Project Specific Designated Substances and Hazardous Materials Survey – Component 2, Task 1: Comprehensive Survey for Life Safety Upgrades Throughout R13

Elevator Replacement and Barrier Free Upgrades Project

R13 Massey Hall Library Offices, 7 Prom Valour Drive, Kingston, Ontario

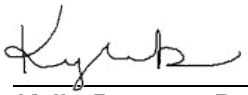
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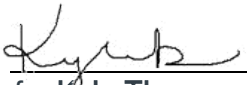
Prepared for Defence Construction Canada

Prepared by:



Kylie Bennett, B.Sc., EPt, C.Tech
Environmental Scientist
Hygiene, Health and Safety

Reviewed by:



for **Kyle Thompson, B.Sc., WRT, C.E.T.**
Director of Operations
Hygiene, Health & Safety

T 877 300 4800 – info@englobecorp.com
101-2713 Lancaster Road – Ottawa, ON – Canada K1B 5R6
englobecorp.com

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1.0 Introduction

Englobe Corporation (Englobe) was retained by Defence Construction Canada (DCC) to conduct a project-specific Designated Substances and Hazardous Materials Survey (DSHMS) in support of the Elevator Replacement and Barrier Free Upgrades Project taking place at the R13 Massey Hall Library Offices Building, located at 7 Prom Valour Drive in Kingston, Ontario. This report is for Component 2, Task 1: Comprehensive Survey for Life Safety Upgrades Throughout R13, as outlined in the project scope of work documents provided by DCC for this project.

The Designated Substances Survey (DSS) is required under the *Ontario Occupational Health and Safety Act* in order 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 DSS conducted, the Project Manager 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 project area.

Englobe completed a visual evaluation of building materials for the presence of suspected designated substances and hazardous materials on February 6th, 2025. As part of the survey, select materials were sampled and submitted for laboratory analysis to confirm asbestos, arsenic, chromium, lead, and mercury content.

2.0 Scope of Work

The survey implemented by Englobe was completed in accordance with Section 30 of the *Occupational Health and Safety Act, R.S.O. 1990, Chapter 0.1*. 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
- Vinyl Chloride

Other Hazardous Materials which are not classified as designated substances, but were included as part of the survey and considered pertinent due to applicable regulations, best practice guidelines, and/or potential risks to human health and/or the environment, are:

- Chromium
- Ozone Depleting Substances (ODSs)

- Polychlorinated Biphenyls (PCBs)
- Urea Formaldehyde Foam Insulation (UFFI)
- Mould
- Other Hazardous Materials (where deemed pertinent)

3.0 Background Document Review

Prior to the commencement of fieldwork, Englobe personnel reviewed the following documentation provided by DCC:

- Project Specific Designated Substances and Hazardous Materials Survey, Elevator Replacement and Barrier Free Upgrades Project, R13 Massey Hall Library Offices, 7 Prom Valour Drive, Kingston, Ontario. Prepared by Englobe Corporation. Dated October 1, 2024. Englobe File No.: 02406622.000.
- Comprehensive Designated Substances and Hazardous Materials Assessment, R13 Massey Hall Library Offices, Royal Military College, Kingston. Prepared by BluMetric Environmental. Dated July 14, 2015. BluMetric File No.: K-B13279-00-00.
- Limited Designated Substance and Hazardous Material Surveys – Phase II, Massey Hall Library Offices. Prepared by Ontario Environmental & Safety Network Ltd. Dated January 17, 2013. OESN Project No.: 00013.002.

4.0 Methodology

The purpose of the survey program was to identify designated substances and hazardous materials that may be disturbed during future work operations associated with the project. The project areas were defined by the following drawings:

- Massey Library Life Safety Upgrade, Building R16 – Massey Library, Royal military College of Canada, Kingston ON. Dated December 20, 2024. Prepared by Architecture49 and WSP. Project No.: CA0024780.8472.
- Kingston Massey Building Elevator Upgrades, Kingston, Ontario. Dated March 8, 2024.

The scope of work for this project was limited to the areas outlined on the above documentation. A DCC representative was on-site to confirm the project scope of work and project specific areas to be included as part of the survey. Neither an elevator nor roof assessment were completed as part of this survey. No other areas or materials were included as part of the survey

The survey was non-destructive in nature. Englobe did not complete intrusive openings into the building envelope or building slabs.

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 was supported by the collection and analysis of a limited number of representative samples, where applicable. Materials suspected of containing designated substances or hazardous materials other than asbestos, arsenic, chromium, lead, mercury, or PCBs were identified by appearance, age, and knowledge of historic applications.

Results tables are included in Appendix A. Select photographs are included in Appendix B. Laboratory certificates of analysis are included in Appendix C. A drawing with sample locations is included in Appendix D. A Statement of Limitations is included in Appendix E.

4.1. Asbestos-Containing Material Methodology

The methodology employed for Asbestos-Containing Materials (ACMs) included identifying the presence of ACMs via the collection and analysis of suspect bulk material samples. The collection of bulk material samples was performed in accordance with the sampling procedures outlined in Ontario Regulation (O.Reg.) 278/05, as amended. O.Reg. 278/05, as amended, Table 1, stipulates the minimum number of bulk asbestos samples that must be collected and analyzed based on the quantity, application, and friability of each material.

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 such as sprayed fireproofing and textured coatings. Non-friable materials are materials that will generally release fibres only when cut or shaped. Common non-friable ACMs include vinyl floor products, drywall joint compound, and mortars. Some of these products may become friable with time or when disturbed.

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 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. The *Canada Labour Code, Occupational Health, and Safety Regulations (COHSR)* defines a material 1% or more asbestos by dry weight to be asbestos containing. For the purposes of this report, and as per CFB Kingston requirements, Englobe has considered an asbestos-containing material to be 0.5% or more by dry weight asbestos.

As part of this survey, asbestos has been assessed to protect federal workers and contractors, and to ensure compliance with federal requirements. This survey also considers the DND Asbestos Management Directive, including assigning action levels to identify asbestos-containing materials.

Representative bulk samples of suspected ACMs were collected by Englobe during the site investigation. Samples were collected to meet the bulk sampling requirements stipulated in O.Reg. 278/05, as amended. Bulk samples were analyzed by Paracel Laboratories Ltd. (Paracel).

Paracel is an accredited laboratory through the Canadian Association for Laboratory Accreditation Inc. (CALA). The bulk samples were analyzed using polarised light microscopy (PLM). All bulk asbestos samples collected by Englobe were analyzed using the regulated Ontario detection limit of 0.5%. Samples followed a stop-positive methodology, where the remaining samples in a series would not be analyzed if any one sample in the series had a concentration of asbestos greater than or equal to 0.5%.

4.2. Paint Chip Sampling – Arsenic, Chromium, Lead, Mercury, and PCBs

Paint chip samples were collected for metals analysis (arsenic, chromium, lead, and mercury) and PCBs (as required, at the discretion of Englobe). Paracel is certified under the CALA to perform analysis for the parameters listed above. Samples were analysed for metals using Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) in accordance with U.S. EPA 6020 and Cold-Vapour Atomic Absorption (CVAA) in accordance with U.S. EPA Method 7471B.

Paint samples were collected of all paint colours throughout the project area based on site observations.

Arsenic in Paint

The Federal Canada Consumer Product Safety Act's *Surface Coating Materials Regulations SOR/2016-193* does not set limits specifically for arsenic in paint. For the purposes of this survey, paints having concentrations of arsenic above the Method Detection Limit of 50-ppm are considered arsenic containing.

Chromium in Paint

The Federal Canada Consumer Product Safety Act does not set limits specifically for chromium in paint. For the purposes of this survey, paints having concentrations of chromium above the Method Detection Limit are considered chromium containing.

Lead in Paint

In Canada, the Federal Canada Consumer Product Safety Act has lowered the allowable concentration of lead in paints for new consumer products to 0.009% lead content by weight (90 ppm), with some material and specific use exceptions. For the purposes of this survey, paints having concentrations of lead above the 90-ppm limit are considered lead-based.

Mercury in Paint

For mercury in paint, the Federal Canada Consumer Product Safety Act has set the maximum allowable concentration of mercury in paint at 10-ppm.

PCBs in Paint

In Canada, the Federal *PCB Regulations SOR/2008-273*, as amended, has set the allowable release of solid PCBs into the environment at 50-ppm.

Leachable Arsenic, Chromium, Lead, Mercury, and PCBs

Englobe also collected bulk samples of materials coated with paint to determine if these materials should be considered hazardous for disposal, based on leachate analysis. Only paint samples exceeding either the regulated limit (for lead, mercury, and PCBs) or Method Detection Limit (for arsenic and chromium) were submitted for leachate analysis. Bulk paint samples were analyzed for chromium, lead, and/or mercury leachate using Toxicity Characteristic Leaching Procedure (TCLP) EPA 6020 - Digestion - ICP-MS and TCLP EPA 7470A, CVAA by Paracel. Leachate results were compared to the 5 mg/L limit for chromium leachate toxicity, the 5 mg/L limit for lead leachate toxicity, and the 0.1 mg/L limit for mercury leachate toxicity, as applicable, as per O. Reg. 347/90 *Waste Management*, as amended, and enabled under the *Environmental Protection Act (R.S.O. 1990, Chapter E.19).*

4.3. PCB-Containing Equipment Methodology

Equipment that may contain PCBs (e.g., electrical transformers 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 had been tagged and locked out by a qualified electrician. When possible, the manufacture name and catalogue number is recorded. Where not clearly labelled as "Non-PCB", the information presented on the ballast labels can be compared with the Environment Canada document entitled "Identification of Lamp Ballasts Containing PCBs (Revised August 1991)" to confirm PCB content, or assumed to contain PCBs, as applicable.

4.4. Urea Formaldehyde Foam Insulation Methodology

Urea formaldehyde foam insulation ("UFFI") is a type of thermal insulation material applied to walls and ceilings of buildings to form a solid layer of insulation. The sale and installation of UFFI was banned in Canada in 1980, for health-related reasons due to the occurrence of formaldehyde gas, which is produced during natural degeneration of the UFFI.

4.5. Ozone Depleting Substances (ODS) Methodology

Ozone depleting substances ("ODSs") include chemicals containing chlorofluorocarbon ("CFC"), hydrochlorofluorocarbon ("HCFC"), halon or any other material capable of destroying ozone in the atmosphere. Ozone Depleting Substances are controlled by O.Reg. 463/10 and the Federal Halocarbons Regulation.

Equipment that may contain halocarbons (e.g., air conditioning and refrigeration equipment) can often be identified by examining manufacturer's labels. The investigation of halocarbons

was performed through the identification of equipment requiring refrigerants as part of the survey process followed by an evaluation for labels on the equipment (indicating the type of refrigerant present), as applicable.

4.6. Other Designated Substances and Hazardous Materials Methodology

The methodology for the identification of other designated substances and hazardous materials followed the same visual evaluation methodology as the investigation for asbestos and lead in surface coatings. During the survey, other identified designated substances were visually identified based on the surveyor's historical knowledge of these substances. These substances/materials were identified, and locations noted, as deemed applicable.

5.0 Findings

The following sections outline the findings of accessible designated substances and hazardous building materials that were assessed as part of the project-specific DSHMS.

5.1. Acrylonitrile

Acrylonitrile was neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.2. Arsenic

5.2.1. Arsenic in Paint

Four (4) samples of paint were collected by Englobe as part of the survey (2025) and submitted for arsenic content analysis. Four (4) samples of paint were previously collected by Englobe (2024) and three (3) samples of paint previously collected by OESN (2013) and identified within the project area were referenced for arsenic content analysis. A summary table of current and historical bulk material samples is included in Appendix A, Table 2.

All paints sampled within the project areas contain concentrations of arsenic less than the Method Detection Limit of 50-ppm:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains <50 ppm arsenic (Englobe Sample ID 02406622-P07).
- Red paint sampled from the floor in basement mechanical room 2 contains <50 ppm arsenic (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the door frame in the basement room adjacent to room 20A contains <50 ppm arsenic (Englobe Sample ID 02406622-P09).

- Light grey paint sampled from the wall in basement room 30 contains <50 ppm arsenic (Englobe Sample ID 02406622-P10).
- White paint sampled from the drywall ceiling in vestibule 005 on the ground floor and observed throughout the project area contains <50 ppm arsenic (Historical Englobe 2024 Sample ID 02406622-P01).
- Dark grey paint sampled from the door in elevator vestibule 003 on the ground floor and observed throughout the project area contains <50 ppm arsenic (Historical Englobe 2024 Sample ID 02406622-P02).
- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains <50 ppm arsenic (Historical Englobe 2024 Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains <50 ppm arsenic (Historical Englobe 2024 Sample ID 02406622-P06).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains <50 ppm arsenic (Historical OESN 2013 Sample ID 00013.002-PB02).
- Royal blue paint in the first-floor delivery hall contains <50 ppm arsenic (Historical OESN 2013 Sample ID 00013.002-PB08).
- Cream paint in the elevator cab contains <50 ppm arsenic (Historical OESN 2013 Sample ID 00013.002-PB13).

5.2.2. Arsenic Leachate

Only paint samples exceeding the Method Detection Limit for arsenic were submitted for leachate analysis. As such, no paint samples were submitted for arsenic leachate analysis.

5.3. Asbestos

The following subsections outline the consolidated asbestos findings from the DSHMS completed by Englobe. A summary table of bulk material samples collected by Englobe is included as Appendix A, Table 1. Action(s) provided for ACMs are based upon the Department of National Defence *Asbestos Condition Assessment and Response Chart.*

5.3.1. Asbestos-Containing Materials

Based on bulk sampling and subsequent laboratory analysis, the following materials observed within the project areas contain regulated amounts of asbestos:

- Non-friable concrete panel mortar identified in basement mechanical room 2 contains 5% Chrysotile asbestos (Englobe Sample ID 02406622-18A). Approximately ten (10) linear metres of this material was observed in good-condition. This material is classified as DND Management Action Level 6.
- Non-friable beige sealant applied around the vestibule 005 frame on the ground floor contains 1% Chrysotile asbestos (Historical Englobe Sample ID 02406622-04A). Approximately six (6) linear metres of this material was observed in good-condition. This material is classified as DND Management Action Level 6.

5.3.2. Assumed Asbestos-Containing Materials

The following materials within the project areas are assumed to contain regulated amounts of asbestos, until bulk sampling confirms otherwise. These materials could not be sampled due to accessibility constraints (inaccessible):

- Materials associated with the elevator shaft, including:
    - Although not visually identified as the elevator shaft was inaccessible to Englobe and outside the current scope of work, non-friable Transite wall panels have been historically identified in the elevator shaft (Historical BluMetric 2015 report). Approximately twelve (12) square metres of this material is assumed present throughout the shaft from the basement to the third floor, unless proven otherwise.

5.3.3. Non-Asbestos Containing Materials

Based on bulk sampling and subsequent laboratory analysis, the following materials observed within the project areas do not contain regulated amounts of asbestos:

Surfacing Materials

- Drywall joint compound (Historical Englobe Sample ID 02406622-05A-C, Historical OESN 2013 Sample ID 00013.002-C09-11, HW 02 00013.002-W08-12).
- Textured wall plaster in elevator mechanical room 001 on the ground floor (Historical Englobe Sample ID 02406622-06A-C).
- Wall and ceiling plaster (white and grey layers) (Historical Englobe Sample ID 02406622-11A-C, 13A-C, Historical OESN 2013 Sample ID 00013.002-C01-05, 00013.002-W01-07).

Mortar, Grout

- Ceramic tile/block grout (Englobe Sample ID 02406622-20A-E, Historical Englobe Sample ID 02406622-01A-C).
- Large block mortar (Historical Englobe Sample ID 02406622-02A-C).
- Concrete block mortar (Englobe Sample ID 02406622-19A-C, Historical Englobe Sample ID 02406622-07A-C).
- Granite mortar (Historical Englobe Sample ID 02406622-12A-C).
- Terracotta mortar (Englobe Sample ID 02406622-21A-C, Historical Englobe Sample ID 02406622-15A-C).

Sealant, Mastics

- Grey sealant around doors in vestibule 005 on the ground floor (Historical Englobe Sample ID 02406622-03A-C).

- Black window glaze on interior door windows (Historical Englobe Sample ID 02406622-08A-C).
- White sealant around interior doors (Historical Englobe Sample ID 02406622-09A-C).
- Vinyl baseboard mastic (Historical Englobe Sample ID 02406622-14A-C).

Vinyl Flooring Products and Associated Mastics

- 12” x 12” (30 cm x 30 cm) grey vinyl floor tile and yellow mastic (Englobe Sample ID 02406622-22A-C, 23A-C).
- 12” x 12” (30 cm x 30 cm) grey vinyl floor tile with black flecks (Historical Englobe Sample ID 02406622-10A-C) and mastic (Historical OESN 2013 Sample ID A-01a-c, A-03a-c, A-04a-c, A-06a-c, A-07a-c).
- 18” x 18” (45 cm x 45 cm) off-white vinyl floor tile with black and white flecks (Historical Englobe Sample ID 02406622-16A-C) and mastic (Historical OESN 2013 Sample ID A-01a-c, A-03a-c, A-04a-c, A-06a-c, A-07a-c).
- 12” x 12” (30 cm x 30 cm) white vinyl floor tile with grey flecks (Historical Englobe Sample ID 02406622-17A-C) and mastic (Historical OESN 2013 Sample ID A-01a-c, A-03a-c, A-04a-c, A-06a-c, A-07a-c).

Ceiling Tiles

- 2’ x 4’ (60 cm x 120 cm) ceiling tile, pinhole and fissure pattern (Historical OESN 2013 Sample ID 00013.002-C12-14).

Englobe could not sample the 2’ x 2’ (60 cm x 60 cm) beveled ceiling tiles in the first-floor delivery hall due to accessibility constraints (elevated heights), however, DCC personnel communicated to Englobe on-site that the ceiling tiles were newly installed. As such, these ceiling tiles are not suspected to contain regulated amounts of asbestos.

A roofing assessment or roof sampling was not performed by Englobe for this phase of the project. It was communicated to Englobe by DCC that the roof was recently replaced and, as such, is not suspected to contain regulated amounts of asbestos.

5.4. Benzene

Benzene is a natural constituent of petroleum-based mixtures and is assumed present in select materials such as roofing materials, tars, paints, and adhesives.

5.5. Coke Oven Emissions

Coke oven emissions were neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.6. Ethylene Oxide

Ethylene oxide was neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.7. Isocyanates

Isocyanates were neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.8. Lead

5.8.1. Lead in Paint

Four (4) samples of paint were collected by Englobe as part of the survey (2025) and submitted for lead content analysis. Four (4) samples of paint were previously collected by Englobe (2024) and two (2) samples of paint were previously collected by OESN (2013) and identified within the project area were referenced for lead content analysis. A summary table of current and historical bulk material samples is included in Appendix A, Table 2.

The following paints sampled within the project areas contain concentrations of lead greater than the Federal Canada Consumer Product Safety Act's limit of 90-ppm:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains 109 ppm lead (Englobe Sample ID 02406622-P07).
- Red paint sampled from the floor in basement mechanical room 2 contains 349 ppm lead (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the door frame in the basement room adjacent to room 20A contains 2,250 ppm lead (Englobe Sample ID 02406622-P09).
- Light grey paint sampled from the wall in basement room 30 contains 13,700 ppm lead (Englobe Sample ID 02406622-P10).
- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains 766 ppm lead (Historical Englobe 2024 Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains 1,660 ppm lead (Historical Englobe 2024 Sample ID 02406622-P06).
- Cream paint in the elevator cab contains 1,630 ppm lead (Historical OESN 2013 Sample ID 00013.002-PB13).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains 2,220 ppm lead (Historical OESN 2013 Sample ID 00013.002-PB02).

The following paints and mortars sampled within the project areas contain concentrations of lead less than the Federal Canada Consumer Product Safety Act's limit of 90-ppm:

- White paint sampled from the drywall ceiling in vestibule 005 on the ground floor and observed throughout the project area contains <5 ppm lead (Historical Englobe 2024 Sample ID 02406622-P01).
- Dark grey paint sampled from the door in elevator vestibule 003 on the ground floor and observed throughout the project area contains 6 ppm lead (Historical Englobe 2024 Sample ID 02406622-P02).
- Royal blue paint in the first-floor delivery hall contains <90 ppm lead (Historical OESN 2013 Sample ID 00013.002-PB08).

No other lead samples were collected by Englobe for lead content analysis, as other paints and surface coatings encountered in the project areas were in good condition and sampling without matrix interference (i.e., removing the paint without the substrate material) would have proved difficult. All other paints and surface coatings in the project areas shall be assumed to contain detectable concentrations of lead, unless specific bulk sampling and laboratory analysis confirms otherwise.

5.8.2. Lead Leachate

Only paint samples exceeding the Federal Canada Consumer Product Safety Act's maximum allowable concentration for lead were submitted for leachate analysis. As such, the eight (8) paint samples exceeding 90-ppm were submitted for lead leachate analysis (4 new samples by Englobe in 2025 and 4 samples referenced from the Englobe 2024 assessment and applicable to the project areas). A summary table of bulk material samples collected by Englobe is included in Appendix A, Table 3. The analytical laboratory results were compared to the 5 mg/L limit for lead leachate toxicity, as per O. Reg. 347/90 *Waste Management*, as amended.

The following sampled paints could not be analyzed by the laboratory and are assumed to exceed the 5mg/L limit for lead leachate toxicity and as such, are considered hazardous for disposal with respect to lead:

- Grey paint sampled from the door frame in the basement room adjacent to room 20A (Englobe Sample ID 02406622-P09).
- Light grey paint sampled from the wall in basement room 30 (Englobe Sample ID 02406622-P10).

The following sampled paints did not exceed the 5mg/L limit for lead leachate toxicity and as such are not considered hazardous for disposal with respect to lead:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains <0.05 mg/L lead leachate (Englobe Sample ID 02406622-P07).
- Red paint sampled from the floor in basement mechanical room 2 contains <0.05 mg/L lead leachate (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains <0.05 mg/L lead leachate (Historical Englobe 2024 Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains 1.81 mg/L lead leachate (Historical Englobe 2024 Sample ID 02406622-P06).

- Cream paint in the elevator cab contains <0.10 mg/L lead leachate (Historical Englobe 2024 Sample ID 02406622-P05).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains 0.42 mg/L lead leachate (Historical Englobe 2024 Sample ID 02406622-P04).

5.8.3. Lead-Containing Materials

Lead is also assumed to be present in the following materials:

- Solder associated with the joints of copper piping
- Ceramic tile glazing
- Terrazzo flooring joints
- Mortars

5.9. Mercury

5.9.1. Mercury in Paint

Four (4) samples of paint were collected by Englobe as part of the survey (2025) and submitted for mercury content analysis. Four (4) samples of paint were previously collected by Englobe (2024) and three (3) samples of paint previously collected by OESN (2013) and identified within the project area were referenced for mercury content analysis. A summary table of current and historical bulk material samples is included in Appendix A, Table 2.

The following paints sampled within the project areas contain concentrations of mercury greater than the Federal Canada Consumer Product Safety Act's limit of 10ppm:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains 11 ppm mercury (Englobe Sample ID 02406622-P07).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains 13 ppm mercury (Historical OESN 2013 Sample ID 00013.002-PB02).

The following paints sampled within the project areas contain concentrations of mercury less than the Federal Canada Consumer Product Safety Act's limit of 10 ppm:

- Red paint sampled from the floor in basement mechanical room 2 contains <2 ppm mercury (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the door frame in the basement room adjacent to room 20A contains <2 ppm mercury (Englobe Sample ID 02406622-P09).
- Light grey paint sampled from the wall in basement room 30 contains <2 ppm mercury (Englobe Sample ID 02406622-P10).
- White paint sampled from the drywall ceiling in vestibule 005 on the ground floor and observed throughout the project area contains <2 ppm mercury (Historical Englobe 2024 Sample ID 02406622-P01).
- Dark grey paint sampled from the door in elevator vestibule 003 on the ground floor and observed throughout the project area contains <2 ppm mercury (Historical Englobe 2024 Sample ID 02406622-P02).

- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains <2 ppm mercury (Historical Englobe 2024 Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains <2 ppm mercury (Historical Englobe 2024 Sample ID 02406622-P06).
- Cream paint in the elevator cab contains <2 ppm mercury (Historical OESN 2013 Sample ID 00013.002-PB13).
- Royal blue paint in the first-floor delivery hall contains <10 ppm mercury (Historical OESN 2013 Sample ID 00013.002-PB08).

5.9.2. Mercury Leachate

Only paint samples exceeding the Federal Canada Consumer Product Safety Act's maximum allowable concentration for mercury of 10 ppm were submitted for leachate analysis. As such, the two (2) paint samples exceeding 10 ppm were submitted for mercury leachate analysis (1 by Englobe in 2025 and 1 by Englobe in 2024). A summary table of bulk material samples collected by Englobe is included in Appendix A, Table 3. The analytical laboratory results were compared to the 0.1 mg/L limit for mercury leachate toxicity, as per O. Reg. 347/90 *Waste Management*, as amended.

The following sampled paints did not exceed the 0.1 mg/L limit for mercury leachate toxicity and as such are not considered hazardous for disposal with respect to mercury:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains <0.005 mg/L mercury leachate (Englobe Sample ID 02406622-P07).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains <0.005 mg/L mercury leachate (Historical Englobe 2024 Sample ID 02406622-P04).

5.10. Silica

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

- Concrete and cement building elements
- Interior and exterior masonry and mortar
- Drywall building elements
- Plaster building elements
- Vinyl flooring products
- Terrazzo flooring
- Texture coatings
- Roofing layers
- Ceramic tiles
- Ceiling tiles

5.11. Vinyl Chloride

Vinyl chloride was neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.12. Chromium

5.12.1. Chromium in Paint

Four (4) samples of paint were collected by Englobe in 2025 as part of the survey and submitted for chromium content analysis. Four (4) samples of paint were previously collected by Englobe (2024) and three (3) samples of paint collected by OESN (2013) and identified within the project area were referenced for chromium content analysis. A summary table of current and historical bulk material samples is included in Appendix A, Table 2.

The following paints sampled within the project areas contain concentrations of chromium greater than the Method Detection Limit:

- Red paint sampled from the floor in basement mechanical room 2 contains 76 ppm chromium (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the door frame in the basement room adjacent to room 20A contains 493 ppm chromium (Englobe Sample ID 02406622-P09).
- Light grey paint sampled from the wall in basement room 30 contains 2,730 ppm chromium (Englobe Sample ID 02406622-P10).
- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains 70 ppm chromium (Historical Englobe Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains 225 ppm chromium (Historical Englobe Sample ID 02406622-P06).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains 549 ppm chromium (Historical OESN 2013 Sample ID 00013.002-PB02).

The following paints sampled within the project areas contain concentrations of chromium less than the Method Detection Limit:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains <50 ppm chromium (Englobe Sample ID 02406622-P07).
- White paint sampled from the drywall ceiling in vestibule 005 on the ground floor and observed throughout the project area contains <50 ppm chromium (Historical Englobe Sample ID 02406622-P01).
- Dark grey paint sampled from the door in elevator vestibule 003 on the ground floor and observed throughout the project area contains <50 ppm chromium (Historical Englobe Sample ID 02406622-P02).
- Cream paint in the elevator cab contains <500 ppm chromium (Historical OESN 2013 Sample ID 00013.002-PB13).
- Royal blue paint in the first-floor delivery hall contains <500 ppm chromium (Historical OESN 2013 Sample ID 00013.002-PB08).

5.12.2. Chromium Leachate

Only paint samples exceeding the Method Detection Limit for chromium were submitted for leachate analysis. As such, six (6) paint samples exceeding the Method Detection Limit were submitted for chromium leachate analysis (3 by Englobe in 2025 and 3 by Englobe in 2024). A summary table of bulk material samples collected by Englobe is included in Appendix A, Table 3. The analytical laboratory results were compared to the 5 mg/L limit for chromium leachate toxicity, as per O. Reg. 347/90 *Waste Management*, as amended.

The following sampled paints could not be analyzed by the laboratory and are assumed to exceed the 5mg/L limit for chromium leachate toxicity and as such, are considered hazardous for disposal with respect to chromium:

- Grey paint sampled from the door frame in the basement room adjacent to room 20A (Englobe Sample ID 02406622-P09).
- Light grey paint sampled from the wall in basement room 30 (Englobe Sample ID 02406622-P10).

The following sampled paints did not exceed the 5 mg/L limit for chromium leachate toxicity and as such are not considered hazardous for disposal with respect to chromium:

- Red paint sampled from the floor in basement mechanical room 2 contains <0.05 chromium leachate (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains <0.05 mg/L chromium leachate (Historical Englobe 2024 Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains 0.05 mg/L chromium leachate (Historical Englobe 2024 Sample ID 02406622-P06).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains <0.10 mg/L chromium leachate (Historical Englobe 2024 Sample ID 02406622-P04).

5.13. Halocarbons

Halocarbons were neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.14. Polychlorinated Biphenyls (PCBs)

5.14.1. PCBs in Paint

Four (4) samples of paint were collected by Englobe in 2025 and submitted for PCB content analysis. Four (4) samples of paint were previously collected by Englobe (2024) and three (3) samples of paint collected by OESN (2013) and identified within the project area were referenced for PCB content analysis. A summary table of bulk material samples is included in Appendix A, Table 2.

All paints sampled within the project areas contain concentrations of PCBs less than the Federal PCB Regulations limit of 50-ppm:

- Yellow paint sampled from the ceiling in basement mechanical room 2 contains <5 ppm PCBs (Englobe Sample ID 02406622-P07).
- Red paint sampled from the floor in basement mechanical room 2 contains <5 ppm PCBs (Englobe Sample ID 02406622-P08).
- Grey paint sampled from the door frame in the basement room adjacent to room 20A contains <5 ppm PCBs (Englobe Sample ID 02406622-P09).
- Light grey paint sampled from the wall in basement room 30 contains <5 ppm PCBs (Englobe Sample ID 02406622-P10).
- White paint sampled from the drywall ceiling in vestibule 005 on the ground floor and observed throughout the project area contains <50 ppm PCBs (Historical Englobe 2024 Sample ID 02406622-P01).
- Dark grey paint sampled from the door in elevator vestibule 003 on the ground floor and observed throughout the project area contains 7 ppm PCBs (Historical Englobe 2024 Sample ID 02406622-P02).
- Grey paint sampled from the concrete floor in elevator mechanical room 001 on the ground floor and observed throughout the project area contains 5 ppm PCBs (Historical Englobe 2024 Sample ID 02406622-P03).
- Grey paint sampled from the wall in stairwell 1 contains 13 ppm PCBs (Historical Englobe 2024 Sample ID 02406622-P06).
- Butter yellow paint in elevator mechanical room 001 on the ground floor contains <50 ppm PCBs (Historical OESN 2013 Sample ID 00013.002-PB02).
- Cream paint in the elevator cab contains <50 ppm PCBs (Historical OESN 2013 Sample ID 00013.002-PB13).
- Royal blue paint in the first-floor delivery hall contains <50 ppm PCBs (Historical OESN 2013 Sample ID 00013.002-PB08).

5.14.2. PCB Leachate

Only paint samples exceeding the Federal PCB Regulations limit for PCBs were submitted for leachate analysis. As such, no paint samples were submitted for PCB leachate analysis.

5.14.3. PCB-Containing Materials

Light fixtures within the building are not expected to be disturbed as part of the project. Should this change, all fluorescent light tube ballasts shall be assumed to contain PCBs, until confirmed otherwise.

5.15. Urea Formaldehyde Foam Insulation (UFFI)

UFFI was neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

5.16. Mould

Mould was neither observed in the building, nor suspected of being present, in forms or quantities that would either impact future work or pose risks to human health or the environment.

6.0 Conclusions & Recommendations

The DSHMS scope of work included an assessment for the presence of the eleven (11) Designated Substances, as identified in the *Occupational Health and Safety Act*, as well as PCBs, ODSs, UFFI, mould, and other miscellaneous hazardous materials or chemicals.

Based on the site investigation, sampling, and analysis, the following designated substances and hazardous materials are present in forms and quantities in the project area:

- Asbestos
- Lead
- Mercury
- Silica
- Chromium

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 by the *Canada Occupational Health and Safety Regulations,* the *DND Asbestos Management Directive*, and in the province of Ontario is governed 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. In the event of conflict between regulations, the more stringent procedures apply.

The removal of non-friable materials can be completed using Low-Risk procedures, provided only non-powered hand tools are used, and the material is wetted during removal. If these conditions cannot be met, then more stringent (Moderate-Risk or High-Risk) procedures are required.

The breaking, cutting, drilling, abrading, grinding, sanding, or vibrating of non-friable asbestos-containing materials if the work is done by means of a power tool that is attached to a dust-

collecting device equipped with HEPA filters, can be performed using Moderate-Risk asbestos work procedures. The breaking, cutting, drilling, abrading, grinding, sanding, or vibrating of non-friable asbestos-containing materials, if the work is done by means of a power tool that is not attached to a dust-collecting device equipped with HEPA filters, requires High-Risk asbestos work procedures.

The transport and disposal of asbestos waste is governed by O. Reg. 347/90 – *General – Waste Management*, as amended. This regulation requires that asbestos waste be sealed in appropriately labelled, double containers resistant to puncture and tears. The waste must be disposed at a licensed waste disposal site.

The time weight average exposure limit (TWAEL) 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 TWAEL.

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, the *DND Asbestos Management Directive*, and the *Canada Occupational Health and Safety Regulations*, as amended, when performing work that may disturb ACMs or suspected ACMs, including prior to building demolition.
- Disturbance and/or removal of ACMs must be appropriately recorded as part of the building's Asbestos Management Plan.
- Before undertaking any work activity that involves asbestos-containing materials, an Asbestos Exposure Control Plan shall be developed, in accordance with the requirements of the *Canada Occupational Health and Safety Regulations*, which includes classification of asbestos specific work activities, onsite labelling of ACMs, and education/training of applicable federal employees specific to ACMs.
- Disposal of asbestos waste is controlled by the *Ontario Environmental Protection Act*, O.Reg. 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.*
- If ACMs or suspected ACMs become damaged and worker exposure to the material is likely to occur, the damaged material must be repaired or removed following work procedures outlined in O. Reg. 278/05, as amended, the *DND Asbestos Management Directive*, and *Canada Labour Code, Occupational Health, and Safety Regulations,* as amended.

Englobe made the attempt to evaluate the project areas to identify hazardous materials present. In spite of these efforts, 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 Ministry of Labour, Immigration, Training and Skills Development (MLITSD) 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.

Mortars have been assumed to contain detectable concentrations of lead. 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. A risk assessment to assess the potential for exposure to lead should be performed to determine work procedures such as those in the MLITSD guideline referenced above.

Although the Canada Consumer Product Safety Act's *Surface Coating Materials Regulations SOR/2016-193*, 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 MLITSD 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 (TWAEL) for airborne lead is prescribed by O.Reg. 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*.

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

- Assumed lead joints associated with copper piping and terrazzo flooring can be cut a small distance (e.g., 50 mm) from the soldered joints to avoid direct disturbance of the lead material.
- Ceramic tiles can be removed using Type 1 work procedures and respiratory protection provided that only non-powered hand tools are used.

6.3. Mercury

If paint containing elevated levels of mercury is to be disturbed, precautions should be taken by the contractor to protect workers against exposure to mercury. The risk of exposure can be mitigated through the application of proper worker health and safety precautions (i.e., work and dust control procedures that reduce dust generation, utilization of PPE and implement a worker hygiene program).

Disturbance of surface coatings with elevated mercury concentrations should follow similar procedures to those of lead surface coatings, as outlined within Ontario MLITSD *Guideline: Lead on Construction Projects.*

The TWAEL for mercury is prescribed by O. Reg. 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.

6.4. Silica

The Occupational Health and Safety Branch of the Ontario MLITSD has 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. 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 O.Reg. 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.

6.5. Chromium

If paint containing elevated levels of chromium is to be disturbed, precautions should be taken by the contractor to protect workers against exposure to chromium. The risk of exposure can be mitigated through the application of proper worker health and safety precautions (i.e., work and dust control procedures that reduce dust generation, utilization of PPE and implement a worker hygiene program).

There are no regulations that specifically govern the disturbance of chromium on construction projects. In the absence of specific regulations, the Ontario MLITSD *Guideline: Lead on Construction Projects* shall be followed when removing or disturbing paints containing detectable concentrations of chromium.

The disposal of construction waste containing chromium 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*.

7.0 Closure

A Statement of Limitations, which forms an integral part of this report, is included in Appendix E.

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

Appendix A
Results Tables



ENGLOBE

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content by PLM

Sample I.D.	Sample Location	Material Description	Asbestos Content (%)	Condition	Accessibility	Friability	DND Action Level	Potential to Release Fibres
Englobe 2025								
02406622-18A	**Basement, Mechanical Room 2, Wall**	**Concrete Panel Mortar**	**5% Chrysotile**	Good	A	Non-Friable	6	Low
02406622-18B			Not Analyzed, Positive Stop					
02406622-18C			Not Analyzed, Positive Stop					
02406622-19A	Basement, Mechanical Room 2, Wall	Concrete Block Mortar	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-19B	Basement, Room 30, Wall		None Detected					
02406622-19C	Basement, Room Adjacent Room 38, Wall		None Detected					
02406622-20A	Basement, Corridor 10, Wall	Ceramic Tile Grout	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-20B			None Detected					
02406622-20C			None Detected					
02406622-20D	Basement, Corridor Adjacent Room 19, Wall		None Detected					
02406622-20E			None Detected					
02406622-21A	First Floor, Room 122, Wall	Terracotta Mortar	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-21B			None Detected					
02406622-21C			None Detected					
02406622-22A	First Floor, Room Adjacent Room 135, Floor	12” x 12” (30 cm x 30 cm) Grey Vinyl Floor Tile	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-22B			None Detected					
02406622-22C			None Detected					

Sample I.D.	Sample Location	Material Description	Asbestos Content (%)	Condition	Accessibility	Friability	DND Action Level	Potential to Release Fibres
02406622-23A	First Floor, Room Adjacent Room 135, Floor	Vinyl Floor Tile Mastic (Yellow)	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-23B			None Detected					
02406622-23C			None Detected					
Englobe 2024								
02406622-01A	Ground Floor, Vestibule 005, Wall	Ceramic Block Grout	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-01B			None Detected					
02406622-01C			None Detected					
02406622-02A	Ground Floor, Vestibule 005, Wall	Large Block Mortar	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-02B			None Detected					
02406622-02C			None Detected					
02406622-03A	Ground Floor, Vestibule 005, Around Door	Grey Sealant	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-03B			None Detected					
02406622-03C			None Detected					
02406622-04A	**Ground Floor, Vestibule 005, Wall**	**Beige Sealant**	**1% Chrysotile**	Good	A	Non-Friable	6	Low
02406622-04B			Positive Stop, Not Analyzed					
02406622-04C			Positive Stop, Not Analyzed					
02406622-05A	First Floor, Entrance Hall 102, Ceiling	Drywall Joint Compound	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-05B			None Detected					
02406622-05C			None Detected					
02406622-06A	Ground Floor, Elevator Mechanical Room 001	Textured Wall Plaster	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-06B			None Detected					
02406622-06C			None Detected					
02406622-07A	Third Floor, Stairwell Across from 314	Concrete Block Mortar	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-07B			None Detected					
02406622-07C			None Detected					

Sample I.D.	Sample Location	Material Description	Asbestos Content (%)	Condition	Accessibility	Friability	DND Action Level	Potential to Release Fibres
02406622-08A	Ground Floor, Elevator Vestibule 003, Door	Black Window Glaze	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-08B			None Detected					
02406622-08C			None Detected					
02406622-09A	Ground Floor, Elevator Vestibule 003, Door	White Sealant	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-09B			None Detected					
02406622-09C			None Detected					
02406622-10A	Elevator Cab, Floor	12” x 12” (30 cm x 30 cm) Grey Vinyl Floor Tile	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-10B			None Detected					
02406622-10C			None Detected					
02406622-11A	Ground Floor, Elevator Vestibule 003, Wall	Plaster (White Layer)	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-11B			None Detected					
02406622-11C			None Detected					
02406622-12A	First Floor, Entrance Hall 102, Wall	Granite Mortar	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-12B			None Detected					
02406622-12C			None Detected					
02406622-13A	First Floor, Entrance Hall 102, Wall	Plaster (White Layer)	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-13B			None Detected					
02406622-13C			None Detected					
02406622-14A	Second Floor, Elevator Vestibule 201, Wall	Vinyl Baseboard Mastic	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-14B			None Detected					
02406622-14C			None Detected					
02406622-15A	Second Floor, Elevator Vestibule 201, Wall	Terracotta Mortar	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-15B			None Detected					
02406622-15C			None Detected					

Sample I.D.	Sample Location	Material Description	Asbestos Content (%)	Condition	Accessibility	Friability	DND Action Level	Potential to Release Fibres
02406622-16A	Third Floor, Elevator Vestibule 301, Floor	18” x 18” (45 cm x 45 cm) Off-White Vinyl Floor Tile	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-16B			None Detected					
02406622-16C			None Detected					
02406622-17A	First Floor, Delivery Hall, Floor	12” x 12” (30 cm x 30 cm) White Vinyl Floor Tile with Black and White Flecks	None Detected	N/A	N/A	N/A	N/A	N/A
02406622-17B			None Detected					
02406622-17C			None Detected					
OESN 2013								
00013.002-C09	Ground Floor, Room 13A	Drywall Joint Compound on Ceiling	None Detected	N/A	N/A	N/A	N/A	N/A
00013.002-C10	Ground Floor, Washroom 14		None Detected					
00013.002-C11			None Detected					
00013.002-W08	Ground Floor, Classroom 19	Drywall Joint Compound on Wall	None Detected	N/A	N/A	N/A	N/A	N/A
00013.002-W09	Ground Floor, Office 26		None Detected					
00013.002-W10	Ground Floor, Room 14		None Detected					
00013.002-W11	Ground Floor, Washroom 13A		None Detected					
00013.002-W12	Ground Floor, Room 14		None Detected					
A-01a-c	Unknown	Floor Tile Mastics	None Detected	N/A	N/A	N/A	N/A	N/A
A-03a-c	Unknown		None Detected					
A-04a-c	Unknown		None Detected					
A-06a-c	Unknown		None Detected					
A-07a-c	Unknown		None Detected					

Sample I.D.	Sample Location	Material Description	Asbestos Content (%)	Condition	Accessibility	Friability	DND Action Level	Potential to Release Fibres
00013.002-C12	Ground Floor, Room 13A	2' x 4' (60 cm x 120 cm) Ceiling Tile, Pinhole and Fissure Pattern	None Detected	N/A	N/A	N/A	N/A	N/A
00013.002-C13			None Detected					
00013.002-C14			None Detected					
00013.002-W01	Third Floor, Office 301	Wall Plaster (White and Grey Layers)	None Detected	N/A	N/A	N/A	N/A	N/A
00013.002-W02	Second Floor, Corridor 215		None Detected					
00013.002-W03	Second Floor, Bookshelf 212		None Detected					
00013.002-W04			None Detected					
00013.002-W05	First Floor, Bookshelf 117		None Detected					
00013.002-W06	First Floor, Storage 103		None Detected					
00013.002-W07	Second Floor, Office 204		None Detected					
00013.002-C01	Ground Floor, Classroom 7	Ceiling Plaster (White and Grey Layers)	None Detected	N/A	N/A	N/A	N/A	N/A
00013.002-C02	Ground Floor, Bookshelf 30		None Detected					
00013.002-C03	Second Floor, Closet 214A		None Detected					
00013.002-C04	Second Floor, Bookshelf 212		None Detected					
00013.002-C05	Ground Floor, Classroom 7a		None Detected					

Note: **Bold** items contain regulated amounts of asbestos (≥0.5%), as per O.Reg. 278/05, as amended.

N/A = Not Applicable

Accessibility
A - Areas of the building within reach (from floor level) of all building users.
B - Frequently entered maintenance areas with reach of maintenance staff, without the need for a ladder.
C - Areas of the building above 3 metres where use of a ladder is required to reach the ACM.
D - Areas of the building which require the removal of a building component, incl. lay-in ceilings, and access panels into solid ceilings.
E - Areas of the building behind inaccessible solid ceiling systems, walls, or mechanical equipment, etc., where demolition of ceiling, wall, or equipment, etc. is required to access the ACM.

Table 2: Summary of Bulk Samples Analyzed for Arsenic/Chromium/Lead/Mercury/PCBs by ICP-MS, CVAA and GC-ECD Analysis

Sample I.D.	Sample Location & Description	Colour	Arsenic Content (ppm)*	Chromium Content (ppm)*	Lead Content (ppm)^	Mercury Content (ppm)^	PCB Content (ppm)"
Englobe 2025							
02406622-P07	Basement, Mechanical Room 2, Ceiling	Yellow	<50	<50	**109**	**11**	<5
02406622-P08	Basement, Mechanical Room 2, Floor	Red	<50	**76**	**349**	<2	<5
02406622-P09	Basement, Room Adjacent Room 20A, Door Frame	Grey	<50	**493**	**2,250**	<2	<5
02406622-P10	Basement, Room 30, Wall	Light Grey	<50	**2,730**	**13,700**	<2	<5
Englobe 2024							
02406622-P01	Ground Floor, Vestibule 005, Ceiling	White	<50	<50	<5	<2	<5
02406622-P02	Ground Floor, Elevator Vestibule 003, Door	Dark Grey	<50	<50	6	<2	7
02406622-P03	Ground Floor, Elevator Mechanical Room 001, Floor	Grey	<50	**70**	**766**	<2	5
02406622-P06	Stairwell 1, Wall	Grey	<50	**225**	**1,660**	<2	13
OESN 2013							
00013.002-PB13	Elevator Cab, Wall	Cream	<50	<500	**1,630**	<2	<50
00013.002-PB02	Ground Floor, Elevator Mechanical Room 001, Wall	Butter Yellow	<50	**549**	**2,220**	**13**	<50
00013.002-PB08	First Floor, Delivery Hall, Wall	Royal Blue	<50	<500	<90	<10	<50

Note: **Bold** items show concentrations that exceed (or are assumed to exceed) the regulated limit.
N/A = Not Applicable
* No current regulated amount. Detectable concentrations are outlined in **bold**
^ SOR/2016-193 Surface Coating Materials Regulations. Any concentration above regulated limit is in **bold**
" SOR/2008-273 PCB Regulations. Any concentration above the regulated limit is in **bold**

Table 3: Summary of Bulk Samples Analyzed for Chromium/Lead/Mercury Leachate by TCLP

Sample I.D.	Sample Location & Description	Colour	Leachable Chromium (mg/L)	Leachable Lead (mg/L)	Leachable Mercury (mg/L)
Englobe 2025					
02406622-P07	Basement, Mechanical Room 2, Ceiling	Yellow	-	<0.05	<0.005
02406622-P08	Basement, Mechanical Room 2, Floor	Red	<0.05	<0.05	-
02406622-P09	**Basement, Room Adjacent Room 20A, Door Frame**	**Grey**	**Assumed >5***	**Assumed >5***	-
02406622-P10	**Basement, Room 30, Wall**	**Light Grey**	**Assumed >5***	**Assumed >5***	-
Englobe 2024					
02406622-P03	Ground Floor, Elevator Mechanical Room 001, Floor	Grey	<0.05	<0.05	-
02406622-P04	Ground Floor, Elevator Mechanical Room 001, Wall	Butter Yellow	<0.10	0.42	<0.005
02406622-P05	Elevator Cab, Wall	Cream	-	<0.10	-
02406622-P06	Stairwell 1, Wall	Grey	0.05	1.81	-

Note: Analytical results are compared to O.Reg. 347/90 *Waste Management*, as amended.

* Sample could not be analyzed by laboratory and as such has been assumed to contain >5 mg/L leachable chromium and lead.

Appendix B
Select Photographs



ENGLOBE

Photo	1	2
		
Sample ID	02406622-01A-C, 20A-E	02406622-02A-C
Material Description	Non-asbestos ceramic tile/block grout	Non-asbestos large block mortar
Photo	3	4
		
Sample ID	02406622-04A	02406622-05A-C, 00013.002-C09-11, 00013.002-W08-12
Material Description	Beige sealant contains 1% Chrysotile asbestos	Non-asbestos drywall joint compound

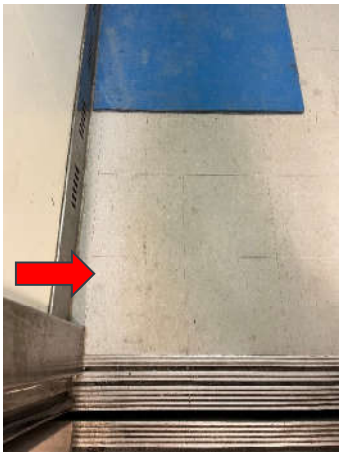
Photo	5	6
		
Sample ID	02406622-06A-C	02406622-08A-C
Material Description	Non-asbestos textured wall plaster	Non-asbestos black window glaze
Photo	7	8
		
Sample ID	02406622-09A-C	02406622-10A-C, A-01-07
Material Description	Non-asbestos white sealant	Non-asbestos grey vinyl floor tile and associated mastic

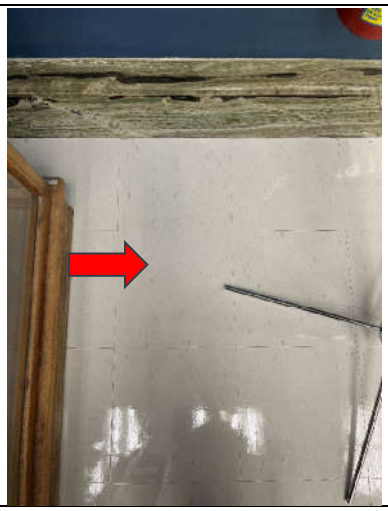
Photo	9	10
		
Sample ID	02406622-11A-C, 13A-C, 00013.002-W01-07, 00013.002-C01-5	02406622-16A-C, A-01-07
Material Description	Non-asbestos plaster (white and grey layers)	Non-asbestos off-white vinyl floor tile and mastic
Photo	11	12
		
Sample ID	02406622-17A-C, A-01-07	00013.002-PB08
Material Description	Non-asbestos white vinyl floor tile and mastic	Royal blue wall paint

Photo	13	14
		
Sample ID	02406622-P01	02406622-P02
Material Description	White ceiling paint	Dark grey door paint
Photo	15	16
		
Sample ID	02406622-P03	02406622-P04, 00013.002-PB13
Material Description	Grey floor paint	Cream wall paint

Photo	21	22
		
Sample ID	02406622-P05, 00013.002-PB02	02406622-18A-C
Material Description	Butter yellow wall paint	Concrete panel mortar contains 5% Chrysotile absestos
Photo	23	24
		
Sample ID	02406622-P08	02406622-P09
Material Description	Red floor paint	Grey door frame paint

Appendix C
Laboratory Certificates of Analysis



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Certificate of Analysis

Englobe Corp. (Ottawa)

2713 Lancaster Road, Unit 101
Ottawa, ON K1B 5R6
Attn: Alycia Starr

Client PO:
Project: 02406622.000
Custody: 78550

Report Date: 12-Feb-2025
Order Date: 6-Feb-2025

Order #: 2506470

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

Paracel ID	Client ID
2506470-01	02406622.000-18A
2506470-02	02406622.000-18B
2506470-03	02406622.000-18C
2506470-04	02406622.000-19A
2506470-05	02406622.000-19B
2506470-06	02406622.000-19C
2506470-07	02406622.000-20A
2506470-08	02406622.000-20B
2506470-09	02406622.000-20C
2506470-10	02406622.000-20D
2506470-11	02406622.000-20E
2506470-12	02406622.000-21A
2506470-13	02406622.000-21B
2506470-14	02406622.000-21C
2506470-15	02406622.000-22A
2506470-16	02406622.000-22B
2506470-17	02406622.000-22C
2506470-18	02406622.000-23A
2506470-19	02406622.000-23B
2506470-20	02406622.000-23C

Approved By:



Emma Diaz

Senior Analyst

Any use of these results implies your agreement that our total liabilty 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: **Englobe Corp. (Ottawa)**

Client PO:

Report Date: 12-Feb-2025

Order Date: 6-Feb-2025

Project Description: 02406622.000

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

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2506470-01	06-Feb-25	Beige	Mortar	**Yes**	**Client ID: 02406622.000-18A**	
					Chrysotile	5
					Non-Fibers	95
2506470-02	06-Feb-25	Beige	Mortar		**Client ID: 02406622.000-18B**	
					not analyzed, positive stop	
2506470-03	06-Feb-25	Beige	Mortar		**Client ID: 02406622.000-18C**	
					not analyzed, positive stop	
2506470-04	06-Feb-25	Grey	Mortar	No	**Client ID: 02406622.000-19A**	
					Non-Fibers	100
2506470-05	06-Feb-25	Grey	Mortar	No	**Client ID: 02406622.000-19B**	
					Non-Fibers	100
2506470-06	06-Feb-25	Grey	Mortar	No	**Client ID: 02406622.000-19C**	
					Non-Fibers	100
2506470-07	06-Feb-25	White	Grout	No	**Client ID: 02406622.000-20A**	
					Non-Fibers	100
2506470-08	06-Feb-25	White	Grout	No	**Client ID: 02406622.000-20B**	
					Non-Fibers	100
2506470-09	06-Feb-25	White	Grout	No	**Client ID: 02406622.000-20C**	
					Non-Fibers	100
2506470-10	06-Feb-25	White	Grout	No	**Client ID: 02406622.000-20D**	
					Non-Fibers	100
2506470-11	06-Feb-25	White	Grout	No	**Client ID: 02406622.000-20E**	
					Non-Fibers	100
2506470-12	06-Feb-25	White/Grey	Terracotta	No	**Client ID: 02406622.000-21A**	[AS-LR-NA]
					Non-Fibers	100

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Order #: 2506470

Certificate of Analysis

Client: Englobe Corp. (Ottawa)

Client PO:

Report Date: 12-Feb-2025

Order Date: 6-Feb-2025

Project Description: 02406622.000

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

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2506470-13	06-Feb-25	White/Grey	Terracotta	No	**Client ID: 02406622.000-21B**	[AS-LR-NA]
					Non-Fibers	100
2506470-14	06-Feb-25	White/Grey	Terracotta	No	**Client ID: 02406622.000-21C**	[AS-LR-NA]
					Non-Fibers	100
2506470-15	06-Feb-25	Grey	Vinyl Floor Tile	No	**Client ID: 02406622.000-22A**	
					Non-Fibers	100
2506470-16	06-Feb-25	Grey	Vinyl Floor Tile	No	**Client ID: 02406622.000-22B**	
					Non-Fibers	100
2506470-17	06-Feb-25	Grey	Vinyl Floor Tile	No	**Client ID: 02406622.000-22C**	
					Non-Fibers	100
2506470-18	06-Feb-25	Yellow	Mastic	No	**Client ID: 02406622.000-23A**	
					Non-Fibers	100
2506470-19	06-Feb-25	Yellow	Mastic	No	**Client ID: 02406622.000-23B**	
					Non-Fibers	100
2506470-20	06-Feb-25	Yellow	Mastic	No	**Client ID: 02406622.000-23C**	
					Non-Fibers	100

**** Analytes in bold indicate asbestos mineral content.**

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	Analysis Date
Asbestos, PLM Visual Estimation	AppE to SubE of 40CFR Part763 and EPA/600/R-93/116	2 - Ottawa West	CALA 1262	12-Feb-25

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

Qualifier Notes

Sample Qualifiers :

AS-LR-NA: Layers/materials inseparable, combined and not analysed separately

Work Order Revisions | Comments

None

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Certificate of Analysis

Englobe Corp. (Ottawa)
2713 Lancaster Road, Unit 101
Ottawa, ON K1B 5R6
Attn: Alycia Starr

Client PO:
Project: 02406622.000
Custody: 75599

Report Date: 13-Feb-2025
Order Date: 6-Feb-2025

Order #: 2506513

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

Paracel ID	Client ID
2506513-01	02406622.000-P07
2506513-02	02406622.000-P08
2506513-03	02406622.000-P09
2506513-04	02406622.000-P10

Approved By:



Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Mercury by CVAA	EPA 7471B - CVAA, digestion	12-Feb-25	12-Feb-25
Metals, ICP-MS	EPA 6020 - Digestion - ICP-MS	12-Feb-25	13-Feb-25
PCBs, total	SW846 8082A - GC-ECD	10-Feb-25	11-Feb-25

Certificate of Analysis

Report Date: 13-Feb-2025

Client: **Englobe Corp. (Ottawa)**

Order Date: 6-Feb-2025

Client PO:

Project Description: 02406622.000

	Client ID:	02406622.000-P07	02406622.000-P08	02406622.000-P09	02406622.000-P10	-	-
	Sample Date:	06-Feb-25 12:00	06-Feb-25 12:00	06-Feb-25 12:00	06-Feb-25 12:00		
	Sample ID:	2506513-01	2506513-02	2506513-03	2506513-04		
	Matrix:	Paint	Paint	Paint	Paint		
	MDL/Units						
Metals							
Arsenic	50 ug/g	<50 [1]	<50 [1]	<50 [1]	<50	-	-
Chromium	50 ug/g	<50 [1]	76 [1]	493 [1]	2730	-	-
Lead	5 ug/g	109 [1]	349 [1]	2250 [1]	13700	-	-
Mercury	2 ug/g	11 [1]	<2 [1]	<2 [1]	<2	-	-
PCBs							
PCBs, total	5 ug/g	<5	<5	<5	<5	-	-
Decachlorobiphenyl	Surrogate	88%	73%	133%	93%	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals								
Arsenic	ND	50	ug/g					
Chromium	ND	50	ug/g					
Lead	ND	5	ug/g					
Mercury	ND	2	ug/g					
PCBs								
PCBs, total	ND	5	ug/g					
Surrogate: Decachlorobiphenyl	*0.992*		*%*	*79.4*	*60-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Arsenic	ND	50	ug/g	ND			NC	50	
Chromium	ND	50	ug/g	ND			NC	50	
Lead	7.4	5	ug/g	8.0			6.7	50	
Mercury	ND	2	ug/g	ND			NC	30	
PCBs									
PCBs, total	ND	5	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.929*		*%*		*74.3*	*60-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Arsenic	51.7	50	ug/g	ND	103	70-130			
Chromium	60.0	50	ug/g	ND	119	70-130			
Lead	48.2	5	ug/g	ND	95.9	70-130			
Mercury	14	2	ug/g	ND	95.9	70-130			
PCBs									
PCBs, total	21	5	ug/g	ND	104	60-140			
Surrogate: Decachlorobiphenyl	*0.985*		*%*		*78.8*	*60-140*			

Qualifier Notes:

Sample Qualifiers :

1: Complete separation of paint from substrate not possible for this sample and a small amount of substrate has been included in the paint digestion.

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

Any use of these results implies your agreement that our total liabilty 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.

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Certificate of Analysis

Englobe Corp. (Ottawa)
2713 Lancaster Road, Unit 101
Ottawa, ON K1B 5R6
Attn: Kylie Bennett

Client PO:
Project: 02406622.000
Custody:

Report Date: 24-Feb-2025
Order Date: 7-Feb-2025

Order #: 2508095

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

Paracel ID	Client ID
2508095-01	02406622-P07
2508095-02	02406622-P08

Approved By:



Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	TCLP EPA 6020 - Digestion - ICP-MS	20-Feb-25	20-Feb-25
REG 558 - Mercury by CVAA	TCLP EPA 7470A, CVAA	20-Feb-25	21-Feb-25
Solids, %	CWS Tier 1 - Gravimetric	19-Feb-25	20-Feb-25

Certificate of Analysis

Report Date: 24-Feb-2025

Client: **Englobe Corp. (Ottawa)**

Order Date: 7-Feb-2025

Client PO:

Project Description: 02406622.000

	Client ID:	02406622-P07	02406622-P08	-	-		
	Sample Date:	06-Feb-25 09:00	06-Feb-25 09:00	-	-	-	-
	Sample ID:	2508095-01	2508095-02	-	-		
	Matrix:	Paint	Paint	-	-		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	100	100	-	-	-	-
EPA 1311 - TCLP Leachate Metals							
Chromium	0.05 mg/L	-	<0.05	-	-	-	-
Lead	0.05 mg/L	<0.05	<0.05	-	-	-	-
Mercury	0.005 mg/L	<0.005	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Metals								
Chromium	ND	0.05	mg/L					
Lead	ND	0.05	mg/L					
Mercury	ND	0.005	mg/L					

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Metals									
Chromium	ND	0.05	mg/L	ND			NC	32	
Lead	ND	0.05	mg/L	ND			NC	32	
Physical Characteristics									
% Solids	76.2	0.1	% by Wt.	75.8			0.6	25	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Metals									
Chromium	55.4	0.05	mg/L	0.225	110	80-124			
Lead	47.2	0.05	mg/L	0.126	94.1	77-126			
Mercury	0.0296	0.005	mg/L	ND	98.7	80-120			

Qualifier Notes:

Login Qualifiers :

TCLP/mSPLP extraction method deviated as 100g sample solids was not available for leaching. A lower mass was used, but the 20:1 liquid to solid ratio was maintained for the extraction.
Applies to Samples: 02406622-P07, 02406622-P08

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 unlesss otherwise noted.

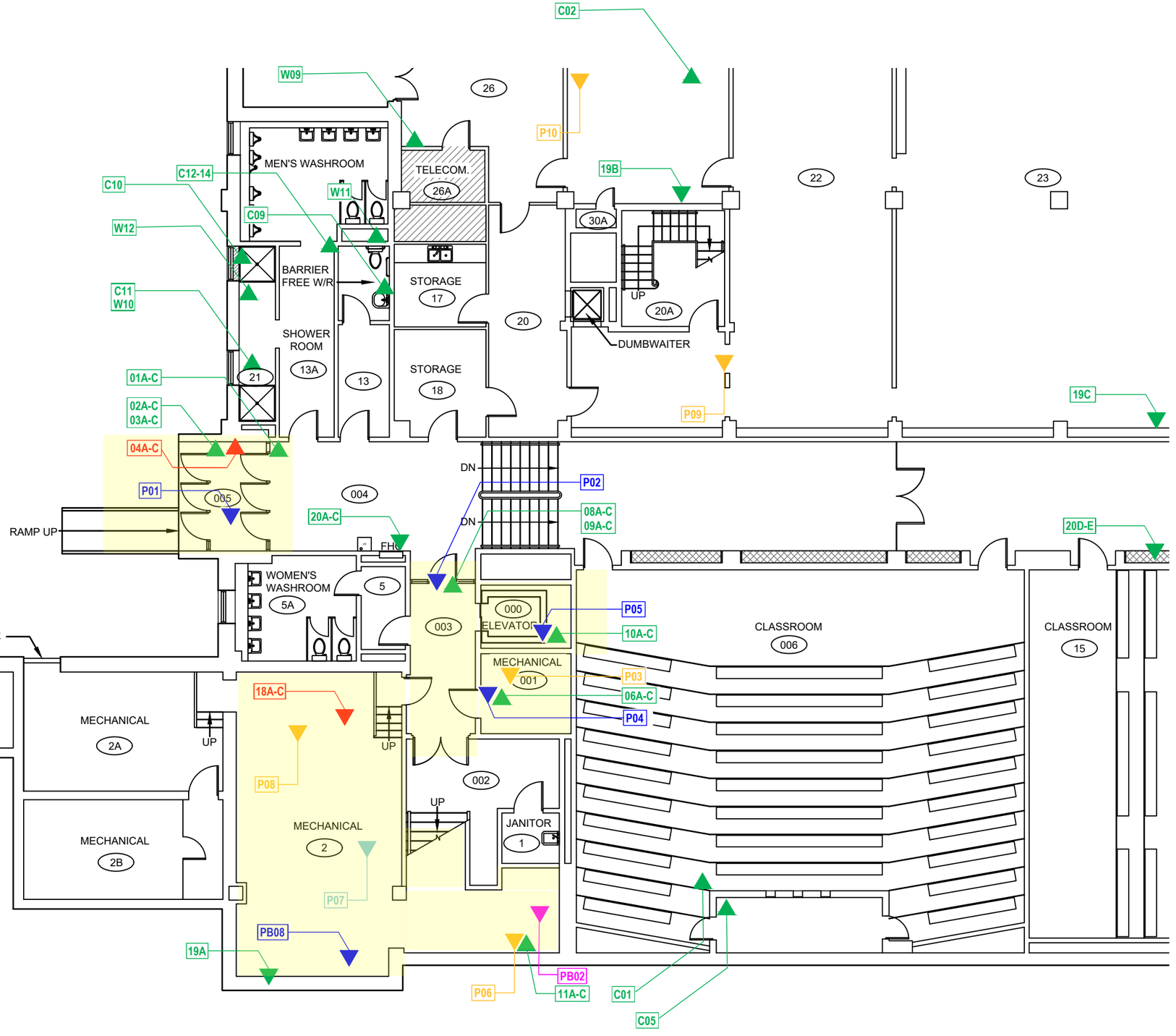
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

Any use of these results implies your agreement that our total liabilty 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.

Appendix D
Drawing with Sample Locations



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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. Historical sample data included on drawing.

Legend

- Approximate non-asbestos containing sample location
- Approximate asbestos-containing sample location (1% Chrysotile)
- Approximate paint sample location (no exceedances)
- Approximate paint sample location (lead and chromium exceedance)
  - P03: 766 ppm lead, 70 ppm chromium
  - P06: 1,660 ppm lead, 225 ppm chromium
  - P08: 349 ppm lead, 76 ppm chromium
  - P09: 2,250 ppm lead, 493 ppm chromium
- Approximate paint sample location (lead, chromium, and mercury exceedance)
  - PB02: 2,220 ppm lead, 549 ppm chromium, 13 ppm mercury
- Approximate paint sample location (lead and mercury exceedance)
  - P07: 109 ppm lead, 11 ppm mercury
- Extent of project scope

Revision	Date	Issue	Approval
0	2024/08/28	Final	K.B.

Client: **Defence Construction Canada**

Site: **7 Prom Valour Drive, Ontario**

Report Title: **Project-Specific Designated Substances and Hazardous Materials Survey, R13 Elevator Replacement and Barrier Free Upgrades Project**

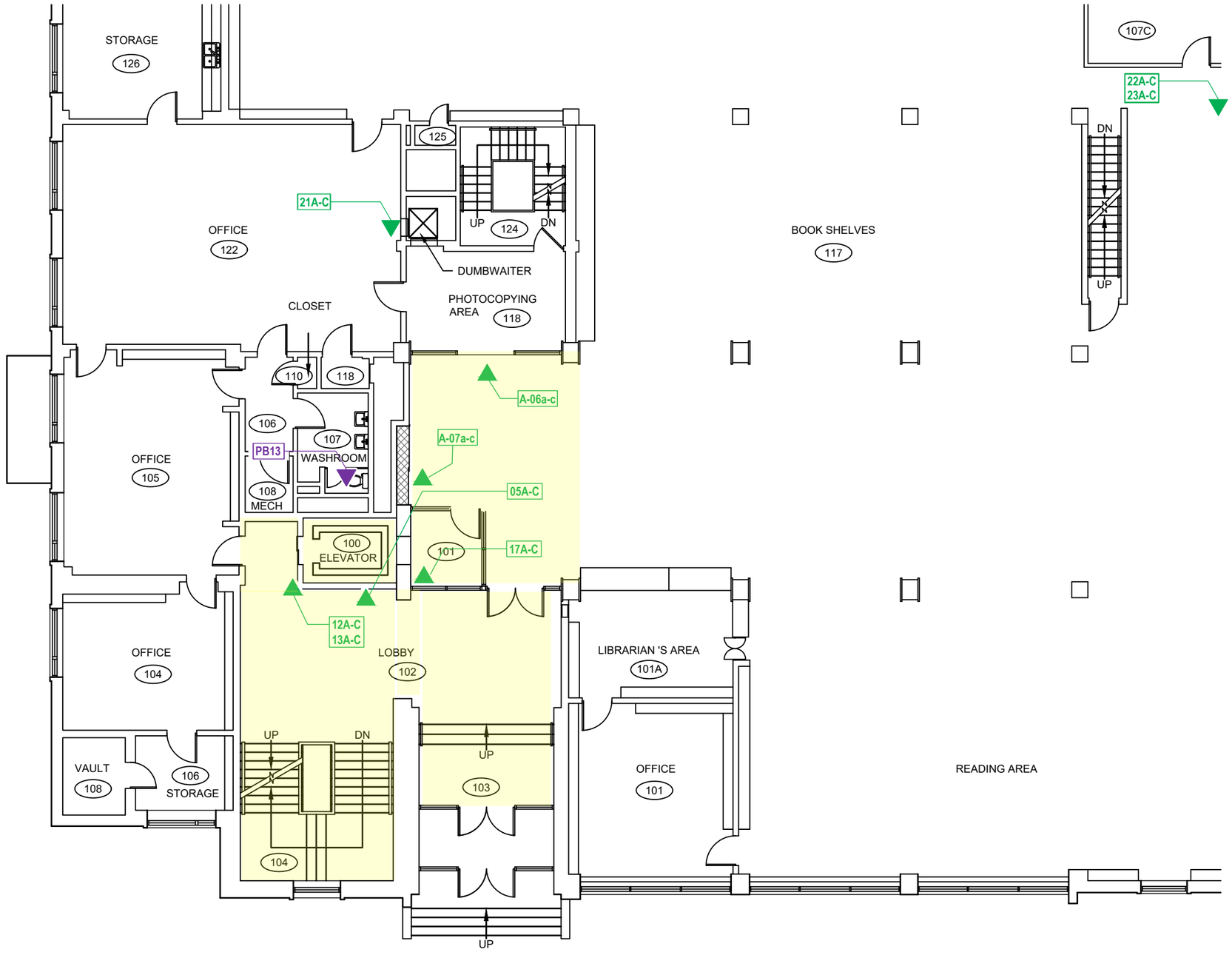
Drawing Title: **Sample Location Plan**
Ground Floor/ Basement Partial Plan

Designed By: K.B.	Scale: Not To Scale
Drawn By: M.M.	Date: February 2025
Approved By: K.B.	Project No.: 02406622.000
Figure No.: 1	

Drawing: 02406622.000 7 Prom Valour Dr .dwg Folder: Y:\Shared\CA\Ottawa\department\TS\CAD\Projects\vantage point\02406622.000 7 prom valour dr\DWGs Wednesday, August 28, 2024 @ 15:02 by Marp Monreal

2713 Lancaster Road, Unit 101, Ottawa, Ontario K1B 5R6 Tel: +1 877-300-4800 Website: www.englobecorp.com/ca

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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. Historical sample data included on drawing. Samples W05 and W06 omitted since sample locations are not included on plan.

Legend

- Approximate asbestos sample location
- Extent of project scope
- Approximate paint sample location (lead exceedance; 1,630 ppm)

Revision	Date	Issue	Approval
0	2024/08/28	Final	K.B.

Client
Defence Construction Canada

Site
7 Prom Valour Drive, Ontario

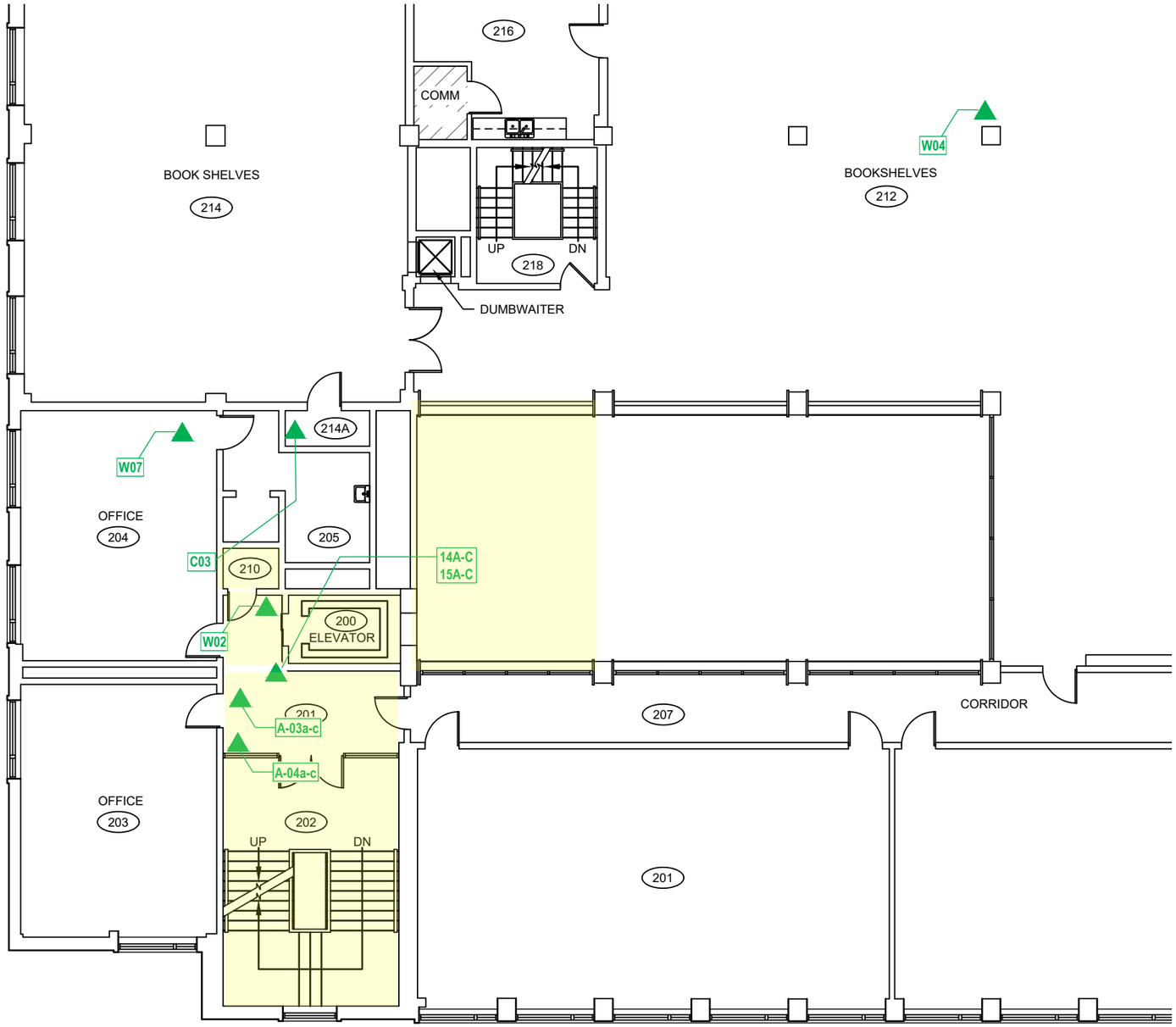
Report Title
Project-Specific Designated Substances and Hazardous Materials Survey, R13 Elevator Replacement and Barrier Free Upgrades Project

Drawing Title
Sample Location Plan
First Floor Partial Plan

Designed By: K.B.	Scale: Not To Scale
Drawn By: M.M.	Date: February 2025
Approved By: K.B.	Project No.: 02406622.000
Figure No.: 2	

Drawing: 02406622.000 7 Prom Valour Dr.dwg Folder: Y:\Shared\CA\Ottawa\department\TS\CAD\Projects\vantage point\02406622.000 7 prom valour dr\DWGs Wednesday, August 28, 2024 @ 15:02 by Marp Monreal

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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. Historical sample data included on drawing. Sample W03 omitted since sample location is not included on plan.

Legend

Approximate asbestos sample location

Extent of project scope

Revision	Date	Issue	Approval
0	2024/08/28	Final	K.B.

Client
Defence Construction Canada

Site
7 Prom Valour Drive, Ontario

Report Title
Project-Specific Designated Substances and Hazardous Materials Survey, R13 Elevator Replacement and Barrier Free Upgrades Project

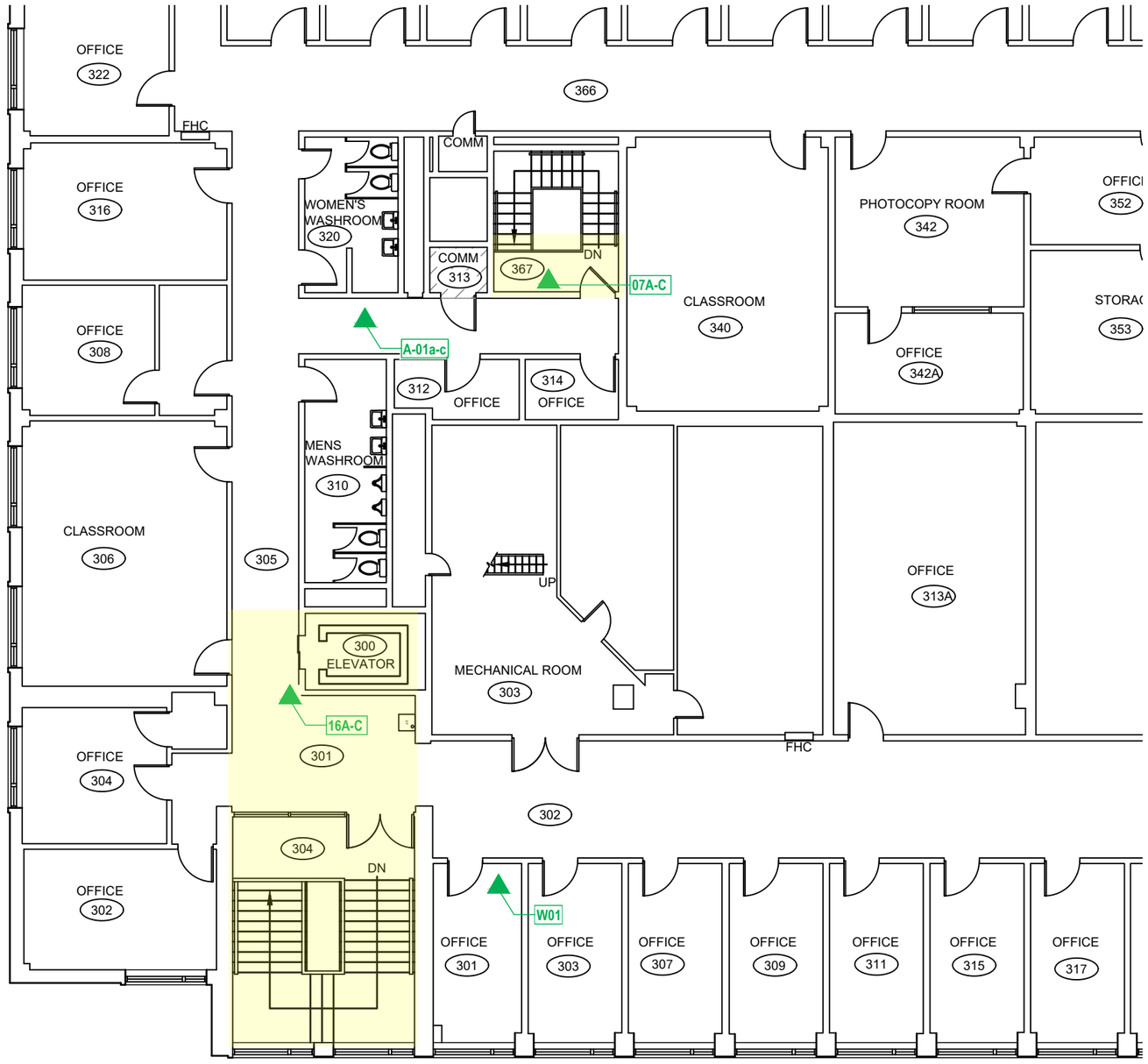
Drawing Title
Sample Location Plan
Second Floor Partial Plan

Designed By: K.B.	Scale: Not To Scale
Drawn By: M.M.	Date: February 2025
Approved By: K.B.	Project No.: 02406622.000
Figure No.: 3	

2713 Lancaster Road, Unit 101, Ottawa, Ontario K1B 5R6 Tel: +1 877-300-4800 Website: www.englobecorp.com/ca

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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. Historical sample data not included on drawing.

Legend

- Approximate asbestos sample location
- Extent of project scope

0	2024/08/28	Final	K.B.
Revision	Date	Issue	Approval

Client
Defence Construction Canada

Site
7 Prom Valour Drive, Ontario

Report Title
Project-Specific Designated Substances and Hazardous Materials Survey, R13 Elevator Replacement and Barrier Free Upgrades Project

Drawing Title
Sample Location Plan
Third Floor Partial Plan

Designed By	Scale
K.B.	Not To Scale
Drawn By	**Date**
M.M.	February 2025
Approved By	**Project No.**
K.B.	02406622.000

Figure No.
4

Wednesday, August 28, 2024 @ 15:02 by Marip Monreal
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Drawing: 02406622.000 7 Prom Valour Dr.dwg

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Appendix E
Statement of Limitations



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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.