

Public Service and Procurement Canada  
2720 Riverside Drive  
Ottawa, Ontario, K1A 0S5

December 9, 2019

Attention: Olivier Brazeau, Regional Asbestos Coordinator

Subject: Designated Substances Survey – Update  
West Annex, Former Sir John Carling Building  
930 Carling Avenue, Ottawa, Ontario

DST File No.: GVOT-034335 - Phase 27.0

## **1.0 INTRODUCTION**

DST Consulting Engineers Inc., A Division of Englobe (DST), was retained by Public Service and Procurement Canada (PSPC) to prepare an updated Designated Substance Report (DSR) for the West Annex, part of the former Sir John Carling Building, located at 930 Carling Avenue, Ottawa, Ontario.

The Designated Substances Report 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 DSR conducted, the site representatives will be able to inform employees, contractors, and tenants of any designated substances that may be present and possibly disturbed throughout the demolition project. DST staff completed a visual inspection of building materials for the presence of suspected designated substances and hazardous materials on September 26th and October 2nd, 2019.

## **2.0 SCOPE OF WORK**

The survey implemented by DST 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 that 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:

- Polychlorinated Biphenyls (PCBs);
- Halocarbons
- Mould; and
- Other hazardous materials, as deemed pertinent.

### **3.0 BACKGROUND REPORT REVIEW**

Prior to the commencement of field work, DST project personnel reviewed past designated substances documents provided by PSPC, as they pertained to the West Annex building. As part of the project, DST reviewed the following documents:

1. Final Report – Designated Substances and Hazardous Building Materials Quantification Assessment. Prepared by Jacques Whitford Stantec Limited. January 31, 2010.
2. Designated Substance Report, Sir John Carling Building, West Annex, 930 Carling Avenue, Ottawa, Ontario. Prepared by Greenough Environmental Consulting Inc. March 2010.
3. Site Evaluation Report – SJC West Annex Remediation. Dust sampling, PCM air sampling and Mould Spore Trap air sampling. Prepared by DST Consulting Engineers, Inc. December 7, 2015.
4. Designated Substances Survey – Revision B, West Annex, Former Sir John Carling Building, 930 Carling Avenue, Ottawa, Ontario. Prepared by DST Consulting Engineers. January 1, 2016.
5. Site Evaluation Reports- Sir John Carling West Annex. Abatement Monitoring, PCM Ambient Air Sampling and Mould Assessments. Prepared by DST Consulting Engineers March 12, to August 22, 2019.

At the request of PSPC, DST referenced the identifiable sampling and analytical results of the above-noted past reports, where applicable. As such, materials already identified as asbestos-containing or non-asbestos containing in the previous reports were not re-sampled by DST, unless there was uncertainty with respect to the data presented in the above-noted reports and/or discrepancies based on on-site observations. Similarly, paints already identified as containing detectable concentrations of lead were not re-sampled by DST. Furthermore, as part of the survey, the presence, quantity and condition of asbestos-containing materials were confirmed by DST. DST's field program also included the sampling of any additional ACMs, lead (in paint) and the identification of other designated substances not previously noted. Where applicable, a sufficient number of bulk asbestos samples were collected in order to satisfy the current bulk sampling requirements of 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.

#### 4.0 METHODOLOGY

In general, the following tasks were completed by DST:

- Investigation and sampling (as required) for any materials suspected of containing designated substances (e.g. asbestos, lead) or other hazardous materials,
- Collection and analysis of the required number of additional suspect ACM samples to satisfy the requirements of O.Reg. 278/05 (as amended) where applicable,
- Determining the presence and extent of Designated Substances and Hazardous Materials for the building; and
- Collecting sufficient information to subsequently enable DST to recommend appropriate mitigation measures to bring the building into compliance with applicable legislation and/or to mitigate risks to human health and/or the environment.

The field program for this report update was completed by DST on September 26th and October 2nd, 2019. The 2019 survey included a room-by-room evaluation of all accessible areas. The survey included limited intrusive openings into to inspect for concealed materials (e.g. vermiculite, adhesive tars/mastics, etc.).

Materials suspected of containing designated substances were visually identified, based on the surveyor's knowledge of the historical 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 other than asbestos 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. 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 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.

Ninety-eight (98) bulk samples of suspected ACMs (not including sample layers and duplicate samples) were collected by DST during the 2014 site investigation. At the request of PSPC, ten (10) duplicate bulk samples of suspected ACMs (greater than 10% of the quantity of bulk asbestos samples collected) were also collected and submitted for laboratory analysis as part of quality assurance/quality control (QA/QC) analytical procedures. Thirty-three (33) bulk samples of suspected ACMs (not including sample layers) were collected by DST during the 2015 site investigation. Sixty-nine (69) bulk samples of suspect ACMs (not including sample layers) were collected by DST during the 2019 site investigation

Samples were collected to meet the bulk sampling requirements stipulated in *O.Reg. 278/05, as amended*. Bulk samples were submitted to and analyzed by Paracel Laboratories (Paracel). 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<sup>2</sup>), 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/2005-109* 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 concentration of lead greater than 90ppm are considered to be lead-containing.

One (1) lead paint sample was collected by DST in the 2014 investigation. Twelve (12) lead paint samples were collected during the 2019 investigation. The samples were analyzed at Paracel. Paracel is certified under the 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.

The sampling program did not include leachate (TCLP) analysis of building materials for waste characterization.

Selected photographs of bulk samples as well as representative conditions in the project area are included in Appendix A. Bulk asbestos and lead (in paint) analytical results (DST, 2019) are included in Appendix B. A drawing with DST (2014, 2015 and 2019) sample locations is included in Appendix C.

## **5.0 INACCESSIBLE AREAS**

The following areas were inaccessible and/or bulk samples could not be collected at the time of the site survey for:

- The sub-basement of the building was inaccessible due to flooding at the time of the 2019 survey. Information on quantities and locations of designated substances found in the sub-basement are drawn from previous reports and have been assumed unchanged since previous surveys.
- Two (2) west rooms on the exterior of the building, adjacent to the loading dock;
- Two (2) rooms on the north-west side of the basement mechanical room;

- Elevator cab, pit, and other inaccessible elevator components.

Due to the above mentioned flooding, representative concrete floor slab cores were not collected from the sub-basement for sample (e.g. asbestos, Polychlorinated Biphenyls (PCB) and Polyaromatic Hydrocarbons (PAH)) analysis as applicable. It is recommended to core the sub-basement floor slab to identify possible designated or hazardous substances present on the underside of the slab, when it can be done safely.

## 6.0 FINDINGS

The following sections outline the complete findings of all accessible designated substances and hazardous building materials that were assessed within the building.

### 6.1. Asbestos

The following section outlines the consolidated asbestos findings from the designated substances survey completed by DST (2014, 2015 and 2019) as well as applicable past designated substances surveys (Greenough, Stantec, 2010).

Table 1 below presents the findings of only materials observed to still be present in the building and confirmed to contain regulated concentrations of asbestos, based on visual observations at the time of the site survey completed by DST in 2014, 2015 and 2019.

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Contain Regulated Amounts of Asbestos (by PLM)				
Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
<b>First Floor</b>				
Not Available	JWEL, 1999	First Floor	Mastic on foam wall insulation	0.5-5% Chrysotile
Not Available		First Floor	Mastic on pipe riser cover	0.5-5% Chrysotile
PM01a	Stantec, 2010	First Floor, Kitchen Area	Parging Material, Kitchen South Wall	10% Chrysotile
PM01b				Not Analyzed, Positive Stop
PM01c				20% Chrysotile
19779-16A	DST, 2014	First Floor, Entrance Lobby	Plaster Ceiling	Not Analyzed, Positive Stop
19779-16B				None Detected
19779-16C				None Detected
19779-19A	DST, 2014	First Floor, Storage Rooms, Former Conf. Room	Remnant Textured Wall Coat	1% Tremolite
19779-19B				1% Tremolite
19779-19C				1% Tremolite
19779-21A	DST, 2014	First Floor, Kitchen and Cafeteria	Plaster Wall and Ceiling Columns	Not Analyzed, Positive Stop
19779-21B				
19779-21C				
19779-21D				
19779-21E				
19779-21F				
19779-21G				
19779-25A	DST, 2014	First Floor, Former Conference Room	Textured Wall Coat	1% Chrysotile
19779-25B				Not Analyzed, Positive Stop
19779-25C				Not Analyzed, Positive Stop

<b>Table 1: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Contain Regulated Amounts of Asbestos (by PLM)</b>				
<b>Sample I.D.</b>	<b>Sampled by, Year</b>	<b>Sample Location</b>	<b>Sample Description</b>	<b>Asbestos Content</b>
<b>19779-26A</b>	<b>DST, 2014</b>	<b>First Floor, Link Corridor</b>	<b>Black Wall/Ceiling Mastic</b>	<b>11.67% Chrysotile</b>
19779-26B				Not Analyzed, Positive Stop
19779-26C				
<b>19779-27A</b>	<b>DST, 2014</b>	<b>First Floor, Former Conference Room</b>	<b>Carpet Mastic</b>	<b>0.91% Chrysotile</b>
19779-27B				Not Analyzed, Positive Stop
19779-27C				
<b>19779-29A</b>	<b>DST, 2014</b>	<b>First Floor, Kitchen</b>	<b>White Fibrous Electrical Wire Sheathing</b>	<b>65% Chrysotile</b>
19779-29B				Not Analyzed, Positive Stop
19779-29C				
<b>19779-05A</b>	<b>DST, 2015</b>	<b>First Floor, Kitchen</b>	<b>Mastic under ceiling fireproofing and Styrofoam</b>	<b>0.7-2.25% Chrysotile</b>
19779-05B				Not Analyzed, Positive Stop
19779-05C				
<b>19779-07A</b>	<b>DST, 2015</b>	<b>First Floor, Kitchen</b>	<b>Black tar under fireproofing and under ceiling arches</b>	<b>7.51% Amosite, 10.01% Chrysotile</b>
19779-07B				Not Analyzed, Positive Stop
19779-07C				
<b>19779-08A</b>	<b>DST, 2015</b>	<b>First Floor, Kitchen, Above walk in fridges</b>	<b>Cementitious layer on top of ceilings</b>	<b>1% Chrysotile</b>
19779-08B				Not Analyzed, Positive Stop
19779-08C				
<b>19779-09A</b>	<b>DST, 2015</b>	<b>First Floor, Kitchen</b>	<b>Plaster Ceilings</b>	<b>1% Chrysotile</b>
19779-09B				Not Analyzed, Positive Stop
19779-09C				
<b>19779-Dust-04</b>	<b>DST, 2015</b>	<b>Stairwell, first Floor/Basement</b>	<b>Dust</b>	<b>0.89% Chrysotile</b>
<b>19779-Dust-05</b>	<b>DST, 2015</b>	<b>Link entrance floor and floor vent</b>	<b>Dust</b>	<b>0.92% Chrysotile</b>
<b>34335-01A</b>	<b>DST, 2019</b>	<b>First Floor, DST Location 32 (Cafeteria), North Windows</b>	<b>Black Interior Window Caulking</b>	<b>4% Chrysotile</b>
34335-01B				Positive Stop- Not Analyzed
34335-01C				
<b>34335-04A</b>	<b>DST, 2019</b>	<b>First Floor, DST Location 24, (South-West Walk in Freezer)</b>	<b>Light Heat Shield</b>	<b>75% Chrysotile</b>
34335-04B				Positive Stop- Not Analyzed
34335-04C				Positive Stop- Not Analyzed
<b>34335-05A</b>	<b>DST, 2019</b>	<b>First Floor, DST Location 24, (South-West Walk in Freezer)</b>	<b>Transite</b>	<b>9% Chrysotile</b>
34335-05B				Positive Stop- Not Analyzed
34335-05C				Positive Stop- Not Analyzed
<b>34335-11A</b>	<b>DST, 2019</b>	<b>First Floor, DST Location 33 (Kitchen) North Wall Behind Ceramic Tile</b>	<b>Black Tar on Blue Foam</b>	<b>7% Chrysotile</b>
34335-11B				Positive Stop- Not Analyzed
34335-11C		<b>First Floor, DST Location 33 (Kitchen) South Wall Behind Ceramic Tile</b>		Positive Stop- Not Analyzed

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Contain Regulated Amounts of Asbestos (by PLM)				
Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
Basement				
Not Available	JWEL, 1999 <sup>1</sup>	Basement	Firestop – gasket at floor penetration	50-75% Chrysotile
Not Available		Basement	Aircell, Pipe Insulation	5-25% Chrysotile
19779-12A	DST, 2014	Basement, Mechanical Room	Fireproofing	Debris: 0.96% Chrysotile & Amosite; Tar Layer – 31.06% Amosite, 7.77% Chrysotile
19779-12B				Not Analyzed, Positive Stop
19779-12C				
19779-13A	DST, 2014	Mechanical Room, Basement	Black Tar, at floor level, around perimeter of electrical room	26.57% Chrysotile
19779-13B				Not Analyzed, Positive Stop
19779-13C				
19779-23A	DST, 2014	Basement, Link	Column, Compound Scratch Coat over concrete	1% Chrysotile
19779-23B				Not Analyzed, Positive Stop
19779-23C				
19779-38	DST, 2014	Basement, Mechanical Room	Fireproofing Tar Paper Layer (duplicate sample, Sample Series 12)	20.43% Amosite, 3.4% Chrysotile
Sub-Basement				
Not Available	JWEL, 1999 <sup>2</sup>	West Mechanical Room, Sub-basement	Cement Parging, Pipe Elbow	25-50% Chrysotile
SA-1a	Greenough, 2006	Sub-basement Mechanical Air Intake Shaft	Remnant Beige Wall Mastic	0.5% Chrysotile
VFT-01a	Stantec, 2010	Sub-basement	Grey Floor Tiles	<0.43% Chrysotile
VFT-01b				3.3% Chrysotile
VFT-01c				Not Analyzed, Positive Stop
19779-01A	DST, 2014	Sub-basement mechanical room, Air plenum	Textured Wall Coat	1% Chrysotile
19779-01B		Stairwell from basement to first floor		Not Analyzed, Positive Stop
19779-01C				
19779-01D				
19779-01E				
19779-04A	DST, 2014	Sub-basement, Mechanical Room. AHU Filter Room	White/Grey Caulking	3.88% Chrysotile
19779-04B		Not Analyzed, Positive Stop		
19779-04C				
19779-05A	DST, 2014	Sub-basement, Mechanical Room. Inside AHU	Textured floor and associated layers	3.02% Chrysotile
19779-05B		Not Analyzed, Positive Stop		
19779-05C				

<sup>1</sup> Reference in Greenough (2012) Designated Substances Survey Report

<sup>2</sup> Referenced in the Greenough (2010) Designated Substances Survey Report

Table 1: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Contain Regulated Amounts of Asbestos (by PLM)				
Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
19779-06A	DST, 2014	Sub-basement, open area	12”x12” Vinyl floor tile, grey with white streaks	0.71% Chrysotile
19779-06B				Not Analyzed, Positive Stop
19779-06C				
19779-07A	DST, 2014	Sub-basement, open area	Column Plaster	1% Chrysotile
19779-07B				Not Analyzed, Positive Stop
19779-07C				
19779-08A	DST, 2014	Sub-basement	12”x12” Vinyl floor tile, beige	1.54% Chrysotile
19779-08B				Not Analyzed, Positive Stop
19779-08C				
19779-10A	DST, 2014	Stairwell from Basement to Sub-basement	Textured Plaster Ceiling	0.95% Chrysotile
19779-10B				Not Analyzed, Positive Stop
19779-10C				
19779-30A	DST, 2014	Sub-basement, Mechanical Room	Pipe Gasket	50% Chrysotile
19779-30B				Not Analyzed, Positive Stop
19779-30C				
19779-31	DST, 2014	Sub-basement mechanical Room	Textured Wall Coat (duplicate sample, Sample Series 1)	2% Chrysotile
19779-33	DST, 2014	Sub-basement, Mechanical Room. AHU Filter Room	White/Grey Caulking (duplicate sample, Sample Series 04)	4.43% Chrysotile
19779-34	DST, 2014	Sub-basement, Mechanical Room. Inside AHU	Textured floor and associated layers (duplicate sample, Sample Series 5)	9.33% Chrysotile
19779-35	DST, 2014	Sub-basement, open area	Column Plaster (duplicate sample, Sample Series 7)	0.79% Chrysotile
19779-37	DST, 2014	Stairwell from Basement to Sub-basement	Textured Plaster Ceiling (duplicate sample, Sample Series 10)	0.93% Chrysotile
19779-11A	DST, 2015	Elevator Cab	Black tar on bottom of elevator cab	5.77% Chrysotile
19779-11B				Not Analyzed, Positive Stop
19779-11C				
Exterior				
34335-17A	DST, 2019	Exterior, South-East Foundation	Exterior Foundation Tar	2% Chrysotile
34335-17B				Positive Stop- Not Analyzed
34335-17C				Positive Stop- Not Analyzed

Notes:

1. Bold items indicate materials that contain greater than or equal to 0.5% asbestos, and are thus classified as asbestos-containing materials, as per *O.Reg 278/05*, as amended.

Table 2 below presents the findings of only materials observed to still be present in the building and confirmed not to contain regulated concentrations of asbestos, based on visual observations at the time of the site survey completed by DST in 2014, 2015 and 2019.



**Table 2: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Not Contain Regulated Concentrations of Asbestos (by PLM)**

Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
<b>First Floor</b>				
SA-7a-7g	Greenough, 2006	First Floor, Cafeteria Ceiling	Sprayed Fireproofing	None Detected
SA-1a-1c	Greenough, 2010	First Floor, AV Booth, Former Conference Room	1'x1' Ceiling Tile	None Detected
SA-2a-2c	Greenough, 2010	First Floor, Conference Room, Storage Area	9"x9" Grey Vinyl floor tile	None Detected
SA-3a-3c	Greenough, 2010	First Floor, Kitchen Corridor	12"x12" Grey Vinyl floor tile	None Detected
SA-4a-4c	Greenough, 2010	First Floor, Cafeteria	Grey Vinyl sheet flooring	None Detected
BLF-01a-c	Stantec, 2010	First Floor, Cafeteria	Grey Vinyl sheet flooring	None Detected
CP-01a-c	Stantec, 2010	First Floor, Cafeteria Kitchen	No sample description provided (suspected to be ceiling plaster)	None Detected
VFT-02a-c <sup>3</sup>	Stantec, 2010	First Floor, Kitchen Area	Black Floor Tiles	None Detected
VFT-013a-c <sup>3</sup>	Stantec, 2010	First Floor, Link	Grey Floor Tiles	None Detected
DJC-01a-c	Stantec, 2010	First Floor, Kitchen Area	Drywall Joint Compound	None Detected
19779-14A	DST, 2014	First Floor, Inside Kitchen Freezers	Textured Wall Coat	None Detected
19779-14B				None Detected
19779-14C				None Detected
19779-15A	DST, 2014	First Floor, Kitchen Area	Smooth Plaster	None Detected
19779-15B				None Detected
19779-15C				None Detected
19779-17A	DST, 2014	First Floor, Entrance Lobby	12"x12" Vinyl Floor Tile, Grey	None Detected
19779-17B				None Detected
19779-17C				None Detected
19779-20A	DST, 2014	First Floor, Kitchen Area, South Bulkhead Behind Stove Equipment	Plaster Bulkhead	None Detected
19779-20B				None Detected
19779-20C				None Detected
19779-22A	DST, 2014	First Floor, Kitchen Shaft	Black tar on white foam/Styrofoam pipe insulation	None Detected
19779-22B				None Detected
19779-22C				None Detected
19779-40	DST, 2014	First Floor, Kitchen	Smooth Plaster (duplicate sample, Sample Series 15)	None Detected
19779-06A	DST, 2015	First Floor, Kitchen, Ceiling Arches	Drywall Joint Compound	None Detected
19779-06B				None Detected
19779-06C				None Detected
19779-10A	DST, 2015	First Floor, Ceiling	Spray Fireproofing	None Detected
19779-10B				None Detected
19779-10C				None Detected

<sup>3</sup> Asbestos Analysis of Bulk Material via Transmission Electron Microscopy (Stantec, 2010)

**Table 2: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Not Contain Regulated Concentrations of Asbestos (by PLM)**

Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
34335-02A	DST, 2019	First Floor DST Location 32 (Cafeteria), North Windows	Beige Interior Window Caulking	None Detected
34335-02B				None Detected
34335-02C				None Detected
34335-03A	DST, 2019	First Floor, DST Location 33 (Kitchen, Locker Room)	12"x12" Vinyl floor tile, Black with White Streaks and Associated Mastic	VFT- None Detected Mastic- None Detected
34335-03B				VFT- None Detected Mastic- None Detected
34335-03C				VFT- None Detected Mastic- None Detected
34335-08A	DST, 2019	First Floor, DST Location 31, (Entrance to Conference Room West Side)	Terra Cotta Mortar	None Detected
34335-08B				None Detected
34335-08C				None Detected
34335-08D		First Floor, DST Location 31, (Entrance to Conference Room East Side)		None Detected
34335-08E				None Detected
34335-08F		First Floor, DST Location 31, (South-East Storage Room)		None Detected
34335-08G				None Detected
34335-09A	DST, 2019	Basement, DST Location 20, (Women's Washroom) Behind Ceramic Tile	Brownish Orange Ceramic Tile Mastic	None Detected
34335-09B				None Detected
34335-09C				None Detected
34335-10A	DST, 2019	First Floor, DST Location 33 (Kitchen) South Wall Behind Ceramic Tile First Floor, DST Location 33 (Kitchen) North Wall Behind Ceramic Tile	Wall Plaster, Grey and Tan Layers	Grey- None Detected
34335-10B				Tan- None Detected
34335-10C				Grey- None Detected
34335-12A	DST, 2019	First Floor, DST Location 33 (Kitchen) Floor Pipe Penetration	Red Firestop	None Detected
34335-12B				None Detected
34335-12C				None Detected
34335-13A	DST, 2019	First Floor, DST Location 33 (Kitchen) Floor Pipe Penetration	Black Tar	None Detected
34335-13B				None Detected
34335-13C				None Detected

**Table 2: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Not Contain Regulated Concentrations of Asbestos (by PLM)**

Regulated Concentrations of Asbestos (by T-Env)				
Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
Basement				
SA-5a-5c	Greenough, 2010	Mechanical Room Ceiling, Basement	Sprayed Fireproofing	None Detected
FP-01a-c	Stantec, 2010	Mechanical Room, Basement	Sprayed Ceiling Fireproofing	None Detected
19779-11A	DST, 2014	Wall Radiator, Top of Stairwell from Basement to Sub-basement	Corrugated Pipe Insulation, Cardboard Wrap	<0.5% Chrysotile
19779-11B				None Detected
19779-11C				None Detected
19779-24A	DST, 2014	Basement, Link, Ventilation Shaft	Layered Cardboard Wrap	None Detected
19779-24B				None Detected
19779-24C				None Detected
34335-06A	DST, 2019	Basement, DST Location 13, Ductwork of Air Handling Unit #35	Tar Paper	None Detected
34335-06B				None Detected
34335-06C				None Detected
34335-07A	DST, 2019	Basement Location 21, Adjacent Men's Washroom	Concrete Block Mortar	None Detected
34335-07B		Basement, DST Location 21, Adjacent Men's Washroom		None Detected
34335-07C		Basement, DST Location 12, West Wall		None Detected
34335-07D		Basement, DST Location 12, Central Pipe Shaft		None Detected
34335-07E				None Detected
34335-07F				None Detected
34335-07G				None Detected
Sub-Basement				
MAS-01a-c	Stantec, 2010	Sub-basement	Black Floor Mastic	None Detected
19779-02A	DST, 2014	Sub-basement mechanical room	Remnant wall coat (remnant second layer of textured wall coat)	None Detected
19779-02B				None Detected
19779-02C		Sub-basement, open area		None Detected
19779-02D				None Detected
19779-02E		Basement, open area		None Detected
19779-02F				None Detected
19779-02G				None Detected
19779-03	DST, 2014	Sub-basement, Mechanical Room	White fibrous debris on and under Air Handling Unit	<0.5% Chrysotile
19779-09A	DST, 2014	Stairwell: Sub-basement to Basement	Layered Cardboard Wrap Pipe Insulation	None Detected
19779-09B				<0.5% Chrysotile
19779-09C				<0.5% Chrysotile
19779-32	DST, 2014	Sub-basement	Remnant wall coat (remnant second layer of textured wall coat) (duplicate sample, Sample Series 2)	None Detected

Table 2: Summary of Bulk Samples Analyzed for Asbestos Content and Confirmed to Not Contain Regulated Concentrations of Asbestos (by PLM)				
Sample I.D.	Sampled by, Year	Sample Location	Sample Description	Asbestos Content
19779-36	DST, 2014	Sub-basement, Stairwell from sub-basement to basement	Layered Cardboard Wrap Pipe Insulation (duplicate sample, Sample Series 9)	<0.5% Chrysotile
19779-Dust-01	DST, 2015	Sub-basement, near south wall	Dust	None Detected
Other Locations				
SA-6a-6g	Greenough, 2006	Throughout	Drywall Joint Compound	None Detected
ES-02a-e	Stantec, 2010	Exterior	Rock/Mortar (stucco)	None Detected
19779-28A	DST, 2014	Exterior	Black Caulking, Granite Joints	None Detected
19779-28B				None Detected
19779-28C				None Detected
34335-14A	DST, 2019	Exterior, Loading Bay Walls	Exterior Black Ceramic Brick Mortar	None Detected
34335-14B				None Detected
34335-14C				None Detected
34335-15A	DST, 2019	Exterior, North Wall (West)	Exterior Stone Mortar	None Detected
34335-15B		Exterior, North Wall (Centre)		None Detected
34335-15C				None Detected
34335-15D		Exterior, North Wall (East)		None Detected
34335-15E				None Detected
34335-15F				None Detected
34335-15G				None Detected
34335-16A	DST, 2019	Exterior, North Wall, Centre Section where Stone has Collapsed	Exterior White Mortar Patch	None Detected
34335-16B				None Detected
34335-16C				None Detected
34335-18A	DST, 2019	Exterior, South Wall	Exterior Grey Textured Parging	None Detected
34335-18B				None Detected
34335-18C				None Detected
34335-19A	DST, 2019	Exterior, South-East Wall Joint	Exterior Grey Joint Caulking	None Detected
34335-19B		Exterior, South-West Wall Joint		None Detected
34335-19C		None Detected		
Roofs				
19779-01A	DST, 2015	Roof, North Terrace	Flat Roofing Materials and associated layers	None Detected
19779-01B				None Detected
19779-01C				None Detected
19779-02A	DST, 2015	Roof, Main Building	Roofing Material Layers	None Detected
19779-02B				None Detected
19779-02C				None Detected
19779-03A	DST, 2015	Roof, Link Structure	Flat Roofing Materials and associated layers	None Detected
19779-03B				None Detected
19779-03C				None Detected
19779-04A	DST, 2015	Roof, Link Structure	Zonolite, Bottom Layer	None Detected
19779-04B				None Detected
19779-04C				None Detected

As outlined in the tables above, all duplicate asbestos bulk samples reported consistent findings with respect to their respective original sample analytical results. Photographs of each of the above-noted samples collected by DST are provided in Appendix A for reference.

#### **6.1.1. Asbestos-Containing Materials**

Bulk sampling and subsequent laboratory analysis has determined that the building materials outlined below contain regulated concentrations of asbestos. All quantities and locations, where provided, are approximations only, and the below list should not be considered absolute. All quantities, locations, and on-site conditions are to be confirmed on-site prior to removal or disturbance:

##### **Friable Asbestos-Containing Materials**

- Friable (intact and in good condition) textured plaster wall/ceiling coat materials – top layer of texture coat (DST 2014 Samples 19779-01A, 19779-25A, 19779-31, 19779-10A, 19779-37) contains 0.93-2% Chrysotile asbestos. This material was observed present in select areas throughout the building, including, but not limited to:
  - select walls in the sub-basement mechanical room and air plenum (approximately one hundred (100) square meters historically present in survey locations 1, 2, 7, and 8), sub-basement stairwell to basement (approximately 5 square meters, survey location 10, column),
  - basement mechanical room and air plenums (approximately one hundred (100) square meters - survey location 13),
  - stairwell walls and ceiling from basement to first floor (approximately one hundred forty (140) square meters - survey location 18),
  - basement electrical room (approximately twenty (20) square metres- survey location 16),
  - first floor, storage rooms adjacent to the conference room (less than one (1) square metre- location 31 at doorframe to conference room),
  - first floor east wall and columns of the former conference room (approximately sixty (60) square meters - survey location 40),
  - first floor, east washroom (approximately 10 square meters - survey location 30) (concealed beneath drywall and ceramic materials),
  - basement level (west) men's washroom area located on (approximately twelve (12) square meters - survey locations 19),
  - exterior loading dock (approximately two (2) square metres, and
  - Remnant (less than one (1) square metre of poor condition, texture wall top coat are present in the open areas and link areas of the basement in survey locations 12 and

39) and first floor link (location 28). Remnant, poor condition, minor areas of the texture wall coat (top coat) were historically present in the open areas and link areas of the sub-basement (survey locations 9, 36, 37, 38) assumed to have undergone abatement/chipping, but for which remnant ACM (top coat) texture coat may still be present in small, minor areas. Due to the sporadic and minor instances of the remnant asbestos plaster top coat layer throughout these sub-basement areas, an accurate quantity of the material could not be ascertained in previous surveys.

DST has confirmed that the remnant bottom layer of plaster texture coat that is present on other areas of the walls in the sub-basement and basement does not contain asbestos (DST 2015 Samples 19779-02A-G, refer to Section 5.1.4). All wall surfaces where a texture coat plaster layer is present shall be considered asbestos-containing.

- Friable interior flooring materials and associated layers of the air handling units in the sub-basement and basement mechanical rooms (approximately 10 square meters - survey locations 2 and 13) (DST 2014 19779-05A and duplicate sample 19779-34) contains 3.02-9.33% Chrysotile asbestos. This material inside the air handling units was observed to be in good condition,
- Plaster ceiling materials (all layers) (DST 2014 Sample 19779-16A) contains 20% Chrysotile asbestos. This material was observed present in select areas throughout the building, including, but not limited to:
  - Entrance lobby of the first floor – (less than 1 square meter -survey location 29),
  - Perimeter link connection to the former Sir John Carling Building (less than 1 square meter - survey location 28), and
  - First floor former conference room storage rooms (approximately 2 square meters - survey location 31).
- Friable remnant plaster materials, observed applied to terracotta block/wall materials inside the first floor former storage rooms of the former conference room and adjacent link areas on the first floor (approximately 30 square meters - survey location 29, 31) (DST 2014 Sample 19779-19A) contains 1% Tremolite asbestos. Based on visual observations, this material has already been selectively abated/chipped, and thus this material is in poor condition,
- Friable, white fibrous electrical wire sheathing, observed in the first floor kitchen area (less than one linear meter - survey location 33) (DST 2014 Sample 19779-29A) contains 65% Chrysotile asbestos. All fibrous electrical cable sheathing throughout the building, where present, should be assumed to contain asbestos. This material is generally in good condition,
- Friable pipe gasket historically present in sub-basement mechanical room (two (2) gaskets historically observed, survey location 7) (DST 2014 Sample 19779-30A) contain 50%

Chrysotile asbestos. One (1) gasket was observed in basement mechanical room – location 13) and one (1) gasket was observed on the exterior of the building in the loading dock. Based on the analytical results, all pipe gaskets, where present, throughout the building should be assumed to contain asbestos. Observed pipe gaskets were generally in good condition,

- Friable pipe fitting insulation/elbow parging contains 25-50% Chrysotile asbestos (JWEL 1999 Sample). Pipe fitting insulation was observed throughout select areas of the building, including, but not limited to:
  - historically present in the sub-basement stairwell (approximately 5 fittings - survey location 10), assumed to present in air ventilation shafts associated with confirmed non-ACM layered cardboard wrap pipe insulation (not accessible, quantity unknown),
  - west basement storage, mechanical, and washroom areas (approximately 75 fittings - select areas of survey locations 14 to 20), and
  - first floor shaft in kitchen area (approximately two (2) fittings and less than one (1) square metre of debris- survey location 34),

Additional asbestos pipe fitting insulation may be present in other concealed and inaccessible areas of the building not visible at the time of the site investigation.

- Friable firestop material at floor penetrations throughout the building (JWEL 1999 Sample) contains 50-75% Chrysotile asbestos. Firestop materials are generally in good condition,
- Friable aircell pipe insulation (JWEL 1999 Sample) contains 5-25% Chrysotile asbestos. Pipe fitting insulation was observed throughout select areas of the building, including, but not limited to:
  - throughout the west basement storage, mechanical and washroom areas (men's and women's washroom areas) (approximately 25 linear meters - select areas of survey locations 14 to 20). Exposed, poor condition aircell pipe insulation was observed in the women's washroom (survey location 20),
  - first floor kitchen shaft (approximately 1 linear meter and less than one (1) linear metre of debris - survey location 34), and
  - remnant poor condition aircell pipe insulation was also observed at select wall/ceiling penetration where aircell pipe insulation would have passed through solid wall/ceiling materials throughout the building and was not abated (typical examples including, but not limited to, survey location 12, 14).
  - Aircell pipe insulation may also be present in other concealed and inaccessible areas of the building that was not visible at the time of the site investigation.

- Friable plaster columns and ceiling bulkheads throughout the first floor kitchen and cafeteria area (approximately 175 square meters - survey location 32, 33) (DST 2014 Sample 19779-21A) contain 1% Tremolite asbestos. Column and bulkhead plaster materials in the first floor kitchen and cafeteria area were generally in good condition,
- Friable plaster associated with columns historically present throughout the sub-basement (approximately 85 square meters - survey location 9) (DST 2014 Sample 19779-07A and duplicate Sample 19779-35) contains 0.79-1% Chrysotile asbestos. The columns were historically intact and in good condition, and
- One (1) friable light heat shield was observed in the south-west walk-in freezer on the first floor, kitchen area (survey location 24) contains 75% Chrysotile asbestos (DST 2019 Sample 34335-04A-C).

#### **Non-Friable Asbestos-Containing Materials**

- Non-friable tar layer present beneath sprayed fireproofing in basement mechanical room contains 20.43-31.06% Amosite and 3.4-7.77% Chrysotile asbestos. Due to the concealed nature of the material, an accurate quantity could not be ascertained, however approximately one hundred twenty (120) square meters of fireproofing was observed in survey location 13) (DST 2014 Sample 19779-12A and duplicate sample 19779-38), Although representative samples of the fireproofing insulation were collected by Greenough and Stantec (2010) and were confirmed to not contain asbestos, the bottom tar layer of the fireproofing and debris associated with the tar was confirmed by DST to be asbestos-containing. DST is of the opinion that the tar layer cannot be effectively separated from the fireproofing insulation material (physically and without cross-contamination), and as such, disturbance/removal of fireproofing insulation materials should be completed using appropriate asbestos-precautionary measures. DST is also of the opinion that the tar layer cannot be effectively removed without the use of power tools. The majority of fireproofing materials were generally in good condition. Approximately ten (10) square metres of poor condition material and ten (10) square metres of debris was observed,
- Non-friable green mastic beneath sprayed ceiling fireproofing and white Styrofoam layer assumed present throughout the first floor Kitchen and cafeteria area was determined to contain 0.7-2.25% Chrysotile asbestos (DST 2015 Sample 19779-05A-C), Due to the concealed nature of the material, an accurate quantity could not be ascertained, however approximately nine hundred (900) square metres of fireproofing was observed in locations 32 and 33).
- Non-friable tar layer present beneath sprayed fireproofing and white Styrofoam, and beneath drywall on upper ceiling arches throughout the first floor kitchen and cafeteria area, contains 7.51% Amosite and 10.01% Chrysotile asbestos (DST 2015 Samples 19779-07A-C) (due to the concealed nature of the material, an accurate quantity could not be ascertained, however approximately nine hundred (900) square metres of fireproofing was observed in locations 32 and 33). Although representative samples of the fireproofing



insulation were collected by Greenough (2010) and DST (2015) and were confirmed to not contain asbestos, the bottom tar layer of the fireproofing was confirmed by DST to be asbestos-containing (in addition to the mastic outlined in the proceeding bullet point). DST is of the opinion that the tar layer cannot be effectively separated from the fireproofing insulation material or drywall (physically and without cross-contamination), and as such, disturbance/removal of fireproofing insulation materials and drywall materials should be completed using appropriate asbestos-precautionary measures. DST is also of the opinion that the tar layer cannot be effectively removed without the use of power tools. Fireproofing materials and drywall materials throughout the kitchen and cafeteria area were generally in good condition.

- Non-friable white/grey caulking (DST 2014 Sample 19779-04A and duplicate Sample 19779-33), observed throughout the air plenums and air handling unit filter rooms of both the sub-basement (historically observed) and basement mechanical rooms (approximately 20 linear meters) contains 3.88-4.43% Chrysotile asbestos. This caulking was observed to be in good condition
- Non-friable 12"x12" Vinyl floor tiles, grey with white streaks (DST 2014 Sample 19779-06A, Stantec Sample VFT-01B) historically observed in the sub-basement around the elevator pit room and east side of sub-basement (approximately 30 square meters - survey location 9), contains 0.71%-3.3% Chrysotile asbestos. Select vinyl floor tiles were historically delaminating from the floor but were generally in good condition.
- Non-friable 12"x12" Vinyl floor tiles, beige, historically observed in the open area (east) of the sub-basement (approximately 70 square meters - survey location 9) (DST 2014 Sample 19779-08A) contains 1.54% Chrysotile asbestos. This material was historically in good condition.
- Non-friable black tar layer, observed around the perimeter of the floor of the electrical room in the basement mechanical room (approximately 10 linear meters - survey location 13) (DST 2014 Sample 19779-13A and duplicate Sample 19779-39) contains 23.68-26.57% Chrysotile asbestos. This material was in good condition.
- Non-friable layer of compound applied to structural concrete columns throughout the building (DST 2014 Sample 19779-23A) contains 1% Chrysotile asbestos. All columns throughout the building (all floors, all areas, where present) should be assumed to be coated with a thin layer of asbestos-containing compound. Columns ranged from six (6) to eight (8) square metres of compound material per column, depending on height of the column. This material was generally in good condition.
- Non-friable black wall/ceiling mastic, contains 11.67% Chrysotile asbestos (DST 2014 Sample 19779-26A). This material is adhered to concrete materials and is in good condition. Due to the sporadic nature of this material installation, an accurate quantity could not be ascertained but the material was confirmed in the following locations and quantities:

- first floor link (approximately twenty-five (25) square metres- survey location 28),
  - basement link area (approximately twenty-five (25) square metres- locations B1-B3),
  - Basement, north rooms off the mechanical room (approximately thirty (30) square metres- locations B4-B-5)
- Non-friable carpet mastic, associated with carpet materials in the first floor former conference room (approximately sixty (60) square meters - survey location 40) (DST 2014 Sample 19779-27A) contains 0.91% Chrysotile asbestos. This material was primarily concealed beneath carpet materials and assumed to be in good condition.
- Non-friable mastic on foam wallboard materials (JWEL 1999 Sample) contains 0.5-5% Chrysotile asbestos. Foam wall board materials were historically observed on south perimeter wall in the kitchen area (quantity unknown, concealed beneath plaster - survey location 32). DST did not observe this material at the time of the site investigation, however, it may be present in concealed and inaccessible areas. This foam board mastic may also be present in concealed areas throughout the building. All foam board wall mastic, where encountered, should be assumed to contain asbestos.
- Non-friable mastic on pipe riser covers (JWEL 1999 Sample) contains 0.5-5% Chrysotile asbestos. Black mastic/tar was observed applied to select pipe fittings throughout the building. Four (4) visible mastic on pipe risers/fittings were observed throughout the building, however, additional mastic on pipe risers may be present in other concealed areas throughout the building. This material was generally in good condition.
- Non-friable remnant wall mastic/pucks (Greenough 2006 Sample SA-1a) contains 0.5% Chrysotile asbestos. Remnant beige and black mastic was historically observed in sub-basement air plenums and rooms adjacent to air plenums (survey location 1, 5, 6, 8, 13). Due to the sporadic nature of the materials installation, an accurate quantity of the material could not be ascertained. Approximately twenty-four (24) square metres was observed in the basement, north rooms off the mechanical room- locations B4-B5). This material is generally in good condition.
- Non-friable parging wall material on south wall in first floor kitchen area (Stantec 2010 Sample PM01a) contains 10% Chrysotile asbestos. DST did not observe this material at the time of the site investigation, however, it may be present in concealed and inaccessible areas.
- Non-friable cementitious layer (approximately seventy-five (75) square metres- locations 22-26) that would comprise the tops of the walk in refrigerators in the first floor kitchen area was determined to contain 1% Chrysotile asbestos (DST 2015 Sample 19779-08A). The material was generally in good condition,
- Black tar (approximately six (6) square metres) on the underside of the elevator cab was determined to contain 5.77% Chrysotile asbestos (DST 2015 Samples 19779-10A-C).

- Non-friable black window caulking contains 4% Chrysotile asbestos (DST 2019 Samples 34335-01A). Approximately four hundred and fifty (450) linear metres was observed on windows throughout the building);
- Non-friable Transite ceiling panels in the south-west walk-in freezer on the first floor, kitchen area (approximately 6 square meters - survey location 24) contains 9% Chrysotile asbestos (DST 2019 Sample 34335-05A);
- Non-friable black tar, applied to blue foam insulation contains 7% Chrysotile asbestos (DST 2019 Sample 34335-11A). The tar is concealed behind ceramic tiles and grey plaster on first floor kitchen walls. Due to the concealed nature of the material, an accurate quantity could not be ascertained, however approximately four-hundred fifty (450) square metres of walls with similar ceramic tile/plaster was observed in location 33).
- Non-friable exterior foundation tar contains 2% Chrysotile asbestos (DST 2019 Samples 34335-17A).

#### **6.1.2. Suspected Asbestos-Containing Materials**

Based on limited visual observations, the following materials are suspected to contain asbestos, unless proven otherwise by bulk sampling and laboratory analysis:

- Concealed and inaccessible materials beneath exterior Heritage-designated northwest terrace granite panels and stone masonry as applicable;
- Suspect Transite panels, observed in the basement west electrical room. Panels were not sampled due to proximity to high voltage equipment,
- Caulking/packing associated with cast iron drain piping, and
- Tar layers which may be present within concrete slab flooring.

#### **6.1.3. Non Asbestos-Containing Materials**

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

- Remnant bottom layer of plaster wall texture coat materials were observed throughout walls of sub-basement and basement (DST Historic Samples 19779-02A-G, and duplicate Sample 19779-32). Based on limited visual observations, textured walls throughout the previous noted areas have been selectively abated/chipped. DST collected representative samples of the remnant bottom layer material present on concrete walls and it was confirmed that this remnant bottom layer of texture wall/plaster material does not contain asbestos.
- White fibrous debris on the surface of and/or under air handling unit in sub-basement mechanical room (DST Historic Sample 19779-03).

- Layered cardboard wrap pipe insulation materials observed in select areas in the building (DST Historic Samples 19779-09A-C and 19779-24A-C).
- Corrugated pipe insulation material, observed in basement stairwell wall radiator (DST Historic Samples 19779-11A-C)
- Textured wall materials inside first floor kitchen freezer rooms DST Historic (Samples 19779-14A-C)
- Smooth wall and ceiling plaster materials in the first floor, west kitchen area (DST Historic Samples 19779-15A-C)
- 12"x12" Grey vinyl floor tiles, first floor entrance lobby to building (DST Historic Samples 19779-17A-C);
- Column stucco (rock/mortar mix) observed throughout the first floor lobby and exterior of the building (DST Historic Samples 19779-18A-C, Stantec 2010 Samples ES-02a-e);
- Plaster bulkhead, first floor, South Kitchen Area (Samples 19779-20A-C). ). However, DST confirmed regulated concentrations of asbestos in column plaster in the first floor cafeteria area. As such, all plaster materials associated with columns and bulkheads throughout the first floor should be assumed to contain asbestos, unless proven otherwise by extensive delineation sampling.
- Black tar on white foam/Styrofoam pipe insulation, observed throughout the building (DST Historic Samples 19779-22A-C);
- Exterior black caulking, applied to the joints of exterior stone wall panels (DST Historic Samples 19779-28A-C).
- Drywall joint compound throughout the building (Greenough 2010 Samples Sa-6a-6g, Stantec 2010 Samples DJC-01a-c);
- Sprayed fireproofing insulation material throughout first floor kitchen and cafeteria (Greenough 2010 Samples SA-7a-g and DST 2015 Samples 19779-10A-C). However, the mastic associated with white Styrofoam beneath the fireproofing and the black tar beneath the fireproofing has been confirmed to contain regulated amounts of asbestos.
- 1'x1' Ceiling tiles in the first floor audio visual (AV) booth of former conference room (Greenough 2010 Samples SA-1a-c);
- 12"x12" grey vinyl floor tiles, first floor, former conference room storage area (Greenough 2010 Samples SA-2a-c, Stantec 2010 Samples VFT-13A-C);
- Grey vinyl floor tiles, first floor, kitchen foyer/corridor (Greenough 2010 Samples SA-3a-c);

- Grey vinyl sheet flooring throughout first floor cafeteria area (Greenough 2010 Samples SA-4a-c and Stantec 2010 Samples BCF-01a-c);
- Sprayed fireproofing insulation material in basement mechanical room (Greenough 2010 Samples SA-5a-e and Stantec 2010 Samples FP-01a-c). However, it should be noted that based on DST bulk sampling of lower layer of tar applied beneath spray fireproofing, this tar material has been confirmed to contain regulated concentrations of Amosite and Chrysotile asbestos. As this tar layer cannot be effectively separated from the fireproofing insulation, fireproofing materials in the basement mechanical room (and other areas of the building, where encountered, with the ACM tar layer beneath) should be considered asbestos-containing;
- Black floor mastic throughout the sub-basement (Stantec 2010 Sample MAS-01a-c); and
- 2'x2' ceiling tiles in the former first floor conference room were determined to be a newer installation and thus not suspected to contain asbestos;
- Drywall joint compound associated with ceiling arches in the cafeteria/kitchen area (DST Historic Samples 19779-06A-C). However, it should be noted that the plaster associated with the vertical columns contains regulated amounts of asbestos. As such, any encountered plaster materials associated with these areas should be treated as asbestos-containing;
- Roofing materials (flat roofing materials and associated layers, Zonolite) (DST 2017 Samples 19779-01A-c to 19779-04A-C);
- Beige window caulking, first floor cafeteria and observed sporadically on windows throughout the building (DST 2019 Samples 34335-02A-C);
- 12"x12" black with white streak vinyl floor tiles and associated mastic, first floor, kitchen locker room (DST 2019 Samples 34335-03A-C);
- Black tar paper, observed as a layer on fibre glass duct insulation, basement mechanical room (DST 2019 Samples 34335-06A-C);
- Concrete block mortar observed throughout the building (DST 2019 Samples 34335-07A-G);
- Terra cotta mortar observed throughout the building (DST 2019 Samples 34335-08A-G);
- Brownish, orange ceramic tile mastic, basement washrooms (DST 2019 Samples 34335-09A-C);
- Grey (DST 2019 Samples 34335-10A-C) and tan wall plaster (DST 2019 Samples 34335-10A-B);, observed behind ceramic tile, first floor kitchen areas;
- Red firestop, observed throughout the building (DST 2019 Samples 34335-12A-C);

- Black tar, first floor kitchen floor pipe penetration (DST 2019 Samples 34335-13A-C);
- Exterior black ceramic brick mortar, exterior loading bay (DST 2019 Samples 34335-14A-C);
- Exterior stone mortar (DST 2019 Samples 34335-15A-G);
- Exterior, white stone mortar patch, sampled from a section of collapsed stone block on the north exterior wall and assumed present behind stone in additional locations of the building exterior (DST 2019 Samples 34335-16A-C);
- Exterior textured parging observed on the south wall (DST 2019 Samples 34335-18A-C);
- Exterior grey joint caulking, observed throughout the exterior of the building (DST 2019 Samples 34335-19A-C).

## 6.2. Lead

The following section outlines the consolidated lead (in paint) findings from the designated substances survey completed by DST (2014) as well as past designated substances survey completed by past consultants (Greenough, Stantec, 2010). Table 2 below presents the findings of only select paint materials observed to still be present in the building, based on visual observations at the time of the site survey completed by DST in 2019, as well as only paint materials applicable to the site investigation.

<b>Table 2: Summary of Bulk Paint Samples Analyzed for Lead Content Analysis (by (ICP-OES))</b>				
<b>Sample I.D.</b>	<b>Sampled by, Year</b>	<b>Sample Location</b>	<b>Sample Description</b>	<b>Lead Content (ppm or µg/g)</b>
<b>LS-1</b>	<b>Greenough, 2010</b>	<b>Sub-Basement Mechanical Room</b>	<b>Black Handrail Paint</b>	<b>3,820</b>
<b>LS-2</b>			<b>Off-White Duct Paint</b>	<b>1,510</b>
<b>LS-3</b>			<b>Grey Floor Paint</b>	<b>6,270</b>
<b>19779-LP01</b>	<b>DST, 2014</b>	<b>First Floor, Kitchen Walk-In Freezer</b>	<b>White Wall Paint</b>	<b>1,740</b>
<b>LP-01</b>	<b>DST, 2019</b>	<b>Basement Mechanical Room, AHU</b>	<b>Grey Paint</b>	<b>1,930</b>
<b>LP-02</b>	<b>DST, 2019</b>	<b>Basement Mechanical Room, AHU Concrete Pad</b>	<b>Yellow Paint</b>	<b>5,250</b>
<b>LP-03</b>	<b>DST, 2019</b>	<b>Basement, Central Open Area, Column</b>	<b>Off White Paint</b>	<b>1,040</b>

<b>Table 2: Summary of Bulk Paint Samples Analyzed for Lead Content Analysis (by (ICP-OES))</b>				
<b>Sample I.D.</b>	<b>Sampled by, Year</b>	<b>Sample Location</b>	<b>Sample Description</b>	<b>Lead Content (ppm or µg/g)</b>
<b>LP-04</b>	<b>DST, 2019</b>	<b>Basement, Central Area Pipes at Ceiling</b>	<b>Black Paint</b>	<b>1,710</b>
LP-05	DST, 2019	Basement Corridor Wall	White paint	39
<b>LP-06</b>	<b>DST, 2019</b>	<b>Basement Corridor, Door Trim</b>	<b>Black Paint</b>	<b>4,930</b>
LP-07	DST, 2019	First Floor, Cafeteria, Columns	Brown Paint	31
<b>LP-08</b>	<b>DST, 2019</b>	<b>Basement Corridor, Elevator Door</b>	<b>Grey Paint</b>	<b>2,670</b>
<b>LP-09</b>	<b>DST, 2019</b>	<b>Exterior, Railing to Upper Deck</b>	<b>Black Paint</b>	<b>500</b>
<b>LP-10</b>	<b>DST, 2019</b>	<b>Exterior, Loading Dock Doors</b>	<b>Grey Paint</b>	<b>962</b>
<b>LP-11</b>	<b>DST, 2019</b>	<b>Exterior, Loading Dock Door Trim</b>	<b>Black Paint</b>	<b>1,780</b>
<b>LP-12</b>	<b>DST, 2019</b>	<b>Exterior, Loading Dock Column</b>	<b>Yellow Paint</b>	<b>1,620</b>

Note: Stantec (2010) lead paint results have not been outlined above as their associated paint sample descriptions were not provided in the Stantec report

Based on the analytical results, the following paints contain concentrations of lead greater than the Federal Canada Consumer Product Safety Act's limit of 90 ppm:

- Black hand-rail paint in the sub-basement mechanical room contains 3,820 ppm lead (Greenough 2010 Sample LS-1). This paint was generally in good condition;
- Off-white duct paint in sub-basement mechanical room contains 1,510 ppm lead (Greenough 2010 Sample LS-2). This paint was peeling and delaminating in select areas of the ductwork;
- Grey floor paint in sub-basement mechanical room contain 6,270 ppm lead (Greenough 2010 Sample LS-3). This paint was peeling and delaminating in select areas of the concrete floor;
- White paint in first floor walk-in freezers (Sample 19779-LP-01) contain 1,740 ppm lead. This paint was peeling in minor areas throughout the freezer rooms;
- Grey AHU paint in the basement mechanical room (DST 2019 Sample LP-01) contains 1,930 ppm lead. This paint was peeling and delaminating in select areas;

- Yellow concrete pad paint in the basement mechanical room (DST 2019 Sample LP-02) contains 5,250 ppm lead. This paint was peeling and delaminating in select areas;
- Off white paint on basement pillars (DST 2019 Sample LP-03) contains 1,040 ppm lead. This paint was generally in good condition with minor peeling and delaminating in select areas;
- Black paint on basement ceilings, AHU ductwork and piping at ceiling level (DST 2019 Sample LP-04) contains 1,710 ppm lead. This paint was in good condition;
- Black door trim paint in the basement corridor (DST 2019 Sample LP-06) contains 4,930 ppm lead. This paint was generally in good condition;
- Grey elevator door paint in the basement corridor (DST 2019 Sample LP-08) contains 2,670 ppm lead. This paint was peeling and delaminating in select areas;
- Black railing paint on the exterior staircase to the upper deck (DST 2019 Sample LP-09) contains 500 ppm lead. This paint was peeling and delaminating; Grey door paint in the exterior loading dock (DST 2019 Sample LP-10) contains 962 ppm lead. This paint was peeling and delaminating;
- Black door trim paint in the exterior loading dock (DST 2019 Sample LP-11) contains 1,780 ppm lead. This paint was peeling and delaminating; and
- Yellow column paint in the exterior loading dock (DST 2019 Sample LP-12) contains 1,620 ppm lead. This paint was peeling and delaminating.

Based on the analytical results, the following paints contain concentrations of lead less than the Federal Canada Consumer Product Safety Act's limit of 90 ppm:

- White wall paint in the basement corridor (DST 2019 Sample LP-05) contains 39 ppm lead; and
- Brown column paint in the cafeteria and kitchen (DST 2019 Sample LP-07) contains 31 ppm lead.

Other paints could not be sampled as the paints were in good condition and sampling without matrix interference (i.e. removing the paint without the substrate material) would have proved difficult. Other paints shall be assumed to contain detectable concentrations of lead, unless specific bulk sampling and laboratory analysis confirms otherwise.

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

- Solder on the joints of copper piping and electrical equipment,
- Joints of cast iron drain pipes,



- Ceramic tile glazing, and
- Emergency light batteries throughout the building.

### **6.3. Mercury**

Mercury is suspected to be present in the following:

- Fluorescent light fixtures containing fluorescent light tubes were observed throughout the building. Fluorescent light tubes contain mercury in a vapour form and in the phosphor coating on the lamp tube. Loose and improperly stored fluorescent light tubes were observed throughout the building; and
- Thermostats and thermometers throughout the building.

### **6.4. Silica**

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

- Concrete and cement;
- Ceiling tiles;
- Drywall and associated materials;
- Flooring compounds and mastics;
- Roofing materials and associated layers;
- Ceramic tiles;
- Exterior/column stucco;
- Wall and ceiling plaster/texture coats;
- Terracotta, brick, and stone and associated mortars.

### **6.5. Hazardous Materials**

#### **6.5.1. Polychlorinated Biphenyls (PCBs)**

Polychlorinated Biphenyls (PCBs), also known as Chlorobiphenyls, are hazardous chemicals which were used in the manufacturing of a variety of equipment, such as electrical equipment, heat exchangers, hydraulic systems, and for several other specialized applications. PCBs are commonly found within electrical ballasts manufactured prior to 1981, found within fluorescent light fixtures and high intensity discharge (HID) lamps.

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.

All accessible building transformers were observed to be dry-type, which are not suspected to contain PCBs.

Fluorescent light fixtures in the building were observed to contain T12 lamp tubes. The unidentified fluorescent light ballasts associated with these fluorescent lights are suspected to contain PCB ballasts, unless proven otherwise by additional investigation. Additionally, based on a limited visual inspection of select exposed light ballasts, DST visually confirmed based on manufacturer date stamps that PCB-containing ballasts are present in the building. Additional investigation and confirmation of all fluorescent light ballasts is recommended prior to removal or disturbance.

### **6.5.2. Halocarbons**

Halocarbons are a family of synthetic organic compounds that are composed of carbon and the following elements: hydrogen, chlorine, fluorine, and/or bromine. They are inert, heat-absorbing molecules which are useful as refrigerants and fire suppression agents because they are inexpensive, non-flammable and very stable.

Halocarbons are used specifically as refrigerants in air-conditioning and refrigeration systems, fire extinguishing agents in fire extinguishing systems, blowing agents in the manufacture of foams, and as solvents. Halocarbons are regulated because many of them contribute to the depletion of the stratospheric ozone layer.

Refrigerators and freezer equipment in the building may contain halocarbons. Based on visual observations and equipment tags, halocarbons associated with refrigeration and freezer equipment in the building are suspected to have been re-claimed by licenced technicians. However, prior to removal or disturbance of this equipment, the halocarbon content of the equipment should be verified.

### **6.5.3. Mould and Water Damage**

Given the age and condition of the building (previously unheated, exposed to exterior elements in select areas, unoccupied) significant mould growth was identified throughout all floors of the building, in varying quantities, density, and number of materials impacted. As such, an accurate quantity of mould could not be ascertained given the sporadic nature of the suspected mould growth.

Since the 2015 survey was completed, the sub-basement has flooded with standing water.

In the sub-basement, in general, mould impacted materials were historically observed on surfaces throughout the floor, including, but not limited to, paper ventilation air filters in air plenums, the majority of pipe insulation and duct insulation throughout the floor, loose wood materials on the east side of the floor, and the majority of drywall, and concrete block wall materials throughout the sub-basement link area.

In the basement, in general, mould impacted materials were observed on surfaces throughout the floor, including, but not limited to, paper ventilation air filters, select duct and pipe insulation

canvas, majority of women washroom surfaces, (washroom stalls, ceiling tiles), as well as the interior of ventilation ductwork.

Other mould impacted building materials may be present in other concealed areas of the building that were not visible, apparent, or accessible at the time of the site investigation.

#### **6.5.4. Other Hazardous Materials**

The following miscellaneous hazardous materials were observed to be present in the building:

- Sub-basement mechanical room concrete floor was historically impacted by a suspected Glycol or coolant leak,
- Sub-basement part washer equipment in caged area was historically suspected to contain lubricant oils,
- Chemical storage lockers were historically observed in the sub-basement. DST could not access all lockers to evaluate the potential presence of hazardous/chemical products,

It should be noted that flood water located in the sub-basement may now be impacted and/or have spread the above noted substances.

- Elevator equipment oil was observed in the basement elevator mechanical room,
- Miscellaneous chemical/oil containers in basement mechanical room, and
- Glycol associated with mechanical systems.

#### **6.6. Other Designated Substances and Hazardous Materials**

The following Designated Substances and Hazardous Materials were neither observed, nor suspected of being present, in forms or quantities that would impact on demolition operations associated with the West Annex Building, 930 Carling Avenue, Ottawa, Ontario:

- Acrylonitrile;
- Arsenic;
- Benzene
- Coke Oven Emissions;
- Ethylene Oxide;
- Isocyanates;
- Vinyl Chloride.

## **7.0 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 demolition operations associated with the West Annex Building, 930 Carling Avenue, Ottawa, Ontario:

- Asbestos;
- Lead;
- Mercury;
- Silica;
- PCBs;
- Halocarbons;
- Mould; and
- Other Hazardous Materials.

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

### **7.1. Asbestos**

The disturbance of ACMs on construction and demolition projects for federal buildings is governed by the Canada Occupational Health and Safety Regulations, PSPC Asbestos Management Standard, 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. 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 (e.g. grey cement compound, parging, aircell, plasters) require a minimum of Moderate-Risk abatement procedures, when disturbing/removing/repairing one (1) square metre or less of the material provided that it is wetted. Should demolition, disturbance, or repair be required of more than one (1) square metre of friable ACM, High Risk abatement procedures are required. It should also be noted that pipe fitting insulation in good condition can be removed using Moderate-Risk glovebag.

The removal of non-asbestos containing materials to access concealed pipe insulation materials (e.g. plaster/substrate material, drywall,) must be completed using asbestos precautionary measures to facilitate access as debris in concealed areas behind solid building material finishes is assumed present.

DST has confirmed that the tar layer associated with spray-on fireproofing materials in the basement mechanical room, and beneath spray on fireproofing and drywall column materials in the kitchen/cafeteria contains regulated concentrations of asbestos. As this layer cannot be effectively segregated and separated from the fireproofing insulation layer and drywall (physically, without cross contamination), removal or disturbance of fireproofing materials and drywall materials should be completed using appropriate asbestos-precautionary measures.

It is industry standard to remove friable, asbestos-containing light heat shields intact using non-powered hand tools, and dispose of as asbestos-containing waste.

Removal of non-friable materials (such as tars, transite, mastics, caulking) can be performed 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 time-weighted 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 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. It is recommended that drywall with asbestos-containing joint compound undergo waste characterization testing to determine whether this specific waste stream can be disposed of as non-asbestos waste.

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, PSPC Asbestos Management Standard, and 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.
- 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, and Canada Labour Code, Occupational Health and Safety Regulations, as amended.

In spite of DST's 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.

## **7.2. 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 paints are also a risk to the environment with the potential to contaminate soil and groundwater. Paints 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 (TWael) 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. 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.

Prior to demolition, the following additional procedures should be performed with respect to other anticipated lead-containing materials:

- Copper piping solder can be cut a small distance (e.g. 50 mm) from the joints to avoid direct disturbance of the lead material;
- Cast iron drain pipes 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. If these conditions cannot be met, then more stringent (Type 2 or 3) work procedures are required;
- Emergency light batteries and other batteries should be removed when decommissioned and disposed of as lead-containing waste; and
- Lead joints between terrazzo floor slabs can be removed and disposed of according to applicable regulations prior to the disposal of the terrazzo floor.

### **7.3. Mercury**

There is no regulation that specifically governs the disturbance of mercury on construction projects. 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 airborne mercury levels that exceed this TWAEL.

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 and the Ontario Dangerous Goods Transportation Act. 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.

#### **7.4. 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.

Dust control procedures, which are typical of any well executed renovation project, are usually sufficient to control airborne silica levels. 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 to silica.

#### **7.5. Polychlorinated Biphenyls (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, the 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 and Ontario Dangerous Goods Transportation Act.



## **7.6. 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, and
- Provincial Transport of Dangerous Substances Regulation and Federal Transport of Dangerous Goods Act.

When 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.

## **7.7. Mould**

Any mould remedial activities shall follow appropriate standards/ guidelines appropriate to the scope of work as outlined within the Canadian Construction Association (CCA) document Mould Guidelines for the Canadian Construction Industry, CCA 82-2004. In the event of conflict between mould and other precautionary measures (e.g. asbestos), the more stringent procedures shall apply.

Mould is present on various building materials throughout the building. The remediation/removal of mould impacted materials is typically not required prior to building demolition. However, workers should be notified of the presence of mould and appropriate Personal Protective Equipment (PPE) (e.g. respiratory and dermal protection) may be required in impacted areas.

Given the extent of mould growth identified in the building, until such time that remediation is completed, entry into the building should be restricted to personnel with proper personnel protective equipment, including, but not limited to, adequate respiratory protection.

## **7.8. Other Hazardous Materials**

The handling and use of these materials should be undertaken by those with proper training (e.g. Workplace Hazardous Materials Information System, etc.) and adhere to any applicable guidelines and/or regulations.

Prior to demolition operations, they should be disposed of appropriately. The transport and disposal of chemical waste is governed by O. Reg. 347/90 – General – Waste Management, as amended.

DST historically observed liquid material that had leaked onto the sub-basement mechanical room floors. The sub-basement has since been flooded. De-watering is subject to regulatory measures and DST recommends that the standing water be sampled and analyzed to ensure regulatory compliance for disposal purposes, and in accordance with the products Material Safety Data Sheet (MSDS).

## 8.0 CLOSURE

A Limitations of Report 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.

### ***DST CONSULTING ENGINEERS INC.***



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## LIMITATIONS OF REPORT

This report is intended for client use only. Any use of this document by a third party, or any reliance on or decisions made based on the findings described in this report, are the sole responsibility of such third parties, and DST Consulting Engineers Inc. accepts no responsibility for damages, suffered by any third party as a result of decisions made or actions conducted based on this report. No other warranties are implied or expressed.

The data, conclusions and recommendations which are presented in this report, and the quality thereof, are based on a scope of work authorized by the client. The sampling program included asbestos bulk sampling and paint sampling in select representative areas for laboratory analysis. There is a practical limitation on the number of samples that can be collected in an occupied building. This requires the investigator to extrapolate observations and analytical results between sample locations. The uncertainty, and inherent risk, associated with this necessity increases with the distance between sampling locations. Note, however, that no scope of work, no matter how exhaustive, can guarantee to identify all contaminants. This report therefore cannot warranty that all building conditions are represented by those identified at specific locations.

Recommendations, when included, are made in good faith and are based on several successful experiences. If either the condition of the building or the health of the occupants change in the future with respect to potential indoor air quality issues, the case should be reviewed and appropriate measures taken. DST is not in a position to evaluate the health risks associated with exposure to the mould referenced in this report. Since human reactions to mould exposure vary widely amongst individuals, and specific segments of the population are generally recognized to be more susceptible than others, an evaluation of health risks can only be made on an individual basis and even then, only by a licensed medical practitioner equipped with a knowledge of the individual's medical history.

Any use of this report by the client and any other party is contingent upon their understanding and acceptance of the following condition:

“Mould is a naturally occurring substance and regardless of the results of an assessment or how completely it is removed, it could reoccur.”

Regardless of the effectiveness of any remedial actions, mould growth may occur/reoccur anywhere within a building at any time, should conditions be favourable. It is therefore essential to maintain buildings, surfaces, appliances and furnishings under conditions which are not favourable to mould incubation and growth (warm, dry, and clean). The scope of services provided by DST for this assignment did not include a detailed evaluation of the thermal and moisture management characteristics of the exterior wall assembly, or a detailed building envelope investigation to ascertain every potential root cause of the water infiltration that created an environment favourable to mould proliferation. Similarly, DST has not been engaged to provide

detailed designs for the reinstatement of building finishes or for improvements to the building envelope.










Note also that standards, guidelines and practices related to DST's scope of work may change with time. Those which were applied at the time of this program may be obsolete or unacceptable at a later date.










Any comments given in this report on potential remediation problems and possible methods are intended only for the guidance of the designer. The scope of work may not be sufficient to determine all of the factors that may affect construction, clean-up methods and/or costs. Contractors bidding on this project or undertaking clean-ups should, therefore, make their own interpretation of the factual information presented and draw their own conclusions as to how the conditions may affect their work. Contractors are to use the reports and drawings for information purposes only. Locations of ACMs shown on drawings are the best representation of known locations. Actual location of existing ACM materials will vary from what is presented in drawings










Any results from an analytical laboratory or other subcontractor reported herein have been carried out by others, and DST Consulting Engineers Inc. cannot warranty their accuracy. Similarly, DST cannot warranty the accuracy of information supplied by the client.

**APPENDIX A**  
**Select Photographs**




**Bulk Asbestos Sample Photo Log – DST 2014 Samples**

<b>Photo:</b>			
<b>Sample ID:</b>	Textured Wall Coat, Sub-Basement Mechanical Room, Basement Stairwell (19779-01A-E)	Remnant wall coat (remnant second layer of textured wall coat), Sub-Basement and Basement Mechanical Rooms and Open Areas (19779-02A-G)	White fibrous debris on and under Air Handling Unit, Sub-basement, Mechanical Room (19779-03)
<b>Photo:</b>			
<b>Sample ID:</b>	White/Grey Caulking, Sub-basement, Mechanical Room (19779-04A-C)	Textured floor and associated layers, Sub-basement, Mechanical Room. Inside AHU (19779-05A-C)	12"x12" Vinyl floor tile, grey with white streaks, Sub-basement, open area (19779-06A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Column Plaster, Sub-basement, open area (19779-07A-C)	12"x12" Vinyl floor tile, beige, Sub-basement (19779-08A-C)	Layered Cardboard Wrap Pipe Insulation, Stairwell: Sub-basement to Basement (19779-09A-C)

<b>Photo:</b>			
<b>Sample ID:</b>	Spray Fireproofing, First Floor, Ceiling (19779-10A-C)	Corrugated Pipe Insulation, Wall Radiator, Top of Stairwell from Basement to Sub-basement (19779-11A-C)	Tar Layer under Fireproofing, Basement, Mechanical Room (19779-12A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Black Tar, Mechanical Room, Basement (19779-13A-C)	Textured Wall Coat, First Floor, Inside Kitchen Freezers (19779-14A-C)	Smooth Plaster, First Floor, Kitchen Area (19779-15A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Plaster Ceiling, First Floor, Entrance Lobby (19779-16A-C)	12"x12" Vinyl Floor Tile, Grey, First Floor, Entrance Lobby (19779-17A-C)	Column Stucco, First Floor Lobby and Exterior (19779-18A-C)


<b>Photo:</b>			
<b>Sample ID:</b>	Remnant Textured Wall Coat, First Floor, Storage Rooms (19779-19A-C)	Plaster Bulkhead, First Floor, Kitchen Area (19779-20A-C)	Plaster Wall and Ceiling Columns, First Floor, Kitchen/Cafeteria (19779-21A-G)
<b>Photo:</b>			
<b>Sample ID:</b>	Black Tar Styrofoam, First Floor, Kitchen Shaft (19779-22A-C)	Column, Compound Scratch Coat, Basement, Link (19779-23A-C)	Layered Cardboard Wrap, Basement Link (19779-24A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Textured Wall Coat, First Floor, Former Conference Room (19779-25A-C)	Black Wall/Ceiling Mastic, First Floor, Link Corridor (19779-26A-C)	Carpet Mastic, First Floor, Former Conference Room (19779-27A-C)







<b>Photo:</b>			
<b>Sample ID:</b>	Black Caulking, Granite Joints Exterior (19779-28A-C)	White Fibrous Electrical Wire Sheathing, First Floor, Kitchen (19779-29A-C)	Pipe Gasket, Sub-basement, Mechanical Room (19779-30A-C)












**Bulk Asbestos Sample Photo Log – DST 2015 Samples**

<b>Photo:</b>			
<b>Sample ID:</b>	Flat Roofing Materials, North Terrace Roof (19779-01A-C)	Roofing Material Layers, Roof, Main Building (19779-02A-C)	Flat Roofing Materials and Zonolite, Roof, Main Building (19779-03A-C and 04A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Fireproofing and Mastic Layer, First Floor, Ceiling (19779-05A-C and 10A-C)	Drywall Joint Compound, First Floor, Kitchen, Ceiling Arches (19779-06A-C)	Cementitious Layer, First Floor, Kitchen, Above walk in fridges (19779-08A-C)

<b>Photo:</b>	
<b>Sample ID:</b>	Black Tar, Bottom of Elevator Cab (19779-11A-C)

**Bulk Asbestos Sample Photo Log – DST 2019 Samples**

<b>Photo:</b>			
<b>Sample ID:</b>	Black Interior Window Caulking, First Floor Cafeteria (34335-01A-C)	Beige Interior Window Caulking, First Floor Cafeteria (34335-02A-C)	12"x12" Vinyl floor tile, Black with White Streaks and Associated Mastic, First Floor, Kitchen, Locker Room (34335-03A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Light Heat Shield, First Floor, South-West Walk in Freezer (34335-04A-C)	Transite, South-West Walk in Freezer Ceiling (34335-05A-C)	Tar Paper, Basement Mechanical Room (34335-06A-C)

<b>Photo:</b>			
<b>Sample ID:</b>	Concrete Block Mortar, Basement Walls (34335-07A-G)	Terra Cotta Mortar, First Floor Walls, Behind Plaster (34335-08A-G)	Ceramic Tile Mastic, First Floor Kitchen (34335-09A- C)
			
<b>Sample ID:</b>	Wall Plaster and Black Tar, First Floor Kitchen (34335-10A-C and 11A- C)	Red Firestop and Black Tar, First Floor Kitchen (34335-12A-C and 13A- C)	Exterior Black Ceramic Brick Mortar, Exterior, Loading Bay Walls (34335-14A-C)
<b>Photo:</b>			
<b>Sample ID:</b>	Exterior Stone Mortar, Exterior, North Wall (34335-15A-G)	Exterior White Mortar Patch, Exterior, North Wall (34335-16A-C)	Foundation Tar, Exterior, South-East Foundation (34335-17A-C)
<b>Photo:</b>			



**Additional Photographs:**



**Photo 1:** Textured wall coat and ceiling materials throughout select areas of the building, contains 1-2% Chrysotile asbestos (stairwell from first floor to basement pictured above)



**Photo 2:** Floor fireproofing/packings contain 50-75% Chrysotile asbestos.



**Photo 3:** Pipe gaskets throughout the building contain 50% Chrysotile asbestos.



**Photo 4:** Floor layers of interior of air handling units (basement AHU pictured above) contains 3.02-9.33% Chrysotile asbestos.



**Photo 5:** Grey cement compound pipe fitting insulation contains 25-50% Chrysotile asbestos and mould impacted pipe insulation canvas, sub-basement stairwell. Layered cardboard wrap pipe insulation was confirmed to not contain regulated concentrations of asbestos.



**Photo 6:** Aircell pipe insulation contains 5-25% Chrysotile asbestos. Aircell debris, pictured in the first floor kitchen pipe shaft.





**Photo 7:** Tar layer beneath spray fireproofing in basement mechanical room contains 20.43-31.06% Amosite and 3.4-7.77% Chrysotile asbestos.



**Photo 8:** Plaster columns and ceiling bulkheads throughout the first floor kitchen and cafeteria area contain 1% Tremolite asbestos.

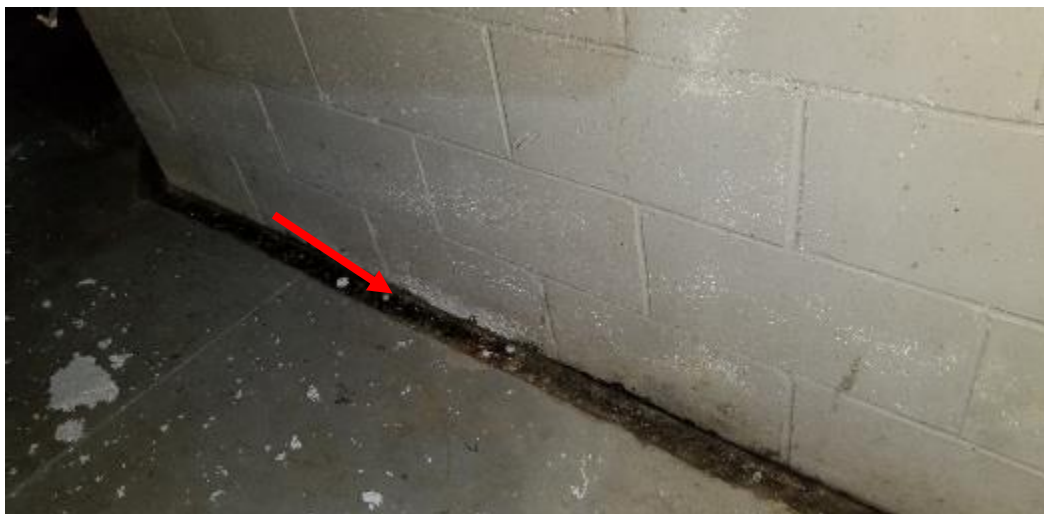


**Photo 9:** Black tar applied to bottom of elevator cab has been confirmed to contain 5.77% Chrysotile asbestos.



**Photo 10:** Light heat shield was observed in the south-west walk-in freezer on the first floor, kitchen area contains 75% Chrysotile asbestos.





**Photo 11:** Black tar layer, observed around the perimeter of the floor of the electrical room in the basement mechanical room contains 23.68-26.57% Chrysotile asbestos.



**Photo 12:** Remnant wall texture coat materials were confirmed to contain 1% Tremolite asbestos, in storage rooms adjacent to former first floor conference room. Based on visual observations, this areas appears to have already been selectively abated/chipped.



**Photo 13:** Adhesive pucks present throughout sub-basement and basement air plenums and rooms adjacent to plenums contains 0.5% Chrysotile asbestos.



**Photo 14:** Green mastic and black tar beneath Styrofoam insulation, which is present beneath fireproofing materials, and drywall materials on the ceiling arches in the kitchen and cafeteria have both been confirmed to contain asbestos.



**Photo 15:** The cementitious layer on top of kitchen ceilings (such as walk-in fridges) has been confirmed to contain asbestos.



**Photo 16:** Black wall/ceiling mastic contains 11.67% Chrysotile asbestos





**Photo 17:** Carpet mastic, associated with carpet materials in the first floor former conference room contains 0.91% Chrysotile asbestos.



**Photo 18:** Black window caulking contains 4% Chrysotile asbestos and was observed on windows throughout the building.



**Photo 19:** Transite ceiling panels in the south-west walk-in freezer on the first floor, kitchen area contains 9% Chrysotile asbestos.



**Photo 20:** Black tar, applied to blue foam insulation contains 7% Chrysotile asbestos. The tar is concealed behind ceramic tiles and grey plaster on first floor kitchen walls.





**Photo 21:** Non-friable exterior foundation tar contains 2% Chrysotile asbestos



**Photo 22:** Friable, white fibrous electrical wire sheathing, observed in the first floor kitchen area contains 65% Chrysotile asbestos.



**Photo 23:** Suspect asbestos-containing transite panel observed in the basement west electrical room.



**Photo 24:** Suspected mould impacted air filters observed in sub-basement mechanical room.



**Photo 25:** Suspected glycol and/or coolant leak was historically observed throughout the concrete floor of the sub-basement mechanical room (not accessible 2019 due to flooding).



**Photo 26:** Suspected mould impacted washroom stalls in basement washroom areas (most surfaces visually impacted by mould growth).





**Photo 27:** Based on limited visual observations, select exposed PCB-containing ballasts were identified in the building. All ballasts throughout the building should be assumed to contain PCBs, unless proven otherwise by additional investigation.



**Photo 28:** Interior of ventilation ductwork (basement mechanical room shown above) was observed to be impacted by suspected mould.

## **APPENDIX B**

Laboratory Certificate of Analysis – Bulk Asbestos and Lead (in paint): DST, 2019

## Certificate of Analysis

### DST Consulting Engineers Inc. (Ottawa)

203-2150 Thurston Dr.

Ottawa, ON K1G5T9

Attn: Andrew Cooney

Client PO: Sir John Carling, West Annex

Project: GV OT 034335

Custody:

Report Date: 9-Oct-2019

Order Date: 3-Oct-2019

**Order #: 1940477**

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

Paracel ID	Client ID
------------	-----------

1940477-01	LP-01
1940477-02	LP-02
1940477-03	LP-03
1940477-04	LP-04
1940477-05	LP-05
1940477-06	LP-06
1940477-07	LP-07
1940477-08	LP-08
1940477-09	LP-09
1940477-10	LP-10
1940477-11	LP-11
1940477-12	LP-12

Approved By:



Dale Robertson, BSc  
Laboratory Director

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 circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 09-Oct-2019

Client: DST Consulting Engineers Inc. (Ottawa)

Order Date: 3-Oct-2019

Client PO: Sir John Carling, West Annex

Project Description: GV OT 034335

**Analysis Summary Table**

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-OES	based on MOE E3470, ICP-OES	8-Oct-19	9-Oct-19

**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.

Certificate of Analysis  
 Client: DST Consulting Engineers Inc. (Ottawa)  
 Client PO: Sir John Carling, West Annex

Report Date: 09-Oct-2019  
 Order Date: 3-Oct-2019  
 Project Description: GV OT 034335

## Sample Results

Lead				Matrix: Paint
				Sample Date: 02-Oct-19
Paracel ID	Client ID	Units	MDL	Result
1940477-01	LP-01	ug/g	20	1930
1940477-02	LP-02	ug/g	20	5250
1940477-03	LP-03	ug/g	20	1040
1940477-04	LP-04	ug/g	20	1710
1940477-05	LP-05	ug/g	20	39
1940477-06	LP-06	ug/g	20	4930
1940477-07	LP-07	ug/g	20	31
1940477-08	LP-08	ug/g	20	2670
1940477-09	LP-09	ug/g	20	500
1940477-10	LP-10	ug/g	20	962
1940477-11	LP-11	ug/g	20	1780
1940477-12	LP-12	ug/g	20	1620

## Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<b>Matrix Blank</b>									
Lead	ND	20	ug/g						
<b>Matrix Duplicate</b>									
Lead	20.6	20	ug/g	ND			0.0	30	
<b>Matrix Spike</b>									
Lead	239		ug/L	ND	92.0	70-130			







Client Name: DST Consulting Engineers	Project Reference: GVOT-034335	<b>Turnaround Time:</b> <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular Date Required: _____
Contact Name: Andrew Cooney	Quote #	
Address: 2150 Thurston Drive Ottawa, Ontario	PO # Sir John Carling, West Annex	
Telephone: 613-290-0101 or 613-748-1415	Email Address: acooney@dstgroup.com, kthompson@dstgroup.com	

Criteria: ☐ O. Reg. 153/04 (As Amended) Table ☐ RSC Filing ☐ O. Reg. 558/00 ☐ PWQO ☐ CCME ☐ SUB (Storm) ☐ SUB (Sanitary) Municipality: \_\_\_\_\_ ☐ Other: \_\_\_\_\_

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Parcel Order Number:		Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Lead							
Sample ID/Location Name					Date	Time															
1	LP-11	P		1	10/02/2019		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	LP-12	P		1	10/02/2019		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:																					

Comments: \_\_\_\_\_ Method of Delivery: walk-in

Relinquished By (Sign): <u>Andrew Cooney</u>	Received by Driver/Depot:	Received at Lab: <u>BGM</u>	Verified By: <u>[Signature]</u>
Relinquished By (Print): Andrew Cooney	Date/Time: _____	Date/Time: <u>10/03/19 16:45</u>	Date/Time: <u>10-3-19 17:12</u>
Date/Time: 10/03/2019	Temperature: _____ °C	Temperature: _____ °C	pH Verified [ ] By: _____

## Subcontracted Analysis

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

203-2150 Thurston Dr.

Ottawa, ON K1G5T9

Attn: Andrew Cooney

Tel: (613) 748-1415

Fax: (613) 748-1356

Paracel Report No. **1940548**Client Project(s): **GV OT 034335**Client PO: **Sir John Carling, West Annex**Reference: **Standing Offer**

Order Date: 03-Oct-19

Revised Report: 18-Nov-19

CoC Number:

Sample(s) from this project were subcontracted for the listed parameters. A copy of the subcontractor's report is attached

Paracel ID	Client ID	Analysis
1940548-01	34335-01A	Asbestos, PLM Visual Estimation
1940548-02	34335-01B	Asbestos, PLM Visual Estimation
1940548-03	34335-01C	Asbestos, PLM Visual Estimation
1940548-04	34335-02A	Asbestos, PLM Visual Estimation
1940548-05	34335-02B	Asbestos, PLM Visual Estimation
1940548-06	3433502C	Asbestos, PLM Visual Estimation
1940548-07	34335-03A	Asbestos, PLM Visual Estimation
1940548-08	34335-03B	Asbestos, PLM Visual Estimation
1940548-09	34335-03C	Asbestos, PLM Visual Estimation
1940548-10	34335-03A	Asbestos, PLM Visual Estimation
1940548-11	34335-03B	Asbestos, PLM Visual Estimation
1940548-12	34335-03C	Asbestos, PLM Visual Estimation
1940548-13	34335-04A	Asbestos, PLM Visual Estimation
1940548-14	34335-04B	Asbestos, PLM Visual Estimation
1940548-15	34335-04C	Asbestos, PLM Visual Estimation
1940548-16	34335-05A	Asbestos, PLM Visual Estimation
1940548-17	34335-05B	Asbestos, PLM Visual Estimation
1940548-18	34335-05C	Asbestos, PLM Visual Estimation
1940548-19	34335-06A	Asbestos, PLM Visual Estimation
1940548-20	34335-06B	Asbestos, PLM Visual Estimation
1940548-21	34335-06C	Asbestos, PLM Visual Estimation
1940548-22	34335-07A	Asbestos, PLM Visual Estimation



## Subcontracted Analysis

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

Client PO: **Sir John Carling, West Annex**

Client Project(s): **GV OT 034335**

Paracel ID	Client ID	Analysis
1940548-23	34335-07B	Asbestos, PLM Visual Estimation
1940548-24	34335-07C	Asbestos, PLM Visual Estimation
1940548-25	34335-07D	Asbestos, PLM Visual Estimation
1940548-26	34335-07E	Asbestos, PLM Visual Estimation
1940548-27	34335-07F	Asbestos, PLM Visual Estimation
1940548-28	34335-07G	Asbestos, PLM Visual Estimation
1940548-29	34335-08A	Asbestos, PLM Visual Estimation
1940548-30	34335-08B	Asbestos, PLM Visual Estimation
1940548-31	34335-08C	Asbestos, PLM Visual Estimation
1940548-32	34335-08D	Asbestos, PLM Visual Estimation
1940548-33	34335-08E	Asbestos, PLM Visual Estimation
1940548-34	34335-08F	Asbestos, PLM Visual Estimation
1940548-35	34335-08G	Asbestos, PLM Visual Estimation
1940548-36	34335-09A	Asbestos, PLM Visual Estimation
1940548-37	34335-09B	Asbestos, PLM Visual Estimation
1940548-38	34335-09C	Asbestos, PLM Visual Estimation
1940548-39	34335-10A	Asbestos, PLM Visual Estimation
1940548-40	34335-10B	Asbestos, PLM Visual Estimation
1940548-41	34335-10C	Asbestos, PLM Visual Estimation
1940548-42	34335-11A	Asbestos, PLM Visual Estimation
1940548-43	34335-11B	Asbestos, PLM Visual Estimation
1940548-44	34335-11C	Asbestos, PLM Visual Estimation
1940548-45	34335-12A	Asbestos, PLM Visual Estimation
1940548-46	34335-12B	Asbestos, PLM Visual Estimation
1940548-47	34335-12C	Asbestos, PLM Visual Estimation
1940548-48	34335-13A	Asbestos, PLM Visual Estimation
1940548-49	34335-13B	Asbestos, PLM Visual Estimation
1940548-50	34335-13C	Asbestos, PLM Visual Estimation
1940548-51	34335-14A	Asbestos, PLM Visual Estimation
1940548-52	34335-14B	Asbestos, PLM Visual Estimation
1940548-53	34335-14C	Asbestos, PLM Visual Estimation
1940548-54	34335-15A	Asbestos, PLM Visual Estimation
1940548-55	34335-15B	Asbestos, PLM Visual Estimation
1940548-56	34335-15C	Asbestos, PLM Visual Estimation
1940548-57	34335-15D	Asbestos, PLM Visual Estimation
1940548-58	34335-15E	Asbestos, PLM Visual Estimation

## Subcontracted Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**Client PO: **Sir John Carling, West Annex**Client Project(s): **GV OT 034335**

Paracel ID	Client ID	Analysis
1940548-59	34335-15F	Asbestos, PLM Visual Estimation
1940548-60	34335-15G	Asbestos, PLM Visual Estimation
1940548-61	34335-16A	Asbestos, PLM Visual Estimation
1940548-62	34335-16B	Asbestos, PLM Visual Estimation
1940548-63	34335-16C	Asbestos, PLM Visual Estimation
1940548-64	34335-17A	Asbestos, PLM Visual Estimation
1940548-65	34335-17B	Asbestos, PLM Visual Estimation
1940548-66	34335-17C	Asbestos, PLM Visual Estimation
1940548-67	34335-18A	Asbestos, PLM Visual Estimation
1940548-68	34335-18B	Asbestos, PLM Visual Estimation
1940548-69	34335-18C	Asbestos, PLM Visual Estimation
1940548-70	34335-19A	Asbestos, PLM Visual Estimation
1940548-71	34335-19B	Asbestos, PLM Visual Estimation
1940548-72	34335-19C	Asbestos, PLM Visual Estimation

**AmeriSci Richmond**

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

**PLM Bulk Asbestos Report**

Paracel Laboratories, Ltd.  
Attn: Heather McGregor  
25 Northside Rd, Unit C  
Canada  
Ottawa, ON K2H 5L5

Date Received 11/15/19 AmeriSci Job # 119111534  
Date Examined 11/17/19 P.O. #  
Page 1 of 10  
RE: 1940548; (Ref: 119-10-1353)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-02A	119111534-01		NA
Location: Caulking "Insufficient Material Submitted For Preparation"			
Analyst Description: Bulk Material			
Asbestos Types:			
Other Material:			
34335-02B	119111534-02		NA
Location: Caulking "Insufficient Material Submitted For Preparation"			
Analyst Description: Bulk Material			
Asbestos Types:			
Other Material:			
34335-02C	119111534-03	No	NAD <sup>1</sup>
Location: Caulking			(by 400 pt ct) by William M. Dunstan on 11/17/19
Analyst Description: Tan, Heterogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 27.8 %			
34335-03A	119111534-04	No	NAD <sup>1</sup>
Location: VFT			(by 400 pt ct) by William M. Dunstan on 11/17/19
Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 14.1 %			
34335-03B	119111534-05	No	NAD <sup>1</sup>
Location: VFT			(by 400 pt ct) by William M. Dunstan on 11/17/19
Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 15.2 %			

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-03C <b>Location:</b> VFT	119111534-06	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 15.2 %			
34335-03A <b>Location:</b> Mastic	119111534-07	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
<b>Analyst Description:</b> Tan, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 39.2 %			
34335-03B <b>Location:</b> Mastic	119111534-08	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
<b>Analyst Description:</b> Tan, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 39.1 %			
34335-03C <b>Location:</b> Mastic	119111534-09	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
<b>Analyst Description:</b> Tan, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 32.5 %			
34335-06A <b>Location:</b> Tar Paper	119111534-10	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 8.3 %			
34335-06B <b>Location:</b> Tar Paper	119111534-11	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 4.6 %			

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-06C Location: Tar Paper  Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 3.9 %	119111534-12	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-07A Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-13	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-07B Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-14	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-07C Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-15	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-07D Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-16	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-07E Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-17	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-07F Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-18	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-07G Location: CB Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-19	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-08A Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-20	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-08B Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-21	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-08C Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-22	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-08D Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-23	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-08E Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-24	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-08F Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-25	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-08G Location: Terra Cotta Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-26	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-09A Location: Mastic  Analyst Description: Tan, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 26.2 %	119111534-27	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-09B Location: Mastic  Analyst Description: Tan, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 26.6 %	119111534-28	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-09C Location: Mastic  Analyst Description: Tan, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 39.8 %	119111534-29	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-10A <b>Location:</b> Plaster  <b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %	119111534-30	<b>No</b>	<b>NAD</b> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-10B <b>Location:</b> Plaster  <b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %	119111534-31	<b>No</b>	<b>NAD</b> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-10C <b>Location:</b> Plaster  <b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %	119111534-32	<b>No</b>	<b>NAD</b> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-12A <b>Location:</b> Firestop  <b>Analyst Description:</b> Red, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 10.3 %	119111534-33	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-12B <b>Location:</b> Firestop  <b>Analyst Description:</b> Red, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 33.3 %	119111534-34	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-12C <b>Location:</b> Firestop  <b>Analyst Description:</b> Red, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 6.2 %	119111534-35	<b>No</b>	<b>NAD<sup>1</sup></b> (by 400 pt ct) by William M. Dunstan on 11/17/19



**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-13A Location: Tar  Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 51.3 %	119111534-36	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-13B Location: Tar  Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 51.3 %	119111534-37	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-13C Location: Tar  Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 41.1 %	119111534-38	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-14A Location: Brick Mortar  Analyst Description: Dark Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-39	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-14B Location: Brick Mortar  Analyst Description: Dark Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-40	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-14C Location: Brick Mortar  Analyst Description: Dark Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-41	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-15A Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-42	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-15B Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-43	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-15C Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-44	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-15D Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-45	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-15E Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-46	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-15F Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-47	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-15G Location: Block Mortar  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-48	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-16A Location: Mortar Patch  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-49	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-16B Location: Mortar Patch  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-50	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-16C Location: Mortar Patch  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-51	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-18A Location: Parging  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-52	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-18B Location: Parging  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-53	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Ref: 119-10-1353)

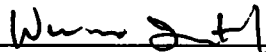
Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-18C Location: Parging  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %	119111534-54	No	NAD (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-19A Location: Caulking  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 0.6 %	119111534-55	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-19B Location: Caulking  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 1.5 %	119111534-56	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19
34335-19C Location: Caulking  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 3.9 %	119111534-57	No	NAD <sup>1</sup> (by 400 pt ct) by William M. Dunstan on 11/17/19

**Reporting Notes:**

(1) Matrix reduced quantitatively by ashing at 480C and HCl treatments prior to PLM analysis per EPA/600/R-93/116.

Revision 1: Report has been revised to reflect a 400 point count to meet the 0.5% MDL.

Analyzed by: William M. Dunstan



Date: 11/17/2019 Reviewed by:



\*NAD = no asbestos detected, Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Pt Ct = 0.25%, 1000 Pt Ct = 0.1%; "Present" or NVA = "No Visible Asbestos" are observations made during a qualitative analysis; NA = not analyzed; NA/PS = not analyzed / positive stop; PLM Bulk Asbestos Analysis by EPA 600/R-93/116 per 40 CFR 763 (NVLAP Lab Code 101904-0) and ELAP PLM Analysis Protocol 198.1 for New York friable samples which includes quantitation of any vermiculite observed (198.6 for NOB samples) or EPA 400 pt ct by EPA 600/M4-82-020 (NYSDOH ELAP Lab # 10984); CA ELAP Lab # 2508; Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar NOB materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). NIST Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested.

## Subcontracted Analysis

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

203-2150 Thurston Dr.

Ottawa, ON K1G5T9

Attn: Andrew Cooney

Tel: (613) 748-1415

Fax: (613) 748-1356

Paracel Report No. **1940548**Client Project(s): **GV OT 034335**Client PO: **Sir John Carling, West Annex**Reference: **Standing Offer**

Order Date: 03-Oct-19

Report Date: 13-Nov-19

**REVISED REPORT**

CoC Number:

Sample(s) from this project were subcontracted for the listed parameters. A copy of the subcontractor's report is attached

Paracel ID	Client ID	Analysis
1940548-01	34335-01A	Asbestos, PLM Visual Estimation
1940548-02	34335-01B	Asbestos, PLM Visual Estimation
1940548-03	34335-01C	Asbestos, PLM Visual Estimation
1940548-04	34335-02A	Asbestos, PLM Visual Estimation
1940548-05	34335-02B	Asbestos, PLM Visual Estimation
1940548-06	3433502C	Asbestos, PLM Visual Estimation
1940548-07	34335-03A	Asbestos, PLM Visual Estimation
1940548-08	34335-03B	Asbestos, PLM Visual Estimation
1940548-09	34335-03C	Asbestos, PLM Visual Estimation
1940548-10	34335-03A	Asbestos, PLM Visual Estimation
1940548-11	34335-03B	Asbestos, PLM Visual Estimation
1940548-12	34335-03C	Asbestos, PLM Visual Estimation
1940548-13	34335-04A	Asbestos, PLM Visual Estimation
1940548-14	34335-04B	Asbestos, PLM Visual Estimation
1940548-15	34335-04C	Asbestos, PLM Visual Estimation
1940548-16	34335-05A	Asbestos, PLM Visual Estimation
1940548-17	34335-05B	Asbestos, PLM Visual Estimation
1940548-18	34335-05C	Asbestos, PLM Visual Estimation
1940548-19	34335-06A	Asbestos, PLM Visual Estimation
1940548-20	34335-06B	Asbestos, PLM Visual Estimation
1940548-21	34335-06C	Asbestos, PLM Visual Estimation
1940548-22	34335-07A	Asbestos, PLM Visual Estimation

## Subcontracted Analysis

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

Client PO: **Sir John Carling, West Annex**

Client

**GV OT 034335**

Paracel ID	Client ID	Analysis
1940548-23	34335-07B	Asbestos, PLM Visual Estimation
1940548-24	34335-07C	Asbestos, PLM Visual Estimation
1940548-25	34335-07D	Asbestos, PLM Visual Estimation
1940548-26	34335-07E	Asbestos, PLM Visual Estimation
1940548-27	34335-07F	Asbestos, PLM Visual Estimation
1940548-28	34335-07G	Asbestos, PLM Visual Estimation
1940548-29	34335-08A	Asbestos, PLM Visual Estimation
1940548-30	34335-08B	Asbestos, PLM Visual Estimation
1940548-31	34335-08C	Asbestos, PLM Visual Estimation
1940548-32	34335-08D	Asbestos, PLM Visual Estimation
1940548-33	34335-08E	Asbestos, PLM Visual Estimation
1940548-34	34335-08F	Asbestos, PLM Visual Estimation
1940548-35	34335-08G	Asbestos, PLM Visual Estimation
1940548-36	34335-09A	Asbestos, PLM Visual Estimation
1940548-37	34335-09B	Asbestos, PLM Visual Estimation
1940548-38	34335-09C	Asbestos, PLM Visual Estimation
1940548-39	34335-10A	Asbestos, PLM Visual Estimation
1940548-40	34335-10B	Asbestos, PLM Visual Estimation
1940548-41	34335-10C	Asbestos, PLM Visual Estimation
1940548-42	34335-11A	Asbestos, PLM Visual Estimation
1940548-43	34335-11B	Asbestos, PLM Visual Estimation
1940548-44	34335-11C	Asbestos, PLM Visual Estimation
1940548-45	34335-12A	Asbestos, PLM Visual Estimation
1940548-46	34335-12B	Asbestos, PLM Visual Estimation
1940548-47	34335-12C	Asbestos, PLM Visual Estimation
1940548-48	34335-13A	Asbestos, PLM Visual Estimation
1940548-49	34335-13B	Asbestos, PLM Visual Estimation
1940548-50	34335-13C	Asbestos, PLM Visual Estimation
1940548-51	34335-14A	Asbestos, PLM Visual Estimation
1940548-52	34335-14B	Asbestos, PLM Visual Estimation
1940548-53	34335-14C	Asbestos, PLM Visual Estimation
1940548-54	34335-15A	Asbestos, PLM Visual Estimation
1940548-55	34335-15B	Asbestos, PLM Visual Estimation
1940548-56	34335-15C	Asbestos, PLM Visual Estimation
1940548-57	34335-15D	Asbestos, PLM Visual Estimation
1940548-58	34335-15E	Asbestos, PLM Visual Estimation

## Subcontracted Analysis

Client: **DST Consulting Engineers Inc. (Ottawa)**Client PO: **Sir John Carling, West Annex**

Client

**GV OT 034335**

Paracel ID	Client ID	Analysis
1940548-59	34335-15F	Asbestos, PLM Visual Estimation
1940548-60	34335-15G	Asbestos, PLM Visual Estimation
1940548-61	34335-16A	Asbestos, PLM Visual Estimation
1940548-62	34335-16B	Asbestos, PLM Visual Estimation
1940548-63	34335-16C	Asbestos, PLM Visual Estimation
1940548-64	34335-17A	Asbestos, PLM Visual Estimation
1940548-65	34335-17B	Asbestos, PLM Visual Estimation
1940548-66	34335-17C	Asbestos, PLM Visual Estimation
1940548-67	34335-18A	Asbestos, PLM Visual Estimation
1940548-68	34335-18B	Asbestos, PLM Visual Estimation
1940548-69	34335-18C	Asbestos, PLM Visual Estimation
1940548-70	34335-19A	Asbestos, PLM Visual Estimation
1940548-71	34335-19B	Asbestos, PLM Visual Estimation
1940548-72	34335-19C	Asbestos, PLM Visual Estimation

**AmeriSci Richmond**

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

**PLM Bulk Asbestos Report**

Paracel Laboratories, Ltd.  
Attn: Heather McGregor  
25 Northside Rd, Unit C  
Canada  
Ottawa, ON K2H 5L5

**Date Received** 10/09/19 **AmeriSci Job #** 119101353  
**Date Examined** 10/09/19 **P.O. #**  
**Page** 1 **of** 14  
**RE:** 1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-01A 1 Location: Caulking	119101353-01	Yes	4 % (by CVES) by Eric H. Ahles on 10/09/19
Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material Asbestos Types: Chrysotile 4.0 % Other Material: Synthetic fibers 6 %, Non-fibrous 90 %			
34335-01B 1 Location: Caulking	119101353-02		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
34335-01C 1 Location: Caulking	119101353-03		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
34335-02A 2 Location: Caulking	119101353-04	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
34335-02B 2 Location: Caulking	119101353-05	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
Analyst Description: Yellow, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			



Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-02C 2 Location: Caulking	119101353-06	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Yellow, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-03A 3 Location: VFT	119101353-07	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Flooring <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-03B 3 Location: VFT	119101353-08	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Flooring <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-03C 3 Location: VFT	119101353-09	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Flooring <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-03A Location: Mastic	119101353-10	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 3 %, Non-fibrous 97 %			
34335-03B Location: Mastic	119101353-11	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 2 %, Non-fibrous 98 %			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-03C Location: Mastic	119101353-12	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
Analyst Description: Black, Homogeneous, Non-Fibrous, Mastic Asbestos Types: Other Material: Cellulose 3 %, Non-fibrous 97 %			
34335-04A 4 Location: Heat Shield	119101353-13	Yes	75 % (by CVES) by Eric H. Ahles on 10/09/19
Analyst Description: Brown/White, Heterogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 75.0 % Other Material: Non-fibrous 25 %			
34335-04B 4 Location: Heat Shield	119101353-14		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
34335-04C 4 Location: Heat Shield	119101353-15		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
34335-05A 5 Location: Transite	119101353-16	Yes	9 % (by CVES) by Eric H. Ahles on 10/09/19
Analyst Description: Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Chrysotile 9.0 % Other Material: Synthetic fibers Trace, Non-fibrous 91 %			
34335-05B 5 Location: Transite	119101353-17		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-05C 5 Location: Transite	119101353-18		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
34335-06A 6 Location: Tar Paper	119101353-19	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black/Yellow, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Fibrous glass 8 %, Non-fibrous 92 %			
34335-06B 6 Location: Tar Paper	119101353-20	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black/Yellow, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 2 %, Fibrous glass 6 %, Non-fibrous 92 %			
34335-06C 6 Location: Tar Paper	119101353-21	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> Black/Yellow, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 2 %, Fibrous glass 6 %, Non-fibrous 92 %			
34335-07A 7 Location: CB Mortar	119101353-22	No	NAD (by CVES) by Eric H. Ahles on 10/09/19
<b>Analyst Description:</b> White, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-07B 7 Location: CB Mortar	119101353-23	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-07C 7 Location: CB Mortar	119101353-24	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-07D 7 Location: CB Mortar	119101353-25	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-07E 7 Location: CB Mortar	119101353-26	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-07F 7 Location: CB Mortar	119101353-27	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-07G 7 Location: CB Mortar	119101353-28	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-08A 7 Location: Terra Cotta Mortar	119101353-29	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-08B 8 Location: Terra Cotta Mortar	119101353-30	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-08C 8 Location: Terra Cotta Mortar	119101353-31	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-08D 8 Location: Terra Cotta Mortar	119101353-32	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-08E 8 Location: Terra Cotta Mortar	119101353-33	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-08F 8 Location: Terra Cotta Mortar	119101353-34	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-08G 8 Location: Terra Cotta Mortar	119101353-35	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-09A 9 Location: Mastic	119101353-36L1	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> White, Heterogeneous, Non-Fibrous, Ceramic Tile <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-09A Location:	119101353-36L2	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-09B 9 Location: Mastic	119101353-37L1	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> White, Heterogeneous, Non-Fibrous, Ceramic Tile <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-09B Location:	119101353-37L2	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-09C 9 Location: Mastic	119101353-38L1	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> White, Heterogeneous, Non-Fibrous, Ceramic Tile <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-09C Location:	119101353-38L2	No	NAD (by CVES) by William M. Dunstan on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-10A 10 Location: Plaster	119101353-39L1	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Plaster <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-10A Location:	119101353-39L2	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Tan, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-10B 10 Location: Plaster	119101353-40L1	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Plaster <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-10B Location:	119101353-40L2	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Tan, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-10C 10 Location: Plaster	119101353-41	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Plaster <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-11A 11 Location: Tar	119101353-42	Yes	7 % (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 7.0 % <b>Other Material:</b> Non-fibrous 93 %			



**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-11B 11                      Location: Tar	119101353-43		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
34335-11C 11                      Location: Tar	119101353-44		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
34335-12A 12                      Location: Firestop	119101353-45	<b>No</b>	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Rust, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-12B 12                      Location: Firestop	119101353-46	<b>No</b>	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Rust, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-12C 12                      Location: Firestop	119101353-47	<b>No</b>	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Rust, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-13A 13                      Location: Tar	119101353-48	<b>No</b>	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 15 %, Synthetic fibers 5 %, Non-fibrous 80 %			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
34335-13B 13 Location: Tar	119101353-49	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 15 %, Synthetic fibers 5 %, Non-fibrous 80 %			
34335-13C 13 Location: Tar	119101353-50	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 15 %, Synthetic fibers 5 %, Non-fibrous 80 %			
34335-14A 14 Location: Brick Mortar	119101353-51	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-14B 14 Location: Brick Mortar	119101353-52	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-14C 14 Location: Brick Mortar	119101353-53	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-15A 15 Location: Block Mortar	119101353-54	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige/Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose Trace, Non-fibrous 100 %			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-15B 15 Location: Block Mortar	119101353-55	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-15C 15 Location: Block Mortar	119101353-56	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-15D 15 Location: Block Mortar	119101353-57	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-15E 15 Location: Block Mortar	119101353-58	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-15F 15 Location: Block Mortar	119101353-59	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-15G 15 Location: Block Mortar	119101353-60	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-16A 16 Location: Mortar Patch	119101353-61	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-16B 16 Location: Mortar Patch	119101353-62	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-16C 16 Location: Mortar Patch	119101353-63	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-17A 17 Location: Tar	119101353-64	Yes	2 % (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 2.0 % <b>Other Material:</b> Non-fibrous 98 %			
34335-17B 17 Location: Tar	119101353-65		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
34335-17C 17 Location: Tar	119101353-66		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			

Client Name: Paracel Laboratories, Ltd.

**PLM Bulk Asbestos Report**

1940548; (Report Amended 11/13/2019)

<b>Client No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
34335-18A 18 Location: Parging	119101353-67	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-18B 18 Location: Parging	119101353-68	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-18C 18 Location: Parging	119101353-69	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-19A 19 Location: Caulking	119101353-70	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige/Gray, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-19B 19 Location: Caulking	119101353-71	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
34335-19C 19 Location: Caulking	119101353-72	No	NAD (by CVES) by Beverly A. Schrage on 10/09/19
<b>Analyst Description:</b> Beige, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			

## PLM Bulk Asbestos Report

1940548; (Report Amended 11/13/2019)

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### Reporting Notes:

Analyzed by: Eric H. Ahles



Date: 10/9/2019 Reviewed by:



\*NAD = no asbestos detected, Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Pt Ct = 0.25%, 1000 Pt Ct = 0.1%; "Present" or NVA = "No Visible Asbestos" are observations made during a qualitative analysis; NA = not analyzed; NA/PS = not analyzed / positive stop; PLM Bulk Asbestos Analysis by EPA 600/R-93/116 per 40 CFR 763 (NVLAP Lab Code 101904-0) and ELAP PLM Analysis Protocol 198.1 for New York friable samples which includes quantitation of any vermiculite observed (198.6 for NOB samples) or EPA 400 pt ct by EPA 600/M4-82-020 (NYSDOH ELAP Lab # 10984); CA ELAP Lab # 2508; Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar NOB materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). NIST Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested.

Paracel ID: 1940548



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acel@paracellabs.com

Chain of Custody  
(Lab Use Only)

Page 1 of 2

Client Name: DST Consulting Engineers	Project Reference: GVOT-034335
Contact Name: Andrew Cooney	Quote #:
Address: 2150 Thurston Drive, Ottawa, ON	PO #: Sir John Carling, West Annex
Telephone: 613-290-0101 / 613-748-1415	Email Address: acooney@dstgroup.com, kthompson@dstgroup.com

Turnaround Time:

<input type="checkbox"/> Immediate	<input type="checkbox"/> 1 Day
<input type="checkbox"/> 4 Hour	<input type="checkbox"/> 2 Day
<input type="checkbox"/> 8 Hour	<input type="checkbox"/> 3 Day
<input checked="" type="checkbox"/> Regular	

Date Required: \_\_\_\_\_

### ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air ☒ Bulk ☐ Tape Lift ☐ Swab ☐ Other Regulatory Guideline: ☒ ON ☐ QC ☐ AB ☐ SK ☐ Other: \_\_\_\_\_

Analyses: ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos ☒ PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Paracel Order Number:

1940548

Sample ID		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk	Combine Identified Materials?	Positive Stop?
					Identify Distinct Building Materials to Be Analyzed * see below	**see below	
1	34305-01A-C	10/02/2019		PLM	Window Caulking	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	34305-02A-C	10/02/2019		PLM	Window Caulking	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	34305-03A-C	10/02/2019		PLM	VFT and Mastic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	34305-04A-C	10/02/2019		PLM	Heat Shield	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	34305-05A-C	10/02/2019		PLM	Transite	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	34305-06A-C	10/02/2019		PLM	Tar Paper	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	34305-07A-C	10/02/2019		PLM	CB Mortar	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	34305-08A-C	10/02/2019		PLM	Terra Cotta Mortar	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	34305-09A-C	10/02/2019		PLM	Orange Mastic (Do not analyze tile)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	34305-10A-C	10/02/2019		PLM	Plaster	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	34305-11A-C	10/02/2019		PLM	Black Tar (Do not analyze blue foam)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	34305-12A-C	10/02/2019		PLM	Red Firestop	<input type="checkbox"/>	<input checked="" type="checkbox"/>

\* If left blank, Paracel will analyze all materials identified during analysis

\*\* If left blank, Paracel will analyze all materials as individual samples (at additional cost) per EPA 600/R-93/116

Comments:

Method of Delivery:

Walk-in

Relinquished By (Sign): <i>[Signature]</i>	Received at Depot: <i>[Signature]</i>	Received at Lab: <i>[Signature]</i>	Verified By: <i>[Signature]</i>
Relinquished By (Print): Andrew Cooney	Date/Time: 10/03/19 16:45	Date/Time: Oct 4/19 9:53	Date/Time: Oct 4/19 12:40



**Paracel ID: 1940548**

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**Chain of Custody**  
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 Page 2 of 2

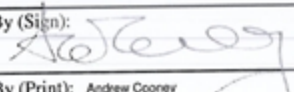
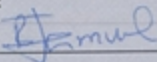
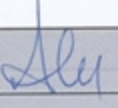
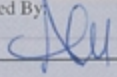
Client Name: DST Consulting Engineers	Project Reference: GVOT-034335	<b>Turnaround Time:</b> <input type="checkbox"/> Immediate <input type="checkbox"/> 1 Day <input type="checkbox"/> 4 Hour <input type="checkbox"/> 2 Day <input type="checkbox"/> 8 Hour <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Regular
Contact Name: Andrew Cooney	Quote #:	
Address: 2150 Thurston Drive, Ottawa, ON	PO #: Sir John Carling, West Annex	
Telephone: 613-290-0101 / 613-748-1415	Email Address: acooney@dstgroup.com, kthompson@dstgroup.com	
		Date Required: _____

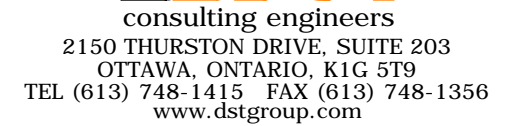
**ASBESTOS & MOLD ANALYSIS**

**Matrix:** ☐ Air ☒ Bulk ☐ Tape Lift ☐ Swab ☐ Other **Regulatory Guideline:** ☒ ON ☐ QC ☐ AB ☐ SK ☐ Other: \_\_\_\_\_  
**Analyses:** ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos ☒ PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Paracel Order Number:  1940548		Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk		
					Identify Distinct Building Materials to Be Analyzed  * see below	Combine Identified Materials?  **see below	Positive Stop?
Sample ID							
1	34335-13A-C	10/02/2019		PLM	Black Tar	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	34335-14A-C	10/02/2019		PLM	Ceramic Brick Mortar	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	34335-15A-G	10/02/2019		PLM	Stone Block Mortar	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	34335-16A-C	10/02/2019		PLM	White Mortar Patch	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	34335-17A-C	10/02/2019		PLM	Foundation Tar	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	34335-18A-C	10/02/2019		PLM	Textured Parging	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	34335-19A-C	10/02/2019		PLM	Joint Caulking	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8						<input type="checkbox"/>	<input type="checkbox"/>
9						<input type="checkbox"/>	<input type="checkbox"/>
10						<input type="checkbox"/>	<input type="checkbox"/>
11						<input type="checkbox"/>	<input type="checkbox"/>
12						<input type="checkbox"/>	<input type="checkbox"/>






\* If left blank, Paracel will analyze all materials identified during analysis \*\* If left blank, Paracel will analyze all materials as individual samples (at additional cost) per EPA 600/R-93/116

Comments:		Method of Delivery: <u>walk-in</u>	
Relinquished By (Sign): 	Received at Depot: 	Received at Lab: 	Verified By: 
Relinquished By (Print): Andrew Cooney	Date/Time: 10/03/19 16:45	Date/Time: 2018/11/19 9:53	Date/Time: 2018/11/19 12:40



1. "ALL SAMPLE IDENTIFIERS ARE PREFIXED WITH "19779-" WHICH WAS LEFT OUT FOR DRAWING CLARITY."
2. DRAWING DOES NOT INCLUDE PAST CONSULTANT SAMPLE LOCATIONS. ONLY DST (2014 AND 2015) BULK SAMPLES ARE INDICATED ON THE DRAWINGS.
3. ROOM LOCATIONS MAY NOT BE AS SHOWN. PARTITION WALLS AND/OR OTHER DRAWING LINES MAY NO LONGER BE PRESENT DUE TO PRE-EXISTING DEMOLITION OPERATIONS COMPLETED PRIOR TO SURVEY.
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ASSOCIATED TECHNICAL REPORT.
5. DO NOT SCALE DRAWING.
6. DUPLICATE SAMPLE LOCATIONS WERE LEFT OUT FOR DRAWING CLARITY.
7. HATCHING IS FOR POOR CONDITION PLASTER/TEXTURE COAT MATERIALS ONLY. ADDITIONAL FRIABLE AND NON-FRIABLE ASBESTOS-CONTAINING MATERIALS ARE PRESENT THROUGHOUT THE BUILDING. REFER TO ASSOCIATED TECHNICAL REPORT FOR FURTHER DETAILS.

LEGEND:

-  APPROXIMATE LOCATION OF BULK ASBESTOS  
 01A-C SAMPLE (DST, 2014)
-  APPROXIMATE LOCATION OF BULK ASBESTOS  
 SAMPLE (DST, 2015)
-  APPROXIMATE LOCATION OF BULK LEAD PAINT  
 LP-01 SAMPLE (DST, 2014)
-  SURVEY LOCATION REFERENCE
-  APPROXIMATE LOCATION OF ABATED/CHIPPED  
 TEXTURE COAT/PLASTER WALL MATERIALS. TOP  
 LAYER OF TEXTURE COAT (ACM) MAY BE  
 PRESENT IN MINOR AREAS THROUGHOUT.

0	11/01/16	ORIGINAL	B.H.
REV	DATE	ISSUE	APPROVAL

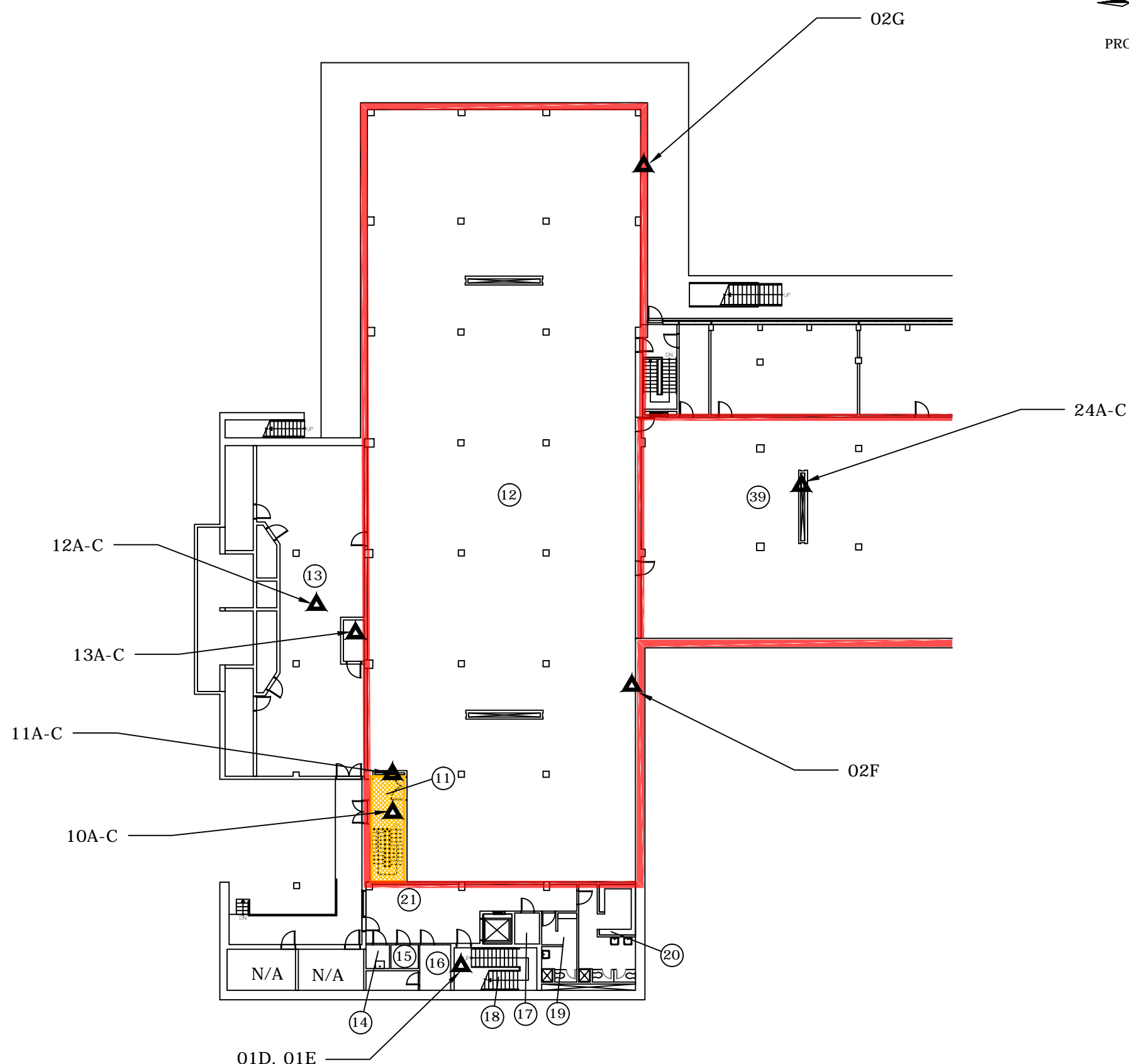
PROJECT TITLE
DESIGNATED SUBSTANCES SURVEY, WEST ANNEX, FORMER SIR JOHN CARLING BUILDING, 930 CARLING AVENUE, OTTAWA, ONTARIO, REV. B

DRAWING TITLE

SAMPLE LOCATION PLAN  
- SUB-BASEMENT

DESIGNED BY K.T.	SCALE NTS
DRAWN BY R.P.	DATE January 2016
APPROVED BY B.H.	PROJECT NO.: BE-OT-019779

FIGURE 1



- NOTES:**
1. "ALL SAMPLE IDENTIFIERS ARE PREFIXED WITH "19779-" WHICH WAS LEFT OUT FOR DRAWING CLARITY."
  2. DRAWING DOES NOT INCLUDE PAST CONSULTANT SAMPLE LOCATIONS. ONLY DST (2014 AND 2015) BULK SAMPLES ARE INDICATED ON THE DRAWINGS.
  3. ROOM LOCATIONS MAY NOT BE AS SHOWN. PARTITION WALLS AND/OR OTHER DRAWING LINES MAY NO LONGER BE PRESENT DUE TO PRE-EXISTING DEMOLITION OPERATIONS COMPLETED PRIOR TO SURVEY.
  4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ASSOCIATED TECHNICAL REPORT.
  5. DO NOT SCALE DRAWING.
  6. DUPLICATE SAMPLE LOCATIONS WERE LEFT OUT FOR DRAWING CLARITY.
  7. HATCHING IS FOR POOR CONDITION PLASTER/TEXTURE COAT MATERIALS ONLY. ADDITIONAL FRIABLE AND NON-FRIABLE ASBESTOS-CONTAINING MATERIALS ARE PRESENT THROUGHOUT THE BUILDING. REFER TO ASSOCIATED TECHNICAL REPORT FOR FURTHER DETAILS.

- LEGEND:**
- APPROXIMATE LOCATION OF BULK ASBESTOS SAMPLE (DST, 2014)
  - APPROXIMATE LOCATION OF BULK ASBESTOS SAMPLE (DST, 2015)
  - APPROXIMATE LOCATION OF BULK LEAD PAINT SAMPLE (DST, 2014)
  - NOT ACCESSIBLE
  - SURVEY LOCATION REFERENCE
  - POOR CONDITION ACM PLASTER / TEXTURE COAT
  - APPROXIMATE LOCATION OF ABATED/CHIPPED TEXTURE COAT/PLASTER WALL MATERIALS. TOP LAYER OF TEXTURE COAT (ACM) MAY BE PRESENT IN MINOR AREAS THROUGHOUT.

0	11/01/16	ORIGINAL	B.H.
REV	DATE	ISSUE	APPROVAL

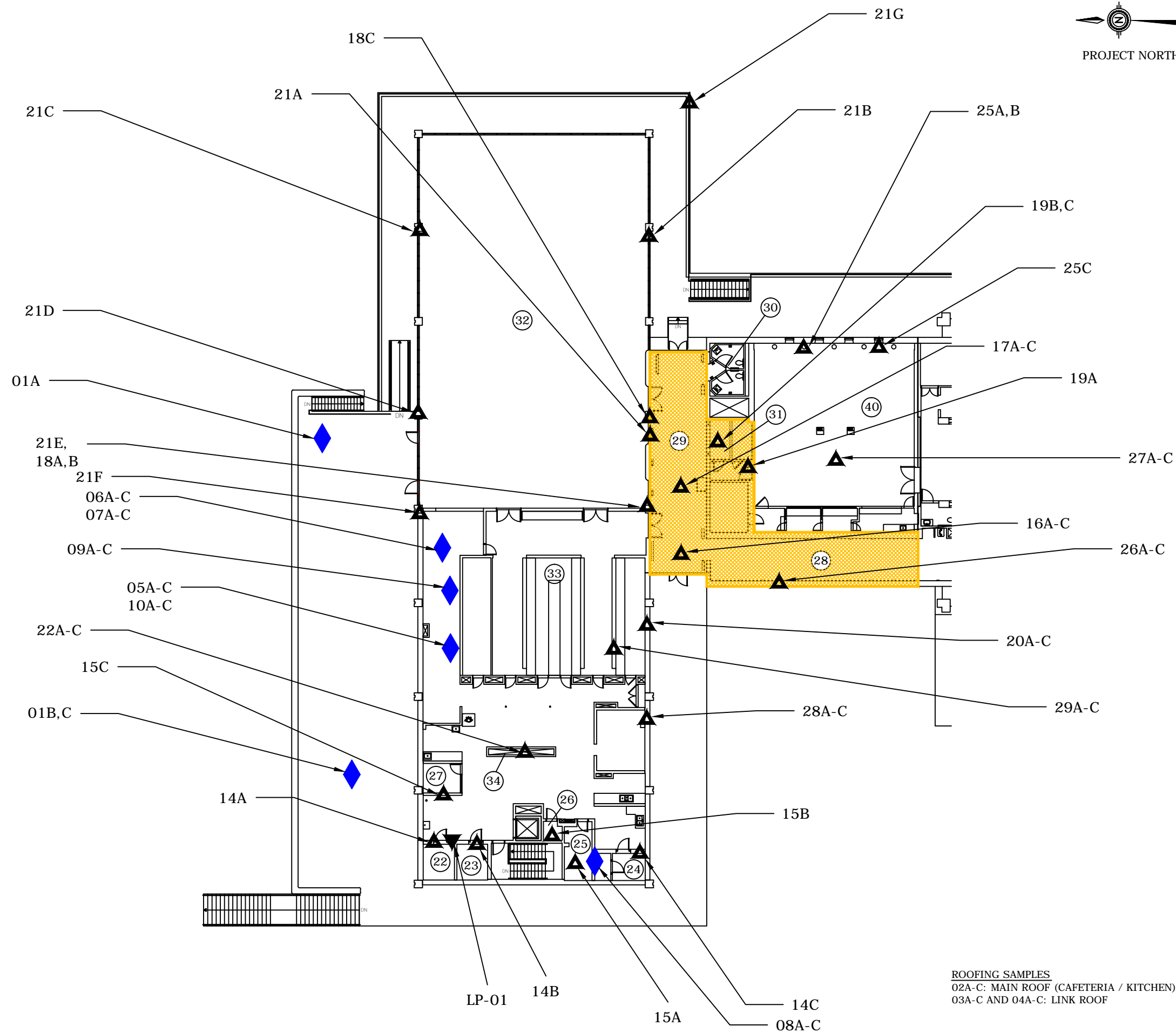
PROJECT TITLE  
DESIGNATED SUBSTANCES SURVEY, WEST ANNEX, FORMER SIR JOHN CARLING BUILDING, 930 CARLING AVENUE, OTTAWA, ONTARIO, REV. B

DRAWING TITLE  
SAMPLE LOCATION PLAN  
- FIRST BASEMENT

DESIGNED BY K.T.	SCALE NTS
DRAWN BY R.P.	DATE January 2016
APPROVED BY B.H.	PROJECT NO.: BE-OT-019779

FIGURE 2





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NOTES:

1. "ALL SAMPLE IDENTIFIERS ARE PREFIXED WITH "19779-" WHICH WAS LEFT OUT FOR DRAWING CLARITY."
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5. DO NOT SCALE DRAWING.
6. DUPLICATE SAMPLE LOCATIONS WERE LEFT OUT FOR DRAWING CLARITY.
7. HATCHING IS FOR POOR CONDITION PLASTER/TEXTURE COAT MATERIALS ONLY. ADDITIONAL FRIABLE AND NON-FRIABLE ASBESTOS-CONTAINING MATERIALS ARE PRESENT THROUGHOUT THE BUILDING. REFER TO ASSOCIATED TECHNICAL REPORT FOR FURTHER DETAILS.

LEGEND:

- ▲ APPROXIMATE LOCATION OF BULK ASBESTOS SAMPLE (DST, 2014)
- ◆ APPROXIMATE LOCATION OF BULK ASBESTOS SAMPLE (DST, 2015)
- ▼ APPROXIMATE LOCATION OF BULK LEAD PAINT SAMPLE (DST, 2014)
- ① SURVEY LOCATION REFERENCE
- POOR CONDITION ACM PLASTER / TEXTURE COAT

0	11/01/16	ORIGINAL	B.H.
REV	DATE	ISSUE	APPROVAL

PROJECT TITLE  
DESIGNATED SUBSTANCES SURVEY, WEST ANNEX, FORMER SIR JOHN CARLING BUILDING, 930 CARLING AVENUE, OTTAWA, ONTARIO, REV. B

DRAWING TITLE  
SAMPLE LOCATION PLAN  
- FIRST FLOOR

DESIGNED BY K.T.	SCALE NTS
DRAWN BY R.P.	DATE January 2016
APPROVED BY B.H.	PROJECT NO.: BE-OT-019779

FIGURE 3