'' beige ceramic tile – mortar bed (1969 Construction era)	<0.25 Chrysotile (Pt Ct) [(1)]
20-A	Room 259B	6'' x 6'' pink with black spots ceramic tile – grout (1969 Construction era)	None Detected
20-B-Grout 1	Room 259B	6'' x 6'' pink with black spots ceramic tile – grout (1969 Construction era)	None Detected
20-B-Grout 2	Room 259B	6'' x 6'' pink with black spots ceramic tile – grout (1969 Construction era)	None Detected

Sample No.	Location	Description	Asbestos Content
20-C	Room 259B	6'' x 6'' pink with black spots ceramic tile – grout (1969 Construction era)	None Detected
21-A	Room 259B	6'' x 6'' pink with black spots ceramic tile – mortar bed (1969 Construction era)	None Detected
21-B	Room 259B	6'' x 6'' pink with black spots ceramic tile – mortar bed (1969 Construction era)	None Detected
21-C	Room 259B	6'' x 6'' pink with black spots ceramic tile – mortar bed (1969 Construction era)	None Detected
22-A	Room 159C	Glazed ceramic tile – grout (1955 Construction era)	None Detected
22-B	Room 159C	Glazed ceramic tile – grout (1955 Construction era)	None Detected
22-C	Room 159C	Glazed ceramic tile – grout (1955 Construction era)	None Detected
23-A-Mortar 1	Room 266	Interior brick mortar (1969 Construction era)	None Detected
23-A-Mortar 2	Room 266	Interior brick mortar (1969 Construction era)	None Detected
23-B-Mortar 1	Room 266	Interior brick mortar (1969 Construction era)	None Detected
23-B-Mortar 2	Room 266	Interior brick mortar (1969 Construction era)	None Detected
23-C-Mortar 1	Room 266	Interior brick mortar (1969 Construction era)	None Detected
23-C-Mortar 2	Room 266	Interior brick mortar (1969 Construction era)	None Detected
24-A	Room 134	Exterior brown window caulking (1969 Construction era)	None Detected
24-B	Room 134D	Exterior brown window caulking (1969 Construction era)	None Detected
24-C	Room 134A	Exterior brown window caulking (1969 Construction era)	None Detected
25-A	Room 134	Exterior brick mortar (1969 Construction era)	<0.25 Chrysotile (Pt Ct) [(1)]
25-B	Room 134A	Exterior brick mortar (1969 Construction era)	<0.25 Chrysotile (Pt Ct) [(1)]
25-C	Room 134A	Exterior brick mortar (1969 Construction era)	<0.25 Chrysotile (Pt Ct) [(1)]
26-A	Room 134	Interior grey window caulking (1969 Construction era)	None Detected
26-B	Room 134A	Interior grey window caulking (1969 Construction era)	None Detected
26-C	Room 134D	Interior grey window caulking (1969 Construction era)	None Detected
27-A	Room 134A	Glass block mortar	None Detected
27-B	Room 134A	Glass block mortar	None Detected
27-C	Room 134A	Glass block mortar	None Detected

Sample No.	Location	Description	Asbestos Content
28-A	Room 162A	Black mastic under cork on wall	None Detected (PLM) None Detected (TEM)
28-B	Room 162A	Black mastic under cork on wall	None Detected
28-C	Room 162A	Black mastic under cork on wall	None Detected
29-A	Room 162A	Brown cork mastic on ceiling	None Detected
29-B	Room 162A	Brown cork mastic on ceiling	None Detected
29-C	Room 162A	Brown cork mastic on ceiling	None Detected
30-A	Room 162A	Surfacing material on concrete ceiling under cork	None Detected
30-B	Room 162A	Surfacing material on concrete ceiling under cork	None Detected
30-C	Room 162A	Surfacing material on concrete ceiling under cork	None Detected
1A	Room 124	Boiler tank insulation	<0.25% chrysotile (1) (3)
1B	Room 124	Boiler tank insulation	0.25% chrysotile (1) (3)
1C	Room 124	Boiler tank insulation	<0.25% chrysotile (1) (3)
1A	Roof	Duct insulation - tar	None Detected (PLM) (3) None Detected (TEM) (3)
1B	Roof	Duct insulation - tar	None Detected (3)
1C	Roof	Duct insulation - tar	None Detected (3)
2A	Roof	Grey caulking – bottom layer	None Detected (3)
2B	Roof	Grey caulking – bottom layer	None Detected (3)
2C	Roof	Grey caulking – bottom layer	None Detected (3)
3A	Roof	Grey caulking – top layer	<1% chrysotile (PLM) (3) 0.39% chrysotile (PLM Grav) (1) (3)
3B	Roof	Grey caulking – top layer	<1% chrysotile (PLM) (3) <0.27% chrysotile (PLM Grav) (1) (3)
3C	Roof	Grey caulking – top layer	None Detected (3)
4A	Roof	Grey caulking – old	None Detected (3)
4B	Roof	Grey caulking – old	None Detected (3)
4C	Roof	Grey caulking – old	None Detected (3)
5A	Roof	Brown caulking at electrical penetration	None Detected (3)
5B	Roof	Brown caulking at electrical penetration	None Detected (3)
5C	Roof	Brown caulking at electrical penetration	None Detected (3)
6A	Roof	Tar	None Detected (PLM) (3) None Detected (TEM) (3)
6B	Roof	Tar	None Detected (3)
6C	Roof	Tar	None Detected (3)
7A	Roof	Tar	None Detected (PLM) (3) None Detected (TEM) (3)

Sample No.	Location	Description	Asbestos Content
7B	Roof	Tar	None Detected (3)
7C	Roof	Tar	None Detected (3)
1A	Room 103A	Mastic under (12” x 12”) vinyl floor tile	None Detected (3)
1B	Room 103A	Mastic under (12” x 12”) vinyl floor tile	None Detected (3)
1C	Room 103A	Mastic under (12” x 12”) vinyl floor tile	None Detected (3)
1A	Room 127	1” x 1” brown ceramic floor tile - grout	None Detected (3)
1B	Room 224	1” x 1” brown ceramic floor tile - grout	None Detected (3)
1C	Room 127	1” x 1” brown ceramic floor tile - grout	None Detected (3)
2A	Room 127	1” x 1” brown ceramic floor tile – mortar bed	None Detected (3)
2B	Room 224	1” x 1” brown ceramic floor tile – mortar bed	None Detected (3)
2C	Room 127	1” x 1” brown ceramic floor tile – mortar bed	None Detected (3)
3A	Room 256	Concrete block-filler paint (era 1959)	None Detected (3)
3B	Room 263	Concrete block-filler paint (era 1959)	<0.25% chrysotile (1,3)
3C	Room 263	Concrete block-filler paint (era 1959)	<0.25% chrysotile (1,3)
4A	Room 240	Concrete block mortar (era 1969)	<0.25% chrysotile (1,3)
4B	Room 246	Concrete block mortar (era 1969)	<0.25% chrysotile (1,3)
4C	Room 249	Concrete block mortar (era 1969)	<0.25% chrysotile (1,3)
5A	Room 274	Concrete block mortar (era 1989)	None Detected (3)
5B	Room 277	Concrete block mortar (era 1989)	None Detected (3)
5C	Room 278	Concrete block mortar (era 1989)	None Detected (3)
6A	Room 115	Concrete block-filler paint (era 1955)	None Detected (3)
6B	Room 126	Concrete block-filler paint (era 1955)	None Detected (3)
6C	Room 127	Concrete block-filler paint (era 1955)	None Detected (3)
7A	Room 126	Ceramic block mortar (era 1955)	None Detected (3)
7B	Room 127	Ceramic block mortar (era 1955)	None Detected (3)
7C	Room 223	Ceramic block mortar (era 1955)	None Detected (3)
8A	Exterior (275)	Caulking (grey) – on front door	None Detected (PLM) (3) None Detected (TEM) (3)
8B	Room 221	Caulking (grey) – on window frame and wall	None Detected (3)
8C	Exterior (275)	Caulking (grey) – on front door	None Detected (3)
9A	Room 275	Paint (1989)	None Detected (3)
9B	Room 275	Paint (1989)	None Detected (3)
9C	Room 275	Paint (1989)	None Detected (3)
10A	Room 138	Paint (1969)	<0.25% chrysotile (1,3)
10B	Room 139	Paint (1969)	<0.25% chrysotile (1,3)
10C	Room 137	Paint (1969)	<0.25% chrysotile (1,3)
11A	Room 204	Mastic (black) – 12”x12” vinyl floor tile (beige with brown streaks)	None Detected (3)
11B	Room 204	Mastic (black) – 12”x12” vinyl floor tile (beige with brown streaks)	None Detected (3)

Sample No.	Location	Description	Asbestos Content
11C	Room 204	Mastic (black) – 12”x12” vinyl floor tile (beige with brown streaks)	None Detected (3)
12A	Room 106	Mastic (black) – 12”x12” vinyl floor tile (beige with light and dark flecks)	None Detected (3)
12B	Room 106	Mastic (black) – 12”x12” vinyl floor tile (beige with light and dark flecks)	None Detected (3)
12C	Room 107	Mastic (black) – 12”x12” vinyl floor tile (beige with light and dark flecks)	None Detected (3)
13A	Room 106A	Mastic (black) – 9”x9” vinyl floor tile (red with grey streaks)	None Detected (3)
13B	Room 106A	Mastic (black) – 9”x9” vinyl floor tile (red with grey streaks)	None Detected (3)
13C	Room 106A	Mastic (black) – 9”x9” vinyl floor tile (red with grey streaks)	None Detected (3)
14A	Room 118	Mastic (black) – 9”x9” vinyl floor tile (light grey with green streaks)	<0.25% chrysotile (1,3)
14B	Room 118	Mastic (black) – 9”x9” vinyl floor tile (light grey with green streaks)	None Detected (3)
14C	Room 118	Mastic (black) – 9”x9” vinyl floor tile (light grey with green streaks)	None Detected (3)
15A	Room 215	Mastic (black) – 12”x12” vinyl floor tile (light pink with brown flecks)	None Detected (3)
15B	Room 212	Mastic (black) – 12”x12” vinyl floor tile (light pink with brown flecks)	None Detected (3)
15C	Room 214	Mastic (black) – 12”x12” vinyl floor tile (light pink with brown flecks)	None Detected (3)
16A	Room 117	Mastic (black) – 12”x12” vinyl floor tile (white with brown flecks)	None Detected (3)
16B	Room 116	Mastic (black) – 12”x12” vinyl floor tile (white with brown flecks)	None Detected (3)
16C	Room 116	Mastic (black) – 12”x12” vinyl floor tile (white with brown flecks)	None Detected (3)
17A	Room 118	Mastic (cream) – baseboard (black)	None Detected (3)
17B	Room 116	Mastic (cream) – baseboard (black)	None Detected (3)
18C	Room 119	Mastic (tan) – baseboard (black)	None Detected (3)
19A	Exterior (106)	Caulking (black) – glass and window frame	**9.6% chrysotile (2,3)**
20A	Room 118A	Caulking (beige) – on door (118A and 119)	None Detected (PLM) (3) None Detected (TEM) (3)
20B	Room 217	Caulking (beige) – on window	None Detected (3)
20C	Room 216	Caulking (beige) – on window	None Detected (PLM) (3) None Detected (TEM) (3)
21A	Exterior (106)	Caulking (grey) – on window frame	**1.1% chrysotile (2,3)**
22A	Exterior (103)	Caulking (grey, tacky) – on window frame and wall	**0.85% chrysotile (2,3)**

Sample No.	Location	Description	Asbestos Content
23A	Exterior (125)	Caulking (grey) – on window frame and wall	None Detected (PLM) [3] None Detected (TEM) [3]
23B	Room 213	Caulking (grey) – on window frame and wall	None Detected [3]
23C	Exterior (106)	Caulking (grey) – on window frame and wall	**3% chrysotile [2,3]**
24A	Room 117	Caulking (dark grey) – on window frame	None Detected (PLM) [3] None Detected (TEM) [3]
24B	Room 221	Caulking (dark grey) – on window frame	None Detected [3]
24C	Room 218	Caulking (dark grey) – on window frame	None Detected [3]
25A	Room 201	Caulking (light grey) – on window frame	None Detected (PLM) [3] None Detected (TEM) [3]
25B	Exterior (111)	Caulking (light grey) – on window frame	None Detected [3]
25C	Room 215	Caulking (light grey) – on window frame	None Detected [3]
26A	Exterior (115)	Caulking (brown) – on window	None Detected (PLM) [3] None Detected (TEM) [3]
26B	Exterior (138)	Caulking (brown) – bay door	None Detected [3]
26C	Exterior (137)	Caulking (brown) – bay door	None Detected [3]
1A	Room 169	2’x4’ ceiling tile – fissure on 2’ with pinhole	None Detected [3]
1B	131	2’x4’ ceiling tile – fissure on 2’ with pinhole	None Detected [3]
1C	128	2’x4’ ceiling tile – fissure on 2’ with pinhole	None Detected [3]
2A	106	12”x12” vinyl floor tile – beige with dark and light flecks	None Detected [3]
2B	107	12”x12” vinyl floor tile – beige with dark and light flecks	None Detected [3]
2C	107	12”x12” vinyl floor tile – beige with dark and light flecks	None Detected [3]
3A	215B	9”x9” vinyl floor tile – brown with beige flecks	None Detected [3]
3B	215B	9”x9” vinyl floor tile – brown with beige flecks	None Detected [3]
3C	215B	9”x9” vinyl floor tile – brown with beige flecks	None Detected [3]
4A	215B	Mastic - 9”x9” vinyl floor tile – brown with beige fleck	None Detected [3]
4B	215B	Mastic - 9”x9” vinyl floor tile – brown with beige fleck	None Detected [3]
4C	215B	Mastic - 9”x9” vinyl floor tile – brown with beige fleck	None Detected [3]
5A	213	12”x12” vinyl floor tile – grey with dark and light flecks	None Detected [3]
5B	213	12”x12” vinyl floor tile – grey with dark and light flecks	None Detected [3]
5C	213	12”x12” vinyl floor tile – grey with dark and light flecks	None Detected [3]
6A	213	Mastic - 12”x12” vinyl floor tile – grey with dark and light flecks	None Detected [3]

Sample No.	Location	Description	Asbestos Content
6B	213	Mastic - 12”x12” vinyl floor tile – grey with dark and light flecks	None Detected (3)
6C	213	Mastic - 12”x12” vinyl floor tile – grey with dark and light flecks	None Detected (3)
7A	280	2’x4’ ceiling tile – dense small random fissure with pinhole	None Detected (3)
7B	278	2’x4’ ceiling tile – dense small random fissure with pinhole	None Detected (3)
7C	278	2’x4’ ceiling tile – dense small random fissure with pinhole	None Detected (3)
8A	131	2’x4’ ceiling tile – thin fissure on 2’ with pinhole	None Detected (3)
8B	131	2’x4’ ceiling tile – thin fissure on 2’ with pinhole	None Detected (3)
8C	131	2’x4’ ceiling tile – thin fissure on 2’ with pinhole	None Detected (3)
1-A	Room 211	12”x12” Cellulose Wall Tile – Big and Small Uniform Hole (Orange painted white on front surface)	None Detected (PLM) (3) None Detected (TEM) (3)
1-B	Room 216	12”x12” Cellulose Wall Tile – Big and Small Uniform Hole (Orange painted white on front surface)	None Detected (3)
1-C	Room 208	12”x12” Cellulose Wall Tile – Big and Small Uniform Hole (Orange painted white on front surface)	None Detected (3)
2-A	Corridor 230	2’x4’ Ceiling Tile – Rough surface with pinhole	None Detected (PLM) (3) None Detected (TEM) (3)
2-B	Corridor 231	2’x4’ Ceiling Tile – Rough surface with pinhole	None Detected (3)
2-C	Corridor 232	2’x4’ Ceiling Tile – Rough surface with pinhole	None Detected (3)
3-A	Room 214	Caulking Between Concrete Roof Deck Panels - Grey	**5.9% chrysotile (3)**
4-A	Room 234	Flex Joint Connector - Grey	None Detected (PLM) (3) None Detected (TEM) (3)
4-B	Room 234	Flex Joint Connector - Grey	None Detected (3)
4-C	Room 234	Flex Joint Connector - Grey	None Detected (3)
5-A	Room 215	Concrete Block Mortar (era 1955)	None Detected (PLM) (3) None Detected (TEM) (3)
5-B	Room 234	Concrete Block Mortar (era 1955)	None Detected (3)
5-C	Room 216	Concrete Block Mortar (era 1955)	None Detected (3)
6-A	Corridor 290	Brick Mortar	None Detected (PLM) (3) None Detected (TEM) (3)
6-B	Exterior Wall	Brick Mortar	None Detected (3)
6-C	Exterior Wall	Brick Mortar	None Detected (3)
7-A	Room 283	Ceramic Block Mortar – White (era 1959)	None Detected (PLM) (3) None Detected (TEM) (3)
7-B	Room 284	Ceramic Block Mortar – White (era 1959)	None Detected (3)
7-C	Room 285	Ceramic Block Mortar – White (era 1959)	None Detected (3)

Sample No.	Location	Description	Asbestos Content
8-A	Room 255	12”x12” Ceiling Tile – Uniform Hole (White with White Painted Surface)	None Detected (PLM) [3] None Detected (TEM) [3]
8-B	Corridor 271	12”x12” Ceiling Tile – Uniform Hole (White with White Painted Surface)	None Detected [3]
8-C	Corridor 273A	12”x12” Ceiling Tile – Uniform Hole (White with White Painted Surface)	None Detected [3]
8-D	Corridor 272	12”x12” Ceiling Tile – Uniform Hole (White with White Painted Surface)	None Detected [3]
8-E	Corridor 289	12”x12” Ceiling Tile – Uniform Hole (White with White Painted Surface)	None Detected [3]
9-A	Corridor 271	12”x12” Ceiling Tile – Pinhole (Grey with White Painted Surface)	**2% amosite [3]** **1% chrysotile [3]**
10-A	Room 235E	12”x12” Ceiling tile – Cellulose Flat (Orange with White Painted Surface)	None Detected [3]
10-B	Room 236F	12”x12” Ceiling tile – Cellulose Flat (Orange with White Painted Surface)	None Detected [3]
10-C	Room 235E	12”x12” Ceiling tile – Cellulose Flat (Orange with White Painted Surface)	None Detected [3]
11-A	Room 235E	Mastic on 12”x12” Ceiling Tile – Cellulose Flat	None Detected (PLM) [3] None Detected (TEM) [3]
11-B	Room 235E	Mastic on 12”x12” Ceiling Tile – Cellulose Flat	None Detected [3]
11-C	Room 235E	Mastic on 12”x12” Ceiling Tile – Cellulose Flat	None Detected [3]
7A	Roof A	Roof membrane	None Detected (PLM) [3] None Detected (TEM) [3]
7B	Roof A	Roof membrane	None Detected [3]
7C	Roof A	Roof membrane	None Detected [3]
8A	Roof A	Asphaltic vapour barrier	None Detected (PLM) [3] None Detected (TEM) [3]
8B	Roof A	Asphaltic vapour barrier	None Detected [3]
8C	Roof A	Asphaltic vapour barrier	None Detected [3]
9A	Roof B	Roof membrane	None Detected (PLM) [3] None Detected (TEM) [3]
9B	Roof B	Roof membrane	None Detected [3]
9C	Roof B	Roof membrane	None Detected [3]
10A	Roof C	Roof membrane	None Detected (PLM) [3] None Detected (TEM) [3]
10B	Roof C	Roof membrane	None Detected [3]
10C	Roof C	Roof membrane	None Detected [3]
11A	Roof C	Asphalt vapour barrier	None Detected (PLM) [3] None Detected (TEM) [3]
11B	Roof C	Asphalt vapour barrier	None Detected [3]
11C	Roof C	Asphalt vapour barrier	None Detected [3]

Sample No.	Location	Description	Asbestos Content
1-A	Room 252	12” x 12” vinyl floor tile – beige with wide brown directional streaks	**5.6% chrysotile** [3]
2-A	Room 252	Mastic on vinyl floor tile Sample #1 – black coloured	**1.1% chrysotile (TEM)** [3]
3-A	Room 252	Mastic on vinyl baseboard – brown coloured	None Detected (TEM) [3]
3-B	Room 251	Mastic on vinyl baseboard – brown coloured	None Detected [3]
3-C	Room 114	Mastic on vinyl baseboard – brown coloured	None Detected [3]
4-A	Room 252	Vinyl baseboard – black coloured	<0.25% chrysotile (TEM) [1,3]
4-B	Room 251	Vinyl baseboard – black coloured	None Detected [3]
4-C	Room 114	Vinyl baseboard – black coloured	None Detected [3]
5-A	Room 251	Mastic on non-asbestos vinyl floor tiles – black coloured	None Detected (TEM) [3]
5-B	Room 251	Mastic on non-asbestos vinyl floor tiles – black coloured	None Detected [3]
5-C	Room 251	Mastic on non-asbestos vinyl floor tiles – black coloured	None Detected [3]
6-A	Room 273	Glue pucks on ceiling tiles – dark brown coloured	None Detected (TEM) [3]
6-B	Room 273	Glue pucks on ceiling tiles – dark brown coloured	None Detected [3]
6-C	Room 114A	Glue pucks on concrete roof deck – brown coloured	None Detected [3]
7-A	Room 273	Textured plaster on ceiling – top coat	None Detected [3]
7-B	Room 273	Textured plaster on ceiling – top coat	None Detected [3]
7-C	Room 273	Textured plaster on ceiling – top coat	None Detected [3]
8-A	Room 273	Plaster on ceiling – scratch coat	None Detected [3]
8-B	Room 273	Plaster on ceiling – scratch coat	None Detected [3]
8-C	Room 273	Plaster on ceiling – scratch coat	None Detected [3]
9-A	Room 114	Mastic on asbestos vinyl floor tile – black coloured	None Detected (TEM) [3]
9-B	Room 114B	Mastic on asbestos vinyl floor tile – black coloured	None Detected [3]
9-C	Room 111	Mastic on asbestos vinyl floor tile – black coloured	None Detected [3]
10-A	Room 111	Black paper on medium sized anti-sweat thermal insulation	<0.25% chrysotile (TEM) [1,3]
10-B	Room 113	Black paper on medium sized anti-sweat thermal insulation	None Detected [3]
10-C	Room 114	Black paper on medium sized anti-sweat thermal insulation	None Detected [3]
11-A	Room 252	Joint compound on drywall wall	**3.7% chrysotile** [3]
12-A	Room 251	Joint compound on drywall bulkhead	**3.7% chrysotile** [3]
13-A	Room 114	Joint compound on drywall wall	None Detected [3]

Sample No.	Location	Description	Asbestos Content
13-B	Room 113	Joint compound on drywall wall	None Detected (3)
13-C	Room 111	Joint compound on drywall wall	None Detected (3)
E122	Corridor E122	Paper on anti-sweat thermal insulation on pipe straights	**35% chrysotile (2,3)**
134a	134	Drywall joint compound (1969)	**2.3% chrysotile (3)**
252	252	Drywall joint compound (1969)	None Detected (3)
153	153	Drywall joint compound (1969)	None Detected (3)
154	154	Drywall joint compound (1969)	None Detected (3)
113	113	Drywall joint compound (1955)	None Detected (3)
136	136	Drywall joint compound (1969)	**1.5% chrysotile (3)**
114A	114A	Drywall joint compound (1955)	None Detected (3)
258-1	258	Drywall joint compound (1959)	None Detected (3)
258-2	258	Drywall joint compound (1959)	None Detected (3)
280A	280A	Drywall joint compound (1989)	None Detected (3)
280B	280B	Drywall joint compound (1989)	None Detected (3)
280C	280C	Drywall joint compound (1989)	None Detected (3)
256	256	Drywall joint compound (1959)	None Detected (3)
104A	104A	Drywall joint compound (1955)	None Detected (3)
159b-A	159b	2’ X 4’ ceiling tile (circular small fissures and random dot)	None Detected (3)
159b-B	159b	2’ X 4’ ceiling tile (circular small fissures and random dot)	None Detected (3)
159b-C	159b	2’ X 4’ ceiling tile (circular small fissures and random dot)	None Detected (3)
257a-A	257a	2’ X 4’ ceiling tile (random small and medium dot)	None Detected (3)
257a-B	257a	2’ X 4’ ceiling tile (random small and medium dot)	None Detected (3)
257a-C	257a	2’ X 4’ ceiling tile (random small and medium dot)	None Detected (3)
122-A	122	2’ X 4’ ceiling tile (“chicken feet”)	None Detected (3)
122-B	122	2’ X 4’ ceiling tile (“chicken feet”)	None Detected (3)
122-C	122	2’ X 4’ ceiling tile (“chicken feet”)	None Detected (3)
128-1A	128	2’ X 4’ ceiling tile (small random fissures with random dot)	**1-5% chrysotile (2,3)**
128-1B	128	2’ X 4’ ceiling tile (small random fissures with random dot)	**1-5% chrysotile (2,3)**
128-1C	128	2’ X 4’ ceiling tile (small random fissures with random dot)	**1-5% chrysotile (2,3)**
168b-A	168b	2’ X 4’ ceiling tile (width wide fissures with random dot)	None Detected (3)
168b-B	168b	2’ X 4’ ceiling tile (width wide fissures with random dot)	None Detected (3)

Sample No.	Location	Description	Asbestos Content
168b-C	168b	2’ X 4’ ceiling tile (width wide fissures with random dot)	None Detected [3]
34	263	2’ x 4’ ceiling tiles	**0.75% chrysotile [2,3]**
160-A	160	12” X 12” ceiling tile (small and large holes)	None Detected [3]
160-B	160	12” X 12” ceiling tile (small and large holes)	None Detected [3]
160-C	160	12” X 12” ceiling tile (small and large holes)	None Detected [3]
110-A	110	12” X 12” ceiling tiles (small and large uniform dot)	None Detected [3]
110-B	110	12” X 12” ceiling tiles (small and large uniform dot)	None Detected [3]
110-C	110	12” X 12” ceiling tiles (small and large uniform dot)	None Detected [3]
N/A	N/A	12” X 12” ceiling tiles (small and large square)	**3.3% amosite [3]**
111C-A	111	12” X 12” ceiling tiles (floral)	**4.8% amosite [2,3]**
123-A	123	12” X 12” ceiling tiles (large uniform dots)	None Detected [3]
123-B	123	12” X 12” ceiling tiles (large uniform dots)	None Detected [3]
123-C	123	12” X 12” ceiling tiles (large uniform dots)	None Detected [3]
126a	126a	Air cell pipe straight insulation	None Detected [3]
123a-2	123a	Pipe straight parging	**42% chrysotile [3]**
158b	158b	“Aircell” pipe straight insulation in pipe chase	**65% chrysotile [3]**
127-A	127	Texture ceiling coat	None Detected [3]
127-B	127	Texture ceiling coat	None Detected [3]
127-C	127	Texture ceiling coat	None Detected [3]
159a-1	159a	Texture ceiling coat	None Detected [3]
159a-2	159a	Texture ceiling coat	None Detected [3]
159a-3	159a	Texture ceiling coat	None Detected [3]
33	250	Texture ceiling spray	**4.5% chrysotile [3]**
17	123	Texture wall plaster	**2.8% chrysotile [3]**
224-A	224	Texture plaster coat	None Detected [3]
224-B	224	Texture plaster coat	None Detected [3]
224-C	224	Texture plaster coat	None Detected [3]
269	269	Anti-sweat pipe insulation	None Detected [3]
25	163	Pipe straight insulation	**36% chrysotile [3]**
5	124	Hot water heating pipe fitting insulation	**80% chrysotile [2,3]**
6	124	Domestic water pipe fitting insulation	**40% chrysotile [2,3]**
7	124	Domestic water pipe straight insulation	**36% chrysotile [2,3]**
19	126A	Rainwater leader fitting insulation	**36% chrysotile [3]**
31	242A	Hot water heating pipe fitting insulation	**36% chrysotile [3]**
32	242A	Duct insulation	**57% chrysotile [3]**
38	269	Rainwater leader hanger insulation	**57% chrysotile [3]**

Sample No.	Location	Description	Asbestos Content
118-A	118	9” X 9” vinyl floor tile (beige with dark green)	**19.9% chrysotile** [2,3]
123a-A	123A	9” X 9” vinyl floor tile (tan with brown)	**15.6% chrysotile** [3]
259b-A	250b	9” X 9” vinyl floor tile (sky blue)	**4.8% chrysotile** [3]
209-A	209	9” X 9” vinyl floor tile (orange with beige)	None Detected [3]
209-B	209	9” X 9” vinyl floor tile (orange with beige)	None Detected [3]
209-C	209	9” X 9” vinyl floor tile (orange with beige)	None Detected [3]
288-A	288	9” X 9” vinyl floor tile (blue with white and green)	None Detected [3]
288-B	288	9” X 9” vinyl floor tile (blue with white and green)	None Detected [3]
288-C	288	9” X 9” vinyl floor tile (blue with white and green)	None Detected [3]
206-A	206	9” X 9” vinyl floor tile (chocolate brown with white)	**7.0% chrysotile** [2,3]
206a-A	206a	9” X 9” vinyl floor tile (beige with brown and pink)	None Detected [3]
206a-B	206a	9” X 9” vinyl floor tile (beige with brown and pink)	None Detected [3]
206a-C	206	9” X 9” vinyl floor tile (beige with brown and pink)	None Detected [3]
284-A	284	9” X 9” vinyl floor tile (brown with beige and white)	None Detected [3]
284-B	284	9” X 9” vinyl floor tile (brown with beige and white)	None Detected [3]
284-C	284	9” X 9” vinyl floor tile (brown with beige and white)	None Detected [3]
287-A	287	9” X 9” vinyl floor tile (brown with white)	None Detected [3]
287-B	287	9” X 9” vinyl floor tile (brown with white)	None Detected [3]
287-C	287	9” X 9” vinyl floor tile (brown with white)	None Detected [3]
216-A	216	9” X 9” vinyl floor tile (green with dark green)	None Detected [3]
216-B	216	9” X 9” vinyl floor tile (green with dark green)	None Detected [3]
216-C	216	9” X 9” vinyl floor tile (green with dark green)	None Detected [3]
208-A	208	9” X 9” vinyl floor tile (light brown with brown)	None Detected [3]
208-B	208	9” X 9” vinyl floor tile (light brown with brown)	None Detected [3]
208-C	208	9” X 9” vinyl floor tile (light brown with brown)	None detected [3]
116-A	116	9” X 9” vinyl floor tile (light brown with white)	**15.1% chrysotile** [2,3]
107-A	107	9” X 9” vinyl floor tile (orange)	**13.0% chrysotile** [2,3]
164-A	164	12” X 12” vinyl floor tile (fake wood look)	None Detected [3]
164-B	164	12” X 12” vinyl floor tile (fake wood look)	None Detected [3]
164-C	164	12” X 12” vinyl floor tile (fake wood look)	None Detected [3]
115-A	115	12” X 12” vinyl floor tile (white with dark brown)	None Detected [3]
115-B	115	12” X 12” vinyl floor tile (white with dark brown)	None Detected [3]

Sample No.	Location	Description	Asbestos Content
115-C	115	12” X 12” vinyl floor tile (white with dark brown)	None Detected (3)
111b-A	111	12” X 12” vinyl floor tile (white with tan)	None Detected (3)
111b-B	111	12” X 12” vinyl floor tile (white with tan)	None Detected (3)
111b-C	111	12” X 12” vinyl floor tile (white with tan)	None Detected (3)
160-A	160	12” X 12” vinyl floor tile (black with white)	None Detected (3)
160-B	160	12” X 12” vinyl floor tile (black with white)	None Detected (3)
160-C	160	12” X 12” vinyl floor tile (black with white)	None Detected (3)
165-A	165	12” X 12” vinyl floor tile (tan with brown)	**4.3% chrysotile (3)**
159b-A	159b	12” X 12” vinyl floor tile (grey with black)	None Detected (3)
159b-B	159b	12” X 12” vinyl floor tile (grey with black)	None Detected (3)
159b-C	159b	12” X 12” vinyl floor tile (grey with black)	None Detected (3)
172a-A	172a	12” X 12” vinyl floor tile (grey with grey)	None Detected (3)
172a-B	172a	12” X 12” vinyl floor tile (grey with grey)	None Detected (3)
172a-C	172a	12” X 12” vinyl floor tile (grey with grey)	None Detected (3)
236-A	236	12” X 12” vinyl floor tile (pink with pink)	None Detected (3)
236-B	236	12” X 12” vinyl floor tile (pink with pink)	None Detected (3)
236-C	236	12” X 12” vinyl floor tile (pink with pink)	None Detected (3)
148-A	148	12” X 12” vinyl floor tile (green with dark green)	None Detected (3)
148-B	148	12” X 12” vinyl floor tile (green with dark green)	None Detected (3)
148-C	148	12” X 12” vinyl floor tile (green with dark green)	None Detected (3)
104-A	104	12” X 12” vinyl floor tile (white with black)	None Detected (3)
104-B	104	12” X 12” vinyl floor tile (white with black)	None Detected (3)
104-C	104	12” X 12” vinyl floor tile (white with black)	None Detected (3)
150-A	150	12” X 12” vinyl floor tile (light blue with dark blue)	None Detected (3)
150-B	150	12” X 12” vinyl floor tile (light blue with dark blue)	None Detected (3)
150-C	150	12” X 12” vinyl floor tile (light blue with dark blue)	None Detected (3)
160-A	160	12” X 12” vinyl floor tile (grey with white)	None Detected (3)
160-B	160	12” X 12” vinyl floor tile (grey with white)	None Detected (3)
160-C	160	12” X 12” vinyl floor tile (grey with white)	None Detected (3)
151-A	151	12” X 12” vinyl floor tile (cream with brown)	**25.5% chrysotile (3)**
111a-A	111	12” X 12” vinyl floor tile (tan with brown)	**16.8% chrysotile (2,3)**
117-A	117	12” X 12” vinyl floor tile (brown with white)	**17.2% chrysotile (2,3)**
1A	W206	12” ceiling tiles, uniform holes, grey interior	None Detected (3)
1B	W203	12” ceiling tiles, uniform holes, grey interior	None Detected (3)
1C	W208	12” ceiling tiles, uniform holes, grey interior	None Detected (3)

NOTES:

(1) "Asbestos-containing material" is defined as material that contains 0.5% or more asbestos by dry weight.

(2) Material collected in the area have since been removed and are provided here for references purposes only.

(3) Sample results derived from a report prepared by Arcadis for the Halton District School Board entitled *Pre-Renovation Designated Substances and Hazardous Materials Survey, T.A. Blakelock High School* dated May 24, 2022.

Bulk samples were analyzed by Polarized Light Microscopy (PLM) analysis, except where "TEM" is noted, in which case Transmission Electron Microscopy analysis was also performed.

< = less than.

Chrysotile = Chrysotile asbestos.

Amosite = Amosite asbestos.

Determination of the locations of asbestos-containing material was made based on the review of existing information, results of bulk sample analysis, visual observations and physical characteristics of the applications as well as our knowledge of the uses of asbestos in building materials.

Based on visual observations and results of laboratory analyses of samples collected by Arcadis Canada Inc., the following asbestos-containing materials were found to be present in the designated study area:

- 2'x4' ceiling tiles in Rooms 134, 134A, 134B, 134D, 144, 144A and 145;
- 1'x1' ceiling tiles in Rooms 135C;
- 12"x12" vinyl floor tiles in Rooms 135, 135B and 136;
- 12"x12" vinyl floor tiles under carpet in Rooms 135C;
- Gypsum board with associated asbestos-containing joint compound applied to walls in Rooms 134, 134A, 134B, 134C, 134D and 136;
- Gypsum board with associated asbestos-containing joint compound applied to walls above lockers Corridor 141;
- Gypsum board with associated asbestos-containing joint compound applied to ceilings in Rooms 144B, 259, 259A, 259C, 259D 259E, 266 and 267;
- Thermal insulation applied to pipe fittings below ceilings in Rooms 135, 136, 144A, 158, 159, 162A, 162B, 163 and 259E;
- Thermal insulation applied to pipe fittings above ceilings in Rooms 134, 134A, 134C, 134D, 158A;158B, 159A, 159B and 159C;
- Thermal insulation applied to pipe straights (Air-cell) below ceilings in Rooms 162A, 162B and 163;

- Thermal insulation applied to pipe straights (Air-cell) above ceilings in Rooms 158A, 158B, 159B and 159C;
- Assumed asbestos-containing cement piping above ceilings in Rooms 134, 141, 259B and 259D;

Note: Drywall was not sampled in Room 259B as room appeared to be newly renovated.

Asbestos-containing thermal insulation applied to pipe fittings is a white-coloured cementitious material. Asbestos-containing thermal insulation applied to pipe straights is “Air-Cell”. “Aircell” is a trade name for a grey-coloured corrugated paper-like type of pipe insulation, usually found on heating and domestic hot water piping.

Glass fibre insulation is readily visually distinguishable (typically yellow in colour) from asbestos-containing insulation materials and was, therefore, not tested for asbestos content.

Floor tiles and cement piping are non-friable materials. The removal, alteration and/or disturbance of these non-friable asbestos-containing materials can be performed as a Type 1 operation as specified in O. Reg. 278/05 if the material is wetted and the work is done only using non-powered, hand-held tools (see Table C-1 in Appendix C). If the removal, alteration and/or disturbance work is done using power tools that are attached to dust-collecting devices equipped with HEPA filters, then the work is classified as Type 2. If the power tools do not have HEPA filtered dust collecting devices, then the work is Type 3.

The removal, alteration and/or disturbance of less than one square metre of drywall in which asbestos-containing joint filling compounds have been used is classified as a Type 1 operation. The removal, alteration and/or disturbance of one square metre or more of drywall with asbestos-containing joint compounds is a Type 2 operation.

The removal, alteration and/or disturbance of less than 7.5 m^2 of asbestos-containing tiles is a Type 1 operation (if the tiles are removed without being broken, cut, etc.). The removal, alteration and/or disturbance of 7.5 m^2 or more asbestos-containing ceiling tiles is a Type 2 operation (if the tiles are removed without being broken, cut, etc.).

Thermal insulation is a friable material. The removal, alteration and/or disturbance of less than 1 m^2 of friable asbestos-containing materials is classified as a Type 2 enclosure operation as specified in O.Reg. 278/05. The removal, alteration and/or disturbance of more than 1 m^2 of friable asbestos-containing materials is classified as a Type 3 operation.

Asbestos may also be present in materials which were not sampled during the course of the asbestos survey carried out by Arcadis, including, but not limited to, areas outside the designated study areas, fire doors, gaskets in piping, internal components of boilers, components of electrical equipment (e.g. electric wiring insulation, non-metallic sheathed cable, electrical panel partitions, arc chutes, high-grade electrical paper, etc.), asphaltic pavement, etc., and/or in locations that are presently inaccessible (e.g., in pipe chases, behind walls, above suspended gypsum board or plaster ceilings, and below carpets). Asbestos may also be present in the form of vermiculite insulation in cavities in concrete or cement block walls (used

as in-fill insulation). Confirmatory testing of any such materials could be undertaken as the need arises (i.e., at the time of renovations, modifications or demolition) or the materials can be assumed to contain asbestos based on findings in adjacent areas.

If any materials which may contain asbestos and which were not tested during the course of the designated substances and hazardous materials survey are discovered during any construction activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

3.2 Lead

Arcadis reviewed a report prepared by Arcadis for the Halton District School Board entitled *Pre-Renovation Designated Substances and Hazardous Materials Survey, T.A. Blakelock High School, 1160 Rebecca Street, Oakville, Ontario* dated May 24, 2022. Information and/or bulk sample analysis results obtained from this existing report was utilized by Arcadis during the course of our investigation and in the preparation of this report.

During the course of our site investigations, representative samples of paint were collected at the time of the survey based on, in part, the visual appearance of the paints (i.e., colours). Paints of similar colours may have been applied at different times and have varying amounts of the analytes described above.The samples were forwarded to EMSL Canada Inc. for lead analyses. Results of bulk sample analysis for lead content are provided in Table 3.2. The laboratory report is provided in Appendix B.

Table 3.2. Summary of Results of Analyses of Bulk Samples for Lead Content

Sample No.	Sample Location	Sample Description	Lead Content
P-1	Room 259A	White paint on drywall ceiling	**400 mg/kg**
P-2	Room 259A	White paint on concrete block wall	**250 mg/kg**
P-1	Room 126	Beige paint on concrete block	<5.5 mg/kg (1)

NOTE:
(1) Sample results derived from a report prepared by Arcadis for the Halton District School Board entitled *Pre-Renovation Designated Substances and Hazardous Materials Survey, T.A. Blakelock High School* dated May 24, 2022.

< = less than.

mg/Kg = milligrams lead per kilogram paint.

1 mg/Kg = 1 part per million (ppm).

Lead was detected at a level above 90 mg/kg (Surface Coating Materials Regulations criterion value) in the white paint samples on drywall and concrete blocked collected in the study areas.

Lead may also be present in lead pipe, mortar, glazing on ceramic tiles, in the solder on the seals of bell joints of any cast iron drainpipe and in the solder on the sweated-on joints between copper pipe and fittings.

The Ministry of Labour *Guideline – Lead on Construction Projects*, dated April 2011, provides guidance in the measures and procedures that should be followed when handling lead containing materials during construction projects. In the guideline, lead-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of lead, as shown in Appendix C, Table C-2. Any operation that may expose a worker to lead that is not a Type 1, Type 2, or Type 3b operation, is classified as a Type 3a operation.

In addition, the *EACO Lead Abatement Guidelines*, *2014 — Edition 1,* Environmental Abatement Council of Ontario, also provides guidance and recommended work practices.

3.3 Mercury

During the course of our site investigations, fluorescent lights were identified in the designated study areas. Mercury should be assumed to be present as a gas in all fluorescent light tubes and in all paint applications, albeit at low levels. The fluorescent light tubes should be recycled for mercury, if the lights are removed.

Proper procedures for removing and handling mercury-containing fluorescent light tubes typically involve:

- ensuring that electrical power to light fixtures has been disconnected and locked out;
- taking all necessary precautions to ensure that fluorescent lamp tubes are removed in a manner that prevents breakage; and
- transporting fluorescent lamp tubes to a licensed processing location for separation and recovery of mercury.

The measures and procedures outlined in the MOL *Guideline, Lead on Construction Projects* for control of potential exposure to lead in paint during construction activities will also serve to control potential exposure to any mercury in paint.

3.4 Silica

Materials observed in the designated study areas which should be considered to contain silica included concrete, concrete mortar, cement block walls, cementitious mortar on the back side of ceramic tile bases and vinyl floor tiles.

Silica can also be assumed to be present in any gravel ballast on roofs and will also be found in asphalt roofing materials if rock or stone are present in the asphalt.

The Ministry of Labour *Guideline, Silica on Construction Projects*, April 2011, provides guidance in controlling exposure to silica dust during construction activities. In the guideline, silica-containing construction operations are classified into three groups - Type 1 (low risk), Type 2 (medium risk) and Type 3 (high risk) based on presumed airborne concentrations of silica, as shown in Appendix C, Table C-3.

Additional precautionary measures should also be implemented for certain types of materials (e.g., plaster and texture coat materials, including non-asbestos applications, concrete block, etc.). For minor disturbances such as drilling, a HEPA-filtered attachment should be used. For removal of more than a minor amount of material, enclosures should be constructed for dust control and separation of the work area from adjacent areas.

3.5 Vinyl Chloride

As mentioned in Section 2.5 above, vinyl chloride would only be a potential exposure concern in the event of combustion of PVC products.

3.6 Acrylonitrile

As mentioned in Section 2.6 above, acrylonitrile would only be a potential exposure concern in the event of combustion of ABS products.

3.7 Other Designated Substances

No other designated substances (benzene, isocyanates, arsenic, ethylene oxide and coke oven emissions) were observed to be present in the designated study areas, and none would be expected to be encountered in any building materials in a form that would represent an exposure concern. Arsenic may be present at low levels in paint applications. The measures and procedures outlined in the MOL *Guideline, Lead on Construction Projects* for control of potential exposure to lead in paint during construction activities will also serve to control potential exposure to any arsenic (or mercury) in paint.

3.8 Polychlorinated Biphenyls (PCBs)

Fluorescent lights were observed in the designated study areas during the course of our site investigations. Light ballasts, such as those associated with the type of fluorescent lights (T8s) observed in the designated study areas, are usually an electronic-type which do not contain PCBs, however, this would be confirmed by an electrician at the time of dismantling of the lights.

3.9 Ozone-Depleting Substances (ODS) and Other Halocarbons

No equipment potentially containing ozone-depleting substances (ODS) was identified during the course of the site investigations.

3.10 Mould

Readily evident mould was not observed during the course of the site investigation. The inspection of mould was limited to visual observations of readily-accessible surfaces and did not include intrusive inspections of wall cavities. During renovations or interior demolition work, any mould-impacted materials uncovered/discovered should be remediated following the measures and procedures outlined in the *Canadian Construction Association Standard Construction Document CCA-82 2004 - Mould Guidelines for the Canadian Construction Industry*.

4 USE AND LIMITATIONS OF THIS PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY REPORT

This report, prepared for Halton District School Board, does not provide certification or warranty, expressed or implied, that the investigation conducted by Arcadis Canada Inc. identified all designated substances (as defined in the Ontario *Occupational Health and Safety Act*) in the designated study areas at the subject facility. The work undertaken by Arcadis Canada Inc. was directed to provide information on the presence of designated substances in building construction materials based on review of existing information, visual investigation of readily accessible areas in the designated study areas of the building and on the results of laboratory analysis of a limited number of bulk samples of material for asbestos content and laboratory analysis of a limited number of paint samples for lead content. The survey did not include for identification of asbestos in process materials, equipment (including electrical equipment and wiring), furniture (e.g., chairs, table tops, etc.), nor material outside of the building (e.g., asphaltic pavement).

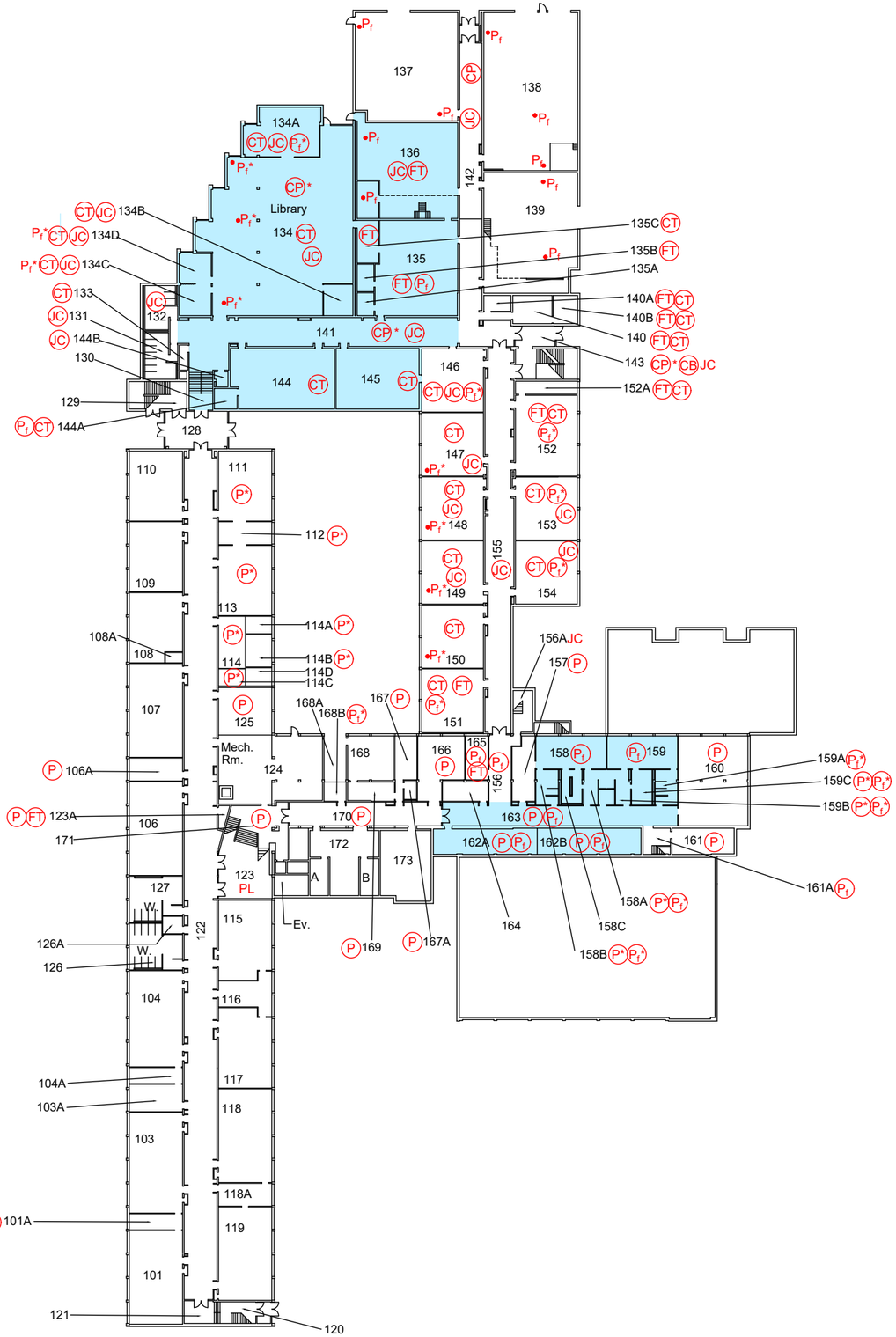
The material in this report reflects Arcadis Canada Inc.'s best judgment in light of the information available at the time of the investigation, which was performed on January 30, 31 and February 3, 2023.

This report is not intended to be used as a scope of work or technical specification for remediation of designated substances or hazardous materials.

This report was prepared by Arcadis Canada Inc. for Halton District School Board. Any use which any other party makes of the report, or reliance on, or decisions to be based on it, is the responsibility of such parties.

APPENDIX A

Floor Plans



LEGEND:

112	FUNCTIONAL SPACE
◯	THROUGHOUT FUNCTIONAL SPACE
*	ABOVE CEILING ASSEMBLY
P	ASBESTOS ON PIPING (FRIABLE)
P_f	ASBESTOS ON PIPE FITTINGS ONLY (FRIABLE)
EQ	ASBESTOS ON MECHANICAL EQUIPMENT (FRIABLE)
PL	ASBESTOS TEXTURED PLASTER (NON-FRIABLE)
CT	ASBESTOS CEILING TILE (NON-FRIABLE)
FT	ASBESTOS FLOOR TILE (NON-FRIABLE)
CP	ASBESTOS CEMENT PRODUCT (NON-FRIABLE)
JC	ASBESTOS DRYWALL JOINT COMPOUND (NON-FRIABLE)
CB	ASBESTOS CEMENT BOARD (NON-FRIABLE)
▭	STUDY AREA

NOTES:

1.

REVISIONS:

No.	Date:	By:	Revisions

REFERENCE:

1.

ARCADIS

HALTON DISTRICT SCHOOL BOARD

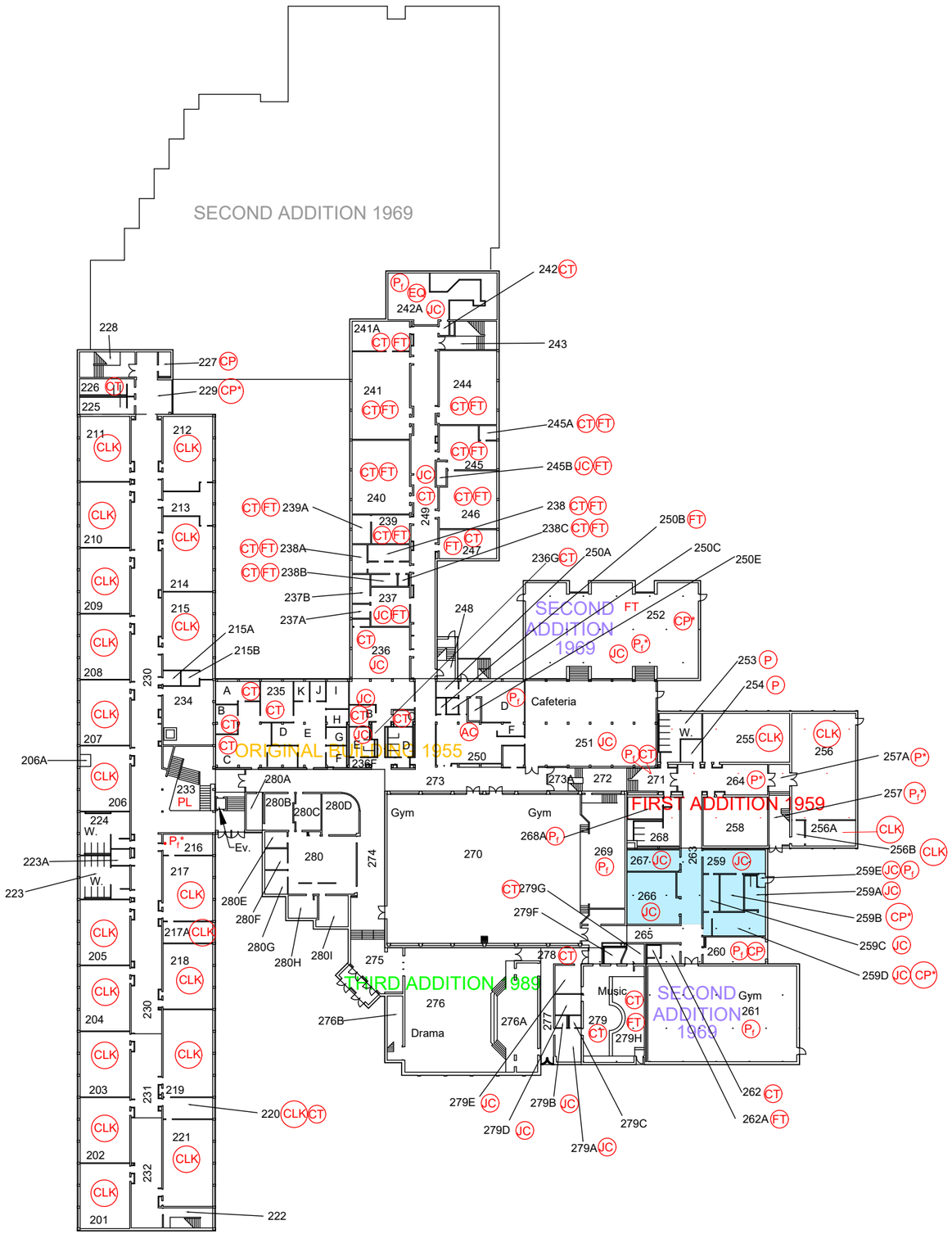
PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

T.A. BLAKELOCK HIGH SCHOOL
1160 REBECCA STREET, OAKVILLE, ONTARIO

LOCATIONS OF ASBESTOS CONTAINING MATERIALS AND STUDY AREAS

FIRST FLOOR PLAN

Drawn By: B.R	Approved By: D.K	Project No: 30167489
Date: FEB 2023	Scale: N.T.S	Drawing No: 30167489-1



LEGEND:

273	FUNCTIONAL SPACE
○	THROUGHOUT FUNCTIONAL SPACE
*	ABOVE CEILING ASSEMBLY
P	ASBESTOS ON PIPING
P_f	ASBESTOS ON PIPE FITTINGS ONLY
EQ	ASBESTOS ON MECHANICAL EQUIPMENT
PL	ASBESTOS TEXTURED PLASTER (NON-FRIABLE)
CT	ASBESTOS CEILING TILE
FT	ASBESTOS FLOOR TILE
CP	ASBESTOS CEMENT PRODUCT
JC	ASBESTOS DRYWALL JOINT COMPOUND
CLK	ASBESTOS CAULKING
AC	ASBESTOS ACOUSTIC SPRAY
▭	STUDY AREA

NOTES:

1.

REVISIONS:

No.	Date:	By:	Revisions

REFERENCE:

1.

ARCADIS

HALTON DISTRICT SCHOOL BOARD

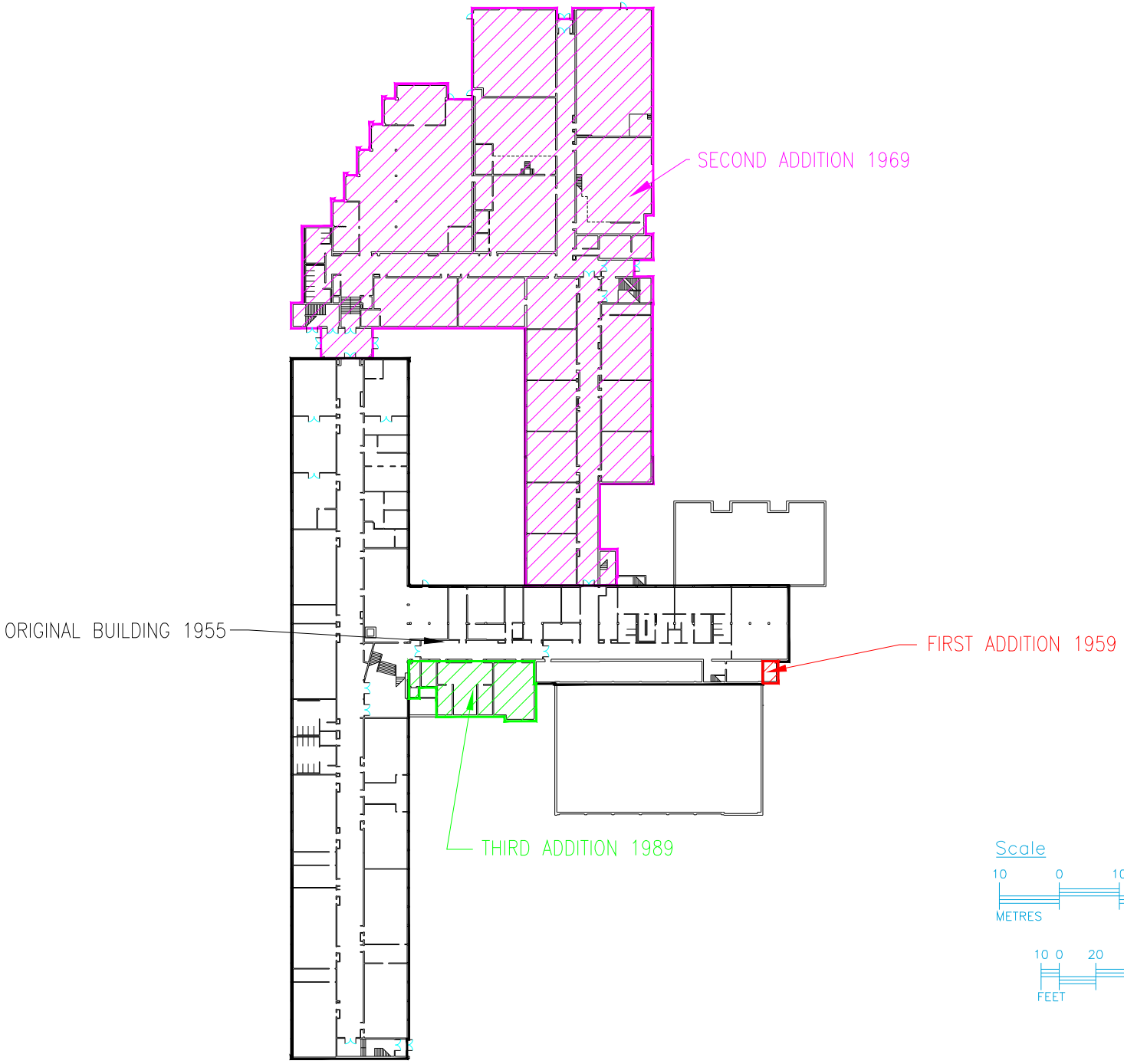
PRE-RENOVATION DESIGNATED SUBSTANCES AND HAZARDOUS MATERIALS SURVEY

T.A. BLAKELOCK HIGH SCHOOL
1160 REBECCA STREET, OAKVILLE, ONTARIO

LOCATIONS OF ASBESTOS CONTAINING MATERIALS AND STUDY AREAS

FIRST AND SECOND FLOOR PLAN

Drawn By: B.R	Approved By: D.K	Project No: 30167489	
Date: FEB 2023	Scale: N.T.S	Drawing No: 30167489-2	



Scale

10 0 10 20 30 40
METRES

10 0 20 40 60 80 100
FEET

NOTES

REVISIONS

No	DATE

TRUE NORTH

PROJECT NORTH

SCHOOL

T.A. Blakelock High School

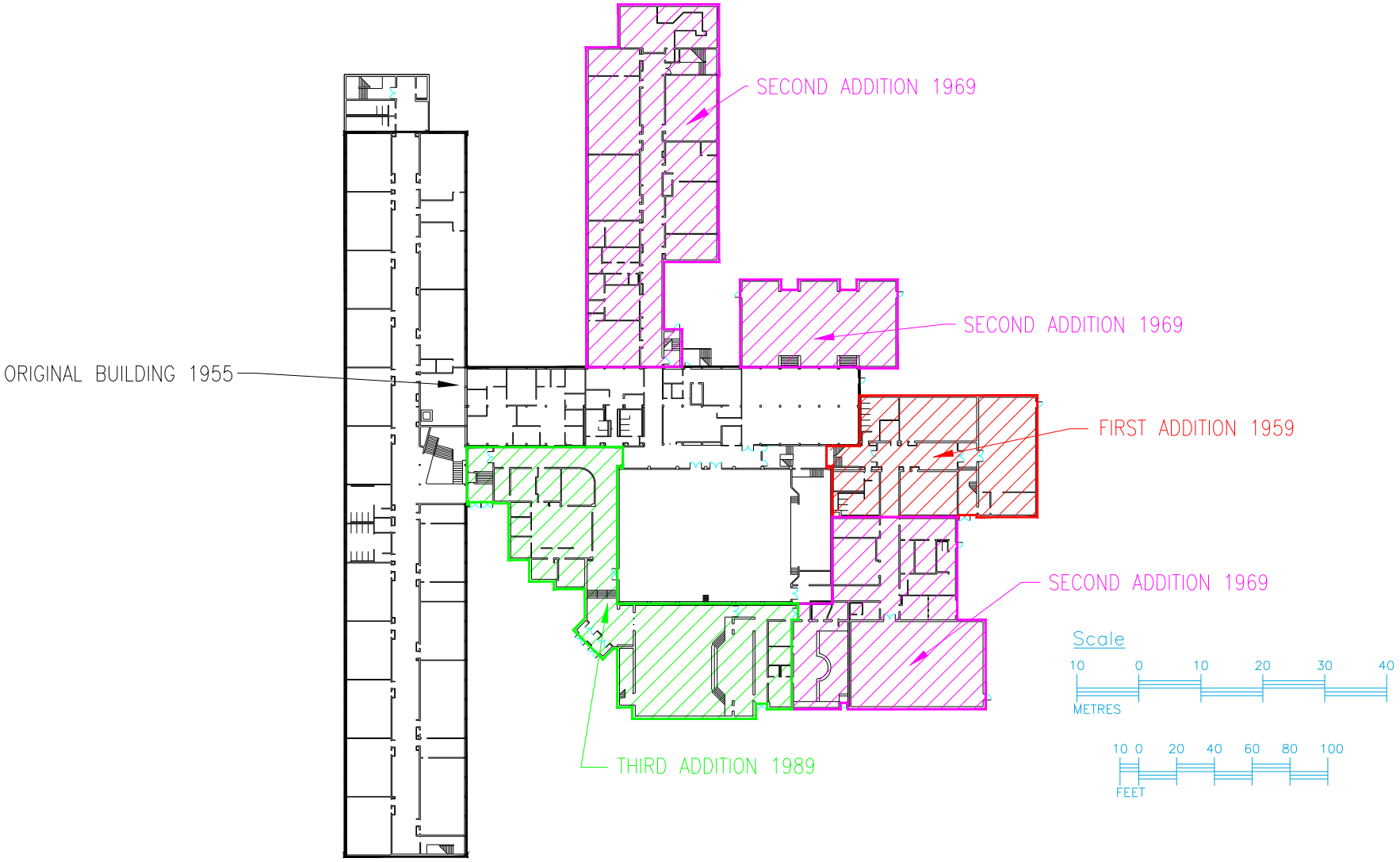
LOCATION
1160 REBECCA STREET
OAKVILLE, ONTARIO

LAST UPDATED	8 JULY 2014
PREVIOUS UPDATE	13 FEB 2012
GRADES	9-12
SCALE	(TO FIT) 1"=100'-0"
DRAWN	RDZ
PROJECT LAST UPDATED	25 OCT 2011
YEAR BUILT	1956
AREA SQ. FT.	166255 (15445m²)
CAD FILE NAME	TABHS

SHEET TITLE

PROJECT NAME
AREA

DIVISION NUMBER



NOTES

REVISIONS

No	DATE

TRUE NORTH

PROJECT NORTH

SCHOOL

T.A. Blakelock High School

LOCATION

1160 REBECCA STREET
OAKVILLE, ONTARIO

LAST UPDATED	8 JULY 2014
PREVIOUS UPDATE	13 FEB 2012
GRADES	9-12
SCALE	(TO FIT) 1"=100'-0"
DRAWN	RDZ
PROJECT LAST UPDATED	25 OCT 2011
YEAR BUILT	1955
AREA SQ. FT.	166255 (15445m²)
CAD FILE NAME	TABHS

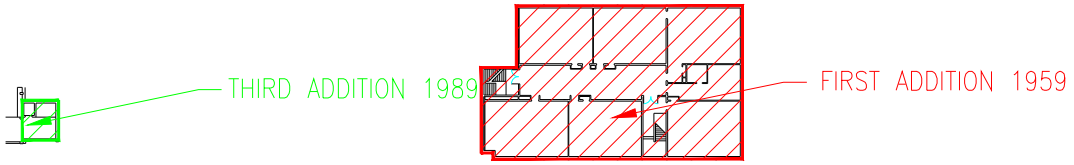
SHEET TITLE

PROJECT NAME

AREA

DIVISION

NUMBER



THIRD ADDITION 1989

Scale

10 0 10 20 30 40
METRES

10 0 20 40 60 80 100
FEET

NOTES

REVISIONS

No	DATE

TRUE NORTH

PROJECT NORTH

SCHOOL

T.A. Blakelock High School

LOCATION
1160 REBECCA STREET
OAKVILLE, ONTARIO

LAST UPDATED	8 JULY 2014
PREVIOUS UPDATE	13 FEB 2012
GRADES	9-12
SCALE	(TO FIT) 1"=100'-0"
DRAWN	RDZ
PROJECT LAST UPDATED	25 OCT 2011
YEAR BUILT	1956
AREA SQ. FT.	166255 (15445m²)
CAD FILE NAME	TABHS

SHEET TITLE

PROJECT NAME
AREA

DIVISION NUMBER

APPENDIX B

Laboratory Reports

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 Order 552301456
Customer ID: 55DCSL97
Customer PO: 30167489
Project ID:

Attn: Rebecca Hao
ARCADIS Canada Inc.
121 Granton Drive
Unit 12
Richmond Hill, ON L4B 3N4

Phone: (905) 882-5984
Fax: (905) 882-8962
Collected:
Received: 2/01/2023
Analyzed: 2/04/2023

Proj: T.A. Blakelock High School

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Client Sample ID: 1-A ***Lab Sample ID:*** **552301456-0001**

Sample Description: 263/2' x 4' ACT - pinholes and small fissure with brown backing (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 1-B ***Lab Sample ID:*** **552301456-0002**

Sample Description: 141/2' x 4' ACT - pinholes and small fissure with brown backing (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 1-C ***Lab Sample ID:*** **552301456-0003**

Sample Description: 263/2' x 4' ACT - pinholes and small fissure with brown backing (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	80.0%	20.0%	None Detected	

Client Sample ID: 2-A ***Lab Sample ID:*** **552301456-0004**

Sample Description: 144/Tile - 12"x12" white VFT with black/brown fleck (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	2/03/2023	White	0.0%	100%	None Detected	
TEM Grav. Reduction	2/04/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 2-B ***Lab Sample ID:*** **552301456-0005**

Sample Description: 145/Tile - 12"x12" white VFT with black/brown fleck (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 2-C ***Lab Sample ID:*** **552301456-0006**

Sample Description: 144/Tile - 12"x12" white VFT with black/brown fleck (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 3-A ***Lab Sample ID:*** **552301456-0007**

Sample Description: 136/Mastic - 12"x12" VFT (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

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 Order 552301456
Customer ID: 55DCSL97
Customer PO: 30167489
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Client Sample ID: 3-B **Lab Sample ID:** **552301456-0008**

Sample Description: 135/Mastic - 12"x12" VFT (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 3-C **Lab Sample ID:** **552301456-0009**

Sample Description: 136/Mastic - 12"x12" VFT (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 4-A **Lab Sample ID:** **552301456-0010**

Sample Description: 159B/Mastic - 12"x12" white with black VFT (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 4-B **Lab Sample ID:** **552301456-0011**

Sample Description: 159B/Mastic - 12"x12" white with black VFT (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 4-C **Lab Sample ID:** **552301456-0012**

Sample Description: 159B/Mastic - 12"x12" white with black VFT (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 5-A **Lab Sample ID:** **552301456-0013**

Sample Description: 159B/Levelling compound under 12"x12" white with black VFT (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 5-B **Lab Sample ID:** **552301456-0014**

Sample Description: 159B/Levelling compound under 12"x12" white with black VFT (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 5-C **Lab Sample ID:** **552301456-0015**

Sample Description: 159B/Levelling compound under 12"x12" white with black VFT (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Tan	0.0%	100.0%	None Detected	

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Client Sample ID: 6-A **Lab Sample ID:** **552301456-0016**

Sample Description: 134/Carpet mastic (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 6-B **Lab Sample ID:** **552301456-0017**

Sample Description: 134/Carpet mastic (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Tan	0.0%	100.0%	None Detected	

Client Sample ID: 6-C **Lab Sample ID:** **552301456-0018**

Sample Description: 134/Carpet mastic (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 7-A **Lab Sample ID:** **552301456-0019**

Sample Description: 134/Black vinyl baseboard (1969 construction era) - Vinyl Baseboard

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	2/03/2023	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	2/04/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 7-B **Lab Sample ID:** **552301456-0020**

Sample Description: 134A/Black vinyl baseboard (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 7-C **Lab Sample ID:** **552301456-0021**

Sample Description: 134D/Black vinyl baseboard (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 8-A **Lab Sample ID:** **552301456-0022**

Sample Description: 134/Yellow mastic under black vinyl baseboard (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Yellow/Beige	0.0%	100.0%	None Detected	

Client Sample ID: 8-B **Lab Sample ID:** **552301456-0023**

Sample Description: 134A/Yellow mastic under black vinyl baseboard (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Yellow/Beige	0.0%	100.0%	None Detected	

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Client Sample ID: 8-C ***Lab Sample ID:*** **552301456-0024**

Sample Description: 134D/Yellow mastic under black vinyl baseboard (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 9-A ***Lab Sample ID:*** **552301456-0025**

Sample Description: 159B/Grey vinyl baseboard (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	2/03/2023	Gray	0.0%	100%	None Detected	
TEM Grav. Reduction	2/04/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 9-B ***Lab Sample ID:*** **552301456-0026**

Sample Description: 159B/Grey vinyl baseboard (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 9-C ***Lab Sample ID:*** **552301456-0027**

Sample Description: 159B/Grey vinyl baseboard (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 10-A ***Lab Sample ID:*** **552301456-0028**

Sample Description: 159B/Brown mastic under grey vinyl baseboard (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 10-B ***Lab Sample ID:*** **552301456-0029**

Sample Description: 159B/Brown mastic under grey vinyl baseboard (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 10-C ***Lab Sample ID:*** **552301456-0030**

Sample Description: 159B/Brown mastic under grey vinyl baseboard (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Yellow	0.0%	100.0%	None Detected	

Client Sample ID: 11-A ***Lab Sample ID:*** **552301456-0031**

Sample Description: 134/Black door frame caulking (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	2/03/2023	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	2/04/2023	Black	0.0%	100.0%	None Detected	

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Client Sample ID: 11-B **Lab Sample ID:** **552301456-0032**

Sample Description: 141/Black door frame caulking (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 11-C **Lab Sample ID:** **552301456-0033**

Sample Description: 259C/Black door frame caulking (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 12-A **Lab Sample ID:** **552301456-0034**

Sample Description: 158C/2" x 2" beige ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 12-B **Lab Sample ID:** **552301456-0035**

Sample Description: 158C/2" x 2" beige ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 12-C **Lab Sample ID:** **552301456-0036**

Sample Description: 158C/2" x 2" beige ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 13-A **Lab Sample ID:** **552301456-0037**

Sample Description: 158C/2" x 2" beige ceramic tile - mortar bed (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 13-B **Lab Sample ID:** **552301456-0038**

Sample Description: 158C/2" x 2" beige ceramic tile - mortar bed (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 13-C **Lab Sample ID:** **552301456-0039**

Sample Description: 158C/2" x 2" beige ceramic tile - mortar bed (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

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Client Sample ID: 14-A ***Lab Sample ID:*** **552301456-0040**

Sample Description: 159C/4" x 4" white ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 14-B ***Lab Sample ID:*** **552301456-0041**

Sample Description: 159C/4" x 4" white ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 14-C ***Lab Sample ID:*** **552301456-0042**

Sample Description: 159C/4" x 4" white ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 15-A ***Lab Sample ID:*** **552301456-0043**

Sample Description: 159C/4" x 4" white ceramic tile - mortar bed (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 15-B ***Lab Sample ID:*** **552301456-0044**

Sample Description: 159C/4" x 4" white ceramic tile - mortar bed (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 15-C ***Lab Sample ID:*** **552301456-0045**

Sample Description: 159C/4" x 4" white ceramic tile - mortar bed (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 16-A ***Lab Sample ID:*** **552301456-0046**

Sample Description: 259A/1" x1" beige ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 16-B ***Lab Sample ID:*** **552301456-0047**

Sample Description: 259A/1" x1" beige ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

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Client Sample ID: 16-C ***Lab Sample ID:*** **552301456-0048**

Sample Description: 259A/1" x1" beige ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 17-A ***Lab Sample ID:*** **552301456-0049**

Sample Description: 259A/1" x1" beige ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 17-B ***Lab Sample ID:*** **552301456-0050**

Sample Description: 259A/1" x1" beige ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 17-C ***Lab Sample ID:*** **552301456-0051**

Sample Description: 259A/1" x1" beige ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 18-A ***Lab Sample ID:*** **552301456-0052**

Sample Description: 259A/4" x4" beige ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 18-B ***Lab Sample ID:*** **552301456-0053**

Sample Description: 259A/4" x4" beige ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 18-C ***Lab Sample ID:*** **552301456-0054**

Sample Description: 259A/4" x4" beige ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 19-A ***Lab Sample ID:*** **552301456-0055**

Sample Description: 259A/4" x4" beige ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Beige	0.0%	100.0%	**<1% Chrysotile**	
400 PLM Pt Ct	2/03/2023	Gray/Beige	0.0%	100.0%	**<0.25% Chrysotile**	

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Client Sample ID: 19-B **Lab Sample ID:** **552301456-0056**

Sample Description: 259A/4" x4" beige ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/Beige	0.0%	100.0%	**<1% Chrysotile**	
400 PLM Pt Ct	2/03/2023	Gray/Beige	0.0%	100.0%	**<0.25% Chrysotile**	

Client Sample ID: 19-C **Lab Sample ID:** **552301456-0057**

Sample Description: 259A/4" x4" beige ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	**<1% Chrysotile**	
400 PLM Pt Ct	2/03/2023	Beige	0.0%	100.0%	**<0.25% Chrysotile**	

Client Sample ID: 20-A **Lab Sample ID:** **552301456-0058**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray/White	0.0%	100.0%	None Detected	

Client Sample ID: 20-B-Grout 1 **Lab Sample ID:** **552301456-0059**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 20-B-Grout 2 **Lab Sample ID:** **552301456-0059A**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 20-C **Lab Sample ID:** **552301456-0060**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - grout (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 21-A **Lab Sample ID:** **552301456-0061**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 21-B **Lab Sample ID:** **552301456-0062**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

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Client Sample ID: 21-C ***Lab Sample ID:*** **552301456-0063**

Sample Description: 259B/6" x 6" pink with black spots ceramic tile - mortar bed (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 22-A ***Lab Sample ID:*** **552301456-0064**

Sample Description: 159C/Glazed ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 22-B ***Lab Sample ID:*** **552301456-0065**

Sample Description: 159C/Glazed ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 22-C ***Lab Sample ID:*** **552301456-0066**

Sample Description: 159C/Glazed ceramic tile - grout (1955 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 23-A-Mortar 1 ***Lab Sample ID:*** **552301456-0067A**

Sample Description: 266/Interior brick mortar (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 23-A Mortar 2 ***Lab Sample ID:*** **552301456-0067B**

Sample Description: 266/Interior brick mortar (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 23-B-Mortar 1 ***Lab Sample ID:*** **552301456-0068A**

Sample Description: 266/Interior brick mortar (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 23-B-Mortar 2 ***Lab Sample ID:*** **552301456-0068B**

Sample Description: 266/Interior brick mortar (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

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Client Sample ID: 23-C-Mortar 1 ***Lab Sample ID:*** **552301456-0069A**

Sample Description: 266/Interior brick mortar (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 23-C-Mortar 2 ***Lab Sample ID:*** **552301456-0069B**

Sample Description: 266/Interior brick mortar (1969 construction era)

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/03/2023	Gray	0.0%	100.0%	None Detected	

Analyst(s):

Caroline Allen	PLM (50) 400 PLM Pt Ct (2) PLM Grav. Reduction (3)
Marzan Regaspi	PLM (14) 400 PLM Pt Ct (1) PLM Grav. Reduction (1)
Sandy Burany, Ph.D	TEM Grav. Reduction (4)
Vanessa Gallego	PLM (5)

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. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and 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. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

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

Initial report from: 02/04/202311:31:56

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Customer ID: 55DCSL97
Customer PO: 30167489
Project ID:

Attn: Viraj Daruwala
ARCADIS Canada Inc.
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Fax: (905) 882-8962
Collected:
Received: 2/02/2023
Analyzed: 2/06/2023

Proj: 30167489 - TA Blakelock

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Client Sample ID: 24-A **Lab Sample ID:** **552301594-0001**

Sample Description: Exterior Brown Window Caulking Outside Room 134

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 24-B **Lab Sample ID:** **552301594-0002**

Sample Description: Exterior Brown Window Caulking Outside Room 134D

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 24-C **Lab Sample ID:** **552301594-0003**

Sample Description: Exterior Brown Window Caulking Outside Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 25-A **Lab Sample ID:** **552301594-0004**

Sample Description: Exteiror Brick Mortar Arcade Room 134

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Gray	0.0%	100.0%	**<1% Chrysotile**	
400 PLM Pt Ct	2/06/2023	Gray	0.0%	100.0%	**<0.25% Chrysotile**	

Client Sample ID: 25-B **Lab Sample ID:** **552301594-0005**

Sample Description: Exteiror Brick Mortar Arcade Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Gray	0.0%	100.0%	**<1% Chrysotile**	
400 PLM Pt Ct	2/06/2023	Gray	0.0%	100.0%	**<0.25% Chrysotile**	

Client Sample ID: 25-C **Lab Sample ID:** **552301594-0006**

Sample Description: Exteiror Brick Mortar Arcade Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Gray	0.0%	100.0%	**<1% Chrysotile**	
400 PLM Pt Ct	2/06/2023	Gray	0.0%	100.0%	**<0.25% Chrysotile**	

Client Sample ID: 26-A **Lab Sample ID:** **552301594-0007**

Sample Description: Grey Interior Window Caulking Room 134

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Gray	0.0%	100.0%	None Detected	

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EMSL Canada Order 552301594
Customer ID: 55DCSL97
Customer PO: 30167489
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Client Sample ID: 26-B ***Lab Sample ID:*** **552301594-0008**

Sample Description: Grey Interior Window Caulking Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Gray	0.0%	100.0%	None Detected	

Client Sample ID: 26-C ***Lab Sample ID:*** **552301594-0009**

Sample Description: Grey Interior Window Caulking Room 134D

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 27-A ***Lab Sample ID:*** **552301594-0010**

Sample Description: Cementitious Materials b/w the Glass Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 27-B ***Lab Sample ID:*** **552301594-0011**

Sample Description: Cementitious Materials b/w the Glass Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 27-C ***Lab Sample ID:*** **552301594-0012**

Sample Description: Cementitious Materials b/w the Glass Room 134A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	White	0.0%	100.0%	None Detected	

Client Sample ID: 28-A ***Lab Sample ID:*** **552301594-0013**

Sample Description: Mastic on Wall Room 162A - Tar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	2/06/2023	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	2/06/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 28-B ***Lab Sample ID:*** **552301594-0014**

Sample Description: Mastic on Wall Room 162A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Black	0.0%	100.0%	None Detected	

Client Sample ID: 28-C ***Lab Sample ID:*** **552301594-0015**

Sample Description: Mastic on Wall Room 162A

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Black	0.0%	100.0%	None Detected	

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EMSL Canada Order 552301594
Customer ID: 55DCSL97
Customer PO: 30167489
Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Client Sample ID: 29-A **Lab Sample ID:** **552301594-0016**
Sample Description: Room 162A, Cork mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Brown/Red	0.0%	100.0%	None Detected	

Client Sample ID: 29-B **Lab Sample ID:** **552301594-0017**
Sample Description: Room 162A, Cork mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Brown/Red	0.0%	100.0%	None Detected	

Client Sample ID: 29-C **Lab Sample ID:** **552301594-0018**
Sample Description: Room 162A, Cork mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Brown	0.0%	100.0%	None Detected	

Client Sample ID: 30-A **Lab Sample ID:** **552301594-0019**
Sample Description: Room 162A, Surfacing finishes

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 30-B **Lab Sample ID:** **552301594-0020**
Sample Description: Room 162A, Surfacing finishes

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Beige	0.0%	100.0%	None Detected	

Client Sample ID: 30-C **Lab Sample ID:** **552301594-0021**
Sample Description: Room 162A, Surfacing finishes

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	2/06/2023	Gray	0.0%	100.0%	None Detected	

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Customer ID: 55DCSL97
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Project ID:

Summary Test Report for Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05

Analyst(s):

Khue Nguyen	TEM Grav. Reduction (1)
Marzan Regaspi	PLM (13) 400 PLM Pt Ct (2) PLM Grav. Reduction (1)
Natalie D'Amico	PLM (7) 400 PLM Pt Ct (1)

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. Interpretation and use of test results are the responsibility of the client. This is a summary report; official reports are available on LabConnect or upon request and 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. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

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

Report amended: 02/08/202310:36:16 Replaces amended report from: 02/08/202310:22:52 Reason Code: Client-Change to Sample ID

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EMSL Canada Or	552301420
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ProjectID:	

Attn: **Rebecca Hao**
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121 Granton Drive
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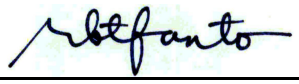
Phone:	(905) 882-5984
Fax:	(905) 882-8962
Received:	2/1/2023 10:51 AM
Collected:	

Project: **30167489 - T.A. Blakelock High School**

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

Client SampleDescription	*Collected*	*Analyzed*	*Weight*	*RDL*	*Lead Concentration*
P-01 White Paint		2/1/2023	0.2521 g	80 ppm	400 ppm
552301420-0001	Site: Room 259A - Drywall Ceiling				
P-02 White Paint		2/1/2023	0.2486 g	80 ppm	250 ppm
552301420-0002	Site: Room 259 - Concrete Block Wall				



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. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

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

Initial report from 02/03/2023 08:44:07

APPENDIX C

Summary of Asbestos, Lead and Silica Work Classifications

TABLE C-1
SUMMARY OF CLASSIFICATION OF TYPE 1, 2 AND 3 OPERATIONS (Ont. Reg. 278/05)

TYPE 1 OPERATIONS

- removing less than 7.5 m^2 asbestos-containing ceiling tiles;
- removing non-friable asbestos-containing material other than ceiling tiles, if the material is 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 the material is wetted and the work is done only using non-powered, hand-held tools; and
- removing less than 1 m^2 of drywall in which asbestos-containing joint compounds have been used.

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;
- removal of one square metre or less of friable asbestos-containing material;
- enclosing friable asbestos-containing material;
- applying tape or a sealant or other covering to asbestos-containing pipe or boiler insulation;
- removing 7.5 m^2 or more asbestos-containing ceiling tiles (if 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 the material is not wetted and the work is done only using non-powered, hand-held tools;
- removal of one square metre or more of drywall in which asbestos-containing joint compounds have been used;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done using power tools that are attached to dust-collecting devices equipped with HEPA filters;
- cleaning or removing filters used in air-handling equipment in a building that has asbestos-containing sprayed fireproofing.

TABLE C-1 (Continued)
SUMMARY OF CLASSIFICATION OF TYPE 1, 2 AND 3 OPERATIONS (Ont. Reg. 278/05)

TYPE 3 OPERATIONS

- removal of more than one square metre of friable asbestos-containing material;
- 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 asbestos-containing fireproofing;
- repairing or demolishing a kiln, metallurgical furnace or similar structure that is made in part of asbestos-containing refractory materials;
- breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing materials, if the work is done using power tools that are not attached to dust-collecting devices equipped with HEPA filters.

TABLE C-2
SUMMARY OF CLASSIFICATION OF LEAD-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE – LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

Type 1 Operations	Type 2 Operations		Type 3 Operations	
	Type 2a	Type 2b	Type 3a	Type 3b
<0.05 mg/m^3	>0.05 to 0.50 mg/m^3	>0.50 to 1.25 mg/m^3	>1.25 to 2.50 mg/m^3	>2.50 mg/m^3

Note: The classification of Type 1, 2 and 3 operations is based on presumed airborne concentrations of lead, as shown above.

TYPE 1 OPERATIONS

- application of lead-containing coatings with a brush or roller;
- 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 that has an effective dust collection system equipped with a HEPA filter;
- installation or removal of lead-containing sheet metal;
- installation or removal of lead-containing packing, babbit or similar material;
- removal of lead-containing coatings or materials using non-powered hand tools, other than manual scraping or sanding;
- soldering.

TYPE 2 OPERATIONS

Type 2a Operations

- welding or high temperature cutting of lead-containing coatings or materials outdoors. This operation is considered a Type 2a operation only if it is short-term, not repeated, and if the material has been stripped prior to welding or high temperature cutting. Otherwise it will be considered a Type 3a operation;
- removal of lead-containing coatings or materials by scraping or sanding using non-powered hand tools;
- manual demolition of lead-painted plaster walls or building components by striking a wall with a sledgehammer or similar tool.

Type 2b Operations

- spray application of lead-containing coatings.

TABLE C-2 (Continued)
SUMMARY OF CLASSIFICATION OF LEAD-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE – LEAD ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

Type 3a Operations

- welding or high temperature cutting of lead-containing coatings or materials indoors or in a confined space;
- burning of a surface containing lead;
- dry removal of lead-containing mortar using an electric or pneumatic cutting device;
- removal of lead-containing coatings or materials using power tools without an effective dust collection system equipped with a HEPA filter;
- removal or repair of a ventilation system used for controlling lead exposure;
- demolition or cleanup of a facility where lead-containing products were manufactured;
- an operation that may expose a worker to lead dust, fume or mist that is not a Type 1, Type 2, or Type 3b operation

Type 3b Operations

- abrasive blasting of lead-containing coatings or materials;
- removal of lead-containing dust using an air mist extraction system.

TABLE C-3

SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS

MOL GUIDELINE, SILICA ON CONSTRUCTION PROJECTS, APRIL 2011

	Type 1 Operations	Type 2 Operations	Type 3 Operations
Cristobalite and Tridymite	>0.05 to 0.50 mg/m^3	>0.50 to 2.50 mg/m^3	>2.5 mg/m^3
Quartz and Tripoli	>0.10 to 1.0 mg/m^3	>1.0 to 5.0 mg/m^3	>5.0 mg/m^3

Note: The classification of silica-containing construction tasks is based on presumed concentrations of respirable crystalline silica, as shown above.

TYPE 1 OPERATIONS

- The drilling of holes in concrete or rock that is not part of a tunnelling operation or road construction.
- Milling of asphalt from concrete highway pavement.
- Charging mixers and hoppers with silica sand (sand consisting of at least 95 per cent silica) or silica flour (finely ground sand consisting of at least 95 per cent silica).
- Any other operation at a project that requires the handling of silica-containing material in a way that may result in a worker being exposed to airborne silica.
- Entry into a dry mortar removal or abrasive blasting area while airborne dust is visible for less than 15 minutes for inspection and/or sampling.
- Working within 25 metres of an area where compressed air is being used to remove silica-containing dust outdoors.

TYPE 2 OPERATIONS

- Removal of silica containing refractory materials with a jackhammer.
- The drilling of holes in concrete or rock that is part of a tunnelling or road construction.
- The use of a power tool to cut, grind, or polish concrete, masonry, terrazzo or refractory materials.
- The use of a power tool to remove silica containing materials.
- Tunnelling (operation of the tunnel boring machine, tunnel drilling, tunnel mesh installation).
- Tuckpoint and surface grinding.
- Dry mortar removal with an electric or pneumatic cutting device.
- Dry method dust cleanup from abrasive blasting operations.
- The use of compressed air outdoors for removing silica dust.
- Entry into area where abrasive blasting is being carried out for more than 15 minutes.

TABLE C-3 (Continued)
SUMMARY OF CLASSIFICATION OF SILICA-CONTAINING CONSTRUCTION TASKS
MOL GUIDELINE, SILICA ON CONSTRUCTION PROJECTS, APRIL 2011

TYPE 3 OPERATIONS

- Abrasive blasting with an abrasive that contains ≥ 1 per cent silica.
- Abrasive blasting of a material that contains ≥ 1 per cent silica.

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