

Appendix B



Public Services and Procurement Canada
2720 Riverside Drive
Ottawa, ON, K1A 0S5

August 18, 2020

Attention: Olivier Brazeau, Regional Asbestos Coordinator

RE: Pre-Demolition Designated Substances Report
Environmental Health Centre Building
50 Colombine Driveway, Tunney's Pasture, Ottawa, ON

Englobe File No.: GV-OT-041133

1.0 INTRODUCTION

Englobe Corporation was retained by Public Services and Procurement Canada (PSPC) for a pre-demolition designated substance report (DSR) in support of building deconstruction at the Environmental Health Centre Building, located at 50 Colombine Driveway, Tunney's Pasture, Ottawa, ON (site). The structure was built in 1965 and consists of a three-storey above-grade structure, with a basement, penthouse, an approximate footprint of 3,000 m².

The Designated Substances Report is required under the *Ontario Occupational Health and Safety Act* to identify designated substances that may be present within the project areas. The *Canada Labour Code* also stipulates under *Part II, Section 124* that every employer shall ensure that the health and safety at work of every person employed by the employer is protected. By having a DSR conducted, PSPC will be able to inform his or her employees, contractors, and tenants of any designated substances that may be present and possibly disturbed throughout the duration of future demolition project in the surveyed areas.

Englobe staff completed a visual evaluation of building materials for the presence of suspected designated substances, and hazardous materials deemed pertinent, on select days in February, March, May, and July 2020. As part of the survey, select materials were sampled and submitted for laboratory analysis to confirm asbestos or lead content.

2.0 SCOPE OF WORK

The survey implemented by Englobe included the 11 designated substances listed in Section 30 of the Occupational Health and Safety Act, R.S.O. 1990, Chapter O.1. Designated Substances, as identified under the Ontario Occupational Health and Safety Act, are as follows:

- Acrylonitrile,
- Arsenic,
- Asbestos,
- Benzene,
- Coke Oven Emissions,

- Ethylene Oxide,
- Isocyanates,
- Lead,
- Mercury,
- Silica, and
- Vinyl Chloride.

Other Hazardous Materials, which are not classified as Designated Substances, but were included as part of the DSHMS scope of work include the following:

- Polychlorinated Biphenyls (PCBs),
- Ozone Depleting Substances (ODS), and
- Other Hazardous Materials.

3.0 BACKGROUND INFORMATION REVIEW

Prior to the commencement of field work, Englobe project personnel reviewed past bulk sampling documentation, as pertinent to the building. As part of the project, Englobe reviewed the following reports:

- Designated Substance Report – Environmental Health Centre (EHC) Deconstruction Project. 50 Colombine Driveway, Tunney's Pasture. Prepared by DST Consulting Engineers Inc. (DST File No.: BEOT020124). Dated March 23rd, 2017.
- Asbestos Reassessment Survey – Environmental Health Centre (EHC). 50 Colombine Driveway, Tunney's Pasture. Prepared by DST Consulting Engineers Inc. (DST File No.: GV-OT-035410). Dated March 27th, 2019.

Englobe referenced the identifiable sampling and analytical results of the above-noted documentation, where applicable. As such, materials already identified as asbestos-containing in previous documentation were not re-sampled by Englobe as part of this project specific survey. Englobe also collected bulk asbestos and lead samples of any additional materials not previously identified as part of the survey.

4.0 METHODOLOGY

The purpose of the survey program was to identify existing designated substances and hazardous materials on site, that may be disturbed during future work operations. The survey included a full building, room-by-room designated substances survey (including elevator shaft evaluation). Investigative entries were performed by a qualified subcontractor to reveal concealed building conditions. Coring into floor slabs was performed by a qualified subcontractor. Englobe submitted all samples to analytical laboratories for analysis. Englobe was unable to access the provincial electrical room in the basement during the survey.

Materials suspected of containing designated substances were visually identified, based on the surveyor's knowledge of the historic composition of building products. Visual identification of

materials suspected to contain asbestos/lead in select paints was supported by the collection and analysis of a limited number of representative samples, where possible and where applicable. Materials suspected of containing designated substances other than asbestos and/or lead in paint were identified by appearance, age, and knowledge of historic applications.

In Ontario, a material is defined as an Asbestos-Containing Material (ACM) if the material has a minimum asbestos content of 0.5 per cent (%) by dry weight, as per Ontario Regulation (O. Reg.) 278/05 *Asbestos on Construction Projects and in Buildings and Repair Operations* enabled under the *Occupational Health and Safety Act (R.S.O. 1990, Chapter 0.1)*, as amended (O. Reg. 278/05, as amended). ACMs can be divided into two categories: friable and non-friable material. A friable ACM is a material that can be crumbled, powdered, or pulverized by hand pressure and can readily release fibres when disturbed. Common applications of friable ACMs are sprayed or trowelled surfacing materials (e.g., sprayed fireproofing and textured coatings) as well as mechanical and thermal insulation. Non-friable materials are materials that will generally release fibres only when cut or shaped. Common non-friable ACMs include vinyl floor products, caulking applications, asbestos textile products and asbestos cement products (Transite). Some of these products may become friable with time or when disturbed.

Bulk building material samples of suspected ACMs were collected by Englobe from the project areas. Samples were collected to meet the bulk sampling requirements stipulated in O. Reg. 278/05, as amended. All bulk samples were submitted to and analyzed by Paracel Laboratories Inc. The bulk samples were analyzed using polarised light microscopy (PLM). This analytical method complies with the United States Environmental Protection Agency (U.S. EPA) Method 600/R-93/116 dated July 1993, which is the regulatory approved protocol for bulk asbestos analysis in Ontario.

With regards to lead in paint, although the Ontario Ministry of Labour (MoL) has published a guideline for control of lead exposures on construction projects in Ontario, it does not include criteria for the classification of lead-paint. Instead, it uses presumed airborne lead concentrations for specific tasks as criteria for classifying work. However, in regulations set by the United States (U.S.) Department of Housing and Urban Development, lead-based paint is classified as any paint application containing at least 1.0 milligrams of lead per square centimetre of surface area (1.0 mg/cm^2), or at least 0.5% lead content by weight [(5,000 parts per million (ppm))]. This criterion was widely, although not universally, used in Canada. In Canada, the Federal Canada Consumer Product Safety Act's *Surface Coating Materials Regulations SOR/2016-193* has lowered the allowable concentration of lead in paints for new consumer products to 0.009% lead content by weight (90 ppm). For the purposes of the survey and this report, paint applications having detectable concentrations of lead are considered to be lead-containing.

Representative samples of paint suspected of containing lead were collected by Englobe and submitted to Paracel for lead content analysis. Paracel is certified under the Canadian Association for Laboratory Accreditation (CALA) to perform lead in paint sample analysis. The sample was analysed by Paracel using Inductively Coupled Plasma – Optical Emission Spectrometry (ICP-OES) in accordance with MOE E3470, ICP-OES.

Equipment that may contain PCBs (e.g., electrical transformers and equipment and fluorescent light ballasts) can often be identified by examining manufacturer's labels. For safety reasons, Englobe personnel do not remove the ballast shields from fluorescent light fixtures to examine the ballast codes unless the electrical circuit for the lighting or equipment had been tagged and locked out by a qualified and licenced electrician.

Bulk samples of tar applications were submitted to Paracel for Polychlorinated Chlorinated Biphenyls (PCBs) analysis using EPA Method 8082A (SW-846): Polychlorinated Biphenyls (PCBs) by Gas Chromatography and Polyaromatic Hydrocarbons (PAHs) analysis using EPA Method 8270 – Gas Chromatography and Mass-Spectrophotometry.

Certificates of laboratory analysis are included in Appendix A. Selected photographs are included in Appendix B. A room-by-room database for identified ACMs, including type, friability, location, quantities, and conditions, is included in Appendix C. A sample location plan is included in Appendix D.

5.0 FINDINGS

The following sections outline the complete findings of all accessible designated substances and hazardous materials that were assessed as part of the survey.

5.1. Asbestos

Table 1 below presents the findings of bulk asbestos material samples collected from and/or applicable to the project area, based on visual observations at the time of the site survey.

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM)			
Sample I.D.	Approximate Sample Location	Sample Description	Asbestos Content and Type
41133-01A	1 st Floor, Room 106	Grey Vinyl Floor Tile Sublayer & Associated Yellow Mastic	Tile - None Detected Mastic – None Detected
41133-01B	1 st Floor, Room 113		Tile - None Detected Mastic – None Detected
41133-01C	1 st Floor, Room 116		Tile - None Detected Mastic – None Detected
41133-02A	1 st Floor, Room 113	Black Vinyl Floor Tile Sublayer & Associated Yellow Mastic	Tile - None Detected Mastic – None Detected
41133-02B			Tile - None Detected Mastic – None Detected
41133-02C	1 st Floor, Room 116		Tile - None Detected Mastic – None Detected
41133-03A	Basement - Corridors	Vinyl Sheet Flooring – Blue Marble Pattern	None Detected
41133-03B			None Detected
41133-03C			None Detected

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM)			
Sample I.D.	Approximate Sample Location	Sample Description	Asbestos Content and Type
41133-04A	Basement – Mechanical Room Hallway	Transite Wall Panel	15% Chrysotile
41133-04B			Not Analyzed – Positive Stop
41133-04C			Not Analyzed – Positive Stop
41133-05A	Basement – Room B88	Transite Ceiling Panel	15% Chrysotile
41133-05B			Not Analyzed – Positive Stop
41133-05C			Not Analyzed – Positive Stop
41133-06A	Penthouse – South-Wall	Double Transite Wall Panel & Yellow Mastic	15% Chrysotile
41133-06B			Not Analyzed – Positive Stop
41133-06C			Not Analyzed – Positive Stop
41133-07A	1 st Floor, Room 133A	12"x12" (30cm x 30cm) Vinyl Floor Tile – Beige w/ Grey, Off-White, and Tan Marble Pattern & Associated Yellow & Black Mastic	None Detected
41133-07B			None Detected
41133-07C			None Detected
41133-08A	1 st Floor – Lobby	Drywall Joint Compound	None Detected
41133-08B	1 st Floor – Room 125		None Detected
41133-08C	1 st Floor – Room 130		None Detected
41133-08D	1st Floor – Room 133A		1% Chrysotile
41133-08E	1 st Floor – Room 103		None Detected
41133-09A	Basement – Room B38	Drywall Joint Compound	1% Chrysotile
41133-09B	Basement – Room B34		1% Chrysotile
41133-09C	Basement – Room B60		None Detected
41133-09D	Basement – Room B52		None Detected
41133-09E	Basement – Room B5		None Detected
41133-09F	Basement – Room B16		1% Chrysotile
41133-09G	Basement – Room B12		None Detected
41133-10A	2nd Floor – Room 216	Drywall Joint Compound	1% Chrysotile
41133-10B	2 nd Floor – Room 228		None Detected
41133-10C	2 nd Floor – Room 242		None Detected
41133-10D	2 nd Floor – Room 238		None Detected
41133-10E	2 nd Floor – Room 217		None Detected

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM)			
Sample I.D.	Approximate Sample Location	Sample Description	Asbestos Content and Type
41133-11A	3 rd Floor – Room 320	Drywall Joint Compound	1% Chrysotile
41133-11B			1% Chrysotile
41133-11C			None Detected
41133-12A	Penthouse – East Air Handling Unit	Parging Cement on Wire Mesh	65% Chrysotile
41133-12B			Not Analyzed – Positive Stop
41133-12C			Not Analyzed – Positive Stop
41133-13A	Penthouse East – South Wall at Column Opening	Grey Fibrous Insulation	10% Chrysotile
41133-13B			Not Analyzed – Positive Stop
41133-13C			Not Analyzed – Positive Stop
41133-14A	Penthouse – Perimeter Wall	Parging Cement	65% Chrysotile
41133-14B			Not Analyzed – Positive Stop
41133-14C			Not Analyzed – Positive Stop
41133-15A	Penthouse – Perimeter of Concrete Equipment Pads	Grey Caulking and Cork	Caulking - None Detected Cork – None Detected
41133-15B			Caulking - None Detected Cork – None Detected
41133-15C			Caulking - None Detected Cork – None Detected
41133-16A	Penthouse – East Wall, Northern Perimeter Wall	Fibrous White Material	35% Chrysotile
41133-16B			Not Analyzed – Positive Stop
41133-16C			Not Analyzed – Positive Stop
41133-17A	3 rd Floor – Washroom Pipe chase	Tar Paper within Terra Cotta Wall	<MDL Chrysotile
41133-17B			<MDL Chrysotile
41133-17C			<MDL Chrysotile
41133-18A	1 st Floor – Room 117	Cloth Wrapped Acoustic Tile & Mastic	Tile - None Detected Mastic – None Detected
41133-18B			Tile - None Detected Mastic – None Detected
41133-18C			Tile - None Detected Mastic – None Detected

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM)			
Sample I.D.	Approximate Sample Location	Sample Description	Asbestos Content and Type
41133-19A	3 rd Floor –Washroom Pipe chase	Terra Cotta Mortar	None Detected
41133-19B	3 rd Floor – Room 309		None Detected
41133-19C	2 nd Floor – Washroom Pipe chase		None Detected
41133-19D	2 nd Floor – Room 217		None Detected
41133-19E	1 st Floor – Washroom Pipe chase		None Detected
41133-19F	Basement – Washroom Pipe chase		None Detected
41133-19G			None Detected
41133-20A	Basement Mechanical Room	Aircell Pipe Insulation	10% Chrysotile
41133-20B			Not Analyzed – Positive Stop
41133-20C	Room B-60		Not Analyzed – Positive Stop
41133-20A[2]	Ground Floor – South	Mortar within Wall Cavity	None Detected
41133-20B[2]	2 nd Floor – Room 218		None Detected
41133-20C[2]	3 rd Floor – Room 319		None Detected
41133-20D[2]			None Detected
41133-20E[2]			None Detected
41133-21A	Mechanical Room	Magblock Pipe Insulation	60% Chrysotile
41133-21B			Not Analyzed – Positive Stop
41133-21C			Not Analyzed – Positive Stop
41133-21A[2]	2 nd Floor – Room 218	Wall Parging Cement within Wall Cavity	1% Chrysotile
41133-21B[2]	Ground Floor - South		Not Analyzed – Positive Stop
41133-21C[2]			Not Analyzed – Positive Stop
41133-21D[2]			Not Analyzed – Positive Stop
41133-21E[2]	3 rd Floor – Room 319		Not Analyzed – Positive Stop
41133-22A	Mechanical Room	Grey Cement Compound	20% Chrysotile
41133-22B			Not Analyzed – Positive Stop
41133-22C	Room B-60		Not Analyzed – Positive Stop
41133-23A	Loading Dock	Foundation Tar	None Detected
41133-23B	Room B-66		None Detected
41133-23C	Mechanical Room		None Detected

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM)			
Sample I.D.	Approximate Sample Location	Sample Description	Asbestos Content and Type
41133-24A	Mechanical Room	Foundation Tar – Second Layer	Not Analyzed
41133-24B	Room B-66		None Detected
41133-24C			None Detected
41133-25A	Room 130 – Perimeter Wall Styrofoam behind Concrete Block & Terra Cotta	Wall Tar - Interior	None Detected
41133-25B			None Detected
41133-25C			None Detected
41133-26A	Perimeter Wall – Styrofoam behind Exterior Decorative Stone	Wall Tar - Exterior	1% Chrysotile
41133-26B			Not Analyzed – Positive Stop
41133-26C			Not Analyzed – Positive Stop
41133-27A	Basement Utility Room, Adjacent Elevator Shaft	Parging Cement Ceiling	None Detected
41133-27B			None Detected
41133-27C			None Detected
41133-28A	Room 133A	Black/Yellow Mastic associated with VFT	None Detected
41133-28B			None Detected
41133-28C			None Detected
41133-29A	Utility Closet adjacent MS120	Mastic/Woven Backing associated with 9x9 Maroon tiles	None Detected
41133-29B			None Detected
41133-29C			None Detected
41133-30A	Room 200	Black Mastic associated with Green, Blue, and Beige VFT – Second Floor	None Detected
41133-30B	Room 237		None Detected
41133-30C	Room 240		None Detected
41133-31A	2 nd Floor Hallway - West	Black Mastic Associated with 2 nd Floor Hallway	None Detected
41133-31B	2 nd Floor Hallway – Centre		None Detected
41133-31C	2 nd Floor Hallway - East		None Detected
41133-32A	Exterior Foundation – South-East corner	Black Tar & Weave on Foundation	<MDL Chrysotile
41133-32B			<MDL Chrysotile
41133-32C			<MDL Chrysotile
41133-33A	Exterior – Southern Stairs	Parging Cement	None Detected
41133-33B			None Detected
41133-33C			None Detected
41133-34A	Exterior – Northern Entrance Windows & Door	Black Caulking	None Detected
41133-34B			None Detected
41133-34C			None Detected
41133-35A	Exterior – Columns and Joints	White Caulking	None Detected
41133-35B			None Detected
41133-35C			None Detected
41133-36A	Exterior – Basement Windows	Grey Caulking	None Detected
41133-36B			None Detected
41133-36C			None Detected

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by Polarized Light Microscopy (PLM)			
Sample I.D.	Approximate Sample Location	Sample Description	Asbestos Content and Type
41133-37A	Exterior – Walls	Parging Cement	None Detected
41133-37B			None Detected
41133-37C			None Detected

Note 1: Bold items exceed the 0.5% regulated concentration of asbestos, as per O.Reg. 278/05, as amended.

Note 2: Samples labelled with "[2]" were collected on July 21, 2020.

5.1.1. Asbestos-Containing Materials

Based on the results of bulk sampling and subsequent laboratory analysis, the following sampled materials (current and historical) contain regulated amounts of asbestos:

- Aircell pipe insulation, observed throughout the building, contains 10% Chrysotile asbestos (Sample 41133-20A).
- Magblock pipe insulation, observed throughout the building, contains 60% Chrysotile asbestos (Sample 41133-21A).
- Sweat wrap (layered cardboard wrap) pipe insulation, assumed to contain asbestos, was observed in remnant quantities in the basement mechanical room.
- Parging on pipe fittings (including tees/valves/ends/hangers), observed throughout the building, contains 20% Chrysotile asbestos (Sample 41133-22A).
- Parging used as an adhesive and as a sporadically applied outer sealant for canvas on tar (also asbestos-containing, see Section 4.1.2 below) on fiberglass over ductwork, observed throughout the building, contains 60% Chrysotile asbestos (sample 20124-31A). Ductwork with just canvas over fiberglass insulation (no tar layer) does not have parging adhesive.
- Parging, homogenous to sample 20124-31A, applied as a layer over cellulose insulation, in the voids of select steel columns in the Penthouse.
- Parging (under canvas, homogenous to sample 20124-31A) applied to the outer sides of air handling units in the Penthouse and also applied to the associated ducting, contains 65% Chrysotile asbestos (sample 41133-13A).
- Parging, homogenous to sample 20124-31A, applied to a generator exhaust system in the separate generator room of the Penthouse.
- 2' x 4' Lay-in acoustic ceiling tiles, with a long fissure and pinhole pattern, observed in select areas of the building, contain 4.1% Amosite asbestos (sample 20124-12A).
- Select internal components of the System 3 generator exhaust in the Penthouse mechanical room are suspected to be comprised of friable asbestos (could not be accessed without destructive means, and still operational).
- A black tar layer, under canvas but over fiberglass on ducting throughout the building contains 0.55 - 1.16% Chrysotile asbestos (sample 20124-01A, 01D and 20124-01D-DUP).
- Black tar, in minor remnant quantities on components associated with the chiller in the basement mechanical room contains 20.33% Chrysotile asbestos (sample 20124-03A).

- Firestop caulking, applied around pipe wall penetrations in sporadic locations throughout the building contains 1.09% Chrysotile asbestos (sample 20124-08A).
- 12"x12" Vinyl floor tiles, beige streaked, observed under a raised floor in server room B-52 B and C (rooms are combined), contain 2.21% Chrysotile asbestos (20124-09A).
- Black tar on Styrofoam pipe insulation debris, observed in the ceiling cavity of server room B-52 B and C, contains 7.85% Chrysotile asbestos (20124-13A)
 - This material is not homogenous with non-asbestos-containing black tar and Styrofoam wall panel material (Samples 20124-04A-C).
- 12" x 12" Vinyl floor tiles, beige with black flecks, and associated mastic, observed in select areas of the building contains 0.78% Chrysotile asbestos (sample 20124-18A).
- Drywall joint compound associated with drywall finishes, observed throughout the building, contains 1% Chrysotile asbestos (sample 20124-21B).
 - All drywall throughout the building shall be considered asbestos-containing.
- Grey-streaked linoleum flooring, observed in select areas of the building, contains 5% Chrysotile asbestos (sample 20124-23A).
- Grey streaked or painted 9"x9" (24cm x 24cm) vinyl floor tiles and associated mastic, observed in select areas of the building, contain 1% Chrysotile asbestos (sample 20124-34A).
- Caulking, applied to the joints between lower Transite wall panels in the Penthouse mechanical room contains 0.56% Chrysotile asbestos (20124-35A).
- 12"x12" Vinyl floor tiles, beige streaked, observed in select areas of the building contain 0.72% Chrysotile asbestos (sample 20124-37A).
- 12"x12" Vinyl floor tiles, light beige streaked, observed in select areas of the building contain 0.72% Chrysotile asbestos (sample 20124-42A).
- Grey caulking applied to roof vent penetrations, on the Penthouse upper roof, contains 0.54% Chrysotile asbestos (sample 20124-46A).
- Transite fume hoods, observed in select laboratories, are assumed to contain asbestos.
- Transite wall panels, observed in the basement mechanical hallway, contains 15% Chrysotile asbestos (sample 41133-04A).
- Transite ceiling panels, observed in room B88, contains 15% Chrysotile asbestos (Sample 41133-05A).
- Double-layered Transite wall panels, observed in the penthouse, contains 15% Chrysotile asbestos (sample 41133-06A).
- Grey fibrous insulation, observed on the penthouse east, northern perimeter wall, contains 10% Chrysotile asbestos (sample 41133-13A).
- Parging cement, observed on the penthouse perimeter wall, contains 65% Chrysotile asbestos (Sample 41133-14A); and
- Grey fibrous wall layer, observed on the penthouse north perimeter wall, contains 35% Chrysotile asbestos (sample 41133-16A).
- Black tar, observed on the exterior of Styrofoam (back-side), and present within the perimeter walls, contains 1% Chrysotile asbestos (Sample 41133-26A). This material is present behind multiple layers of wall finishing materials, whereby removal of the wall finishing materials is required to access (refer to ACM Database), and

- Grey parging cement, observed between the black Styrofoam tar and concrete block in the perimeter walls, contains 1% Chrysotile asbestos (Sample 41133-21A [2]). This material is present behind multiple layers of wall finishing materials, whereby removal of the wall finishing materials is required to access (Refer to ACM Database).

The following materials are assumed to contain asbestos:

- Non-friable cast-iron drainpipe joint packing.
- Duct vibration dampers throughout the building; and
- Cast iron drainpipe joint caulking, observed throughout the building, is suspected of containing asbestos (bulk sampling was not performed to avoid compromising the waterproof seal).

5.1.2. Non-Asbestos-Containing Materials

Bulk sampling and subsequent laboratory analysis have determined that the following building materials do not contain regulated amounts of asbestos:

- A cementitious scratch coat finish, applied to ceilings and columns in the select areas of the building (samples 20124-02A-E).
- Black tar, used to adhere Styrofoam insulation, observed on interior walls throughout the building and behind radiators on the 2nd and 3rd floors (samples 20124-04A-C).
- 2'x4' Lay-in acoustic ceiling tiles with pinholes, observed in various locations throughout the building (20124-05A-C).
- Drywall joint compound associated with drywall finishes in the room B-50A (samples 20124-06A-C). Please note: all other occurrences of drywall joint compound outside this room are considered to be asbestos-containing unless further delineation proves otherwise.
- 12"x12" Vinyl floor tiles with beige stripes, observed in select areas of the building (samples 20124-07A-C).
- A mastic application for the raised floor installation in the B-52 server room (samples 20124-10A-C).
- Mastic used to adhere 1'x1' cellulose ceiling tiles, observed in select areas of the building (samples 20124-11A-C and 20124-11B-DUP).
- 2' x 4' Ceiling tiles, with fissures and pinholes, observed in select areas of the building (samples 20124-14A-C and 20124-14C-DUP).
- Smooth plaster (all layers), observed throughout the building (samples 20124-15A-G).
- Beige streaked linoleum, observed in select areas of the building (20124-16A-C).
- 12" x 12" Vinyl floor tiles with white and brown flecks, observed in select areas of the building (samples 20124-17A-C).
- 12" x 12" Vinyl floor tiles, beige with dense grey flecks, observed in select areas of the building (samples 20124-19A-C).
- A rough plaster application, observed on a section of the upper ceiling in room B-57 (basement) (samples 20124-20A-C).

- A textured concrete ceiling finish, observed in select areas of the building (samples 20124-22A-C).
- Levelling compound beneath carpet finishes, observed in select areas of the building (samples 20124-24A-C).
- 2' x 5' Ceiling tiles with small pinholes, observed in select areas of the building (samples 20124-25A-C).
- 2' x 5' Ceiling tiles with large pinholes, observed throughout the building (samples 20124-26A-C and 20124-26C).
- Baseboard mastic, throughout the building (samples 20124-27A-C and 20124-38A-C).
- A stippled ceiling finish, observed in the ground floor lobby and adjacent stairwell vestibule (samples 20124-28A-C).
- 9" x 9" Vinyl floor tiles, maroon coloured, observed in select areas of the building (samples 20124-29A-C).
- 12" x 12" Vinyl floor tiles, beige with white and brown streaks, observed in select areas of the building (samples 20124-30A-C).
- 12" x 12" Vinyl floor tiles, blue/beige mottled, observed in select areas of the building (samples 20124-32A-C).
- 12" x 12" Vinyl floor tiles, brown mottled, observed in select areas of the building (samples 20124-33A-C).
- 9" x 9" Vinyl floor tiles, mottled light beige, observed in select areas of the building (samples 20124-36A-C).
- Grey sealant applied to ductwork joints, observed in select areas of the building (samples 20124-39A-C).
- Light grey-streaked linoleum flooring, observed in select areas of the building (samples 20124-40A-C).
- 2' x 5' Ceiling tiles with pinholes, observed throughout the 3rd floor of the building (samples 20124-41A-C).
- Window and door caulking (samples 20124-43A-C).
- Grey caulking applied to the flashing at the base of exterior columns (samples 20124-44A-C).
- Black caulking on upper Penthouse roof penetrations, and on select areas of the parapet flashing comprising the lower roof (samples 20124-45A-C).
- Grey caulking between stone wall slabs, exterior of building (20124-47A-C and 20124-47A-DUP).
- Grey caulking on the parapet flashing comprising the lower roof (samples 20124-48A-C).
- Roofing materials, upper penthouse roof (samples 20124-49A-C).
- Roofing materials, lower penthouse roof (samples 20124-50A-C).
- Roofing materials, courtyard at Penthouse floor level (samples 20124-51A-C).
- Additional ceiling tiles observed throughout the building are not suspected to contain asbestos based on manufacture date codes, which would post-date the use of asbestos in ceiling tiles; and
- Additional vinyl floor tile and linoleum flooring products of a new vintage in various renovated laboratory spaces.

- Grey vinyl floor tile sublayer and associated mastic (samples 41133-01A-C).
- Black vinyl floor tile sublayer and associated mastic (samples 41133-02A-C).
- Vinyl sheet flooring – blue marble pattern (samples 41133-03A-C).
- 12" x 12" (30cm x 30cm) vinyl floor tile, beige w/ grey, off-white, and tan marble pattern & associated yellow & black mastic (samples 41133-07A-C).
- Grey caulking and cork (samples 41133-15A-C).
- Tar paper within terra cotta wall (samples 41133-17A-C).
- Cloth-wrapped acoustic tile & mastic (samples 41133-18A-C).
- Terra cotta brick mortar (samples 41133-19A-G).
- Foundation tar first layer (samples 41133-23A-C).
- Foundation tar second layer (samples 41133-24A-C).
- Black tar on the interior of Styrofoam, present within the perimeter walls (samples 41133-25A-C).
- Parging cement, observed in a basement utility room (samples 41133-27A-C).
- Black & yellow mastic, associated with floor tile in room 133A (samples 41133-28A-C).
- Black mastic and woven backing, associated with maroon floor tile (samples 41133-29A-C).
- Black mastic, associated with beige, green and blue floor tile on the second floor (samples 41133-30A-C).
- Black mastic, associated with floor tile in the second-floor hallway (samples 41133-31A-C).
- Black tar and woven backing, sampled from the south-east exterior foundation (samples 41133-32A-C).
- Parging cement, sampled from the southern stairs (samples 41133-33A-C).
- Black caulking, sampled from the northern entrance windows (samples 41133-34A-C).
- White caulking, sampled from exterior columns and joints (samples 41133-35A-C).
- Grey caulking, sampled from around the basement windows (samples 41133-36A-C).
- Parging cement, sampled from the exterior walls (samples 41133-37A-C); and
- Grey concrete block mortar, sampled from within the perimeter walls (samples 41133-20A-E [2]).

5.2. Lead

Table 2 presents the findings of current and historical lead in paint/coatings samples collected from, and applicable to, the project area, based on visual observations at the time of the site survey.

Table 2: Summary of Paint Samples Analyzed for Lead Paint (LP) (DST, 2017)			
Sample ID	Sample Location	Sample Description	Lead Result (ug/g)
LP-01	Floor, mechanical room, basement	Grey paint with red under layer	1,130
LP-02	Wall, mechanical room, basement	White paint	244

Table 2: Summary of Paint Samples Analyzed for Lead Paint (LP) (DST, 2017)			
Sample ID	Sample Location	Sample Description	Lead Result (ug/g)
LP-03	Chiller, mechanical room, basement	Blue paint	8,270
LP-04	Wall, exit 101 west, Ground Floor	White paint	544
LP-05	Ceiling, female washroom, 2nd Floor	White paint	995
LP-06	Wall, offices, 3rd Floor	White paint	345
LP-07	Wall, offices, 3rd Floor	Beige paint	699
LP-08	Floor, mechanical room, Penthouse	Grey paint and under layers	915

Note: **Bold** items show lead concentrations that exceed the 90-ppm limit for lead, as per *Canada Consumer Product Safety Act's Surface Coating Materials Regulations SOR/2016-193*, as amended.

Based on sample results for the bulk lead (in paint) samples collected by Englobe, detectable concentrations of lead were confirmed in all paint applications. The following is a summary of paints with detectable levels of lead identified at the building:

- Grey floor paint with a red underlayer (sample LP-01) contains 1,130 ppm lead and was observed in the basement mechanical room, in good condition.
- White wall paint (sample LP-02) contains 244 ppm lead, and was observed throughout the basement level, in good condition.
- Blue paint applied to the chiller in the basement mechanical room contains 8,270 ppm lead (sample LP-03) and was observed in good condition.
- White wall and ceiling paint, observed throughout the ground floor of the building in good condition, contains 544 ppm lead (sample LP-04).
- White wall and ceiling paint, observed throughout the second floor of the building in good condition, contains 995 ppm lead (sample LP-05).
- White wall and ceiling paint, observed throughout the third floor of the building in good condition, contains 345 ppm lead (sample LP-06).
- Beige paint, observed throughout the third floor of the building in good condition, contains 699 ppm lead (sample LP-07); and
- Grey floor paint with under layers (sample LP-08) contains 915 ppm lead and was observed in the Penthouse mechanical room, in good condition

All other interior and exterior paints, as well as all other surface coatings (e.g., coatings on structural steel) are considered to be lead-containing, except where proven otherwise (e.g., bulk sampling and laboratory analysis, etc.).

Based upon the historical composition of building materials, lead is assumed to be present in the following materials:

- Solder on copper piping,

- Ceramic tile glazing,
- Cast iron joint caulking,
- Emergency light batteries, and
- Mortars (e.g., brick).

5.3. Benzene

One (1) diesel storage tank with an estimated capacity of 7,500L was observed on the exterior east side of the site, in proximity to the loading dock.

5.4. Silica

Based on the historic composition of building materials, silica is expected to be present in:

- Concrete and cement,
- Interior and exterior stone and masonry building materials and associated mortars of the building,
- Roofing materials,
- Ceramic tiles, grouts, mortar,
- Drywall building elements,
- Mastics, and
- Vinyl flooring products.

5.5. Mercury

Mercury is assumed to be present in the following building materials:

- Fluorescent light fixtures containing fluorescent light tubes, observed within the project areas. Fluorescent light tubes contain mercury in a vapour form and in the phosphor coating on the lamp tube.
 - Approximately 3,900 fluorescent light tubes were observed throughout the building, in fixtures and stored in boxes and closets.
- Thermostats, containing glass ampules of mercury, were observed throughout the building.
 - Approximately 10 mercury ampules were observed throughout the building.

5.6. PCBs

Light fixtures with T12 lamps are more likely to contain ballasts that were manufactured prior to 1981. T8 lamps are associated with light fixtures that were manufactured after the phase-out of PCB-containing ballasts. The letter "T" denotes the shape of the light fixture (e.g., tubular) and the number which follows indicates the diameter in eighths of an inch. Based on limited visual observations, Englobe observed suspected PCB ballasts within the building. As a due diligence measure, prior to removal, all ballasts should be inspected to confirmed PCB content. Approximately 2,000 ballasts are suspected throughout the building.

Table 3 below presents the findings of bulk PCB material samples collected from and/or applicable to the project area, based on visual observations at the time of the site survey.

Table 3: Summary of Bulk Samples Analyzed for PCBs (Englobe, 2020)			
Sample ID	Sample Location	Sample Description	PCB Result (ug/g)
41133-T-MR	Floor slab, mechanical room, basement	Black tar	<0.50
41133-T-LD	Floor slab, loading dock, basement	Black tar	<2.50
41133-T-TC	Floor slab, telecom room (room B66), basement	Black tar	<0.50
41133-T-WE	First Floor, Perimeter Wall, Exterior	Black tar	<2.50
41133-T-WI	First Floor, Perimeter Wall, Interior	Black tar	<1.67

All PCB samples were confirmed to contain less than the allowable concentration of 50 ppm for PCBs in solid materials, as per *PCB Regulations SOR 2008/273 and O.Reg. 362/90*, as amended. As such, these tar applications do not contain regulated concentrations of PCBs.

5.7. Halocarbons

Halocarbons are assumed present in the following equipment:

- Fridges and freezers within the building (estimated 30 fridges),
- Water coolers, throughout the building (estimated 4 coolers),
- Two (2) exterior York Air units, containing an estimated 10 lbs of R410A,
- One (1) Keeprite air handling unit, containing an estimated 7 lbs of R410A and R507,
- One (1) Fujitsu Halycon Invertor, containing an estimated 4lbs 10oz of R410A, and
- One (1) Fujitsu Halycon Invertor, containing an estimated 4.3lbs of R22.

5.8. Polyaromatic Hydrocarbons (PAHs)

Table 4 below presents a summary of bulk PAH material samples collected from and/or applicable to the project area, based on visual observations at the time of the site survey.

Table 4: Summary of Bulk Samples Analyzed for PAHs (Englobe, 2020)		
Sample ID	Sample Location	Sample Description
41133-T-MR	Floor slab, mechanical room, basement	Black tar
41133-T-LD	Floor slab, loading dock, basement	Black tar
41133-T-TC	Floor slab, telecom room (room B66), basement	Black tar
41133-T-WE	First Floor, Perimeter Wall, Exterior	Black tar

Table 4: Summary of Bulk Samples Analyzed for PAHs (Englobe, 2020)		
Sample ID	Sample Location	Sample Description
41133-T-WI	First Floor, Perimeter Wall, Interior	Black tar

Sample 41133-T-WI contained detectable concentrations of 2-Methylnaphthalene, Naphthalene, and Phenanthrene. However, concentrations of the above PAHs were less than the allowable concentrations defined in *O.Reg 347/90, General – Waste Management*, as amended.

All other samples were confirmed to contain less than detectable concentrations of PAHs. As such, these tar applications do not contain regulated concentrations of PAHs.

5.9. Other Designated Substances

The following Designated Substances were neither observed, nor suspected of being present, in forms or quantities expected to impact future work operations:

- Acrylonitrile,
- Arsenic,
- Coke Oven Emissions,
- Ethylene Oxide,
- Isocyanates, and
- Vinyl Chloride

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the site investigation, sampling and analysis, the following Designated Substances and Hazardous Materials are present in forms and quantities expected to have an impact on future work operations:

- Asbestos,
- Lead,
- Silica,
- Mercury,
- PCBs, and
- Halocarbons

Englobe's recommendations for each material, which are based upon both regulatory compliance and best practice guidelines, are included in the following sections below.

6.1. Asbestos

The disturbance of ACMs on construction and demolition projects is governed in the province of Ontario by *O.Reg. 278/05*, as amended. These regulations classify all asbestos disturbances as Low Risk (Type 1), Moderate Risk (Type 2), or High Risk (Type 3), each of which has defined precautionary measures. All asbestos materials are subject to specific handling and disposal

precautions and must be removed prior to demolition. The Ontario Ministry of Labour (MoL) must be notified of any project involving removal of more than a minor amount (e.g., typically 1 square metre) of friable asbestos material. In the event of conflict between regulations, the more stringent procedures apply.

Identified friable ACMs (pipe insulation, pipe fitting insulation, and parging applications) require a minimum of Type 2 abatement procedures under O.Reg. 278/05, as amended, when disturbing/removing/repairing one (1) square metre or less of the material. Should demolition, disturbance, or repair be required of more than one (1) square metre of friable ACM, Type 3 abatement procedures are required. It should be noted that the removal of good condition pipe fitting insulation can be completed using Type 2 glovebag procedures, provided the glovebag seal can be maintained throughout the removal process.

As per the COHSR and clarification documentation¹, removing greater than 2m² of ceiling tiles (assumed to be considered a friable material) if the ceiling tiles are removed without being broken, cut, ground, sanded, or vibrated can be completed using Intermediate Risk asbestos work procedures. If 2m² or less of ceiling tiles are removed without being broken, cut, ground, sanded, or vibrated, this work can be completed using Low Risk asbestos work procedures. The breaking, cutting, grinding, sanding, or vibrating of any quantity of ceiling tiles (assumed friable) must be completed using High Risk asbestos precautionary measures.

The removal or disturbance of less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used can be completed using Type 1 asbestos procedures. The removal or disturbance of one square metre or more of drywall in which joint-filling compounds that are asbestos-containing material have been used must be completed using a minimum of Type 2 asbestos procedures.

Type 1 work procedures can be used for the removal of non-friable ACMs (e.g., mastics, tars, vinyl floor tiles, linoleum, caulking's, Transite products), provided that the material can be wetted and removed using only non-powered tools. If these conditions cannot be met, then more stringent (e.g., Type 2 or Type 3) procedures are necessary.

The time weight average exposure limit (TWAEEL) for airborne asbestos is prescribed by *O.Reg. 490/09 Designated Substances*, as amended and the *Canada Labour Code, Occupational Health and Safety Regulations*. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to airborne asbestos levels that exceed this TWAEEL.

The following recommendations apply to ACMs and suspected ACMs:

- Appropriate work procedures and precautionary measures must be used, as outlined in O.Reg. 278/05, as amended, *PSPC Asbestos Management Standard*, and the *Canada*

¹ Technical Guideline to Asbestos Exposure Management Programs. Employment and Social Development Canada. January 16, 2018.

Occupational Health and Safety Regulations, as amended, when performing work that may disturb ACMs or suspected ACMs, including prior to building demolition.

- Disposal of asbestos waste is controlled by the Ontario Environmental Protection Act, Regulation 347/90, *General - Waste Management*, as amended. This regulation requires that asbestos waste be sealed in double containers resistant to puncture and tears, and appropriately labelled. The waste must be disposed at a licensed waste disposal site. Proper notification must be issued to the site representative prior to transportation of waste. The transport of the waste to the disposal site is controlled by the federal Transportation of Dangerous Goods Act, 1992 (TDGA) and Ontario Dangerous Goods Transportation Act.

Some ACMs may be concealed and not observed at the time of the survey. As such, should any previously unidentified suspect ACMs be encountered as part of future work, these materials are to be treated as ACMs and handled accordingly, unless sampling proves otherwise. Materials that have not been analyzed but are visibly similar to other materials identified as asbestos-containing, must be considered asbestos-containing unless proven otherwise by laboratory analysis.

6.2. Lead

The Occupational Health and Safety Branch (OHS) of the Ontario MoL have published *Guideline: Lead on Construction Projects*. This document classifies all lead disturbances as Type 1, Type 2a, Type 2b, Type 3a or Type 3b work, and assigns different levels of respiratory protection and work procedures for each classification. Disturbance of lead-containing coatings shall follow the procedures of this guideline document.

Paints and other surface coatings containing elevated concentrations of lead can pose a health risk to humans if ingested or inhaled. Such lead-containing surface coatings are also a risk to the environment with the potential to contaminate soil and groundwater. Surface coatings with elevated lead content can also pose a health risk to workers while completing renovations within the building.

Although the Canada Consumer Product Safety Act's *Surface Coating Materials Regulations* *SOR/2005-109*, as amended, has set a limit of 90 parts per million (ppm) for surface coating materials, there may be a potential for exposure to high levels of airborne lead depending on the work activities performed that disturb the lead-containing materials, even at low lead content concentrations. Conducting a risk assessment to assess the potential for exposure to lead should be performed to determine the need to follow work procedures such as those in the MoL guideline referenced above.

In the event of conflict between lead precautionary measures and other precautionary measures (e.g., asbestos, silica), the more stringent procedures shall apply.

The time weighted average exposure limit (TWAEEL) for airborne lead is prescribed by *Ontario Regulation 490/09 Designated Substances*, as amended. Work procedures and personal

protective equipment must be used to ensure that workers are not exposed to airborne lead levels that exceed this TWAEL.

The disposal of construction waste containing lead is governed by *O. Reg. 347/90 - General – Waste Management*, as amended. The transport of the waste to the disposal site is controlled by the federal TDGA and the Ontario Dangerous Goods Transportation Act. Materials with elevated concentrations of lead should be subject to Toxicity Characteristic Leaching Procedure (TCLP) testing to determine toxicity with respect to lead prior to disposal, in accordance with *O. Reg. 347/90, as amended*. TCLP analysis has indicated that green paint throughout the site is considered lead leachate toxic for disposal.

Prior to or during renovation work, the following procedures should be performed for lead-containing materials that are anticipated to be disturbed:

- Copper piping can be cut a small distance (e.g., 50 mm) from the soldered joints to avoid direct disturbance of the lead material,
- Cast iron drainpipes can be cut away from the joints to avoid direct disturbance of the lead caulking in the joints,
- Ceramic tiles, can be removed using Type 1 work procedures and respiratory protection provided that only non-powered hand tools are used,
- Emergency light batteries and other batteries should be removed when decommissioned and disposed of as lead-containing waste.

6.3. Silica

The Occupational Health and Safety Branch of the Ontario MoL have published *Guideline: Silica on Construction Projects*. This document classifies all silica disturbances as Type 1, Type 2, or Type 3 work, and assigns different levels of respiratory protection and work procedures for each classification. This guideline should be followed during disturbance of silica-containing materials.

As a general rule, it is preferable to use more stringent dust suppression techniques and engineering controls as opposed to relying on respiratory protection to control worker exposure. Respiratory protection should only be relied on as a last resort when dust suppression techniques and engineering controls fail to control worker exposure.

The TWAEL for airborne silica is prescribed by *Ontario Regulation 490/09 Designated Substances*, as amended. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to airborne silica levels that exceed this exposure limit.

6.4. Mercury

When removal of the fluorescent light tubes is required, the tubes should be removed intact from the fixtures. This prevents worker exposure to mercury vapour, particularly if the tubes were energized shortly before removal. Other sources of liquid mercury should be removed in a similar fashion (intact) to prevent worker exposure.

The TWael for mercury is prescribed by *Ontario Regulation 490/09 Designated Substances*, as amended. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to mercury levels that exceed this TWael.

Liquid mercury is classified as a hazardous waste under O. Reg. 347/90, as amended. The transport of the waste to a disposal site is controlled by O. Reg. 347/90 and by the federal TDGA. It is now common practice to recycle fluorescent light tubes, and other items containing mercury, recovering the component materials, and avoiding the generation of hazardous waste.

6.5. PCBs

Prior to removal or disposal, the PCB content of equipment and/or liquids should be confirmed to determine proper procedures to be followed, unless conservatively assumed to contain PCBs.

When the fluorescent light fixtures are taken out of service, these ballasts, as well as other ballasts, should be examined to determine whether they contain PCBs. This can be done by comparing the manufacturer date codes stamped on the ballasts to information contained in the document titled *Identification of Lamp Ballasts Containing PCBs*, published by Environment Canada. Ballasts that contain PCBs must be packaged, transported, and disposed of in accordance with all appropriate provincial and federal regulations.

If PCB-containing equipment and/or materials are identified and must be removed, they should be disposed of in accordance with the Canadian Environment Protection Act's PCB Regulations, *O. Reg. 362/90 – Waste Management, PCBs*, and *O. Reg. 347, General – Waste Management*, as amended, are regulated under the Environmental Protection Act to regulate the handling, storage and transportation of hazardous substances and waste dangerous goods. The transport of PCB waste to the disposal site is controlled by the federal Transportation of Dangerous Goods Act.

6.6. Halocarbons

The handling, transport and disposal of halocarbons is governed by the following:

- Federal Halocarbon Regulations (FHR), 2003,
- Ozone-depleting Substances and Halocarbon Alternatives Regulations, 2016,
- Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems, 2015,
- O.Reg. 463/10, Ozone Depleting Substances and Other Halocarbons, and
- Federal Transport of Dangerous Goods Act and Ontario Dangerous Goods Transportation Act.

When suspected halocarbon-containing equipment is taken out of service, the halocarbons must be captured and reclaimed by a certified service technician using methods and containers that are designed to contain the halocarbon. The service technician must provide written acknowledgement of the requirements of the FHR. Appropriate records of service technician

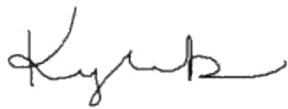
certification and records of equipment decommissioning must be provided and maintained in accordance with requirements of the FHR.

7.0 CLOSURE

A Statement of Limitations section, which forms an integral part of this report, is attached.

We trust that the information contained herein meets your needs. Should you have any questions or comments, please do not hesitate to contact us.

For Englobe Corporation



for

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STATEMENT OF LIMITATIONS

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This Report should be considered in its entirety; selecting specific portions of the Report may result in the misinterpretation of the content.

The work performed by the Company was carried out in accordance with the terms and conditions specified in the Professional Services Agreement between the Company and the Client, in accordance with currently accepted engineering standards and practices and in a manner consistent with the level of skill, care and competence ordinarily exercised by members of the same profession currently practicing under similar conditions and like circumstances in the same jurisdiction in which the services were provided. Standards, guidelines, and practices may change over time; those which were applied to produce this Report may be obsolete or unacceptable later.

The findings, recommendations, suggestions, or opinions expressed in this Report reflect the Company's best professional judgment based on observations and/or information reasonably available at the time the work was performed, as appropriate for the scope, work schedule and budgetary constraints established by the Client. No other warranty or representation, expressed or implied, is included in this Report including, but not limited to, that the Report deals with all issues potentially applicable to the site and/or that the Report deals with any and all of the important features of the site, except as expressly provided in the scope of work.

This Report has been prepared for the specific site, development, building, design or building assessment objectives and/or purposes that were described to the Company by the Client. The applicability and reliability of the content of this Report, subject to the limitations provided herein, are only valid to the extent that there has been no material alteration or variation thereto, and the Company expressly disclaims any obligation to update the Report. However, the Company reserves the right to amend or supplement this Report based on additional information, documentation or evidence made available to it.

The Company makes no representation concerning the legal significance of its findings, nor as to the present or future value of the property, or its fitness for a particular purpose and hereby

disclaims any responsibility or liability for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

Since the passage of time, natural occurrences, and direct or indirect human intervention may affect the views, conclusions, and recommendations (if any) provided in this Report, it is intended for immediate use.

This Statement of Limitations forms an integral part of the Report.

In preparing this Report, the Company has relied in good faith on information provided by others and has assumed that such information is factual, accurate and complete. The Company accepts no responsibility or liability for any deficiency, misstatement or inaccuracy in this Report resulting from the information provided, concealed, or not fully disclosed by those individuals.

The assessment should not be considered a comprehensive audit that covers and eliminates all present, past, and future risks. The information presented in this Report is based on data collected during the completion of the site assessment conducted. The overall site/building conditions were extrapolated based on information collected at specific sampling locations. Professional judgement was exercised in gathering and analyzing data; however, no sampling methodology can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Consequently, the actual site/building conditions between the sampling points may vary. In addition, analysis has been carried out only for the parameters identified, and it should not be inferred that other hazardous materials are not present.

It is recommended practice that the Company be retained during subsequent phases of the project, to confirm that the conditions throughout the site do not deviate materially from those encountered throughout the sampling program.

Any results from a third-party laboratory or other subcontractors reported herein have been carried out by others, and the Company cannot warrant their accuracy.

This Report is based on the assumption that the design features relevant to our work will be in accordance with applicable codes, standards, and guidelines of practice and constructed substantially in accordance with the Report. If there are any changes to the site development or building construction features, or there is any additional information that was not otherwise available at the time the work was performed, the Company should be retained to review the implications thereof to the contents of this Report. The design recommendations expressed in this Report are applicable only to the project described therein.

No attempt was made to dismantle, inspect, or test existing equipment other than that which is specifically noted in the report.

APPENDIX A

Laboratory Certificate of Analysis

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Andrew Couturier

Client PO:
Project: P1 94 1133
Custody:

Report Date: 28-Feb-2020
Order Date: 24-Feb-2020

Order #: 2009066

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

Paracel ID	Client ID
2009066-01	41133-01A
2009066-02	41133-01B
2009066-03	41133-01C
2009066-04	41133-01A
2009066-05	41133-01B
2009066-06	41133-01C
2009066-07	41133-02A
2009066-08	41133-02B
2009066-09	41133-02C
2009066-10	41133-02A
2009066-11	41133-02B
2009066-12	41133-02C
2009066-13	41133-03A
2009066-14	41133-03B
2009066-15	41133-03C
2009066-16	41133-04A
2009066-17	41133-04B
2009066-18	41133-04C
2009066-19	41133-05A
2009066-20	41133-05B
2009066-21	41133-05C
2009066-22	41133-06A
2009066-23	41133-06B
2009066-24	41133-06C
2009066-25	41133-06A
2009066-26	41133-06B

Approved By:



Heather S.H. McGregor, BSc

Laboratory Director - Microbiology

Certificate of Analysis

Report Date: 28-Feb-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 24-Feb-2020

Client PO:

Project Description: P1 94 1133

2009066-27	41133-06C
2009066-28	41133-07A
2009066-29	41133-07B
2009066-30	41133-07C
2009066-31	41133-07A
2009066-32	41133-07B
2009066-33	41133-07C
2009066-34	41133-08A
2009066-35	41133-08B
2009066-36	41133-08C
2009066-37	41133-08D
2009066-38	41133-08E
2009066-39	41133-09A
2009066-40	41133-09B
2009066-41	41133-09C
2009066-42	41133-09D
2009066-43	41133-09E
2009066-44	41133-09F
2009066-45	41133-09G
2009066-46	41133-10A
2009066-47	41133-10B
2009066-48	41133-10C
2009066-49	41133-10D
2009066-50	41133-10E
2009066-51	41133-11A
2009066-52	41133-11B
2009066-53	41133-11C
2009066-54	41133-12A
2009066-55	41133-12B
2009066-56	41133-12C
2009066-57	41133-13A
2009066-58	41133-13B
2009066-59	41133-13C
2009066-60	41133-14A
2009066-61	41133-14B
2009066-62	41133-14C
2009066-63	41133-15A
2009066-64	41133-15B
2009066-65	41133-15C
2009066-66	41133-15A
2009066-67	41133-15B
2009066-68	41133-15C
2009066-69	41133-16A
2009066-70	41133-16B

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Report Date: 28-Feb-2020

Order Date: 24-Feb-2020

Client PO:

Project Description: P1 94 1133

2009066-71	41133-16C
2009066-72	41133-17A
2009066-73	41133-17B
2009066-74	41133-17C
2009066-75	41133-18A
2009066-76	41133-18B
2009066-77	41133-18C
2009066-78	41133-18A
2009066-79	41133-18B
2009066-80	41133-18C
2009066-81	41133-19A
2009066-82	41133-19B
2009066-83	41133-19C
2009066-84	41133-19D
2009066-85	41133-19E
2009066-86	41133-19F
2009066-87	41133-19G

Certificate of Analysis

Report Date: 28-Feb-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 24-Feb-2020

Client PO:

Project Description: P1 94 1133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-01	20-Feb-20	Grey	Vinyl Floor Tile	No	Client ID: 41133-01A	
					Cellulose	35
					Non-Fibers	65
2009066-02	20-Feb-20	Grey	Vinyl Floor Tile	No	Client ID: 41133-01B	
					Cellulose	35
					Non-Fibers	65
2009066-03	20-Feb-20	Grey	Vinyl Floor Tile	No	Client ID: 41133-01C	
					Cellulose	35
					Non-Fibers	65
2009066-04	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-01A	
					Non-Fibers	100
2009066-05	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-01B	
					Non-Fibers	100
2009066-06	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-01C	
					Non-Fibers	100
2009066-07	20-Feb-20	Black	Vinyl Floor Tile	No	Client ID: 41133-02A	
					Cellulose	35
					Non-Fibers	65
2009066-08	20-Feb-20	Black	Vinyl Floor Tile	No	Client ID: 41133-02B	
					Cellulose	35
					Non-Fibers	65
2009066-09	20-Feb-20	Black	Vinyl Floor Tile	No	Client ID: 41133-02C	
					Cellulose	35
					Non-Fibers	65
2009066-10	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-02A	
					Non-Fibers	100

Certificate of Analysis

Report Date: 28-Feb-2020

Client: **DST Consulting Engineers Inc. (Ottawa)**

Order Date: 24-Feb-2020

Client PO:

Project Description: **P1 94 1133**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-11	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-02B	
					Non-Fibers	100
2009066-12	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-02C	
					Non-Fibers	100
2009066-13	20-Feb-20	Blue	Vinyl Sheet Flooring	No	Client ID: 41133-03A	
					Cellulose	15
					MMVF	5
					Non-Fibers	80
2009066-14	20-Feb-20	Blue	Vinyl Sheet Flooring	No	Client ID: 41133-03B	
					Cellulose	15
					MMVF	5
					Non-Fibers	80
2009066-15	20-Feb-20	Blue	Vinyl Sheet Flooring	No	Client ID: 41133-03C	
					Cellulose	15
					MMVF	5
					Non-Fibers	80
2009066-16	20-Feb-20	Grey	Transite	Yes	Client ID: 41133-04A	
					Chrysotile	15
					Non-Fibers	85
2009066-17	20-Feb-20				Client ID: 41133-04B	
					not analyzed	
2009066-18	20-Feb-20				Client ID: 41133-04C	
					not analyzed	
2009066-19	20-Feb-20	Grey	Transite	Yes	Client ID: 41133-05A	
					Chrysotile	15
					Non-Fibers	85

Certificate of Analysis

Report Date: 28-Feb-2020

Client: **DST Consulting Engineers Inc. (Ottawa)**

Order Date: 24-Feb-2020

Client PO:

Project Description: **P1 94 1133**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-20	20-Feb-20				Client ID: 41133-05B	
					not analyzed	
2009066-21	20-Feb-20				Client ID: 41133-05C	
					not analyzed	
2009066-22	20-Feb-20	Grey	Transite	Yes	Client ID: 41133-06A	
					Chrysotile	15
					Non-Fibers	85
2009066-23	20-Feb-20				Client ID: 41133-06B	
					not analyzed	
2009066-24	20-Feb-20				Client ID: 41133-06C	
					not analyzed	
2009066-25	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-06A	
						[Z-01b]
					Non-Fibers	100
2009066-26	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-06B	
						[Z-01b]
					Non-Fibers	100
2009066-27	20-Feb-20	Yellow	Mastic	No	Client ID: 41133-06C	
						[Z-01b]
					Non-Fibers	100
2009066-28	20-Feb-20	Beige	Vinyl Floor Tile	No	Client ID: 41133-07A	
					Non-Fibers	100
2009066-29	20-Feb-20	Beige	Vinyl Floor Tile	No	Client ID: 41133-07B	
					Non-Fibers	100
2009066-30	20-Feb-20	Beige	Vinyl Floor Tile	No	Client ID: 41133-07C	
					Non-Fibers	100
2009066-31	20-Feb-20	Yellow/Black	Mastic	No	Client ID: 41133-07A	
						[Z-01]
					Non-Fibers	100

Certificate of Analysis

Report Date: 28-Feb-2020

Client: **DST Consulting Engineers Inc. (Ottawa)**

Order Date: 24-Feb-2020

Client PO:

Project Description: **P1 94 1133**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-32	20-Feb-20	Yellow/Black	Mastic	No	Client ID: 41133-07B	[Z-01]
					Non-Fibers	100
2009066-33	20-Feb-20	Yellow/Black	Mastic	No	Client ID: 41133-07C	[Z-01]
					Non-Fibers	100
2009066-34	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-08A	
					Non-Fibers	100
2009066-35	20-Feb-20	White	Drywall Joint Compound	No	Client ID: 41133-08B	
					Non-Fibers	100
2009066-36	20-Feb-20	Off-white	Drywall Joint Compound	No	Client ID: 41133-08C	
					Non-Fibers	100
2009066-37	20-Feb-20	Tan	Drywall Joint Compound	Yes	Client ID: 41133-08D	
					Chrysotile	1
					Non-Fibers	99
2009066-38	20-Feb-20	Off-white	Drywall Joint Compound	No	Client ID: 41133-08E	
					Non-Fibers	100
2009066-39	20-Feb-20	Tan	Drywall Joint Compound	Yes	Client ID: 41133-09A	
					Chrysotile	1
					Non-Fibers	99
2009066-40	20-Feb-20	Tan	Drywall Joint Compound	Yes	Client ID: 41133-09B	
					Chrysotile	1
					Non-Fibers	99
2009066-41	20-Feb-20	White	Drywall Joint Compound	No	Client ID: 41133-09C	
					Non-Fibers	100
2009066-42	20-Feb-20	Off-white	Drywall Joint Compound	No	Client ID: 41133-09D	
					Non-Fibers	100

Certificate of Analysis

Report Date: 28-Feb-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 24-Feb-2020

Client PO:

Project Description: P1 94 1133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-43	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-09E	
					Non-Fibers	100
2009066-44	20-Feb-20	Tan	Drywall Joint Compound	Yes	Client ID: 41133-09F	
					Chrysotile	1
					Non-Fibers	99
2009066-45	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-09G	
					Non-Fibers	100
2009066-46	20-Feb-20	Off-white	Drywall Joint Compound	Yes	Client ID: 41133-10A	
					Chrysotile	1
					Non-Fibers	99
2009066-47	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-10B	
					Non-Fibers	100
2009066-48	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-10C	
					Non-Fibers	100
2009066-49	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-10D	
					Non-Fibers	100
2009066-50	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-10E	
					Non-Fibers	100
2009066-51	20-Feb-20	Off-white	Drywall Joint Compound	Yes	Client ID: 41133-11A	
					Chrysotile	1
					Non-Fibers	99
2009066-52	20-Feb-20	Off-white	Drywall Joint Compound	Yes	Client ID: 41133-11B	
					Chrysotile	1
					Non-Fibers	99

Certificate of Analysis

Report Date: 28-Feb-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 24-Feb-2020

Client PO:

Project Description: P1 94 1133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-53	20-Feb-20	Grey	Drywall Joint Compound	No	Client ID: 41133-11C	
					Non-Fibers	100
2009066-54	20-Feb-20	Grey	Plaster	Yes	Client ID: 41133-12A	
						[Z-01a]
					Chrysotile	65
					Non-Fibers	35
2009066-55	20-Feb-20				Client ID: 41133-12B	
					not analyzed	
2009066-56	20-Feb-20				Client ID: 41133-12C	
					not analyzed	
2009066-57	20-Feb-20	Grey	Cellulose	Yes	Client ID: 41133-13A	
					Chrysotile	10
					MMVF	65
					Non-Fibers	25
2009066-58	20-Feb-20				Client ID: 41133-13B	
					not analyzed	
2009066-59	20-Feb-20				Client ID: 41133-13C	
					not analyzed	
2009066-60	20-Feb-20	Grey	Parge	Yes	Client ID: 41133-14A	
					Chrysotile	65
					Non-Fibers	35
2009066-61	20-Feb-20				Client ID: 41133-14B	
					not analyzed	
2009066-62	20-Feb-20				Client ID: 41133-14C	
					not analyzed	

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 28-Feb-2020

Order Date: 24-Feb-2020

Project Description: P1 94 1133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-63	20-Feb-20	Grey	Caulking	No	Client ID: 41133-15A	
					Non-Fibers	100
2009066-64	20-Feb-20	Grey	Caulking	No	Client ID: 41133-15B	
					Non-Fibers	100
2009066-65	20-Feb-20	Grey	Caulking	No	Client ID: 41133-15C	
					Non-Fibers	100
2009066-66	20-Feb-20	Brown	Cork	No	Client ID: 41133-15A	
					Non-Fibers	100
2009066-67	20-Feb-20	Brown	Cork	No	Client ID: 41133-15B	
					Non-Fibers	100
2009066-68	20-Feb-20	Brown	Cork	No	Client ID: 41133-15C	
					Non-Fibers	100
2009066-69	20-Feb-20	Grey	Fibrous Wall Layer	Yes	Client ID: 41133-16A	
					Chrysotile	35
					MMVF	55
					Non-Fibers	10
2009066-70	20-Feb-20				Client ID: 41133-16B	
					not analyzed	
2009066-71	20-Feb-20				Client ID: 41133-16C	
					not analyzed	
2009066-72	20-Feb-20	Black	Tar Paper	Yes	Client ID: 41133-17A	
					[ASTrc]Chrysotile	<MDL
					Cellulose	65
					MMVF	<MDL
					Non-Fibers	35

Certificate of Analysis

Report Date: 28-Feb-2020

Client: **DST Consulting Engineers Inc. (Ottawa)**

Order Date: 24-Feb-2020

Client PO:

Project Description: **P1 94 1133**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-73	20-Feb-20	Black	Tar Paper	Yes	Client ID: 41133-17B	
						[AS-PRE]
					[ASTrc]Chrysotile	<MDL
					Cellulose	65
					MMVF	<MDL
2009066-74	20-Feb-20	Black	Tar Paper	Yes		35
2009066-75	20-Feb-20	Beige/Grey	Acoustic Tile	No	Client ID: 41133-18A	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
2009066-76	20-Feb-20	Beige/Grey	Acoustic Tile	No	Client ID: 41133-18B	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
2009066-77	20-Feb-20	Beige/Grey	Acoustic Tile	No	Client ID: 41133-18C	
					Cellulose	40
					MMVF	30
					Non-Fibers	30
2009066-78	20-Feb-20	Brown	Mastic	No	Client ID: 41133-18A	
					Non-Fibers	100
2009066-79	20-Feb-20	Brown	Mastic	No	Client ID: 41133-18B	
					Non-Fibers	100
2009066-80	20-Feb-20	Brown	Mastic	No	Client ID: 41133-18C	
					Non-Fibers	100

Certificate of Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**

Report Date: 28-Feb-2020

Order Date: 24-Feb-2020

Client PO:

Project Description: **P1 94 1133**
Asbestos, PLM Visual Estimation **MDL - 0.5%**

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2009066-81	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19A	
					Non-Fibers	100
2009066-82	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19B	
					Non-Fibers	100
2009066-83	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19C	
					Non-Fibers	100
2009066-84	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19D	
					Non-Fibers	100
2009066-85	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19E	
					Non-Fibers	100
2009066-86	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19F	
					Non-Fibers	100
2009066-87	20-Feb-20	Grey	Terra Cota Mortar	No	Client ID: 41133-19G	
					Non-Fibers	100

* MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

** Analytes in bold indicate asbestos mineral content.

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	2 - Ottawa West	NVLAP 200812-0		27-Feb-20

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

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Certificate of Analysis

Report Date: 28-Feb-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 24-Feb-2020

Client PO:

Project Description: P1 94 1133

Qualifier Notes

Sample Qualifiers :

AS-PRE: Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis

ASTrc: Trace asbestos was observed below the noted detection limit but could not be accurately quantified.

Z-01: Layers inseparable.

Z-01a: Plaster appears to be parging cement.

Z-01b: Potential contamination from transite panel in sample bag.

Work Order Revisions | Comments

None

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Andrew Couturier

Client PO:
Project: GV OT 041133
Custody:


Report Date: 2-Jun-2020
Order Date: 27-May-2020

Order #: 2022301

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

Paracel ID	Client ID
2022301-01	41133-20A
2022301-02	41133-20B
2022301-03	41133-20C
2022301-04	41133-21A
2022301-05	41133-21B
2022301-06	41133-21C
2022301-07	41133-22A
2022301-08	41133-22B
2022301-09	41133-22C
2022301-10	41133-23A
2022301-11	41133-23B
2022301-12	41133-23C
2022301-13	41133-24A
2022301-14	41133-24B
2022301-15	41133-24C
2022301-16	41133-25A
2022301-17	41133-25B
2022301-18	41133-25C
2022301-19	41133-26A
2022301-20	41133-26B
2022301-21	41133-26C
2022301-22	41133-27A
2022301-23	41133-27B
2022301-24	41133-27C
2022301-25.1	41133-28A
2022301-25.2	41133-28A

Approved By:



Emma Diaz
Senior Analyst

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

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Report Date: 02-Jun-2020

Order Date: 27-May-2020

Client PO:

Project Description: GV OT 041133

2022301-26.1	41133-28B
2022301-26.2	41133-28B
2022301-27.1	41133-28C
2022301-27.2	41133-28C
2022301-28	41133-29A
2022301-29	41133-29B
2022301-30	41133-29C
2022301-31	41133-29A
2022301-32	41133-29B
2022301-33	41133-29C
2022301-34	41133-30A
2022301-35	41133-30B
2022301-36	41133-30C
2022301-37	41133-31A
2022301-38	41133-31B
2022301-39	41133-31C

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 02-Jun-2020

Order Date: 27-May-2020

Project Description: GV OT 041133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2022301-01	26-May-20	Beige	Aircell	Yes	Client ID: 41133-20A	
					Chrysotile	10
					Cellulose	15
					Non-Fibers	75
2022301-02	26-May-20				Client ID: 41133-20B	
					not analyzed	
2022301-03	26-May-20				Client ID: 41133-20C	
					not analyzed	
2022301-04	26-May-20	Grey	Magblock	Yes	Client ID: 41133-21A	
					Chrysotile	60
					Non-Fibers	40
2022301-05	26-May-20				Client ID: 41133-21B	
					not analyzed	
2022301-06	26-May-20				Client ID: 41133-21C	
					not analyzed	
2022301-07	26-May-20	Grey	GCC	Yes	Client ID: 41133-22A	
					Chrysotile	20
					Non-Fibers	80
2022301-08	26-May-20				Client ID: 41133-22B	
					not analyzed	
2022301-09	26-May-20				Client ID: 41133-22C	
					not analyzed	
2022301-10	26-May-20	Black	Tar	No	Client ID: 41133-23A	
						[AS-PRE]
					MMVF	<MDL
					Non-Fibers	100

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV OT 041133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2022301-11	26-May-20	Black	Tar	No	Client ID: 41133-23B	[AS-PRE]
					MMVF	0.61
					Non-Fibers	99.39
2022301-12	26-May-20	Black	Tar	No	Client ID: 41133-23C	[AS-PRE]
					Cellulose	5
					MMVF	<MDL
2022301-13	26-May-20				Client ID: 41133-24A	[Z-01]
					not analyzed	
2022301-14	26-May-20	Black	Tar	No	Client ID: 41133-24B	[AS-PRE]
					Cellulose	5
					MMVF	<MDL
2022301-15	26-May-20	Black	Tar	No	Client ID: 41133-24C	[AS-PRE]
					Cellulose	5
					MMVF	<MDL
2022301-16	26-May-20	Black	Tar	No	Client ID: 41133-25A	
					Non-Fibers	100
2022301-17	26-May-20	Black	Tar	No	Client ID: 41133-25B	
					Non-Fibers	100
2022301-18	26-May-20	Black	Tar	No	Client ID: 41133-25C	
					Non-Fibers	100
2022301-19	26-May-20	Black	Tar	Yes	Client ID: 41133-26A	
					Chrysotile	1
					Non-Fibers	99

Certificate of Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**

Client PO:

Report Date: 02-Jun-2020

Order Date: 27-May-2020

Project Description: **GV OT 041133**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2022301-20	26-May-20				Client ID: 41133-26B	
					not analyzed	
2022301-21	26-May-20				Client ID: 41133-26C	
					not analyzed	
2022301-22	26-May-20	White	Parging	No	Client ID: 41133-27A	
					Non-Fibers	100
2022301-23	26-May-20	White	Parging	No	Client ID: 41133-27B	
					Non-Fibers	100
2022301-24	26-May-20	White	Parging	No	Client ID: 41133-27C	
					Non-Fibers	100
2022301-25.1	26-May-20	Black	Mastic	No	Client ID: 41133-28A	
					Non-Fibers	100
2022301-25.2	26-May-20	Beige	Mastic	No	Client ID: 41133-28A	
					Non-Fibers	100
2022301-26.1	26-May-20	Black	Mastic	No	Client ID: 41133-28B	
					Non-Fibers	100
2022301-26.2	26-May-20	Beige	Mastic	No	Client ID: 41133-28B	
					Non-Fibers	100
2022301-27.1	26-May-20	Black	Mastic	No	Client ID: 41133-28C	
					Non-Fibers	100
2022301-27.2	26-May-20	Beige	Mastic	No	Client ID: 41133-28C	
					Non-Fibers	100
2022301-28	26-May-20	Brown	Mastic	No	Client ID: 41133-29A	
					Non-Fibers	100

Certificate of Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**

Client PO:

Report Date: 02-Jun-2020

Order Date: 27-May-2020

Project Description: **GV OT 041133**

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2022301-29	26-May-20	Brown	Mastic	No	Client ID: 41133-29B	
					Non-Fibers	100
2022301-30	26-May-20	Brown	Mastic	No	Client ID: 41133-29C	
					Non-Fibers	100
2022301-31	26-May-20	Beige	Woven Backing	No	Client ID: 41133-29A	
					Cellulose	90
					Non-Fibers	10
2022301-32	26-May-20	Beige	Woven Backing	No	Client ID: 41133-29B	
					Cellulose	90
					Non-Fibers	10
2022301-33	26-May-20	Beige	Woven Backing	No	Client ID: 41133-29C	
					Cellulose	90
					Non-Fibers	10
2022301-34	26-May-20	Black	Mastic	No	Client ID: 41133-30A	
					Non-Fibers	100
2022301-35	26-May-20	Black	Mastic	No	Client ID: 41133-30B	
					Non-Fibers	100
2022301-36	26-May-20	Beige	Mastic	No	Client ID: 41133-30C	
					Non-Fibers	100
2022301-37	26-May-20	Beige	Mastic	No	Client ID: 41133-31A	
					Non-Fibers	100
2022301-38	26-May-20	Black	Mastic	No	Client ID: 41133-31B	
					Non-Fibers	100
2022301-39	26-May-20	Beige	Mastic	No	Client ID: 41133-31C	
					Non-Fibers	100

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 02-Jun-2020

Order Date: 27-May-2020

Project Description: GV OT 041133

* MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

** Analytes in bold indicate asbestos mineral content.

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	1 - Mississauga	NVLAP 200863-0		1-Jun-20

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

Mississauga Lab: 15 - 6800 Kitimat Rd Mississauga, Ontario, L5N 5M1

Qualifier Notes

Sample Qualifiers :

AS-PRE: Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis

Z-01: Insufficient sample

Work Order Revisions | Comments

None

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Andrew Couturier

Client PO:
Project: GV-OT-041133
Custody:

Report Date: 2-Jun-2020
Order Date: 27-May-2020

Order #: 2022304

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

Paracel ID	Client ID
2022304-01	41133-T-MR
2022304-02	41133-T-LD
2022304-03	41133-T-TC
2022304-04	41133-T-WE
2022304-05	41133-T-WI

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PAHs by GC-MS	EPA 8270 - GC-MS, extraction	30-May-20	2-Jun-20
PCBs, total	SW846 8082A - GC-ECD	30-May-20	1-Jun-20
Solids, %	Gravimetric, calculation	30-May-20	31-May-20

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

	Client ID:	41133-T-MR	41133-T-LD	41133-T-TC	41133-T-WE
	Sample Date:	26-May-20 09:00	26-May-20 09:00	26-May-20 09:00	26-May-20 09:00
	Sample ID:	2022304-01	2022304-02	2022304-03	2022304-04
	MDL/Units	Other	Other	Other	Other

Physical Characteristics

% Solids	0.1 % by Wt.	100	100	100	100
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Semi-Volatiles

Acenaphthene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Acenaphthylene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Anthracene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Benzo [a] anthracene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Benzo [a] pyrene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Benzo [b] fluoranthene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Benzo [g,h,i] perylene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Benzo [k] fluoranthene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Biphenyl	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Chrysene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Dibenzo [a,h] anthracene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Fluoranthene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Fluorene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
1-Methylnaphthalene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
2-Methylnaphthalene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	3.96
Methylnaphthalene (1&2)	0.04 ug/g dry	<2.40 [1]	<4.00 [1]	<2.40 [1]	<4.36 [1]
Naphthalene	0.01 ug/g dry	<0.60 [1]	<1.00 [1]	<0.60 [1]	2.54
Phenanthrene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	2.28
Pyrene	0.02 ug/g dry	<1.20 [1]	<2.00 [1]	<1.20 [1]	<2.18 [1]
2-Fluorobiphenyl	Surrogate	104%	95.7%	102%	109%
Terphenyl-d14	Surrogate	121%	113%	110%	98.2%

PCBs

PCBs, total	0.05 ug/g dry	<0.50 [1]	<2.50 [1]	<0.50 [1]	<2.50 [1]
Decachlorobiphenyl	Surrogate	102%	84.5%	108%	60.6%

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

Client ID:	41133-T-WI	-	-	-
Sample Date:	26-May-20 09:00	-	-	-
Sample ID:	2022304-05	-	-	-
MDL/Units	Other	-	-	-

Physical Characteristics

% Solids	0.1 % by Wt.	100	-	-	-
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Semi-Volatiles

Acenaphthene	0.02 ug/g dry	<2.40 [1]	-	-	-
Acenaphthylene	0.02 ug/g dry	<2.40 [1]	-	-	-
Anthracene	0.02 ug/g dry	<2.40 [1]	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<2.40 [1]	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<2.40 [1]	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<2.40 [1]	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<2.40 [1]	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<2.40 [1]	-	-	-
Biphenyl	0.02 ug/g dry	<2.40 [1]	-	-	-
Chrysene	0.02 ug/g dry	<2.40 [1]	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<2.40 [1]	-	-	-
Fluoranthene	0.02 ug/g dry	<2.40 [1]	-	-	-
Fluorene	0.02 ug/g dry	<2.40 [1]	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<2.40 [1]	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<2.40 [1]	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<2.40 [1]	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<4.80 [1]	-	-	-
Naphthalene	0.01 ug/g dry	<1.20 [1]	-	-	-
Phenanthrene	0.02 ug/g dry	<2.40 [1]	-	-	-
Pyrene	0.02 ug/g dry	<2.40 [1]	-	-	-
2-Fluorobiphenyl	Surrogate	96.1%	-	-	-
Terphenyl-d14	Surrogate	83.9%	-	-	-

PCBs

PCBs, total	0.05 ug/g dry	<1.67 [1]	-	-	-
Decachlorobiphenyl	Surrogate	70.5%	-	-	-

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	0.05	ug/g						
Surrogate: Decachlorobiphenyl	0.0823		ug/g		82.3	60-140			
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Biphenyl	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	1.46		ug/g		109	50-140			
Surrogate: Terphenyl-d14	1.35		ug/g		101	50-140			

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	0.05	ug/g dry	ND			NC	40	
Surrogate: Decachlorobiphenyl	0.127		ug/g dry		127	60-140			
Physical Characteristics									
% Solids	95.2	0.1	% by Wt.	93.0			2.4	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	0.034	0.02	ug/g dry	0.029			16.4	40	
Benzo [a] pyrene	0.036	0.02	ug/g dry	0.034			7.0	40	
Benzo [b] fluoranthene	0.048	0.02	ug/g dry	0.043			11.0	40	
Benzo [g,h,i] perylene	0.025	0.02	ug/g dry	0.029			14.9	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	0.021			NC	40	
Biphenyl	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	0.051	0.02	ug/g dry	0.043			17.3	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	0.087	0.02	ug/g dry	0.072			19.3	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	0.023	0.02	ug/g dry	0.023			4.3	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	0.056	0.02	ug/g dry	0.040			32.7	40	
Pyrene	0.071	0.02	ug/g dry	0.057			22.5	40	
Surrogate: 2-Fluorobiphenyl	1.44		ug/g dry		92.7	50-140			
Surrogate: Terphenyl-d14	1.39		ug/g dry		89.8	50-140			

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	0.408	0.05	ug/g	ND	102	60-140			
Surrogate: Decachlorobiphenyl	0.0910		ug/g		91.0	60-140			
Semi-Volatiles									
Acenaphthene	0.196	0.02	ug/g	ND	101	50-140			
Acenaphthylene	0.143	0.02	ug/g	ND	73.8	50-140			
Anthracene	0.174	0.02	ug/g	ND	89.6	50-140			
Benzo [a] anthracene	0.248	0.02	ug/g	0.029	113	50-140			
Benzo [a] pyrene	0.232	0.02	ug/g	0.034	102	50-140			
Benzo [b] fluoranthene	0.274	0.02	ug/g	0.043	119	50-140			
Benzo [g,h,i] perylene	0.213	0.02	ug/g	0.029	95.4	50-140			
Benzo [k] fluoranthene	0.266	0.02	ug/g	0.021	126	50-140			
Biphenyl	0.140	0.02	ug/g	ND	72.4	50-140			
Chrysene	0.271	0.02	ug/g	0.043	117	50-140			
Dibenzo [a,h] anthracene	0.194	0.02	ug/g	ND	100	50-140			
Fluoranthene	0.367	0.02	ug/g	0.072	152	50-140			QM-06
Fluorene	0.187	0.02	ug/g	ND	96.6	50-140			
Indeno [1,2,3-cd] pyrene	0.228	0.02	ug/g	0.023	106	50-140			
1-Methylnaphthalene	0.206	0.02	ug/g	ND	107	50-140			
2-Methylnaphthalene	0.222	0.02	ug/g	ND	115	50-140			
Naphthalene	0.187	0.01	ug/g	ND	96.7	50-140			
Phenanthrene	0.309	0.02	ug/g	0.040	139	50-140			
Pyrene	0.389	0.02	ug/g	0.057	171	50-140			QM-06
Surrogate: 2-Fluorobiphenyl	1.53		ug/g		98.6	50-140			
Surrogate: Terphenyl-d14	1.65		ug/g		107	50-140			

Certificate of Analysis

Report Date: 02-Jun-2020

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 27-May-2020

Client PO:

Project Description: GV-OT-041133

Qualifier Notes:

Sample Qualifiers :

1 : Elevated detection limits due to the nature of the sample matrix.

QC Qualifiers :

QM-06 : Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Andrew Couturier

Client PO:
Project: GV OT 041133
Custody:

Report Date: 4-Jun-2020
Order Date: 29-May-2020

Order #: 2023022

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

Paracel ID	Client ID
2023022-01	41133-32A
2023022-02	41133-32B
2023022-03	41133-32C
2023022-04	41133-33A
2023022-05	41133-33B
2023022-06	41133-33C
2023022-07	41133-34A
2023022-08	41133-34B
2023022-09	41133-34C
2023022-10	41133-35A
2023022-11	41133-35B
2023022-12	41133-35C
2023022-13	41133-36A
2023022-14	41133-36B
2023022-15	41133-36C
2023022-16	41133-37A
2023022-17	41133-37B
2023022-18	41133-37C

Approved By:



Emma Diaz
Senior Analyst

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

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 04-Jun-2020

Order Date: 29-May-2020

Project Description: GV OT 041133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2023022-01	29-May-20	Black	Tar & Weave	Yes	Client ID: 41133-32A	[AS-PRE, Z-01]
					[ASTrc]Chrysotile	<MDL
					MMVF	20
					Non-Fibers	80
2023022-02	29-May-20	Black	Tar & Weave	Yes	Client ID: 41133-32B	[AS-PRE, Z-01]
					[ASTrc]Chrysotile	<MDL
					MMVF	20
					Non-Fibers	80
2023022-03	29-May-20	Black	Tar & Weave	Yes	Client ID: 41133-32C	[AS-PRE, Z-01]
					[ASTrc]Chrysotile	<MDL
					MMVF	20
					Non-Fibers	80
2023022-04	29-May-20	Grey	Parging	No	Client ID: 41133-33A	
					Non-Fibers	100
2023022-05	29-May-20	Grey	Parging	No	Client ID: 41133-33B	
					Non-Fibers	100
2023022-06	29-May-20	Grey	Parging	No	Client ID: 41133-33C	
					Non-Fibers	100
2023022-07	29-May-20	Black	Caulking	No	Client ID: 41133-34A	
					Non-Fibers	100
2023022-08	29-May-20	Black	Caulking	No	Client ID: 41133-34B	
					Non-Fibers	100
2023022-09	29-May-20	Black	Caulking	No	Client ID: 41133-34C	
					Non-Fibers	100
2023022-10	29-May-20	White	Caulking	No	Client ID: 41133-35A	
					Non-Fibers	100

Certificate of Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**

Report Date: 04-Jun-2020

Order Date: 29-May-2020

Client PO:

Project Description: **GV OT 041133**
Asbestos, PLM Visual Estimation **MDL - 0.5%**

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2023022-11	29-May-20	White	Caulking	No	Client ID: 41133-35B	
					Non-Fibers	100
2023022-12	29-May-20	White	Caulking	No	Client ID: 41133-35C	
					Non-Fibers	100
2023022-13	29-May-20	Grey	Caulking	No	Client ID: 41133-36A	
					Non-Fibers	100
2023022-14	29-May-20	Grey	Caulking	No	Client ID: 41133-36B	
					Non-Fibers	100
2023022-15	29-May-20	Grey	Caulking	No	Client ID: 41133-36C	
					Non-Fibers	100
2023022-16	29-May-20	Grey	Mortar	No	Client ID: 41133-37A	
					Non-Fibers	100
2023022-17	29-May-20	Grey	Mortar	No	Client ID: 41133-37B	
					Non-Fibers	100
2023022-18	29-May-20	Grey	Mortar	No	Client ID: 41133-37C	
					Non-Fibers	100

* MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

**** Analytes in bold indicate asbestos mineral content.**
Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	2 - Ottawa West	NVLAP 200812-0		4-Jun-20

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

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 04-Jun-2020

Order Date: 29-May-2020

Project Description: GV OT 041133

Qualifier Notes

Sample Qualifiers :

AS-PRE: Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis

ASTrc: Trace asbestos was observed below the noted detection limit but could not be accurately quantified.

Z-01: Layers inseparable.

Work Order Revisions | Comments

None

Certificate of Analysis

DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.
Ottawa, ON K1G 5T9
Attn: Kyle Thompson

Client PO:
Project: 1941133
Custody: 46114

Report Date: 28-Jul-2020
Order Date: 21-Jul-2020

Order #: 2030225

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

Parcel ID	Client ID
2030225-01	41133-20 A
2030225-02	41133-20 B
2030225-03	41133-20 C
2030225-04	41133-20 D
2030225-05	41133-20 E
2030225-06	41133-21 A
2030225-07	41133-21 B
2030225-08	41133-21 C
2030225-09	41133-21 D
2030225-10	41133-21 E

Approved By:



Emma Diaz
Senior Analyst

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 28-Jul-2020

Order Date: 21-Jul-2020

Project Description: 1941133

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

Parcel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2030225-01	21-Jul-20	Light Grey	Mortar	No	Client ID: 41133-20 A	
					Non-Fibers	100
2030225-02	21-Jul-20	Light Grey	Mortar	No	Client ID: 41133-20 B	
					Non-Fibers	100
2030225-03	21-Jul-20	Light Grey	Mortar	No	Client ID: 41133-20 C	
					Non-Fibers	100
2030225-04	21-Jul-20	Light Grey	Mortar	No	Client ID: 41133-20 D	
					Non-Fibers	100
2030225-05	21-Jul-20	Light Grey	Mortar	No	Client ID: 41133-20 E	
					Non-Fibers	100
2030225-06	21-Jul-20	Grey	Mortar	Yes	Client ID: 41133-21 A	
					Chrysotile	1
					Non-Fibers	99
2030225-07	21-Jul-20				Client ID: 41133-21 B	
					not analyzed	
2030225-08	21-Jul-20				Client ID: 41133-21 C	
					not analyzed	
2030225-09	21-Jul-20				Client ID: 41133-21 D	
					not analyzed	
2030225-10	21-Jul-20				Client ID: 41133-21 E	
					not analyzed	

** Analytes in bold indicate asbestos mineral content.

Certificate of Analysis

Client: DST Consulting Engineers Inc. (Ottawa)

Client PO:

Report Date: 28-Jul-2020

Order Date: 21-Jul-2020

Project Description: 1941133

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	by EPA 600/R-93/116	2 - Ottawa West	NVLAP 200812-0		28-Jul-20

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

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Work Order Revisions | Comments

None

APPENDIX B

Representative Photographs



Photograph 1: Transite panels, observed in the penthouse, were confirmed to contain 15% Chrysotile asbestos (Sample ID 41133-06A)



Photograph 2: Transite ceiling panels, observed in Room B88, were confirmed to contain 15% Chrysotile asbestos (Sample ID 41133-05A)



Photograph 3: Parging cement on the Penthouse perimeter wall was confirmed to contain 65% Chrysotile asbestos (Sample ID 41133-14A).



Photograph 4: Grey fibrous wall coating, collected from the Penthouse perimeter wall, contains 35% Chrysotile asbestos (Sample ID 41133-16A).



Photograph 5: Styrofoam, within the perimeter wall, contains tar layers on both sides. The tar on the exterior side (red arrow) contains 1% Chrysotile asbestos (Sample 41133-26A). Grey paring cement, within the perimeter wall (blue arrow), contains 1% Chrysotile asbestos (Sample 41133-21A[2]). To access the tar, demolition into the perimeter wall from the interior or exterior of the structure will be required. Materials are well adhered, whereby grinding, or mechanical means would be required for removal.



Photograph 6: Thermostats, containing glass ampules of mercury, were observed throughout the building.



Photograph 7: PCB ballasts were observed within the building.



Photograph 8: A diesel storage tank, with an estimated capacity of 7,500L, was observed on the exterior, eastern side of the building.



Photograph 9: External air handling units, confirmed to contain 10 lbs of R410A halocarbons.

APPENDIX C

Database of Asbestos-Containing Materials

Asbestos-Containing Materials Database - Environmental Health Centre (EHC) - July 2020

Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
Basement										
B	Mech Room	Piping	Straight Run-Mag Block	275	LM	Good	B	Friable	7	Large basement mechanical room. Piping throughout. Up to 3.5m high.
B	Mech Room	Piping	Straight Run-Mag Block	1	LM	Fair	B	Friable	5/6	
B	Mech Room	Piping	Straight Run-Aircell	150	LM	Good		Friable	Error	
B	Mech Room	Piping	Straight Run-Aircell	1	LM	Poor	B	Friable	3	
B	Mech Room	Ductwork	Black tar layer under canvas	200	SM	Good	B	Non-Friable	7	
B	Mech Room	Ductwork	Parge adhesive under canvas	200	SM	Good	B	Friable	7	
B	Mech Room	Piping	Straight Run-Sweatwrap	5	LM	Good	B	Friable	7	
B	Mech Room	Piping	Pipe Fitting Insulation	350	EA	Good	B	Friable	7	
B	Mech Room	Piping	Pipe Fitting Insulation	1	EA	Fair	B	Friable	6/5	
B	Mech Room	Chiller	Remnant black mastic	6	SM	Good	B	Non-Friable	7	
B	B-50	Walls	Transite panels	20	SM	Good	B	Non-Friable	7	Painted wall panels along hallway
B	B-50 Hallway	Walls	Transite panels	30	SM	Good	B	Non-Friable	7	
B	B-50B	Ductwork	Mag Block	25	SM	Good	C (e)	Friable	7	
B	B-50B	Piping	Pipe Fitting Insulation	2	EA	Good	C (e)	Friable	7	
B	B-50B	Piping	Straight Run Pipe Insulation	6	LM	Good	C (e)	Friable	7	
B	B-50A	Piping	Straight Run Pipe Insulation	2	LM	Good	C (c)	Friable	7	
B	B-50A	Piping	Straight Run Pipe Insulation	1	LM	Poor	C (c)	Friable	4	
B	B-50A	Piping	Pipe Fitting Insulation	1	EA	Good	C (c)	Friable	7	
B	B-50A	Piping	Pipe Fitting Insulation	1	EA	Poor	C (c)	Friable	4	
B	B-50A	Ductwork	Mag Block	150	SM	Good	C (c)	Friable	7	
B	B-50C	Piping	Straight Run-Aircell	5	LM	Good	B	Friable	7	
B	B-50C	Piping	Straight Run-Mag Block	5	LM	Good	B	Friable	7	
B	B-52	Walls	Drywall joint compound	30	SM	Good	A	Non-Friable	5/7	
B	B-52	Piping	Pipe Fitting Insulation	2	EA	Good	C (e)	Friable	7	
B	B-52	Piping	Firestop Caulking	30	SM	Good	A	Non-Friable	5/7	
B	B-52	Ductwork	Black tar layer under canvas	70	SM	Good	C (e)	Non-Friable	7	
B	B-52	Ductwork	Parge adhesive under canvas	70	SM	Good	C (e)	Friable	7	
B	B-52A	Piping	Pipe Fitting Insulation	2	EA	Good	C (e)	Friable	7	
B	B-52B & C	Floor	Vinyl floor tiles	20	SM	Good	C (c)	Non-Friable	7	Beneath raised floor
B	B-52B & C	Ceiling	2x4 Ceiling tiles, LF PH	20	SM	Good	B	Friable	7	
B	B-52B & C	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	
B	B-52B & C	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	
B	B-52B & C	Piping	Straight Run-Aircell	10	LM	Good	C (c)	Friable	7	
B	B-52 Pipechase	Piping	Straight Run-Mag Block	30	LM	Good	B	Friable	7	Accessible from B-52C
B	B-52 Pipechase	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	Accessible from B-52C
B	B-2	Piping	Straight Run-Mag Block	10	LM	Good	C (c)	Friable	7	
B	B-2	Piping	Straight Run-Aircell	10	LM	Good	C (c)	Friable	7	
B	B-2	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
B	B-2	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	
B	B-2	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	
B	B-4	Floor	Vinyl floor tiles and mastic	15	SM	Good	A	Non-Friable	5/7	

Asbestos-Containing Materials Database - Environmental Health Centre (EHC) - July 2020

Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
B	B-4	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
B	B-6C	Ductwork	Black tar layer under canvas	8	SM	Good	C (c)	Non-Friable	7	
B	B-6C	Ductwork	Parge adhesive under canvas	8	SM	Good	C (c)	Friable	7	
B	B-6C	Piping	Straight Run-Aircell	15	LM	Good	D	Friable	7	Former environmentally controlled chamber. Piping above ceiling of climate controlled chamber - assumed plaster
B	B-6D	Ductwork	Black tar layer under canvas	8	SM	Good	C (c)	Non-Friable	7	Former environmentally controlled chamber. Piping above ceiling of climate controlled chamber - assumed plaster
B	B-6D	Ductwork	Parge adhesive under canvas	8	SM	Good	C (c)	Friable	7	Former environmentally controlled chamber. Piping above ceiling of climate controlled chamber - assumed plaster
B	B-6D	Piping	Straight Run-Aircell	15	LM	Good	D	Friable	7	Former environmentally controlled chamber. Piping above ceiling of climate controlled chamber - assumed plaster
B	B-6D	Piping	Pipe Fitting Insulation	8	EA	Good	C (e)	Friable	7	
B	B-10	Ductwork	Black tar layer under canvas	10	SM	Good	C (c)	Non-Friable	7	
B	B-10	Ductwork	Parge adhesive under canvas	10	SM	Good	C (c)	Friable	7	
B	B-12C	Walls	Drywall joint compound	60	SM	Good	A	Non-Friable	5/7	
B	B-12C	Ductwork	Black tar layer under canvas	8	SM	Good	C (c)	Non-Friable	7	
B	B-12C	Ductwork	Parge adhesive under canvas	8	SM	Good	C (c)	Friable	7	
B	B-12D	Walls	Drywall joint compound	50	SM	Good	A	Non-Friable	5/7	
B	B-12D	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
B	B-12D	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
B	B-12	Piping	Straight Run-Aircell	3	LM	Good	C (c)	Friable	7	
B	B-12	Walls	Drywall joint compound	60	SM	Good	A	Non-Friable	5/7	
B	B-12	Ductwork	Black tar layer under canvas	30	SM	Good	C (c)	Non-Friable	7	
B	B-12	Ductwork	Parge adhesive under canvas	30	SM	Good	C (c)	Friable	7	
B	B-12B	Walls	Drywall joint compound	150	SM	Good	A	Non-Friable	5/7	
B	B-12B	Ductwork	Black tar layer under canvas	60	SM	Good	C (c)	Non-Friable	7	
B	B-12B	Ductwork	Parge adhesive under canvas	60	SM	Good	C (c)	Friable	7	
B	B-12B	Piping	Straight Run Pipe Insulation	6	LM	Good	C (c)	Friable	7	
B	B-6B/C Hallway	Piping	Straight Run Pipe Insulation	3	LM	Good	C (c)	Friable	7	
B	B-6B/C Hallway	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
B	B-6B/C Hallway	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
B	B-6B/C Hallway	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
B	B-6	Piping	Straight Run Pipe Insulation	3	LM	Good	C (c)	Friable	7	
B	B-6	Piping	Pipe Fitting Insulation	12	EA	Good	C (c)	Friable	7	
B	B-6	Piping	Pipe Fitting Insulation	10	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-6	Ductwork	Black tar layer under canvas	2	SM	Good	C (c)	Non-Friable	7	
B	B-6	Ductwork	Parge adhesive under canvas	2	SM	Good	C (c)	Friable	7	
B	B-6B	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
B	B-6B	Ductwork	Black tar layer under canvas	2	SM	Good	C (c)	Non-Friable	7	
B	B-6B	Ductwork	Parge adhesive under canvas	2	SM	Good	C (c)	Friable	7	
B	B-5A-D	Piping	Straight Run-Aircell	10	LM	Good	C (c)	Friable	7	

Asbestos-Containing Materials Database - Environmental Health Centre (EHC) - July 2020

Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
B	B-5A-D	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
B	B-5A-D	Piping	Pipe Fitting Insulation	10	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-5A-D	Walls	Drywall joint compound	<1	SM	Poor	A	Non-Friable	3	
B	B9, B9-A,B,C,D	Floor	Vinyl floor tiles	60	SM	Good	D	Non-Friable	7	Beneath carpet
B	B9, B9-A,B,C,D	Piping	Straight Run Pipe Insulation	20	LM	Good	C (c)	Friable	7	
B	B9, B9-A,B,C,D	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
B	B9, B9-A,B,C,D	Piping	Pipe Fitting Insulation	10	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-13	Floor	Vinyl floor tiles and mastic	60	SM	Good	A	Non-Friable	5/7	
B	B-13	Piping	Straight Run Pipe Insulation	30	LM	Good	C (c)	Friable	7	
B	B-13	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
B	B-13	Piping	Pipe Fitting Insulation	20	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-13	Fumehoods x 2	Transite panels	10	SM	Good	A	Non-Friable	5/7	Cupboards of fumehoods. 5 m2 each
B	B-13	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	
B	B-13	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	
B	B-19, B-19-A,B,C,D,E	Floor	Vinyl floor tiles and mastic	220	SM	Good	A	Non-Friable	5/7	Includes: 12x12 beige with black, 9x9 Grey & 12x12 Grey streaked
B	B-19, B-19-A,B,C,D,E	Piping	Straight Run Pipe Insulation	70	LM	Good	C (c)	Friable	7	
B	B-19, B-19-A,B,C,D,E	Ductwork	Black tar layer under canvas	80	SM	Good	C (c)	Non-Friable	7	
B	B-19, B-19-A,B,C,D,E	Ductwork	Parge adhesive under canvas	80	SM	Good	C (c)	Friable	7	
B	B-19, B-19-A,B,C,D,E	Piping	Pipe Fitting Insulation	50	EA	Good	C (c)	Friable	7	
B	B-19, B-19-A,B,C,D,E	Piping	Pipe Fitting Insulation	15	EA	Good	D	Friable	7	Concealed behind wooden panels, feeding sinks.
B	B-19, B-19-A,B,C,D,E	Piping	Pipe Fitting Insulation	20	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along south perimeter wall, feeding radiators.
B	B-19, B-19-A,B,C,D,E	Fumehoods x 5	Transite panels	25	SM	Good	A	Non-Friable	5/7	Cupboards of fumehoods. 5 m2 each
B	B-14, B-14A	Piping	Straight Run-Aircell	30	LM	Good	D	Friable	7	Concealed in concrete block wall, between doorways to B-19 and B-13. Close proximity to other piping
B	B-14, B-14A	Piping	Straight Run Pipe Insulation	5	LM	Good	C (c)	Friable	7	
B	B-14, B-14A	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
B	B-57	Ductwork	Black tar layer under canvas	65	SM	Good	C (c)	Non-Friable	7	
B	B-57	Ductwork	Parge adhesive under canvas	65	SM	Good	C (c)	Friable	7	
B	B-57	Piping	Pipe Fitting Insulation	25	EA	Good	C (c)	Friable	7	
B	B-57	Piping	Straight Run-Aircell	15	LM	Good	C (c)	Friable	7	
B	B-57	Ductwork	Parging	2	SM	Good	C (c)	Friable	7	
B	B-16	Floor	Vinyl floor tiles and mastic	40	SM	Good	D	Non-Friable	7	Beneath carpet
B	B-16	Walls	Drywall joint compound	70	SM	Good	A	Non-Friable	5/7	
B	B-16	Piping	Aircell Pipe Insulation	15	LM	Good	C (c)	Friable	7	
B	B-16	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
B	B-16	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	
B	B-16	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	
B	B-20	Ductwork	Black tar layer under canvas	160	SM	Good	C (c)	Non-Friable	7	
B	B-20	Ductwork	Parge adhesive under canvas	160	SM	Good	C (c)	Friable	7	
B	B-20	Piping	Pipe Fitting Insulation	40	EA	Good	C (c)	Friable	7	

Asbestos-Containing Materials Database - Environmental Health Centre (EHC) - July 2020

Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
B	B-20	Piping	Pipe Fitting Insulation	2	EA	Fair	C (c)	Friable	7	
B	B-56	Piping	Straight Run-Mag Block	10	LM	Good	C (c)	Friable	7	
B	B-56	Piping	Straight Run-Aircell	20	LM	Fair	C (c)	Friable	7	
B	B-56	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
B	B-56	Ductwork	Mag Block	5	SM	Good	C (c)	Friable	7	
B	B-56	Ductwork	Parge adhesive under canvas	30	SM	Good	C (c)	Friable	7	
B	B-56	Ductwork	Black tar layer under canvas	30	SM	Good	C (c)	Non-Friable	7	
B	B-58	Piping	Straight Run-Aircell	30	LM	Good	C (c)	Friable	7	
B	B-58	Piping	Pipe Fitting Insulation	35	EA	Good	C (c)	Friable	7	
B	B-58	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	
B	B-58	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	
B	B-60	Walls and columns	Drywall joint compound	350	SM	Good	A	Non-Friable	5/7	
B	B-60	Piping	Straight Run-Aircell	20	LM	Good	C (c)	Friable	7	
B	B-60	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
B	B-60	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	
B	B-60	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	
B	Elec Room	Piping	Straight Run-Aircell	6	LM	Good	C (e)	Friable	7	
B	B-66	Piping	Straight Run-Aircell	25	LM	Good	C (e)	Friable	7	
B	B-66	Piping	Pipe Fitting Insulation	20	EA	Good	C (e)	Friable	7	
B	B-66	Ductwork	Black tar layer under canvas	45	SM	Good	C (c)	Non-Friable	7	
B	B-66	Ductwork	Parge adhesive under canvas	45	SM	Good	C (c)	Friable	7	
B	Elec closet off hallway	Floor	Vinyl floor tiles and mastic	10	SM	Good	B	Non-Friable	7	
B	Elec closet off hallway	Piping	Pipe Fitting Insulation	3	EA	Good	B	Friable	7	
B	B-23	Piping	Pipe Fitting Insulation	13	EA	Good	C (c)	Friable	7	
B	B-23	Ductwork	Black tar layer under canvas	60	SM	Good	C (c)	Non-Friable	7	
B	B-23	Ductwork	Parge adhesive under canvas	60	SM	Good	C (c)	Friable	7	
B	B-70	Piping	Pipe Fitting Insulation	8	EA	Good	C (c)	Friable	7	
B	B-68	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
B	B-68	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	
B	B-68	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	
B	B-72	Piping	Straight Run-Aircell	20	LM	Good	C (c)	Friable	7	
B	B-72	Piping	Pipe Fitting Insulation	40	EA	Good	C (c)	Friable	7	
B	B-72	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	Only one duct insulated
B	B-72	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	
B	B-74	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
B	B-74	Piping	Straight Run-Aircell	3	LM	Good	C (c)	Friable	7	
B	B-78	Ceiling	Transite panels	25	SM	Good	B	Non-Friable	7	
B	B-78	Piping	Pipe Fitting Insulation	17	EA	Good	C (c)	Friable	7	
B	B-78	Piping	Straight Run-Aircell	12	LM	Good	C (c)	Friable	7	
B	B-78	Ductwork	Black tar layer under canvas	14	SM	Good	C (c)	Non-Friable	7	
B	B-78	Ductwork	Parge adhesive under canvas	14	SM	Good	C (c)	Friable	7	
B	B-78	Ductwork	Black tar layer under canvas	1	SM	Fair	C (c)	Non-Friable	7	
B	B-78	Ductwork	Parge adhesive under canvas	1	SM	Fair	C (c)	Friable	7	

Asbestos-Containing Materials Database - Environmental Health Centre (EHC) - July 2020

Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
B	B-80	Ceiling	Transite panels	18	SM	Good	B	Non-Friable	7	
B	B-80	Ceiling	Transite panels	1	SM	Fair	B	Non-Friable	5/6	
B	B-80	Piping	Straight Run-Aircell	5	LM	Good	C (c)	Friable	7	
B	B-80	Piping	Pipe Fitting Insulation	5	EA	Good	C (c)	Friable	7	
B	B-80	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	
B	B-80	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	
B	B-80	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
B	B-80	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
B	B-82	Ceiling	Transite panels	16	SM	Good	B	Non-Friable	7	
B	B-82	Piping	Straight Run-Aircell	15	LM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-82	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-82	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-82	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-82	Ductwork	Parge adhesive under canvas	<1	SM	Debris	C (c)	Friable	2	Above transite panel ceiling
B	B-84	Ceiling	Transite panels	20	SM	Good	B	Non-Friable	7	
B	B-84	Piping	Straight Run-Aircell	5	LM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-84	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-84	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-84	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-84	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-84	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	Above transite panel ceiling
B	B-86	Ceiling	Transite panels	16	SM	Good	B	Non-Friable	7	
B	B-86	Piping	Straight Run-Aircell	15	LM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-86	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-86	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-86	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-88	Ceiling	Transite panels	20	SM	Good	B	Non-Friable	7	
B	B-88	Piping	Straight Run-Aircell	5	LM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-88	Ductwork	Black tar layer under canvas	10	SM	Good	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-88	Ductwork	Parge adhesive under canvas	10	SM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-88	Ductwork	Black tar layer under canvas	1	SM	Fair	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-88	Ductwork	Parge adhesive under canvas	1	SM	Fair	C (c)	Friable	7	Above transite panel ceiling
B	B-90	Ceiling	Transite panels	16	SM	Good	B	Non-Friable	7	
B	B-90	Piping	Straight Run-Aircell	15	LM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-90	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-90	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	Above transite panel ceiling
B	B-90	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	Above transite panel ceiling
B	B-92	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	Only in Ceiling Space
B	B-92	Piping	Straight Run-Aircell	20	LM	Good	C (c)	Friable	7	
B	B-94	Piping	Pipe Fitting Insulation	22	EA	Good	C (e)	Friable	7	
B	B-96	Ductwork	Black tar layer under canvas	25	SM	Good	C (e)	Non-Friable	7	
B	B-96	Ductwork	Parge adhesive under canvas	25	SM	Good	C (e)	Non-Friable	7	
B	Loading dock area	Ductwork	Black tar layer under canvas	80	SM	Good	C (e)	Non-Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
B	Loading dock area	Ductwork	Parge adhesive under canvas	80	SM	Good	C (e)	Friable	7	
B	Loading dock area	Piping	Pipe Fitting Insulation	16	EA	Good	C (e)	Friable	7	
B	Loading dock area	Piping	Parging cement	2	SM	Good	C (e)	Friable	7	
B	B-48	Piping	Pipe Fitting Insulation	4	EA	Good	B	Friable	7	
B	South-east hallway	Piping	Pipe Fitting Insulation	140	EA	Good	C (c)	Friable	7	
B	South-east hallway	Ductwork	Black tar layer under canvas	600	SM	Good	C (c)	Non-Friable	7	
B	South-east hallway	Ductwork	Parge adhesive under canvas	600	SM	Good	C (c)	Friable	7	
B	B-45	Ductwork	Black tar layer under canvas	90	SM	Good	C (e)	Non-Friable	7	
B	B-45	Ductwork	Parge adhesive under canvas	90	SM	Good	C (e)	Friable	7	
B	B-45	Piping	Pipe Fitting Insulation	15	EA	Good	C (e)	Friable	7	
B	B-45	Piping	Pipe Fitting Insulation	10	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-45	Piping	Straight Run-Aircell	10	LM	Good	C (c)	Friable	7	
B	B-43, B43-A,B,C,D,E	Piping	Pipe Fitting Insulation	10	EA	Good	C (e)	Friable	7	
B	B-43, B43-A,B,C,D,E	Piping	Pipe Fitting Insulation	15	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-43, B43-A,B,C,D,E	Piping	Straight Run-Aircell	20	LM	Good	C (c)	Friable	7	
B	B-43, B43-A,B,C,D,E	Ductwork	Black tar layer under canvas	12	SM	Good	C (e)	Non-Friable	7	
B	B-43, B43-A,B,C,D,E	Ductwork	Parge adhesive under canvas	12	SM	Good	C (e)	Friable	7	
B	B-33/B-33A	Piping	Pipe Fitting Insulation	11	EA	Good	C (e)	Friable	7	
B	B-33/B-33A	Piping	Straight Run-Aircell	20	LM	Good	D	Friable	7	Suspect present within concrete block column
B	B-33/B-33A	Ductwork	Black tar layer under canvas	12	SM	Good	C (e)	Non-Friable	7	
B	B-33/B-33A	Ductwork	Parge adhesive under canvas	12	SM	Good	C (e)	Friable	7	
B	B-35	Floor	Vinyl floor tiles and mastic	110	SM	Good	A	Non-Friable	5/7	
B	B-35	Ductwork	Black tar layer under canvas	60	SM	Good	C (e)	Non-Friable	7	
B	B-35	Ductwork	Parge adhesive under canvas	60	SM	Good	C (e)	Friable	7	
B	B-35	Piping	Pipe Fitting Insulation	25	EA	Good	C (e)	Friable	7	
B	B-35	Piping	Pipe Fitting Insulation	15	EA	Good	D	Friable	7	Concealed behind metal panels and plaster columns along north perimeter wall, feeding radiators.
B	B-35	Piping	Straight Run-Aircell	30	LM	Good	C (e)	Friable	7	
B	B-33B	Piping	Pipe Fitting Insulation	10	EA	Good	D	Friable	7	
B	Washrooms Pipechase	Piping	Pipe Fitting Insulation	35	EA	Good	B	Friable	7	
B	B-83A	Piping	Pipe Fitting Insulation	4	EA	Good	D	Friable	7	Present above plaster ceiling, 2.7m above floor
B	B-83A	Ductwork	Black tar layer under canvas	1	SM	Good	D	Non-Friable	7	Present above plaster ceiling, 2.7m above floor
B	B-83A	Ductwork	Parge adhesive under canvas	1	SM	Good	D	Friable	7	Present above plaster ceiling, 2.7m above floor
B	B-83	Piping	Straight Run Pipe Insulation	15	LM	Good	D	Friable	7	Present above plaster ceiling, 2.7m above floor
B	B-83	Piping	Pipe Fitting Insulation	20	EA	Good	D	Friable	7	Present above plaster ceiling, 2.7m above floor
B	B-81A	Piping	Pipe Fitting Insulation	4	EA	Good	D	Friable	7	Present above plaster ceiling, 2.5m above floor
B	B-81	Piping	Straight Run Pipe Insulation	15	LM	Good	D	Friable	7	Assumed present in solid wall
B	B-81	Piping	Pipe Fitting Insulation	20	EA	Good	D	Friable	7	Assumed present in solid wall
B	B-38	Floor	Linoleum	120	SM	Good	A	Non-Friable	5/7	
B	B-38	Walls and columns	Drywall joint compound	200	SM	Good	A	Non-Friable	5/7	
B	CS-2	Piping	Pipe Fitting Insulation	22	EA	Good	B	Friable	7	
B	CS-2	Ductwork	Black tar layer under canvas	5	SM	Good	B	Non-Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
B	CS-2	Ductwork	Parge adhesive under canvas	5	SM	Good	B	Friable	7	
B	B-36	Walls and columns	Drywall joint compound	40	SM	Good	A	Non-Friable	5/7	
B	B-36	Ceiling deck	Drywall joint compound	150	SM	Good	C (c)	Non-Friable	7	
B	B-36	Ceiling deck	Drywall joint compound	15	SM	Fair	C (c)	Non-Friable	7	
B	B-36	Piping	Pipe Fitting Insulation	9	EA	Good	C (c)	Friable	7	
B	B-36A	Floor	Linoleum	12	SM	Good	A	Non-Friable	5/7	
B	B-36A	Ceiling deck	Drywall joint compound	12	SM	Good	D	Non-Friable	7	
B	B-36B	Floor	Linoleum	6	SM	Good	A	Non-Friable	5/7	
B	B-36B	Ceiling deck	Drywall joint compound	12	SM	Good	D	Non-Friable	7	
B	B-34, B-34-A,B	Walls	Drywall joint compound	80	SM	Good	A	Non-Friable	5/7	
B	B-34, B-34-A,B	Miscellaneous	Transite panels	2	SM	Good	A	Non-Friable	5/7	Stored loosely in room.
B	B-34, B-34-A,B	Piping	Pipe Fitting Insulation	40	EA	Good	C (c)	Friable	7	
B	B-34-C	Floor	Vinyl floor tiles and mastic	6	SM	Good	A	Non-Friable	5/7	
B	B-34-C	Piping	Straight Run-Aircell	10	LM	Good	C (c)	Friable	7	
B	B-34-C	Piping	Straight Run-Aircell	<1	LM	Poor	C (c)	Friable	4	
B	B-34-C	Piping	Pipe Fitting Insulation	30	EA	Good	C (c)	Friable	7	
B	North-Eastern Hallway	Ductwork	Black tar layer under canvas	90	SM	Good	C (c)	Non-Friable	7	
B	North-Eastern Hallway	Ductwork	Parge adhesive under canvas	90	SM	Good	C (c)	Friable	7	
B	North-Eastern Hallway	Piping	Pipe Fitting Insulation	70	EA	Good	C (c)	Friable	7	
B	North-Eastern Hallway	Piping	Straight Run-Mag Block	200	LM	Good	C (c)	Friable	7	
B	South-Western Hallway	Ductwork	Black tar layer under canvas	250	SM	Good	C (c)	Non-Friable	7	
B	South-Western Hallway	Ductwork	Parge adhesive under canvas	250	SM	Good	C (c)	Friable	7	
B	South-Western Hallway	Piping	Pipe Fitting Insulation	60	EA	Good	C (c)	Friable	7	
B	North-Western Hallway	Ductwork	Black tar layer under canvas	12	SM	Good	C (c)	Non-Friable	7	
B	North-Western Hallway	Ductwork	Parge adhesive under canvas	12	SM	Good	C (c)	Friable	7	
B	North-Western Hallway	Piping	Pipe Fitting Insulation	65	EA	Good	C (c)	Friable	7	
B	North-Western Hallway	Piping	Straight Run-Aircell	100	LM	Good	C (c)	Friable	7	
B	Throughout	Wall/piping	Wall pipe penetration caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
B	Throughout	Ducting	Duct vibration dampers	UNK	UNK	Good	C (e)	Non-Friable	7	
B	Throughout	Cast iron drain piping	Joint caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
Ground Floor										
G	101	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	101	Piping	Pipe Fitting Insulation	30	EA	Good	C (c)	Friable	7	
G	101	Ductwork	Black tar layer under canvas	30	SM	Good	C (c)	Non-Friable	7	
G	101	Ductwork	Parge adhesive under canvas	30	SM	Good	C (c)	Friable	7	
G	103	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	103	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
G	103	Ductwork	Black tar layer under canvas	30	SM	Good	C (c)	Non-Friable	7	
G	103	Ductwork	Parge adhesive under canvas	30	SM	Good	C (c)	Friable	7	
G	103	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	103	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	107	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
G	107	Piping	Pipe Fitting Insulation	21	EA	Good	C (c)	Friable	7	
G	107	Ductwork	Black tar layer under canvas	22	SM	Good	C (c)	Non-Friable	7	
G	107	Ductwork	Parge adhesive under canvas	22	SM	Good	C (c)	Friable	7	
G	107	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	107	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	109/111	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	109/111	Piping	Pipe Fitting Insulation	21	EA	Good	C (c)	Friable	7	
G	109/111	Ductwork	Black tar layer under canvas	22	SM	Good	C (c)	Non-Friable	7	
G	109/111	Ductwork	Parge adhesive under canvas	22	SM	Good	C (c)	Friable	7	
G	109/111	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	2 locations
G	109/111	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	2 locations
G	113	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	113	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
G	113	Ductwork	Black tar layer under canvas	22	SM	Good	C (c)	Non-Friable	7	
G	113	Ductwork	Parge adhesive under canvas	22	SM	Good	C (c)	Friable	7	
G	113	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	113	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	117	Piping	Pipe Fitting Insulation	30	EA	Good	C (c)	Friable	7	
G	117	Ductwork	Black tar layer under canvas	36	SM	Good	C (c)	Non-Friable	7	
G	117	Ductwork	Parge adhesive under canvas	36	SM	Good	C (c)	Friable	7	
G	120	Piping	Pipe Fitting Insulation	22	EA	Good	C (c)	Friable	7	
G	120	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
G	120	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
G	120	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	120	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	118	Piping	Pipe Fitting Insulation	21	EA	Good	C (c)	Friable	7	
G	118	Piping	Pipe Fitting Insulation	1	EA	Poor	C (c)	Friable	4	
G	118	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
G	118	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
G	118	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	118	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	116	Piping	Pipe Fitting Insulation	22	EA	Good	C (c)	Friable	7	
G	116	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
G	116	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
G	116	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	116	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	110	Piping	Pipe Fitting Insulation	50	EA	Good	C (c)	Friable	7	
G	110	Ductwork	Black tar layer under canvas	50	SM	Good	C (c)	Non-Friable	7	
G	110	Ductwork	Parge adhesive under canvas	50	SM	Good	C (c)	Friable	7	
G	110	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	2 locations
G	110	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	2 locations
G	108	Piping	Pipe Fitting Insulation	22	EA	Good	C (c)	Friable	7	
G	108	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
G	108	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
G	106	Piping	Pipe Fitting Insulation	18	EA	Good	C (c)	Friable	7	
G	106	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
G	106	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
G	106	Ductwork	Black tar layer under canvas	2	SM	Fair	C (c)	Non-Friable	7	
G	106	Ductwork	Parge adhesive under canvas	2	SM	Fair	C (c)	Friable	7	
G	104	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
G	104	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
G	104	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
G	104	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	104	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	EX102 West	Piping	Pipe Fitting Insulation	10	EA	Good	D	Friable	7	Above solid plaster ceiling, approximately 2.6m high
G	CR100	Piping	Pipe Fitting Insulation	28	EA	Good	C (c)	Friable	7	
G	CR100	Piping	Straight Run-Aircell	20	LM	Good	C (c)	Friable	7	
G	CR100	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	
G	CR100	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	
G	CR100	Ductwork	Parging	1	SM	Good	C (c)	Friable	7	Around duct opening
G	MS101	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS101	Piping	Straight Run-Mag Block	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS102A	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
G	MS102A	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
G	MS104	Piping	Straight Run-Aircell	12	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS104	Piping	Pipe Fitting Insulation	6	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS105	Piping	Straight Run-Aircell	14	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS105	Piping	Pipe Fitting Insulation	8	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS106	Piping	Straight Run-Aircell	12	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS106	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS107	Piping	Straight Run-Aircell	8	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS107	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
G	MS108	Piping	Straight Run-Aircell	4	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS108	Piping	Pipe Fitting Insulation	9	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS109	Piping	Straight Run-Aircell	8	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS109	Piping	Pipe Fitting Insulation	9	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS110	Piping	Straight Run-Aircell	8	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	MS110	Piping	Pipe Fitting Insulation	8	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
G	LB100	Walls	Drywall joint compound	30	SM	Good	A	Non-Friable	5/7	
G	LB100	Walls	Drywall joint compound	2	SM	Fair	A	Non-Friable	5/6	
G	LB100	Ceiling	Drywall joint compound	70	SM	Good	C (e)	Non-Friable	7	Approximately 3.5m high
G	LB100	Piping	Pipe Fitting Insulation	15	EA	Good	D	Friable	7	Above drywall ceiling
G	LB100	Ductwork	Black tar layer under canvas	10	SM	Good	D	Non-Friable	7	Above drywall ceiling
G	LB100	Ductwork	Parge adhesive under canvas	10	SM	Good	D	Friable	7	Above drywall ceiling
G	LB100	Piping	Straight Run Pipe Insulation	25	LM	Good	D	Friable	7	Above drywall ceiling
G	Washrooms Pipechase	Piping	Pipe Fitting Insulation	15	EA	Good	B / Ce	Friable	7	Up to 2.5m high
G	Washrooms Pipechase	Piping	Black tar layer under canvas	4	SM	Good	C (e)	Non-Friable	7	
G	Washrooms Pipechase	Piping	Parge adhesive under canvas	4	SM	Good	C (e)	Friable	7	
G	Mech shaft	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Located adjacent to elevator, inaccessible, assumed present
G	Mech shaft	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Located adjacent to elevator, inaccessible, assumed present
G	Female Washroom	Piping	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	Above plaster ceiling - 2.8m high
G	Female Washroom	Ductwork	Black tar layer under canvas	30	SM	Good	D	Non-Friable	7	Above plaster ceiling - 2.8m high
G	Female Washroom	Ductwork	Parge adhesive under canvas	30	SM	Good	D	Friable	7	Above plaster ceiling - 2.8m high
G	Male Washroom	Piping	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	Above plaster ceiling - 2.8m high
G	Male Washroom	Ductwork	Black tar layer under canvas	30	SM	Good	D	Non-Friable	7	Above plaster ceiling - 2.8m high
G	Male Washroom	Ductwork	Parge adhesive under canvas	30	SM	Good	D	Friable	7	Above plaster ceiling - 2.8m high
G	125	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	126	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	126	Piping	Pipe Fitting Insulation	35	EA	Good	C (c)	Friable	7	
G	126	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	
G	126	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	
G	126	Ductwork	Black tar layer under canvas	1	SM	Fair	C (c)	Non-Friable	7	
G	126	Ductwork	Parge adhesive under canvas	1	SM	Fair	C (c)	Friable	7	
G	126	Ductwork	Parging	1	SM	Good	C (c)	Friable	7	On one duct hanger
G	128/130	Wall	Drywall joint compound	30	SM	Good	A	Non-Friable	5/7	
G	128/130	Piping	Pipe Fitting Insulation	40	EA	Good	C (c)	Friable	7	

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G	128/130	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	
G	128/130	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	
G	128/130	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	2 Locations
G	128/130	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	2 Locations
G	132	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	132	Piping	Pipe Fitting Insulation	30	EA	Good	C (c)	Friable	7	
G	132	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	
G	132	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	
G	132	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	132	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	134	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	134	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
G	134	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	
G	134	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	
G	133A	Floor	Vinyl floor tiles and mastic	300	SM	Good	A	Non-Friable	5/7	
G	133A	Walls and columns	Drywall joint compound	100	SM	Good	A	Non-Friable	5/7	
G	133A	Piping	Pipe Fitting Insulation	140	EA	Good	C (c)	Friable	7	
G	133A	Ductwork	Black tar layer under canvas	85	SM	Good	C (c)	Non-Friable	7	
G	133A	Ductwork	Parge adhesive under canvas	85	SM	Good	C (c)	Friable	7	
G	EX102-East	Piping	Pipe Fitting Insulation	30	EA	Good	C (e)	Friable	7	
G	EX102-East	Ductwork	Black tar layer under canvas	25	SM	Good	C (e)	Non-Friable	7	
G	EX 102-East	Ductwork	Parge adhesive under canvas	25	SM	Good	C (e)	Friable	7	
G	EX102-East	Ductwork	Parging	1	SM	Good	C (e)	Friable	7	
G	Storage room	Ductwork	Parge adhesive under canvas	20	SM	Good	C (e)	Friable	7	South of Cafeteria 133A
G	Storage room	Ductwork	Black tar layer under canvas	20	SM	Good	C (e)	Non-Friable	7	South of Cafeteria 133A
G	MS120	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
G	MS120	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
G	133	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
G	133	Piping	Pipe Fitting Insulation	25	EA	Good	C (c)	Friable	7	
G	133	Ductwork	Black tar layer under canvas	30	SM	Good	C (c)	Non-Friable	7	
G	133	Ductwork	Parge adhesive under canvas	30	SM	Good	C (c)	Friable	7	
G	133	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
G	133	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
G	131	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
G	131	Ductwork	Black tar layer under canvas	20	SM	Good	C (c)	Non-Friable	7	
G	131	Ductwork	Parge adhesive under canvas	20	SM	Good	C (c)	Friable	7	
G	CR100	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
G	MS113	Piping	Straight Run-Aircell	8	LM	Good	B	Friable	7	
G	MS113	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	
G	MS112	Piping	Pipe Fitting Insulation	6	EA	Good	B	Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
G	Perimeter Wall	Wall	Black Tar	1000	SM	Good	D	Friable	7	Black tar on exterior side of styrofoam, inside perimeter wall. Behind 3-4" thick exterior decorative stone, 3-4" thick concrete block, and 1" thick asbestos-containing parging cement. Interior access behind 1" plaster, 5" terra cotta, and 3" thick styrofoam. Anticipated present and concealed in all perimeter walls above grade. Destructive removal of materials required for access throughout. Tar shall be assumed to be well adhered to block throughout for which mechanical/power tool separation is required.
G	Perimeter Wall	Wall	Parging Cement	1000	SM	Good	D	Friable	7	Parging cement between asbestos-containing black tar on styrofoam and concrete block, inside perimeter wall. Behind 3-4" thick exterior decorative stone and 3-4" thick concrete block. Interior access behind 1" plaster, 5" terra cotta, 3" thick styrofoam with asbestos-containing black tar. Anticipated in all perimeter walls above grade. Destructive removal of materials required for access throughout. Parging shall be assumed to be well adhered to block throughout for which mechanical/power tool separation is required.
G	Throughout	Wall/piping	Wall pipe penetration caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
G	Throughout	Ducting	Duct vibration dampers	UNK	UNK	Good	C (e)	Non-Friable	7	
G	Throughout	Cast iron drain piping	Joint caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
Second Floor										
2nd	200	Piping-radiators	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	
2nd	200	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
2nd	200	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	200	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	204, 204-A,B	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
2nd	204, 204-A,B	Piping	Pipe Fitting Insulation	25	EA	Good	C (c)	Friable	7	
2nd	204, 204-A,B	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	204, 204-A,B	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	204, 204-A,B	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	Two locations
2nd	204, 204-A,B	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	Two locations
2nd	206	Piping-radiators	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	
2nd	206	Piping	Pipe Fitting Insulation	12	EA	Good	C (c)	Friable	7	
2nd	206	Ductwork	Black tar layer under canvas	8	SM	Good	C (c)	Non-Friable	7	
2nd	206	Ductwork	Parge adhesive under canvas	8	SM	Good	C (c)	Friable	7	
2nd	208	Piping-radiators	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	
2nd	208	Piping	Pipe Fitting Insulation	16	EA	Good	C (c)	Friable	7	
2nd	208	Ductwork	Black tar layer under canvas	10	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	208	Ductwork	Parge adhesive under canvas	10	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	210	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
2nd	210	Piping	Pipe Fitting Insulation	18	EA	Good	C (c)	Friable	7	
2nd	210	Ductwork	Black tar layer under canvas	10	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	210	Ductwork	Parge adhesive under canvas	10	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	212	Piping-radiators	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
2nd	212	Wall	Drywall joint compound	10	SM	Good	A	Non-Friable	5/7	
2nd	212	Piping	Pipe Fitting Insulation	12	EA	Good	C (c)	Friable	7	
2nd	212	Ductwork	Black tar layer under canvas	10	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	212	Ductwork	Parge adhesive under canvas	10	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	214	Piping-radiators	Pipe Fitting Insulation	16	EA	Good	B	Friable	7	
2nd	214	Piping	Pipe Fitting Insulation	16	EA	Good	C (c)	Friable	7	
2nd	214	Ductwork	Black tar layer under canvas	15	SM	Good	C (c)	Non-Friable	7	
2nd	214	Ductwork	Parge adhesive under canvas	15	SM	Good	C (c)	Friable	7	
2nd	214	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	Unjacketed
2nd	214	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	Unjacketed
2nd	214A	Piping	Pipe Fitting Insulation	9	EA	Good	C (c)	Friable	7	
2nd	214A	Ductwork	Black tar layer under canvas	<1	SM	Good	C (c)	Non-Friable	7	
2nd	214A	Ductwork	Parge adhesive under canvas	<1	SM	Good	C (c)	Friable	7	
2nd	215	Floor	Vinyl floor tiles and mastic	9	SM	Good	B	Non-Friable	7	
2nd	216	Piping-radiators	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	
2nd	216	Wall	Drywall joint compound	30	SM	Good	A	Non-Friable	5/7	
2nd	216	Piping	Pipe Fitting Insulation	16	EA	Good	C (c)	Friable	7	
2nd	216	Ductwork	Black tar layer under canvas	14	SM	Good	C (c)	Non-Friable	7	
2nd	216	Ductwork	Parge adhesive under canvas	14	SM	Good	C (c)	Friable	7	
2nd	217	Wall	Drywall joint compound	30	SM	Good	A	Non-Friable	5/7	
2nd	218/220/220A/B/224/228A	Piping-radiators	Pipe Fitting Insulation	70	EA	Good	B	Friable	7	
2nd	218/220/220A/B/224/228A	Wall	Drywall joint compound	200	SM	Good	A	Non-Friable	5/7	
2nd	218/220/220A/B/224/228A	Piping	Pipe Fitting Insulation	60	EA	Good	C (c)	Friable	7	
2nd	218/220/220A/B/224/228A	Ductwork	Black tar layer under canvas	80	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	218/220/220A/B/224/228A	Ductwork	Parge adhesive under canvas	80	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	MS220	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
2nd	MS220	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
2nd	228	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
2nd	228	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
2nd	228	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
2nd	228	Ductwork	Black tar layer under canvas	25	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	228	Ductwork	Parge adhesive under canvas	25	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	230	Piping-radiators	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	
2nd	230	Ceiling	2x4 Ceiling tiles, LF PH	20	SM	Good	B	Friable	7	
2nd	230	Piping	Pipe Fitting Insulation	12	EA	Good	C (c)	Friable	7	
2nd	230	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	
2nd	230	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	
2nd	230	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
2nd	230	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
2nd	232-234, 236A	Piping-radiators	Pipe Fitting Insulation	30	EA	Good	B	Friable	7	
2nd	232-234, 236A	Piping	Pipe Fitting Insulation	45	EA	Good	C (c)	Friable	7	
2nd	232-234, 236A	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
2nd	232-234, 236A	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	238	Piping-radiators	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	
2nd	238	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
2nd	238	Piping	Pipe Fitting Insulation	15	EA	Good	C (c)	Friable	7	
2nd	238	Ductwork	Black tar layer under canvas	16	SM	Good	C (c)	Non-Friable	7	
2nd	238	Ductwork	Parge adhesive under canvas	16	SM	Good	C (c)	Friable	7	
2nd	238	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
2nd	238	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
2nd	240	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
2nd	240	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
2nd	240	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
2nd	240	Ductwork	Black tar layer under canvas	30	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	240	Ductwork	Parge adhesive under canvas	30	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	242	Wall	Drywall joint compound	25	SM	Good	A	Non-Friable	5/7	
2nd	233-245/233A/245A	Piping-radiators	Pipe Fitting Insulation	40	EA	Good	B	Friable	7	
2nd	233-245/233A/245A	Piping	Pipe Fitting Insulation	80	EA	Good	C (c)	Friable	7	
2nd	233-245/233A/245A	Ductwork	Black tar layer under canvas	125	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	233-245/233A/245A	Ductwork	Parge adhesive under canvas	125	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	Washrooms Pipechase	Piping	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	
2nd	Washrooms Pipechase	Piping	Pipe Fitting Insulation	1	EA	Fair	B	Friable	5/6	
2nd	Mech shaft	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
2nd	Mech shaft	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
2nd	Female Washroom	Piping-radiators	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	
2nd	Female Washroom	Piping	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	Above plaster ceiling - 2.8m high
2nd	Female Washroom	Ductwork	Black tar layer under canvas	30	SM	Good	D	Non-Friable	7	Above plaster ceiling - 2.8m high
2nd	Female Washroom	Ductwork	Parge adhesive under canvas	30	SM	Good	D	Friable	7	Above plaster ceiling - 2.8m high
2nd	Male Washroom	Piping-radiators	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	
2nd	Male Washroom	Piping	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	Above plaster ceiling - 2.8m high
2nd	Male Washroom	Ductwork	Black tar layer under canvas	30	SM	Good	D	Non-Friable	7	Above plaster ceiling - 2.8m high
2nd	Male Washroom	Ductwork	Parge adhesive under canvas	30	SM	Good	D	Friable	7	Above plaster ceiling - 2.8m high
2nd	209-217/217F/213/209A	Piping-radiators	Pipe Fitting Insulation	70	EA	Good	C (c)	Friable	7	
2nd	209-217/217F/213/209A	Piping	Pipe Fitting Insulation	100	EA	Good	C (c)	Friable	7	
2nd	209-217/217F/213/209A	Ductwork	Black tar layer under canvas	110	SM	Good	C (c)	Non-Friable	7	
2nd	209-217/217F/213/209A	Ductwork	Parge adhesive under canvas	110	SM	Good	C (c)	Friable	7	
2nd	209-217/217F/213/209A	Ductwork	Black tar layer under canvas	<1	SM	Fair	C (c)	Non-Friable	7	
2nd	209-217/217F/213/209A	Ductwork	Parge adhesive under canvas	<1	SM	Fair	C (c)	Friable	7	
2nd	201-207/201A	Piping-radiators	Pipe Fitting Insulation	60	EA	Good	C (c)	Friable	7	
2nd	201-207/201A	Piping	Pipe Fitting Insulation	60	EA	Good	C (c)	Friable	7	
2nd	201-207/201A	Ductwork	Black tar layer under canvas	120	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
2nd	201-207/201A	Ductwork	Parge adhesive under canvas	120	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
2nd	Hallway	Piping	Pipe Fitting Insulation	80	EA	Good	C (c)	Friable	7	
2nd	Hallway	Ductwork	Black tar layer under canvas	100	SM	Good	C (c)	Non-Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
2nd	Hallway	Ductwork	Parge adhesive under canvas	100	SM	Good	C (c)	Friable	7	
2nd	Hallway	Ductwork	Parge adhesive under canvas	1	SM	Fair	C (c)	Friable	7	2 Locations
2nd	Hallway	Ductwork	Black tar layer under canvas	1	SM	Fair	C (c)	Non-Friable	7	
2nd	MS202	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS202	Piping	Straight Run-Mag Block	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS202	Piping	Pipe Fitting Insulation	6	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS202A	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
2nd	MS202A	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
2nd	MS204	Piping	Pipe Fitting Insulation	5	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS205	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS205	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS206	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS206	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS207	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS207	Piping	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS208	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS208	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS209	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS209	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS210	Piping	Straight Run-Aircell	4	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS210	Piping	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	Elec closet off hallway	Floor	Vinyl floor tiles and mastic	3	SM	Good	B	Non-Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
2nd	MS213	Piping	Pipe Fitting Insulation	8	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS214	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS214	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS215	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS215	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS216	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS216	Piping	Pipe Fitting Insulation	6	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS217	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS217	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS218	Piping	Pipe Fitting Insulation	4	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	MS219	Piping	Pipe Fitting Insulation	8	EA	Good	B	Friable	7	From below and continues to floor above - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
2nd	Perimeter Wall	Wall	Black Tar	1000	SM	Good	D	Friable	7	Black tar on exterior side of styrofoam, inside perimeter wall. Behind 3-4" thick exterior decorative stone, 3-4" thick concrete block, and 1" thick asbestos-containing parging cement. Interior access behind 1" plaster, 5" terra cotta, and 3" thick styrofoam. Anticipated present and concealed in all perimeter walls above grade. Destructive removal of materials required for access throughout. Tar shall be assumed to be well adhered to block throughout for which mechanical/power tool separation is required.
2nd	Perimeter Wall	Wall	Parging Cement	1000	SM	Good	D	Friable	7	Parging cement between asbestos-containing black tar on styrofoam and concrete block, inside perimeter wall. Behind 3-4" thick exterior decorative stone and 3-4" thick concrete block. Interior access behind 1" plaster, 5" terra cotta, 3" thick styrofoam with asbestos-containing black tar. Anticipated in all perimeter walls above grade. Destructive removal of materials required for access throughout. Parging shall be assumed to be well adhered to block throughout for which mechanical/power tool separation is required.
2nd	Throughout	Wall/piping	Wall pipe penetration caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
2nd	Throughout	Ducting	Duct vibration dampers	UNK	UNK	Good	C (e)	Non-Friable	7	
2nd	Throughout	Cast iron drain piping	Joint caulking	UNK	UNK	Good	C (e)	Non-Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
Third Floor										
3rd	300	Floor	Vinyl floor tiles and mastic	25	SM	Good	A	Non-Friable	5/7	
3rd	300	Piping-radiators	Pipe Fitting Insulation	40	EA	Good	B	Friable	7	
3rd	300	Ductwork-radiators	Black tar layer under canvas	1	SM	Good	B	Non-Friable	7	
3rd	300	Ductwork-radiators	Parge adhesive under canvas	1	SM	Good	B	Friable	7	
3rd	304	Piping-radiators	Pipe Fitting Insulation	50	EA	Good	B	Friable	7	
3rd	304	Ductwork-radiators	Black tar layer under canvas	2	SM	Good	B	Non-Friable	7	
3rd	304	Ductwork-radiators	Parge adhesive under canvas	2	SM	Good	B	Friable	7	
3rd	304	Piping	Pipe Fitting Insulation	3	EA	Good	C (c)	Friable	7	
3rd	306	Piping-radiators	Pipe Fitting Insulation	50	EA	Good	B	Friable	7	
3rd	306	Ductwork-radiators	Black tar layer under canvas	2.5	SM	Good	B	Non-Friable	7	
3rd	306	Ductwork-radiators	Parge adhesive under canvas	2.5	SM	Good	B	Friable	7	
3rd	306	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
3rd	307	Wall	Drywall joint compound	50	SM	Good	A	Non-Friable	5/7	
3rd	312	Floor	Vinyl floor tiles and mastic	30	SM	Good	A	Non-Friable	5/7	Includes 2 different floor tile designs
3rd	312	Piping-radiators	Pipe Fitting Insulation	30	EA	Good	B	Friable	7	
3rd	312	Piping	Pipe Fitting Insulation	8	EA	Good	C (c)	Friable	7	
3rd	312	Ductwork-radiators	Black tar layer under canvas	1.5	SM	Good	B	Non-Friable	7	
3rd	312	Ductwork-radiators	Parge adhesive under canvas	1.5	SM	Good	B	Friable	7	
3rd	310A	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
3rd	310A	Ductwork-radiators	Black tar layer under canvas	0.5	SM	Good	B	Non-Friable	7	
3rd	310A	Ductwork-radiators	Parge adhesive under canvas	0.5	SM	Good	B	Friable	7	
3rd	316	Piping-radiators	Pipe Fitting Insulation	40	EA	Good	B	Friable	7	
3rd	316	Ductwork-radiators	Black tar layer under canvas	2	SM	Good	B	Non-Friable	7	
3rd	316	Ductwork-radiators	Parge adhesive under canvas	2	SM	Good	B	Friable	7	
3rd	316	Fumehood	Transite panels	2	SM	Good	A	Non-Friable	5/7	
3rd	316B	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
3rd	316B	Ductwork	Black tar layer under canvas	8	SM	Good	C (c)	Non-Friable	7	
3rd	316B	Ductwork	Parge adhesive under canvas	8	SM	Good	C (c)	Friable	7	
3rd	320, 320-A,B	Wall	Drywall joint compound	80	SM	Good	A	Non-Friable	5/7	
3rd	320, 320-A,B	Piping-radiators	Pipe Fitting Insulation	45	EA	Good	B	Friable	7	
3rd	320, 320-A,B	Ductwork-radiators	Black tar layer under canvas	2	SM	Good	B	Non-Friable	7	
3rd	320, 320-A,B	Ductwork-radiators	Parge adhesive under canvas	2	SM	Good	B	Friable	7	
3rd	320, 320-A,B	Piping	Pipe Fitting Insulation	8	EA	Good	C (c)	Friable	7	
3rd	322	Piping-radiators	Pipe Fitting Insulation	40	EA	Good	B	Friable	7	
3rd	322	Ductwork-radiators	Black tar layer under canvas	1.5	SM	Good	B	Non-Friable	7	
3rd	322	Ductwork-radiators	Parge adhesive under canvas	1.5	SM	Good	B	Friable	7	
3rd	324	Piping-radiators	Pipe Fitting Insulation	80	EA	Good	B	Friable	7	
3rd	324	Ductwork-radiators	Black tar layer under canvas	4	SM	Good	B	Non-Friable	7	
3rd	324	Ductwork-radiators	Parge adhesive under canvas	4	SM	Good	B	Friable	7	
3rd	324	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
3rd	324	Fumehood	Transite panels	16	SM	Good	A	Non-Friable	5/7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
3rd	326A	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
3rd	326A	Ductwork-radiators	Black tar layer under canvas	2	SM	Good	B	Non-Friable	7	
3rd	326A	Ductwork-radiators	Parge adhesive under canvas	2	SM	Good	B	Friable	7	
3rd	330	Piping-radiators	Pipe Fitting Insulation	30	EA	Good	B	Friable	7	
3rd	330	Ductwork-radiators	Black tar layer under canvas	2	SM	Good	B	Non-Friable	7	
3rd	330	Ductwork-radiators	Parge adhesive under canvas	2	SM	Good	B	Friable	7	
3rd	332	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
3rd	330	Ductwork-radiators	Black tar layer under canvas	1	SM	Good	B	Non-Friable	7	
3rd	330	Ductwork-radiators	Parge adhesive under canvas	1	SM	Good	B	Friable	7	
3rd	MS320	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
3rd	MS320	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
3rd	334	Piping-radiators	Pipe Fitting Insulation	40	EA	Good	B	Friable	7	
3rd	334	Piping	Pipe Fitting Insulation	12	EA	Good	C (c)	Friable	7	
3rd	334	Ductwork	Black tar layer under canvas	16	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
3rd	334	Ductwork	Parge adhesive under canvas	16	SM	Good	C (c)	Friable	7	
3rd	341	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
3rd	341	Piping	Pipe Fitting Insulation	2	EA	Good	D	Friable	7	Feeding sinks, behind wooden and/or steel panels.
3rd	341	Ductwork-radiators	Black tar layer under canvas	2	SM	Good	B	Non-Friable	7	
3rd	341	Ductwork-radiators	Parge adhesive under canvas	2	SM	Good	B	Friable	7	
3rd	341	Fumehood	Transite panels	4	SM	Good	A	Non-Friable	5/7	
3rd	337, 337A	Floor	Remnant Vinyl Floor Tile	20	SM	Poor	D	Friable	7	Observed under lab benches. Detached from mastic
3rd	337, 337A	Piping-radiators	Pipe Fitting Insulation	60	EA	Good	B	Friable	7	
3rd	337, 337A	Piping	Pipe Fitting Insulation	24	EA	Good	C (c)	Friable	7	
3rd	337, 337A	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
3rd	337, 337A	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
3rd	337, 337A	Fumehood	Transite panels	16	SM	Good	A	Non-Friable	5/7	
3rd	333	Floor	Vinyl floor tiles and mastic	10	SM	Good	A	Non-Friable	5/7	
3rd	333	Wall	Drywall joint compound	20	SM	Good	A	Non-Friable	5/7	
3rd	333	Piping	Pipe Fitting Insulation	10	EA	Good	C (c)	Friable	7	
3rd	333	Ductwork	Black tar layer under canvas	2	SM	Good	C (c)	Non-Friable	7	
3rd	333	Ductwork	Parge adhesive under canvas	2	SM	Good	C (c)	Friable	7	
3rd	331/331A	Piping-radiators	Pipe Fitting Insulation	80	EA	Good	B	Friable	7	
3rd	331/331A	Piping	Pipe Fitting Insulation	20	EA	Good	C (c)	Friable	7	
3rd	331/331A	Piping-sinks	Pipe Fitting Insulation	6	EA	Good	A	Friable	5/7	
3rd	331/331A	Ductwork	Black tar layer under canvas	40	SM	Good	C (c)	Non-Friable	7	Quantity includes 0.5 SM for each radiator
3rd	331/331A	Ductwork	Parge adhesive under canvas	40	SM	Good	C (c)	Friable	7	Quantity includes 0.5 SM for each radiator
3rd	Washrooms Pipechase	Piping	Pipe Fitting Insulation	18	EA	Good	B	Friable	7	
3rd	Mech shaft	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick
3rd	Mech shaft	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
3rd	Female Washroom	Piping-radiators	Pipe Fitting Insulation	30	EA	Good	B	Friable	7	
3rd	Female Washroom	Piping	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
3rd	Female Washroom	Ductwork	Black tar layer under canvas	30	SM	Good	D	Non-Friable	7	Quantity includes 0.5 SM for each radiator
3rd	Female Washroom	Ductwork	Parge adhesive under canvas	30	SM	Good	D	Friable	7	Quantity includes 0.5 SM for each radiator
3rd	Male Washroom	Piping-radiators	Pipe Fitting Insulation	20	EA	Good	B	Friable	7	
3rd	Male Washroom	Piping	Pipe Fitting Insulation	12	EA	Good	D	Friable	7	
3rd	Male Washroom	Ductwork	Black tar layer under canvas	30	SM	Good	D	Non-Friable	7	
3rd	Male Washroom	Ductwork	Parge adhesive under canvas	30	SM	Good	D	Friable	7	
3rd	319, 319A	Piping-radiators	Pipe Fitting Insulation	80	EA	Good	B	Friable	7	
3rd	319, 319A	Ductwork-radiators	Black tar layer under canvas	5	SM	Good	B	Non-Friable	7	
3rd	319, 319A	Ductwork-radiators	Parge adhesive under canvas	5	SM	Good	B	Friable	7	
3rd	315/315-B/315-C/311-A/311	Piping	Pipe Fitting Insulation	6	EA	Good	C (c)	Friable	7	
3rd	315/315-B/315-C/311-A/311	Piping-sinks	Pipe Fitting Insulation	6	EA	Good	A	Friable	5/7	
3rd	315/315-B/315-C/311-A/311	Piping-eyewash	Pipe Fitting Insulation	6	EA	Good	A	Friable	5/7	
3rd	315/315-B/315-C/311-A/311	Piping-radiators	Pipe Fitting Insulation	60	EA	Good	B	Friable	7	
3rd	315/315-B/315-C/311-A/311	Ductwork-radiators	Black tar layer under canvas	5	SM	Good	B	Non-Friable	7	
3rd	315/315-B/315-C/311-A/311	Ductwork-radiators	Parge adhesive under canvas	5	SM	Good	B	Friable	7	
3rd	315/315-B/315-C/311-A/311	Fumehood	Transite panels	10	SM	Good	A	Non-Friable	5/7	
3rd	309, 309-A,B	Walls	Drywall joint compound	50	SM	Good	A	Non-Friable	5/7	
3rd	309, 309-A,B	Piping	Pipe Fitting Insulation	3	EA	Good	C (c)	Friable	7	
3rd	309, 309-A,B	Piping-radiators	Pipe Fitting Insulation	50	EA	Good	B	Friable	7	
3rd	309, 309-A,B	Ductwork-radiators	Black tar layer under canvas	2.5	SM	Good	B	Non-Friable	7	
3rd	309, 309-A,B	Ductwork-radiators	Parge adhesive under canvas	2.5	SM	Good	B	Friable	7	
3rd	307	Walls	Drywall joint compound	30	SM	Good	A	Non-Friable	5/7	
3rd	303, 303A	Piping-radiators	Pipe Fitting Insulation	70	EA	Good	B	Friable	7	
3rd	303, 303A	Piping	Pipe Fitting Insulation	8	EA	Good	C (c)	Friable	7	
3rd	303, 303A	Piping-sinks	Pipe Fitting Insulation	8	EA	Good	A	Friable	5/7	
3rd	303, 303A	Ductwork	Black tar layer under canvas	2	SM	Good	C (c)	Non-Friable	7	
3rd	303, 303A	Ductwork	Parge adhesive under canvas	2	SM	Good	C (c)	Friable	7	
3rd	303, 303A	Fumehood	Transite panels	10	SM	Good	A	Non-Friable	5/7	
3rd	Hallway	Floor	Vinyl Floor Tiles	270	SM	Good	A	Non-Friable	5/7	
3rd	Hallway	Floor	Black Mastic	270	SM	Good	D	Non-Friable	7	Beneath VFT
3rd	Hallway	Ceiling	2x4 Ceiling tiles, LF PH	140	SM	Good	C (e)	Friable	7	
3rd	Hallway	Piping	Pipe Fitting Insulation	50	EA	Good	C (c)	Friable	7	
3rd	Hallway	Ductwork	Black tar layer under canvas	330	SM	Good	C (c)	Non-Friable	7	
3rd	Hallway	Ductwork	Parge adhesive under canvas	330	SM	Good	C (c)	Friable	7	
3rd	Hallway	Piping	Straight Run-Aircell	90	LM	Good	C (c)	Friable	7	
3rd	MS302	Piping	Straight Run-Aircell	6	LM	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS302	Piping	Straight Run-Mag Block	6	LM	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS302	Piping	Pipe Fitting Insulation	16	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS302A	Ductwork	Black tar layer under canvas	80	SM	Good	D	Non-Friable	7	Requires demolition through concrete block - approximately 25cm thick

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
3rd	MS302A	Ductwork	Parge adhesive under canvas	80	SM	Good	D	Friable	7	Requires demolition through concrete block - approximately 25cm thick
3rd	MS303	Piping	Pipe Fitting Insulation	18	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS304	Piping	Pipe Fitting Insulation	11	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS305	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS306	Piping	Pipe Fitting Insulation	15	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS307	Piping	Pipe Fitting Insulation	14	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS308	Piping	Pipe Fitting Insulation	9	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS309	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS310	Piping	Pipe Fitting Insulation	10	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	MS311	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Floor of shaft and accessibility to shaft to be confirmed by contractor.
3rd	Elec closet off hallway	Floor	Vinyl floor tiles and mastic	3	SM	Good	B	Non-Friable	7	
3rd	MS313	Piping	Pipe Fitting Insulation	8	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.
3rd	MS314	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.
3rd	MS315	Piping	Pipe Fitting Insulation	13	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.
3rd	MS316	Piping	Pipe Fitting Insulation	8	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.
3rd	MS317	Piping	Pipe Fitting Insulation	4	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.
3rd	MS318	Piping	Pipe Fitting Insulation	12	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.
3rd	MS319	Piping	Pipe Fitting Insulation	14	EA	Good	B	Friable	7	From below - floor in shaft may be incomplete. Accessibility to be confirmed for ladder use.

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
3rd	Perimeter Wall	Wall	Black Tar	860	SM	Good	D	Friable	7	Black tar on exterior side of styrofoam, inside perimeter wall. Behind 3-4" thick exterior decorative stone, 3-4" thick concrete block, and 1" thick asbestos-containing parging cement. Interior access behind 1" plaster, 5" terra cotta, and 3" thick styrofoam. Anticipated present and concealed in all perimeter walls above grade. Destructive removal of materials required for access throughout. Tar shall be assumed to be well adhered to block throughout for which mechanical/power tool separation is required.
3rd	Perimeter Wall	Wall	Parging Cement	860	SM	Good	D	Friable	7	Parging cement between asbestos-containing black tar on styrofoam and concrete block, inside perimeter wall. Behind 3-4" thick exterior decorative stone and 3-4" thick concrete block. Interior access behind 1" plaster, 5" terra cotta, 3" thick styrofoam with asbestos-containing black tar. Anticipated in all perimeter walls above grade. Destructive removal of materials required for access throughout. Parging shall be assumed to be well adhered to block throughout for which mechanical/power tool separation is required.
3rd	Throughout	Wall/piping	Wall pipe penetration caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
3rd	Throughout	Ducting	Duct vibration dampers	UNK	UNK	Good	C (e)	Non-Friable	7	
3rd	Throughout	Cast iron drain piping	Joint caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
Penthouse										
PH	PH interior perimeter	Lower walls	Double-sided Transite panels	800	SM	Good	B	Non-Friable	7	
PH	PH interior perimeter	Lower walls	Double-sided Transite panels	2	SM	Poor	B	Non-Friable	3	2 locations -Behind vault/opposite penthouse doors.
PH	PH interior perimeter	Lower walls	Caulking between Transite panels	1300	LM	Good	B	Non-Friable	7	
PH	PH interior perimeter	Lower columns	Parging over cellulose	3	SM	Good	B	Friable	7	Lower columns, south-east side of PH
PH	PH interior perimeter	Lower columns	Grey insulation	3	SM	Good	B	Friable	7	
PH	East PH	System #2 AHU	Parging	230	SM	Good	B	Friable	7	
PH	East PH	System #2 ductwork	Parging	40	SM	Good	B	Friable	7	
PH	East PH	System #2 ductwork	Black tar layer under canvas	120	SM	Good	B	Non-Friable	7	
PH	East PH	System #2 ductwork	Parge adhesive under canvas	120	SM	Good	B	Friable	7	
PH	East PH	Generator exhaust	ACM on internal components	UKN	UKN	Good	D	UKN	7	Internal components inaccessible
PH	East PH	Nothern wall	Fibrous insulation on wall	10	SM	Good	B	Friable	7	
PH	East to West PH	System #2 ductwork	Black tar layer under canvas	400	SM	Good	B	Non-Friable	7	
PH	East to West PH	System #2 ductwork	Parge adhesive under canvas	400	SM	Good	B	Friable	7	
PH	East to West PH	System #2 ductwork	Black tar layer under canvas	<1	SM	Fair	B	Non-Friable	5/6	
PH	East to West PH	System #2 ductwork	Parge adhesive under canvas	<1	SM	Fair	B	Friable	5/6	
PH	East to West PH	System #2 ductwork	Parging	10	SM	Good	B	Friable	7	
PH	West PH	System #1 AHU	Parging	400	SM	Good	B	Friable	7	
PH	West PH	System #1 ductwork	Parging	80	SM	Good	B	Friable	7	
PH	West PH	System #1 ductwork	Parging	<1	SM	Poor	B	Friable	3	2 Locations
PH	West PH	System #1 ductwork	Black tar layer under canvas	200	SM	Good	B	Non-Friable	7	
PH	West PH	System #1 ductwork	Parge adhesive under canvas	200	SM	Good	B	Friable	7	
PH	West PH	System #1 ductwork	Black tar layer under canvas	2	SM	Fair	B	Non-Friable	5/6	Unjacketed
PH	West PH	System #1 ductwork	Parge adhesive under canvas	2	SM	Fair	B	Friable	5/6	Unjacketed

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Floor	Location ID	System	Description	Quantity	Unit	Condition	Access	Friability	Action	Englobe Comments
PH	West PH	Heat Exchanger	Parging	10	SM	Good	B	Friable	7	
PH	Exterior courtyard	PH-side walls	Double-sided Transite panels	75	SM	Good	B	Non-Friable	7	
PH	Penthouse	Piping	Straight Run-Mag Block	125	LM	Good	B	Friable	7	
PH	Penthouse	Piping	Pipe Fitting Insulation	100	EA	Good	C (e)	Friable	7	
PH	Penthouse	Piping	Pipe Fitting Insulation	1	EA	Fair	C (e)	Friable	6	
PH	Penthouse	Piping	Pipe Fitting Insulation	4	EA	Poor	C (e)	Friable	4	
PH	Penthouse	Piping	Parging	20	SM	Good	B	Friable	7	
PH	Generator Room	Piping	Pipe Fitting Insulation	1	EA	Good	C (e)	Friable	7	
PH	Generator Room	Exhaust	Parging	5	SM	Good	B	Friable	7	
PH	Throughout	Cast iron drain piping	Joint caulking	UNK	UNK	Good	C (e)	Non-Friable	7	
Exterior										
Exterior	Upper Penthouse Roof	Roof/pipe penetrations	Grey caulking	5	SM	Good	B	Non-Friable	7	

NOTES:

- Asbestos disturbance, abatement, transportation, and disposal shall be performed in accordance with requirements of O.Reg. 278/05, O.Reg. 347/90, PSPC Asbestos Management Standard, Canada Occupational Health and Safety Regulations, and TDGA, as amended.
- Quantities, conditions, and locations of asbestos-containing materials are to be confirmed on-site prior to material removal or disturbance. All quantities are approximations and are for general reference purposes only. The above quantities and information should be used only as a general guide for abatement costing purposes. No warranties or guarantees are implied or expressed. Bidding contractors are responsible for conducting a thorough walkthrough of the project areas, and draw their own conclusions with respect to site conditions, locations of materials, quantities, reinforcement relating to destructive access, and accessibility for abatement that may impact their costing and schedule.
- Condition, accessibility and action level based on PSPC's Asbestos Management Standard.
- All materials with accessibility Ce or Cc are to be assumed to be above 3m.

CONDITION:

GOOD - Completely encapsulated, no signs of damage, deterioration, or delamination
 FAIR - Minor damage or penetration or ACM that has never been covered.
 POOR - Original cover or jacket is damaged or missing. ACM is exposed and amount of missing material/damage is
 DEBRIS - Presence of fallen ACM. Major damage and no longer attached to its original

ACCESSIBILITY:

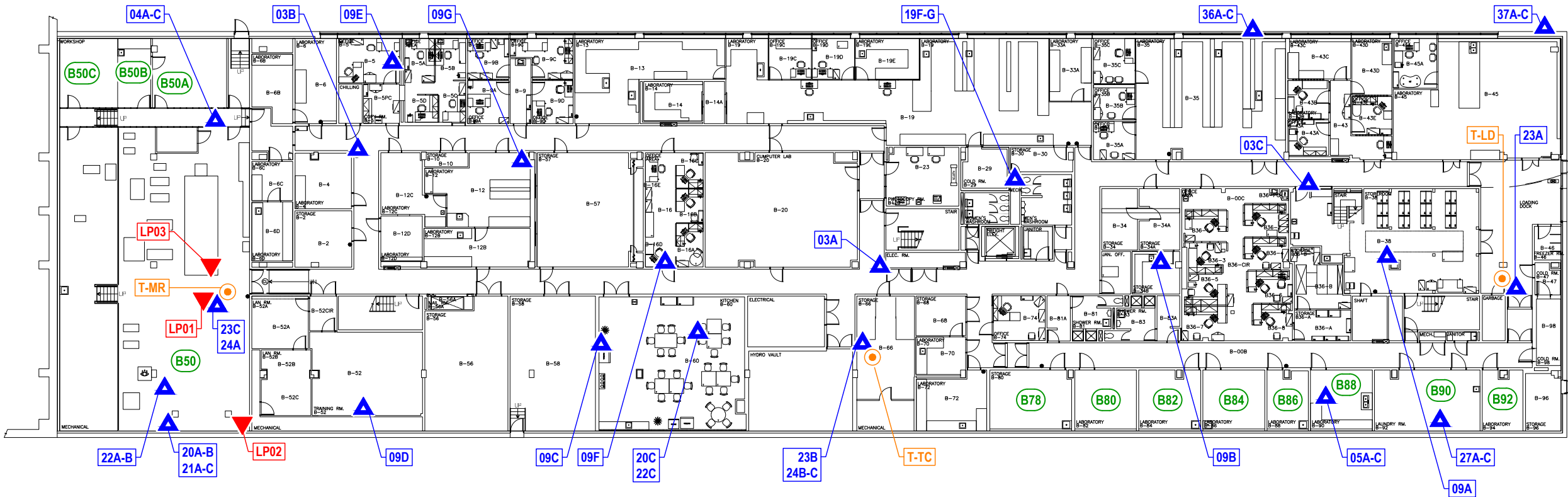
A - Areas of the building that are accessible to all building occupants
 B - Areas of the building that are accessible to Maintenance and Operations staff only, without the need of a ladder
 Ce - Areas of the building above 2.5 metres where use of a ladder is required to reach the ACM. ACM is exposed from floor level or ladder, without removing other building component
 Cc - Area of the building which require the removal of a building component, including ceiling tile or access panel into solid ceiling.
 D - Areas of the building that are behind solid ceilings systems or within wall and ceiling cavities (e.g. areas where building material demolition is required to obtain access).

PRIORITY (ACTION LEVEL)

- IMMEDIATE CLEAN UP OF ACM DEBRIS
- PRECAUTIONS FOR ACCESS WHICH MAY DISTURB ACM DEBRIS
- ACM REMOVAL
- PRECAUTIONS FOR WORK WHICH MAY DISTURB ACM IN POOR CONDITION
- PROACTIVE ACM REMOVAL
- ACM REPAIR
- MANAGEMENT PROGRAM AND SURVEILLANCE

APPENDIX D

Sample Location Plan



- Note**
1. This drawing shall be read in conjunction with the associated technical report.
 2. Do not scale drawing.
 3. Base plan provided by client.
 4. Sample prefixes have been omitted for clarity

- Legend**
- Approximate asbestos sample location
 - Approximate lead sample location
 - Approximate PCB/PAH sample location
 - Room number

0	2022/06/14	Final	KB
Revision	Date	Issue	Approval

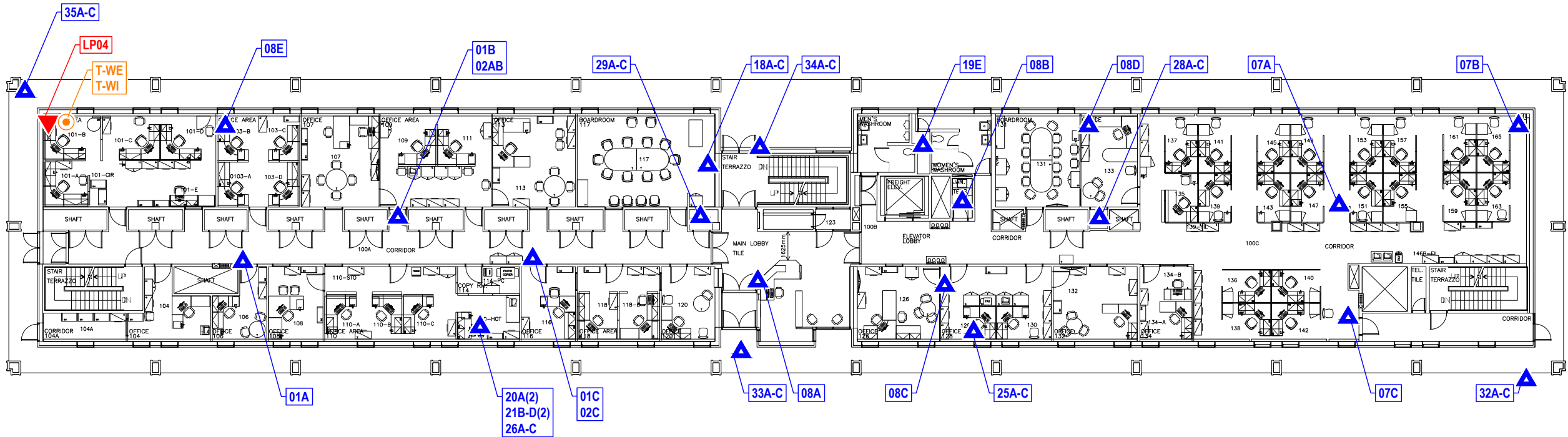
Client
Public Services and Procurement Canada

Site
50 Columbine Driveway, Ottawa, ON

Report Title
Sample Location Plans

Drawing Title
Basement Floor Plan

Designed By	Scale
KM	NTS
Drawn By	Date
JM	June 2022
Approved By	Project No.
KT	02203789.000
Figure No.	



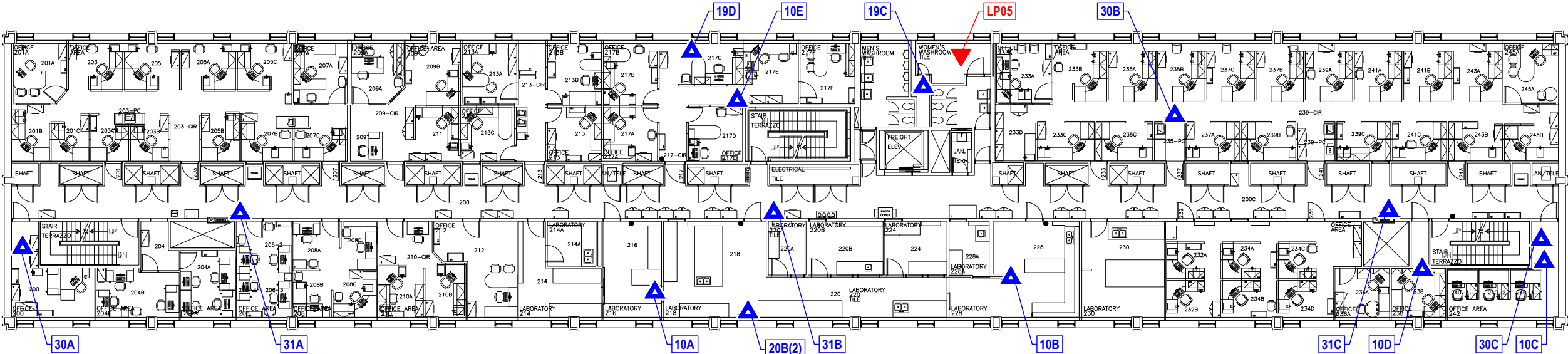
Note

1. This drawing shall be read in conjunction with the associated technical report.
2. Do not scale drawing.
3. Base plan provided by client.
4. Sample prefixes have been omitted for clarity

Legend

- Approximate asbestos sample location
- Approximate lead sample location
- Approximate PCB/PAH sample location

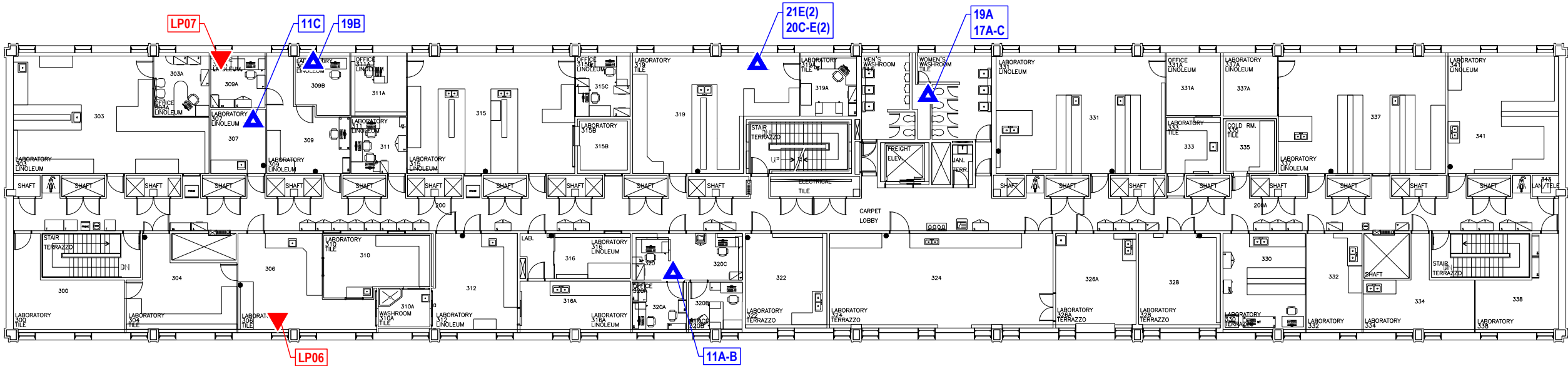
0	2022/06/14	Final	KB
Revision	Date	Issue	Approval
Client			
Public Services and Procurement Canada			
Site			
50 Columbine Driveway, Ottawa, ON			
Report Title			
Sample Location Plans			
Drawing Title			
Ground Floor Plan			
Designed By		Scale	
KM		NTS	
Drawn By		Date	
JM		June 2022	
Approved By		Project No.	
KT		02203789.000	
Figure No.		2	



- Note**
1. This drawing shall be read in conjunction with the associated technical report.
 2. Do not scale drawing.
 3. Base plan provided by client.
 4. Sample prefixes have been omitted for clarity

- Legend**
- Approximate asbestos sample location
 - Approximate lead sample location

0	2022/06/14	Final	KB
Revision	Date	Issue	Approval
Client Public Services and Procurement Canada			
Site 50 Columbine Driveway, Ottawa, ON			
Report Title Sample Location Plans			
Drawing Title Second Floor Plan			
Designed By KM		Scale NTS	
Drawn By JM		Date June 2022	
Approved By KT		Project No. 02203789.000	
Figure No.		3	

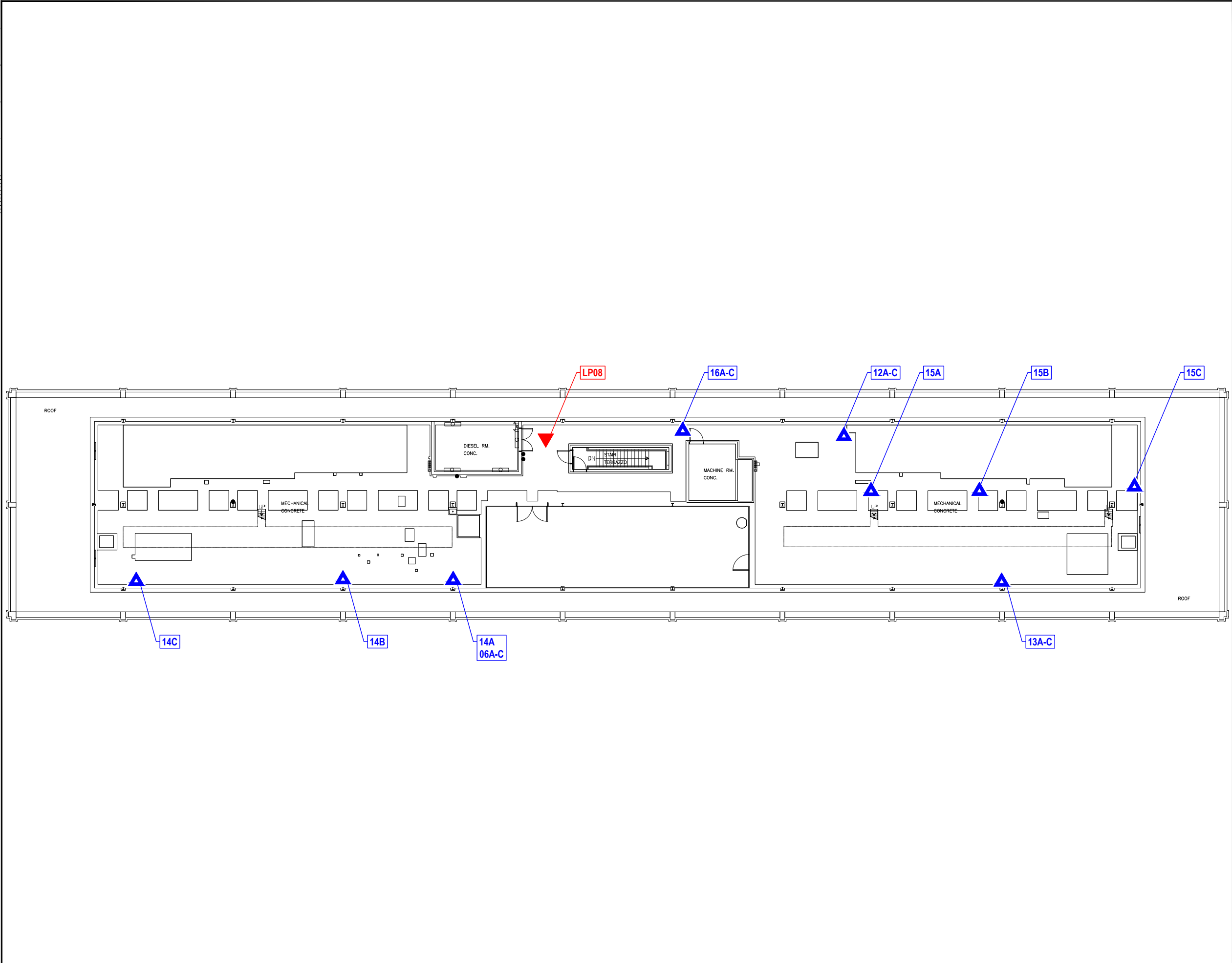


- Note**
1. This drawing shall be read in conjunction with the associated technical report.
 2. Do not scale drawing.
 3. Base plan provided by client.
 4. Sample prefixes have been omitted for clarity

- Legend**
- Approximate asbestos sample location
 - Approximate lead sample location

0	2022/06/14	Final	KB
Revision	Date	Issue	Approval
Client Public Services and Procurement Canada			
Site 50 Columbine Driveway, Ottawa, ON			
Report Title Sample Location Plans			
Drawing Title Third Floor Plan			
Designed By KM		Scale NTS	
Drawn By JM		Date June 2022	
Approved By KT		Project No. 02203789.000	
Figure No.		4	

Drawing: 02203789 PSC Sample Locations Plan.dwg Folder: D:\Joven OneDrive\OneDrive - Englobe Corp\Work\02203789 PSC\Sample Locations Plan\DWGs Tuesday, June 14, 2022 @ 16:34 by Joven Mendoza



Note

1. This drawing shall be read in conjunction with the associated technical report.
2. Do not scale drawing.
3. Base plan provided by client.
4. Sample prefixes have been omitted for clarity

Legend

Approximate asbestos sample location

Approximate lead sample location

0	2022/06/14	Final	KB
Revision	Date	Issue	Approval
Client Public Services and Procurement Canada			
Site 50 Columbine Driveway, Ottawa, ON			
Report Title Sample Location Plans			
Drawing Title Penthouse Floor Plan			
Designed By KM		Scale NTS	
Drawn By JM		Date June 2022	
Approved By KT		Project No. 02203789.000	
Figure No.		5	