Lincoln Alexander Elementary School

Exterior Window and Door Replacement

Designated Substance Audit Report

Project Location:
50 Ravenbury Drive, Hamilton, ON

Prepared for:
Hamilton-Wentworth District School Board
20 Education Court, PO Box 2558
Hamilton, ON LN 3L1

Prepared by:
MTE Consultants Inc.
1016 Sutton Drive, Unit A
Burlington, ON L7L 6B8

December 9, 2024

MTE File No.: 60039_001

Engineers, Scientists, Surveyors.

Contents

Appendices

1.0 INTRODUCTION

1.1 Authorization

MTE Consultants Inc. (MTE) was retained by Hamilton-Wentworth District School Board (the Client) to conduct a Designated Substance Audit for the building located at 50 Ravenbury Drive in Hamilton, Ontario.

The purpose of the audit was to identify the presence of Designated Substances within the building in accordance with Section 30 of the Occupational Health & Safety Act (OHSA), in advance of an exterior window and door replacement project. This report meets the requirements of Section 30 of the OHSA and the requirements of Ontario Regulation (O. Reg.) 278/05.

2.0 SCOPE OF WORK

As requested by the Client, this assessment was limited to the exterior doors and windows. These areas are referred to in the following sections as the “Subject Areas”.

The Scope of Work for this assessment was completed by MTE and included the following activities:

- Review of existing or historical reports and documentation pertaining to Designated Substances within the building;
- Visual inspection of accessible locations within the Subject Areas to identify the following suspect Designated Substances and Hazardous Building Materials:
  - Asbestos;
  - Lead;
  - Mercury;
  - Silica;
  - Mould growth;
  - Ozone Depleting Substances; and,
  - Polychlorinated Biphenyls limited to fluorescent light ballasts/sealant;
- The following Designated Substances are not expected to be present due to the building use or in a form that is hazardous: Acrylonitrile, Arsenic, Benzene, Coke Oven Emissions, Ethylene Oxide, Isocyanates, and Vinyl Chloride;
- Collection of bulk building material samples suspected to contain asbestos;
- Collection of paint scrape samples suspected to contain lead;
- Collection of sealant samples to determine Polychlorinated Biphenyl (PCB) content;
- Submission of samples to an accredited and/or qualified laboratory;
- Interpretation of laboratory results; and,
- Preparation of this report of findings and recommendations.

3.0 METHODOLOGY AND ASSESSMENT CRITERIA

This audit was conducted using visual and laboratory identification methods for the assessment of materials outlined in Section 2.0 and their corresponding location and use. Materials that are determined to be asbestos-containing materials (ACM) are further classified by their friability

and condition. The areas outlined in Section 2.0 were inspected and limited to building components, materials and service connections. Notwithstanding that reasonable attempts were made to identify all Designated Substances, the possibility of concealed substances and material exists and may not become visible until substantial demolition has occurred and therefore are currently undocumented. All work was conducted in accordance with industry accepted methods and MTE Standard Operating Procedures and did not include the following:

- Materials indicated in this report as “Potentially Concealed”;
- Locations that may be hazardous to the surveyor (located at heights, electrical equipment, confined spaces);
- Where invasive inspection could cause consequential damage to the property or impair the integrity of the equipment, such as roof system, exterior finishes, underground services or components of mechanical equipment;
- Locations concealed by building finishes that require substantial demolition or removal for access or determination of quantities (plumbing or electrical lines);
- Non-permanent items or personal contents, furnishings; and,
- Settled dust or airborne agents unless otherwise stated.

4.0 ASSESSMENT AND RESULTS

An inspection of the building was conducted by MTE on November 20, 2024.

A description of the building and assessed finishes is provided below. Refer to Section 4.1 for a summary of findings.

Building Element	Description
Exterior Finishes	Brick veneer and mortar
Wall Finishes	Concrete Block

4.1 Findings and Analytical Results

A summary of sampling locations and analytical results are included in **Appendix A**.

Laboratory certificates of analysis are included in **Appendix B**.

Figures of inspected areas are included in **Appendix C**.

A photographic log is included in **Appendix D.**

A detailed summary of findings and recommended actions is provided in **Table 4.4 of Appendix A.**

4.1.1 Asbestos

Asbestos was used in building materials throughout the years with a peak usage in the 1950s and 1960s. While the manufacture of most ACM was banned in the 1970s, buildings constructed in the 1980s have the potential for ACM as well. In 1986, legislation limiting the use of asbestos in consumer products was introduced.

As part of this inspection, a total of 15 bulk samples of suspect ACM were submitted for asbestos analysis with a total of 9 analyses being performed. The difference between the number of samples submitted and the number of samples analysed can be a function of either

the stop-positive method or the requirement of analyzing multiple layers, performed by the laboratory, from a single sample reported as additional samples or subsets of a sample.

Bulk samples were submitted for asbestos analysis to Paracel Laboratories Ltd. (Paracel), in Mississauga, Ontario. Paracel is certified under the Canadian Association of Laboratory Accreditation to perform asbestos analysis of bulk samples (accreditation number A3762). Laboratory analysis was conducted in accordance with the United States Environmental Protection Agency (USEPA), Test Method EPA/600-R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, June, 1993 by Polarized Light Microscopy (PLM) as prescribed by O. Reg. 278/05.

Based on the laboratory results and visual identification, ACM was confirmed present at the time of the inspection

4.1.2 Lead

Lead was historically used in mortar pigments, ceramic glazing; plumbing solder, electrical equipment and electronics solder, in pipe gaskets as packing in cast iron bell and spigot joints of sanitary drains, flexible plumbing connections, flashing panels, acoustical dampeners, phone cable casing and some architectural applications. In buildings constructed after 1990, these applications are no longer applicable outside of specialized uses (shielding for medical imaging etc.).

As part of this inspection, a total of 4 paint scrape samples were collected from surfaces and represent the paint colours observed throughout the Subject Areas.

Samples were submitted for laboratory analysis by ASTM D3335-85A “Standard Method to Test for Low Concentrations of Lead in Paint by Atomic Absorption Spectrophotometry” following MOE Method E3470 Inductively Coupled Plasma Optical Emission Spectrometry to Paracel Laboratories Ltd., in Ottawa, Ontario. Paracel is accredited by the Canadian Association of Laboratory Accreditation to perform bulk lead analysis of paint.

Based on the laboratory results and visual identification, no lead-containing materials were confirmed present at the time of the inspection.

4.1.3 Mercury

Mercury is typically used in building service applications such as fluorescent light tubes, compact fluorescent bulbs, metal halide (sodium halide) lamp bulbs, and neon lights as a vapour. Mercury may exist in thermostats and pipe or mechanical equipment thermometers as a liquid. Mercury is presumed to be present in the above materials.

While sources of mercury may be present, no mercury-containing materials will be impacted by the proposed work.

4.1.4 Silica

Silica is present in rock, stone, soil, and sand. Masonry products such as concrete block, brick, and mortar, as well as concrete and associated products contain silica. Due to its ubiquitous nature, silica was historically used in a wide variety of building materials and is still used today in new construction.

Building materials that are presumed to contain silica were visually identified at the time of the inspection.

4.1.5 Mould

No water damaged or mould growth impacted building materials were observed during the inspection.

4.1.6 Polychlorinated Biphenyls (PCB)

Based on the reported age of the building, PCBs are not expected to be present in light ballasts.

As part of this inspection, a total of 4 sealant samples were collected from building components which may be disturbed during the proposed project. Samples were collected and submitted to Paracel for laboratory analysis under US EPA Method 8082A for PCBs. In Ontario, under Ontario Regulation 362, a PCB-containing solid is defined as any material or substance other than a PCB liquid that contains or is contaminated with PCBs at a concentration greater than 50 µg/g by weight of PCBs.

Based on the laboratory results and visual identification, no PCB-containing materials were confirmed or suspected present at the time of the inspection.

4.1.7 Ozone-Depleting Substances (ODS)

ODS are chemical compounds that include chlorofluorocarbons (cfcs), hydrochlorofluorocarbons (hcfcs), halons, methyl bromide, carbon tetrachloride, hydrobromofluorocarbons, chlorobromomethane, and methyl chloroform which are widely used in cooling and refrigeration. The use of ODS is regulated under Ontario Regulation 463/10 *Ozone Depleting Substances and Other Halocarbons* Made under the Environmental Protection Act.

No building components presumed to contain ODS were identified at the time of the inspection.

4.2 Conclusions and Recommendations

A detailed summary of recommended actions is provided in **Table 4.4 of Appendix A**.

In accordance with Section 30 of OHSA and Section 8 of O. Reg. 278/05, the Owner must provide a copy of this report to all contractors doing work at the building. The Owner must also provide a copy of this report to all prospective contractors.

Should any additional suspect Designated Substances be discovered during building renovation demolition, work in the vicinity should cease and the materials should not be disturbed until proper notification, testing and abatement instructions are provided. All waste generated as a result of any and all work at the Site must be handled, transported and disposed of in accordance with Ontario Regulation 347 made under the Environmental Protection Act and local by-laws. Based on the assessment findings and analytical results, the following abatement measures are presented. It should be noted that the recommended actions are the minimum required actions, as prescribed by the appropriate Acts, regulations, guidelines, standards, codes and general best practice measures.

4.2.1 Asbestos

ACMs were identified during the assessment. If these materials, including those deemed or suspected, will be disturbed, or will likely be disturbed, during building maintenance, renovations, construction, or demolition activities, they must be handled and disposed of in accordance with the procedures prescribed by O. Reg. 278/05.

All asbestos work must be conducted by contractors who are trained in the type of asbestos operations required, and should be overseen by a qualified third party Health, Safety and Environmental professional. In order to conduct Type 3 asbestos operations, contractors must be certified as Asbestos Abatement Workers AAW (Trade code 253W) and Asbestos Abatement Supervisors AAS (Trade code 253S) by The Ministry of Training, Colleges and Universities (Ministry of Advanced Education and Skills Development) as prescribed by Section 20 of O. Reg. 278/05. Suspect or visually confirmed ACM must be deemed to be asbestos-containing and treated as if they contain a type of asbestos other than Chrysotile.

ACM may be present in concealed locations and if construction, renovation, alteration, or maintenance activities are planned, invasive inspections of concealed locations for potential ACM must be performed prior to such activities.

Should any suspect ACM be discovered during the course of construction, renovation, alteration, or maintenance activities, work which disturbs the material must cease immediately. Suspect ACM must be treated as asbestos-containing or sampled prior to disturbance to assess the presence of asbestos.

4.2.2 Lead

No lead-containing materials were confirmed present during the assessment, however, low level lead-containing paint is present and the following general procedures are recommended as a precautionary measure as per the Environmental Abatement Council of Canada's (EACC) *Lead Guideline for Construction, Renovation, Maintenance or Repair (October 2014)*:

- General dust control;
- The washing of hands and face at on-site facilities;
- No smoking, eating, chewing gum or drinking in the work area; and,
- No removal of painted surfaces by means of abrasive blasting.

4.2.3 Mercury

No mercury-containing materials will be impacted by the proposed project. No special requirements for management, handing and disposal by the owner, constructor, contractor, sub-contractors and workers apply.

4.2.4 Silica

Silica is presumed to be present; therefore, special requirements for management and handing are required. The contractor should also consult MOL Occupational Health and Safety Branch's Guideline: *Silica on Construction Projects* (April 2011) for the procedures and methods required to remove and dispose of silica-containing materials.

4.2.5 Mould

No water damage or suspect mould growth was observed during the assessment therefore no special management and handling requirements are warranted.

4.2.6 Polychlorinated Biphenyls (PCB)

No PCB-containing materials were identified. No special requirements for management, handing and disposal by the owner, constructor, contractor, sub-contractors and workers apply.

4.2.7 Ozone Depleting Substances (ODS)

No building components presumed to contain ODS were identified and no special requirements for management, handing and disposal by the owner, constructor, contractor, sub-contractors and workers apply.

5.0 LIMITATIONS

Services performed by **MTE Consultants Inc.** (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and the Client. It was completed in accordance with the approved Scope of Work referred to in Section 2.0. As such, this report may not deal with all issues potentially applicable to the site and may omit issues that are or may be of interest to the reader. MTE makes no representation that the present report has dealt with all-important environmental features, except as provided in the Scope of Work. All findings and conclusions presented in this report are based on site conditions, as they existed during the time period of the investigation. This report is not intended to be exhaustive in scope or to imply a risk-free facility.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time might affect the views, conclusions and recommendations (if any) provided in this report because environmental conditions of a property can change. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may re-assess the contents of this report.

All of which is respectfully submitted,

MTE Consultants Inc.

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Appendix A

Tables

TABLE 4.1: BULK ASBESTOS SAMPLE SUMMARY TABLE				
Sample #	**Location**	**Material Description**	**Asbestos Results (% Type)**	**Is Material ACM**
S01A	SAMPLED AT EXTERIOR OF MAIN ENTRANCE BUT OBSERVED THROUGHOUT EXTERIOR	BROWN SEALANT	ND	NO
S01B	SAMPLED AT EXTERIOR OF MAIN ENTRANCE BUT OBSERVED THROUGHOUT EXTERIOR	BROWN SEALANT	ND	NO
S01C	SAMPLED AT EXTERIOR OF MAIN ENTRANCE BUT OBSERVED THROUGHOUT EXTERIOR	BROWN SEALANT	ND	NO
S02A	**SAMPLED AT INTERIOR OF CLASSROOM 124 BUT OBSERVED THROUGHOUT INTERIOR**	**INTERIOR BLACK WINDOW SEALANT**	**1% CHRYSOTILE**	**YES**
S02B	**SAMPLED AT INTERIOR OF CLASSROOM 119 BUT OBSERVED THROUGHOUT INTERIOR**	**INTERIOR BLACK WINDOW SEALANT**	**NA**	**YES**
S02C	**SAMPLED AT INTERIOR OF CLASSROOM 105 BUT OBSERVED THROUGHOUT INTERIOR**	**INTERIOR BLACK WINDOW SEALANT**	**NA**	**YES**
S03A	MAIN ENTRANCE LOBBY/VESTIBULE	TEXTURE COAT CEILING	ND	NO
S03B	MAIN ENTRANCE LOBBY/VESTIBULE	TEXTURE COAT CEILING	ND	NO
S03C	MAIN ENTRANCE LOBBY/VESTIBULE	TEXTURE COAT CEILING	ND	NO
S04A	**MAIN ENTRANCE**	**BLACK WINDOW GLAZING**	**3% CHRYSOTILE**	**YES**
S04B	**MAIN ENTRANCE**	**BLACK WINDOW GLAZING**	**NA**	**YES**
S04C	**MAIN ENTRANCE**	**BLACK WINDOW GLAZING**	**NA**	**YES**
S05A	**SAMPLED AT EXTERIOR OF ROOM 142A BUT OBSERVED THROUGHOUT EXTERIOR**	**BLACK WINDOW SEALANT**	**1% CHRYSOTILE**	**YES**
S05B	**SAMPLED AT EXTERIOR OF ROOM 140B BUT OBSERVED THROUGHOUT EXTERIOR**	**BLACK WINDOW SEALANT**	**NA**	**YES**
S05C	**SAMPLED AT EXTERIOR OF ROOM 115 BUT OBSERVED THROUGHOUT EXTERIOR**	**BLACK WINDOW SEALANT**	**NA**	**YES**

NA: Not Analyzed due to stop positive method **ND**: No asbestos fibres detected above the laboratory minimum detection limit

A bulk material sample containing 0.5% or more asbestos therefore establishes that material as asbestos-containing. In accordance with Table 1 of O. Reg. 278/05, a minimum number of samples for the material to be classified as non asbestos. A homogeneous material is defined by O. Reg. 278/05 “as material that is uniform in colour and texture”. Homogeneous samples are identified by an alphabetical suffix to sample names to represent multiple samples of a homogeneous material. When a homogeneous material is analysed it is determined to be asbestos-containing upon the first positive detection of asbestos equal to or greater than 0.5%. Subsequent samples of the same material are therefore not analysed. Some bulk samples are comprised of multiple layers and as such will require multiple analysis. In such cases each layer is isolated at the laboratory and analysed individually to determine asbestos content. As a result the laboratory may report additional samples beyond the submitted number of samples or include multiple analyses as subsets within a sample.

TABLE 4.2: LEAD IN PAINT SAMPLE SUMMARY TABLE					
Sample #	**Location**	**Colour**	**Material**	**Lead Content (ug/g)**	**Classification**
LP1	INTERIOR	WHITE	WALL	<5	LOW LEVEL LEAD-CONTAINING
LP2	INTERIOR	DARK BLUE	DOOR FRAMES	16	LOW LEVEL LEAD-CONTAINING
LP3	INTERIOR	LIGHT BLUE	DOORS	16	LOW LEVEL LEAD-CONTAINING
LP4	EXTERIOR	BROWN	DOORS AND FRAMES	14	LOW LEVEL LEAD-CONTAINING

"<": The samples analysed reported concentrations of lead to be less than 1000 ug/g and are therefore classified as low level lead-containing. However, no lead concentrations were reported above the sample specific laboratory detection limit.

As outlined in EACO's Lead Guideline for Construction, Renovation, Maintenance or Repair (October 2014), for the purpose of classifying surface coatings and mortars by laboratory analysis, any material containing lead at a concentration:

- Greater than 0.5% by weight (5,000 µg/g, mg/kg, ppm) is considered lead-based;
- Between 0.1 % and 0.5% by weight (1,000 to 5,000 µg/g, mg/kg, ppm) is considered lead-containing; or
- Less than 0.1% (1,000 µg/g, mg/kg, ppm) is considered low level lead-containing.

TABLE 4.3: BULK PCB SAMPLE SUMMARY TABLE				
Sample #	**Location**	**Material Description**	**PCB Content (ug/g)**	**Classification**
PCB1	CLASSROOM 124	BLACK WINDOW SEALANT	<5	Non PCB-Containing
PCB2	MAIN ENTRANCE	BROWN SEALANT	<5	Non PCB-Containing
PCB3	MAINT ENTRANCE	BLACK WINDOW GLAZING	<5	Non PCB-Containing
PCB4	EXTERIOR	BLACK WINDOW SEALANT	<5	Non PCB-Containing

As outlined in the Statutory Orders and Regulations (SOR)/2008-273, the PCB Regulations, made under the Canadian Environmental Protection Act, 1999, any material containing PCB at a concentration:
• Greater than 50 µg/g is considered PCB-Containing

Table 4.4 - Summary of Designated Substances and Recommended Actions

50 Ravenbury Drive, Hamilton, Ontario

Material	Location(s)	Material Description	Management Requirements If No Impacts to Material	Recommended Actions If Material Will Be Or Likely Be Impacted By Maintenance, Renovation, Construction or Demolition Activities
Asbestos Non-Friable	Throughout Interior	Black Sealant on Interior Window Frames	In place management in accordance with O. Reg. 278/05	Removal in accordance with O. Reg. 278/05 as a Type 1 Operation
	Throughout Exterior	Black Sealant on Exterior Window Frames		
	Main Entrance	Black Glazing on Window Frames		
Low Level Lead-Containing Paint	Throughout Interior	White Paint on Walls	None	General hygiene procedures during renovation activities: • General dust control, • Washing of hands and face at on-site facilities, • No smoking, eating, chewing gum or drinking in the work area, • No abrasive blasting.
	Throughout Interior	Dark Blue Paint on Door Frames		
	Throughout Interior	Light Blue Paint on Doors		
	Throughout Exterior	Brown Paint on Doors		
Silica	Throughout Interior and Exterior of Building	Concrete Block, Brick and Mortar	None	Conduct any work during renovation, demolition activities in accordance with the Ministry of Labour Guideline Silica on Construction Projects

Notes:
1) A copy of this report should be provided to all prospective contractors prior to quotation, in accordance with Section 30 of the Occupational Health and Safety Act.
2) Recommended actions are the minimum required actions, as prescribed by the appropriate Acts, regulations, guidelines, standards, codes and general best practice measures. Prior to demolition, the Contractor may choose to alter the approach and combine or break out sections of work. This is acceptable provided that the appropriate Acts, regulations, guidelines, standards and codes are followed and afford protection for the health and safety of workers, occupants and the public that is at least equal to the protection that would be provided by complying with the minimum requirements.
3) All waste generated is subject to characterization and disposal in accordance with Ontario Regulation 347.

Appendix B

Laboratory Certificates of Analysis

PARACEL LABORATORIES LTD.
TRUSTED. RESPONSIVE. RELIABLE.

15 - 6800 Kitimat Rd
Mississauga, ON, L5N 5M1
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

MTE Consultants Inc. (Burlington)

1016 Sutton Drive, Unit A
Burlington, ON L7L 6B8
Attn: Gavin Oakes

Client PO:
Project: Lincoln Alexander Window/Door Replacement DSA
Custody:

Report Date: 27-Nov-2024
Order Date: 21-Nov-2024

Order #: 2447329

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

Paracel ID	Client ID
2447329-01	S01A - Brown Sealant - Main Entrance Exterior
2447329-02	S01B - Brown Sealant - Main Entrance Exterior
2447329-03	S01C - Brown Sealant - Main Entrance Exterior
2447329-04	S02A - Window Sealant - Interior
2447329-05	S02B - Window Sealant - Interior
2447329-06	S02C - Window Sealant - Interior
2447329-07	S03A - Texture Coating - Vestibules
2447329-08	S03B - Texture Coating - Vestibules
2447329-09	S03C - Texture Coating - Vestibules
2447329-10	S04A - Window Glazing - Main Entrance
2447329-11	S04B - Window Glazing - Main Entrance
2447329-12	S04C - Window Glazing - Main Entrance
2447329-13	S05A - Exterior Window Sealant
2447329-14	S05B - Exterior Window Sealant
2447329-15	S05C - Exterior Window Sealant

Approved By:

Emma Diaz

Senior Analyst

Certificate of Analysis

Report Date: 27-Nov-2024

Client: **MTE Consultants Inc. (Burlington)**

Order Date: 21-Nov-2024

Client PO:

Project Description: Lincoln Alexander Window/Door Replacement DSA

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

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2447329-01	20-Nov-24	Brown	Sealant	No	**Client ID: S01A - Brown Sealant - Main Entrance Exterior**	
					Non-Fibers	100
2447329-02	20-Nov-24	Brown	Sealant	No	**Client ID: S01B - Brown Sealant - Main Entrance Exterior**	
					Non-Fibers	100
2447329-03	20-Nov-24	Brown	Sealant	No	**Client ID: S01C - Brown Sealant - Main Entrance Exterior**	
					Non-Fibers	100
2447329-04	20-Nov-24	Black	Sealant	**Yes**	**Client ID: S02A - Window Sealant - Interior**	
					Chrysotile	1
					Cellulose	5
					Non-Fibers	94
2447329-05	20-Nov-24	Black	Sealant		**Client ID: S02B - Window Sealant - Interior**	
					not analyzed, positive stop	
2447329-06	20-Nov-24	Black	Sealant		**Client ID: S02C - Window Sealant - Interior**	
					not analyzed, positive stop	
2447329-07	20-Nov-24	White	Texture Coat	No	**Client ID: S03A - Texture Coating - Vestibules**	
					Non-Fibers	100
2447329-08	20-Nov-24	White	Texture Coat	No	**Client ID: S03B - Texture Coating - Vestibules**	
					Non-Fibers	100
2447329-09	20-Nov-24	White	Texture Coat	No	**Client ID: S03C - Texture Coating - Vestibules**	
					Non-Fibers	100
2447329-10	20-Nov-24	Grey	Window glazing	**Yes**	**Client ID: S04A - Window Glazing - Main Entrance**	
					Chrysotile	3
					Non-Fibers	97
2447329-11	20-Nov-24	Grey	Window glazing		**Client ID: S04B - Window Glazing - Main Entrance**	
					not analyzed, positive stop	
2447329-12	20-Nov-24	Grey	Window glazing		**Client ID: S04C - Window Glazing - Main Entrance**	
					not analyzed, positive stop	

PARACEL LABORATORIES LTD.

Order #: 2447329

Certificate of Analysis

Report Date: 27-Nov-2024

Client: MTE Consultants Inc. (Burlington)

Order Date: 21-Nov-2024

Client PO:

Project Description: Lincoln Alexander Window/Door Replacement DSA

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

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2447329-13	20-Nov-24	Black	Sealant	**Yes**	**Client ID: S05A - Exterior Window Sealant**	
					Chrysotile	1
					Non-Fibers	99
2447329-14	20-Nov-24	Black	Sealant		**Client ID: S05B - Exterior Window Sealant**	
					not analyzed, positive stop	
2447329-15	20-Nov-24	Black	Sealant		**Client ID: S05C - Exterior Window Sealant**	
					not analyzed, positive stop	

** Analytes in bold indicate asbestos mineral content.

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	Analysis Date
Asbestos, PLM Visual Estimation	AppE to SubE of 40CFR Part763 and EPA/600/R-93/116	1 - Mississauga	CALA 3762	27-Nov-24

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

Work Order Revisions | Comments

None

2447329

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)-1947
paracel@paracellabs.com

Chain of Custody
(Lab Use Only)

Page 1 of 1

Client Name: MTE Consultants	Project Reference: Lincoln Alexander Window/Door Replacement DSA
Contact Name: Gavin Oakes; Aaron Rows	Quote #: MTE Standing Offer
Address: 1016 Sutton Drive, Unit A Burlington, ON L7L 6B8	PO #:
Telephone: 905-639-2552	Email Address: goakes@mte85.com arows@mte85.com

Turnaround Time:

- ☐ Immediate
- ☐ 4 Hour
- ☐ 8 Hour
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☒ 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: 2447329

	Sample ID	Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk: Identify Distinct Building Materials to Be Analyzed (if not specified, all materials identified will be analyzed) *	Positive Stop?
1	S01 A-C - Brown sealant - main entrance exterior	20 Nov 24	-	PLM		☒
2	S02 A-C - Window Sealant - Interior	20 Nov 24	-	PLM		☒
3	S03 A-C - Texture Coating - Vestibules	20 Nov 24	-	PLM		☒
4	S04 A-C - Window Glazing - Main Entrance	20 Nov 24	-	PLM		☒
5	S05 A-C - Exterior Window Sealant	20 Nov 24	-	PLM		☒
6						☐
7						☐
8						☐
9						☐
10						☐
11						☐
12						☐

*** If left blank, all distinct materials identified in the samples will be analyzed and reported separately as per EPA 600/R-93/116. Additional charges will apply.**

Comments:

Method of Delivery: PUROLATOR

Relinquished By (Sign):	Received at Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Aaron Rows			
Date/Time: 20 Nov 24 - 1:20 pm	Date/Time:	Date/Time: Nov 21/24 08:45	Date/Time: Nov 21/24 10:15

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Certificate of Analysis

MTE Consultants Inc. (Burlington)

1016 Sutton Drive, Unit A
Burlington, ON L7L 6B8
Attn: Gavin Oakes

Client PO:
Project: Lincoln Alexander Door/Window Replacement DSA
Custody:

Report Date: 26-Nov-2024
Order Date: 21-Nov-2024

Order #: 2447324

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

Paracel ID	Client ID
2447324-01	LP01 - White - Walls
2447324-02	LP02 - Dark Blue - Door Frames
2447324-03	LP03 - Light Blue - Doors
2447324-04	LP04 - Brown - Main Entrace Doors

Approved By:

Milan Ralitsch, PhD
Senior Technical Manager

Certificate of Analysis

Report Date: 26-Nov-2024

Client: MTE Consultants Inc. (Burlington)

Order Date: 21-Nov-2024

Client PO:

Project Description: Lincoln Alexander Door/Window Replacement DSA

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 6020 - Digestion - ICP-MS	23-Nov-24	23-Nov-24

Qualifier Notes:

None

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

Report Date: 26-Nov-2024

Client: MTE Consultants Inc. (Burlington)

Order Date: 21-Nov-2024

Client PO:

Project Description: Lincoln Alexander Door/Window Replacement DSA

Sample Results

Lead

Matrix: Paint

Paracel ID	Client ID	Sample Date	Units	MDL	Result
2447324-01	LP01 - White - Walls	15-Nov-24	ug/g	5	<5
2447324-02	LP02 - Dark Blue - Door Frames	15-Nov-24	ug/g	5	16
2447324-03	LP03 - Light Blue - Doors	15-Nov-24	ug/g	5	16
2447324-04	LP04 - Brown - Main Entrace Doors	15-Nov-24	ug/g	5	14

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	**ND**	**5**	**ug/g**						
Matrix Duplicate									
Lead	**ND**	**5**	**ug/g**	**ND**			**NC**	**50**	
Matrix Spike									
Lead	59.3	5.00	ug/g	ND	118	70-130			

PARACEL LABORATORIES LTD.

Paracel ID: 2447324

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2447324	

Client Name: MTE Consultants	Project Ref: Lincoln Alexander Door/Window Replcament DSA	Page 1 of 1
Contact Name: Gavin Oakes;Aaron Rows	Quote #: MTE Standing Offer	**Turnaround Time**
Address: 1016 Sutton Drive, Unit A Burlington, ON L7L 6B8	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☑ Regular
Telephone: 905-639-2552	E-mail: goakes@mte85.com arows@mte85.com	Date Required:

☐ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table
For RSC: ☐ Yes ☐ No

Other Regulation
☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☐ SU - Sani ☐ SU - Storm
Mun:
☐ Other:

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analysis: Lead
1	L001 ~~Brown - Door~~ White - walls	P	-	1	15 Nov 24	3:00 pm	X
2	L002 - Dark Blue - Door frames	P	-	1	↓	↓	X
3	L003 - Light Blue - Doors	P	-	1			X
4	L004 - Brown - Main entrance doors	P	-	1			X
5							
6							
7							
8							
9							
10							

Comments:

Method of Delivery: Purolator

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Aaron Rows	Date/Time:	Date/Time: 11/21/24 944	Date/Time: 11/21/24 1005
Date/Time: 20 Nov 24 - 3:00 pm	Temperature: °C	Temperature:	pH Verified: ☐ By: NA.

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Certificate of Analysis

MTE Consultants Inc. (Burlington)
1016 Sutton Drive, Unit A
Burlington, ON L7L 6B8
Attn: Gavin Oakes

Report Date: 27-Nov-2024
Order Date: 21-Nov-2024

Client PO:
Project: Lincoln Alexander Door/Window Replcament DSA
Custody:

Order #: 2447323

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

Paracel ID	Client ID
2447323-01	PCB 01 - Black - Window Sealant
2447323-02	PCB 02 - Brown - Exterior Door Sealant
2447323-03	PCB 03 - Window Glazing
2447323-04	PCB 04 - Exterior Window Sealant

Approved By:

Dale Robertson, BSc
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PCBs, total	SW846 8082A - GC-ECD	21-Nov-24	22-Nov-24

Certificate of Analysis

Report Date: 27-Nov-2024

Client: **MTE Consultants Inc. (Burlington)**

Order Date: 21-Nov-2024

Client PO:

Project Description: Lincoln Alexander Door/Window Replcament DSA

	Client ID:	PCB 01 - Black - Window Sealant	PCB 02 - Brown - Exterior Door Sealant	PCB 03 - Window Glazing	PCB 04 - Exterior Window Sealant		
	Sample Date:	15-Nov-24 15:00	15-Nov-24 15:00	15-Nov-24 15:00	15-Nov-24 15:00	-	-
	Sample ID:	2447323-01	2447323-02	2447323-03	2447323-04		
	Matrix:	Other	Other	Other	Other		
	MDL/Units						
PCBs							
PCBs, total	5 ug/g	<5	<5	<5	<5	-	-
Decachlorobiphenyl	Surrogate	119%	128%	117%	139%	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs								
PCBs, total	ND	5	ug/g					
Surrogate: Decachlorobiphenyl	*6.90*		*%*	*138*	*60-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	5	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*6.78*		*%*		*136*	*60-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	17	5	ug/g	ND	84.6	60-140			
Surrogate: Decachlorobiphenyl	*6.46*		*%*		*129*	*60-140*			

Certificate of Analysis

Report Date: 27-Nov-2024

Client: **MTE Consultants Inc. (Burlington)**

Order Date: 21-Nov-2024

Client PO:

Project Description: Lincoln Alexander Door/Window Replcament DSA

Qualifier Notes:

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

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

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

PARACEL LABORATORIES LTD.

Paracel ID: 2447323

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2447323	

Client Name: MTE Consultants	Project Ref: Lincoln Alexander Door/Window Replcament DSA	Page 1 of 1
Contact Name: Gavin Oakes;Aaron Rows	Quote #: MTE Standing Offer	**Turnaround Time**
Address: 1016 Sutton Drive, Unit A Burlington, ON L7L 6B8	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☑ Regular
Telephone: 905-639-2552	E-mail: goakes@mte85.com arows@mte85.com	Date Required:

☐ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table ___
For RSC: ☐ Yes ☐ No

Other Regulation

☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☐ SU - Sani ☐ SU - Storm
Mun: ___
☐ Other:

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	Required Analysis: PCB 85											
1	PCB 01 - Brick window sealant	O	-	1	20 Nov 24	3:00pm	X											
2	PCB 02 - Brown exterior door Sealant	O	-	1	↓	↓	X											
3	PCB 03 - Window glazing	O	-	1			X											
4	PCB 04 - Exterior window sealant	O	-	1			X											
5																		
6																		
7																		
8																		
9																		
10																		

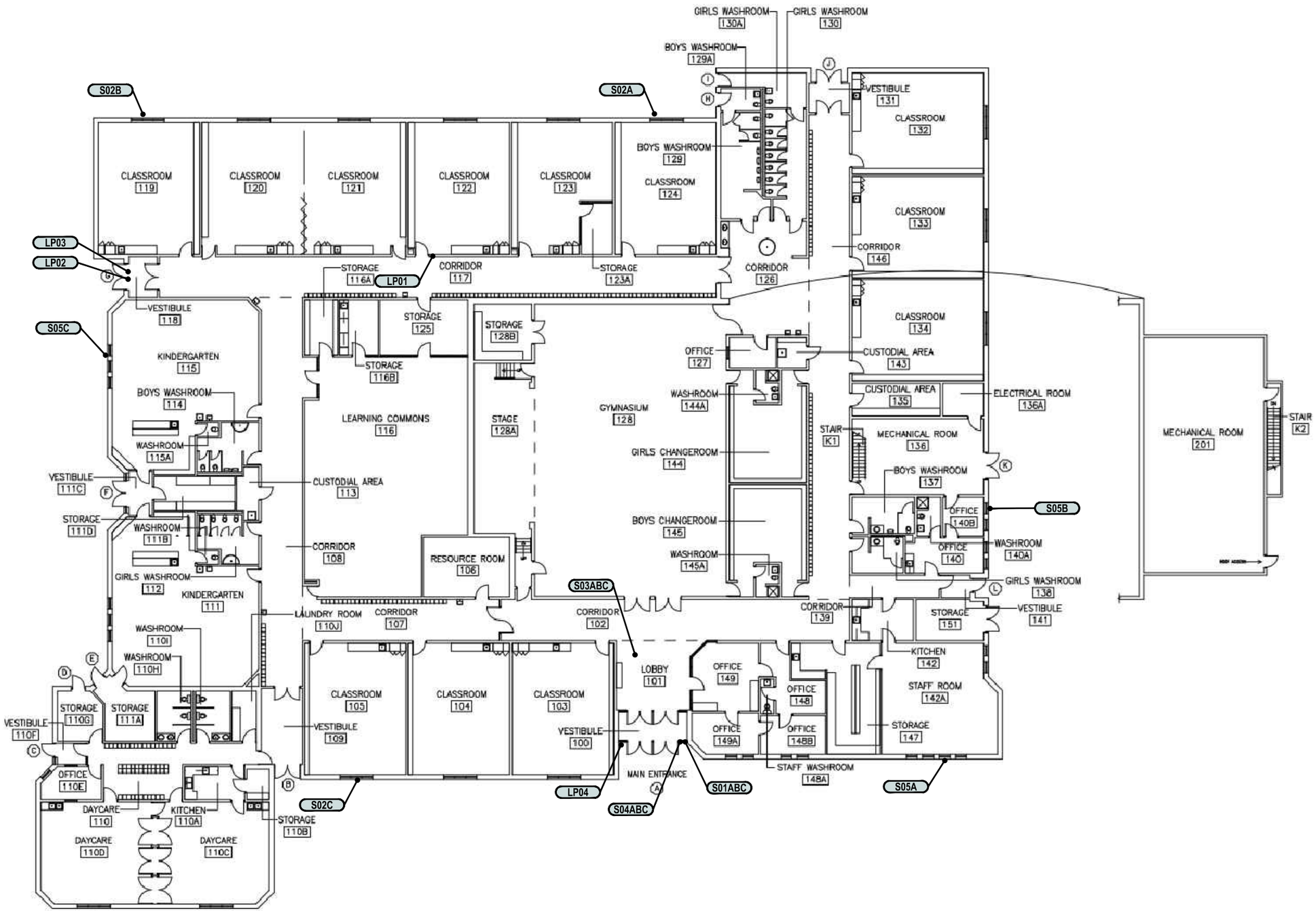
Comments:

Method of Delivery: Purolator

Relinquished By (Sign): Gavin Oakes	Received By Driver/Depot:	Received at Lab: SO	Verified By: SS
Relinquished By (Print): Aaron Rows	Date/Time:	Date/Time: Nov 21, 2024 9:00am	Date/Time: 21 Nov 24 0955
Date/Time: 20 Nov 24 - 3:00pm	Temperature: °C	Temperature:	pH Verified: ☐ By: NA

Appendix C

Figures



Notes:

ALL DRAWINGS TO BE REFERENCED WITH THE DSA REPORT. LOCATIONS AND QUANTITIES ARE APPROXIMATE.

ALL KNOWN OR SUSPECT DESIGNATED SUBSTANCES ARE NOT DEPICTED ON THIS FIGURE. REFER TO THE DSA REPORT FOR A COMPLETE LIST OF IDENTIFIED KNOWN AND SUSPECT DESIGNATED SUBSTANCES.

THIS FIGURE IS COLOUR DEPENDENT, PHOTOCOPIES MAY ALTER INTERPRETATION OF FIGURE. ALWAYS REFER TO ORIGINAL DRAWINGS AND DSA REPORT.

Designated Substances and Hazardous Materials Legend

S05C — Sample Identification

MTE
Engineers, Scientists, Surveyors

Ph. (905) 639-2552 www.mte85.com

CLIENT
Hamilton-Wentworth District School Board

PROJECT
DESIGNATED SUBSTANCE AUDIT

DRAWING
MAIN FLOOR
50 RAVENBURY DRIVE
HAMILTON ON

Project Manager	G. OAKES	Date	DECEMBER 2024
Baseplan By	MTE	Project No.	600390_001
Figure By	SXS	Drawing No.	1.0
Scale	N.T.S.		

December 03, 2024 - 10:00 am - Plotted By: SXS
Project: 60039_001
CAD: P:\P_60039_001\60039_001-DSS.DWG

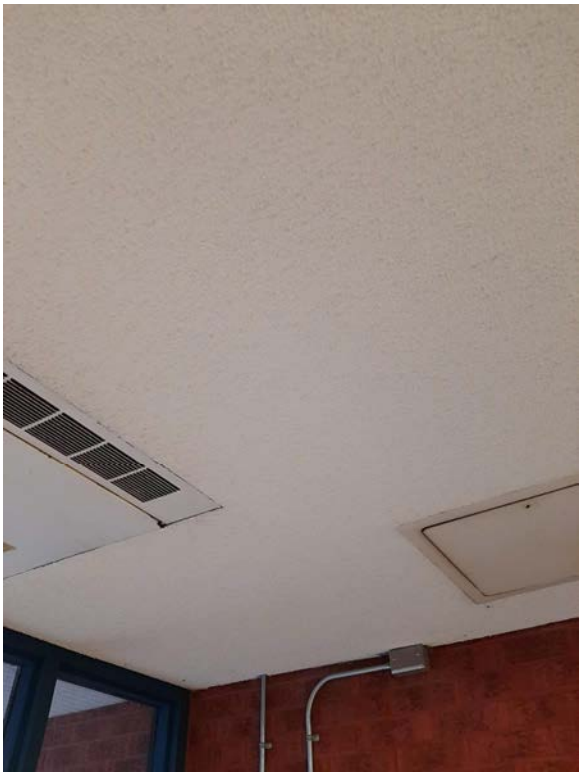
Appendix D

Photographic Log

Photograph No. 1 – Black window sealant was observed around the perimeter of windows throughout the interior of the building. The sealant was sampled (S02A,B,C) and found to be asbestos-containing. The sealant was also sampled for PCBs (PCB1) and is non-PCB.

Photograph No. 2 – Black window sealant was observed around the perimeter of windows throughout the exterior of the building. The sealant was sampled (S05A,B,C) and found to be asbestos-containing. The sealant was also sampled for PCBs (PCB4) and is non-PCB.

Photograph No. 3 – Glazing was observed between the glass and the frame/casing on the main entrance window. The glazing was sampled (S04A,B,C) and found to be asbestos-containing. The glazing was also sampled for PCBs (PCB3) and is non-PCB.



Photograph No. 4 – Texture coat ceilings were observed within the lobby and main entrance vestibule. The texture coat was sampled (S03A,B,C) and found to be non-asbestos.

Photograph No. 5 – Brown sealant was observed around the perimeter of exterior doors. The sealant was sampled (S01A,B,C) and found to be non-asbestos. The sealant was also sampled for PCBs (PCB2) and is non-PCB.