

Sir Winston Churchill Secondary School

Main Entrance & Ramp Renovation and Manufacturing Shop Renovation

Designated Substance Audit Report

Project Location: 1715 Main Street East, Hamilton, ON

Prepared for: Hamilton-Wentworth District School Board 20 Education Court, P.O. Box 2558 Hamilton, ON L8N 3L1

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

February 12, 2024

MTE File No.: 45429-101

Engineers, Scientists, Surveyors.



Contents

1.0	Intro	oduction	1
1.1	A	uthorization	1
2.0	Sco	pe of Work	1
3.0	Met	hodology and Assessment Criteria	2
4.0	Ass	essment and Results	2
4.1	Fi	ndings and Analytical Results	3
4.	1.1	Asbestos	3
4.	1.2	Lead	4
4.	1.3	Mercury	4
4.	1.4	Silica	4
4.	1.5	Mould	5
4.	1.6	Polychlorinated Biphenyls (PCB)	5
4.	1.7	Ozone-Depleting Substances (ODS)	5
4.2	С	onclusions and Recommendations	5
4.	2.1	Asbestos	6
4.	2.2	Lead	6
4.	2.3	Mercury	6
4.	2.4	Silica	7
4.	2.5	Mould	7
4.	2.6	Polychlorinated Biphenyls (PCB)	7
4.	2.7	Ozone Depleting Substances (ODS)	7
5.0	Limi	tations	8

Appendices

- Appendix A Tables
- Appendix B Laboratory Certificates of Analysis
- Appendix C Appendix D Figures Photographic Log

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 Sir Winston Churchill Secondary School located at 1715 Main Street East 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 building renovation. 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 following areas:

- Main entrance area;
- Classroom 2044; and,
- Classroom 2041.

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 Area to identify the following suspect Designated Substances and Hazardous Building Materials:
 - o Asbestos;
 - o Lead;
 - o Mercury;
 - o Silica;
 - o Mould growth;
 - Ozone Depleting Substances; and,
 - Polychlorinated Biphenyls limited to fluorescent light ballasts/sealants.
- 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 January 3, 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	Concrete Brick veneer and mortar Sealants
Building Structure	Structural steel Wood Frame
Mechanical Systems/Insulations	Parging on pipe fittings
Electrical/Plumbing Systems	Fluorescent Light tubes, bulbs
Floor Finishes	Concrete Terrazzo
Wall Finishes	Concrete
Ceiling Finishes	2' x 4' Small fissure pinhole pattern ceiling tiles (2014 manufacturing date stamp) 2'x4' pinhole pattern ceiling tiles

As part of this assignment, MTE reviewed "Sir Winston Churchill Secondary School Asbestos Inventory" which was prepared by HWDSB Regulated Substance Team and dated November 2023. Review of this report indicated the following asbestos-containing materials have been confirmed or suspected present within the building:

ltem	Material Description	Location
Confirmed ACM	Vinyl Floor Tiles	Floors
Confirmed ACM	Boiler Insulation	Boiler Room
Confirmed ACM	Sprayed Fireproofing	Hydro room, Caretakers Room, Boiler Room
Confirmed ACM	Pipe fittings	Mechanical Rooms
Confirmed ACM	Black Lab Countertops	Classrooms
Suspect ACM	Gaskets	Behind Blackboards
Suspect ACM	Roof Drains	Roof
Suspect ACM	Fire Doors	Throughout
Suspect ACM	Transite Panels	Select Locations

Information provided by others was relied on in good faith in the preparation of this report and was accepted as accurate without independent verification or confirmation by MTE. No other warranty or representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

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 21 bulk samples of suspect ACM were submitted for asbestos analysis with a total of 17 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 to Paracel Laboratories Ltd. (Paracel), in Mississauga, Ontario for asbestos analysis. 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.

MTE Consultants | 45429-101 | Sir Winston Churchill Secondary School - Designated Substance Audit | February 12, 2024 3

Due to the height of the ceiling within classrooms 2044 and 2041, ceiling level materials and ceiling cavities could not be safely accessed. Suspect asbestos containing pipe insulation was observed in the ceiling of classrooms 2044 and 2041. Similar piping was previously observed in other locations within the building and confirmed as asbestos-containing.

Due to the non-intrusive nature of MTE's assessment, no inspection openings were made in block wall cavities to inspect for potentially concealed vermiculite; however, there were several gaps in the block in Room 2041 and MTE did not see any signs of vermiculite seepage or spillage.

In addition, a white board was present on the wall within Room 2041; however, MTE was not able to access behind the tackboard. It is possible that asbestos-containing mastics and/or gaskets are present behind the tackboard.

Based on the laboratory results, ACM was confirmed present at the time of the inspection. In addition, suspect ACM was either observed or may potentially be concealed by building finishes.

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 2 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 Hamilton, Ontario. Paracel is accredited by the Canadian Association of Laboratory Accreditation to perform bulk lead analysis of paint.

Based on the laboratory results, 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.

Mercury-containing materials were visually identified at the time of the inspection.

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)

Suspect PCB-containing light ballasts were visually identified during the inspection. All live electrical equipment that could not be properly and safely de-energized was not assessed, therefore light ballasts were not inspected. Light ballasts which were not accessed, will require additional investigation to determine their PCB content when removed from service.

As part of this inspection, a total of 3 sealant samples were collected from building components which may be disturbed during the proposed project OR observed throughout the building/Subject Area. 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 sealants were confirmed 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.

There are no requirements under current legislation to remove ACM from a building simply because it is present. However, O. Reg. 278/05 requires that an Asbestos Management Program be implemented and maintained by the owner/employer where ACM is identified or suspected present.

4.2.2 Lead

Lead-containing paint was identified. As such special requirements for the management, handling and disposal of lead-containing materials by the owner, constructor, contractor, sub-contractors and workers apply. The abatement contractor should consult Environmental Abatement Council of Canada's (EACC) *Lead Guideline for Construction, Renovation, Maintenance or Repair (October 2014)* for the procedures and methods required to remove and dispose of lead-containing materials.

Low level lead-containing paint is also present and the following general procedures are recommended as a precautionary measure as per 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

Mercury-containing materials were identified. All mercury containing materials or sources should be removed, intact, prior to any work which may disturb or damage them and cause worker exposure to mercury liquid and/or vapour.

MTE Consultants | 45429-101 | Sir Winston Churchill Secondary School - Designated Substance Audit | February 12, 2024 6

On-site crushing of mercury-containing materials should not occur. Care should be taken to ensure safe storage of the above until recycling or disposal can be coordinated. Under current legislation, mercury waste requires handling and disposal in accordance with Ontario Regulation 490/09 of the OHSA and Ontario Regulation 347 of the Environmental Protection Act.

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)

Suspect PCB-containing fluorescent light ballasts were identified but could not be conclusively classified as PCB-containing or non-PCB-containing.

It is the responsibility of the owner to inspect, or ensure the inspection of all light ballasts as they are removed from service to make certain they are properly classified as PCB-containing or non-PCB containing. Fixtures will require dismantling to access date stamps (located on the back of the ballast) in order to be correctly classified in accordance with Environment Canada's document "*Identification of Lamp Ballasts Containing PCBs, Report EPS 2/CC/2 (revised), August 1991*".

Statutory Orders and Regulations (SOR)/2008-273, the *PCB Regulations*, made under the *Canadian Environmental Protection Act*, permits continued use of in-service PCB-containing light ballasts until the end of service life or until December 31, 2025.

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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MMC:

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Tables



		TABLE 4.1: BULK ASBESTOS SAMPLE SUMM	ARY TABLE	
Sample #	Location	Material Description	Asbestos Results (% Type)	ls Materia ACM
S01A	Room 2044	Gray Interior Window Sealant	ND	No
S01B	Room 2044	Gray Interior Window Sealant	ND	No
S01C	Room 2041	Gray Interior Window Sealant	ND	No
S02A	Room 2041	Brown Wall Mastic	ND	No
S02B	Room 2041	Brown Wall Mastic	ND	No
S02C	Room 2041	Brown Wall Mastic	ND	No
S03A	Room 2044	Floor Levelling Compound	ND	No
S03B	Room 2044	Floor Levelling Compound	ND	No
S03C	Room 2044	Floor Levelling Compound	ND	No
S04A	Room 2044	Concrete Block Mortar	0.5% Chrysotile	Yes
S04B	Room 2044	Concrete Block Mortar	NA	Yes
S04C	Room 2041	Concrete Block Mortar	NA	Yes
S05A	Hallway (But Observed in Room 2044 and 2041)	2'x4' Pinhole Pattern Ceiling Tile	ND	No
S05B	Hallway (But Observed in Room 2044 and 2041)	2'x4' Pinhole Pattern Ceiling Tile	ND	No
S05C	Hallway (But Observed in Room 2044 and 2041)	2'x4' Pinhole Pattern Ceiling Tile	ND	No
S06A	Ext. Doors Main Entrance	Exterior Dark Gray Door Sealant	3% Chrysotile	Yes
S06B	Ext. Doors Main Entrance	Exterior Dark Gray Door Sealant	NA	Yes
S06C	Ext. Doors Main Entrance	Exterior Dark Gray Door Sealant	NA	Yes
S07A	Ext. Doors Main Entrance	Black Glazing	ND	No
S07B	Ext. Doors Main Entrance	Black Glazing	ND	No
S07C	Ext. Doors Main Entrance	Black Glazing	ND	No

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	Material	Lead Content (ug/g)	Classification	
LP1	Room 2044	Gray Paint	2,560	Lead-Containing	
LP2	Room 2041	Beige Paint	655	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	Exterior Windows	Black Glazing	<5	Non PCB-Containing	
PCB2	Exterior Doors	Dark Gray Sealant	<5	Non PCB-Containing	
PCB3	Windows Rooms 2044/2041	Gray Sealant	<5	Non PCB-Containing	
As outlined in the Statutory Orders and Pagulations (SOR)/2008 272, the PCR Pagulations, made under the Canadian Environmental Protection Act					

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					
Sir Winston Churchill Secondary School						
Material	Location(s)	Material Description	Management Requirements If No Impacts to Material	Recommended Actions If Material Wil Maintenance, Renovation, Constructio		
Asbestos Non-Friable	Exterior Main Entrance Doors	Exterior Dark Gray Sealant	In place management in accordance with O. Reg. 278/05	Removal in accordance with O. Reg. 278		
Asbestos Non-Friable	Classrooms 2044 and 2041	Concrete Block Mortar	In place management in accordance with O. Reg. 278/05	Removal in accordance with O. Reg. 278 Type 2 Operation – hand held tools only with HEPA vacuum attachment in conjur OR Type 3 Operation – power tools with no o		
Suspect Asbestos Friable	Ceilings and Ceiling Cavities in 2044 and 2041	Pipe Fitting/Elbow Insulation	In place management in accordance with O. Reg. 278/04	Removal in accordance with O. Reg. 278 < 1m ² as a Type 2 or Type 2 Glove Bag Glove Bag or Type 3 Operation		

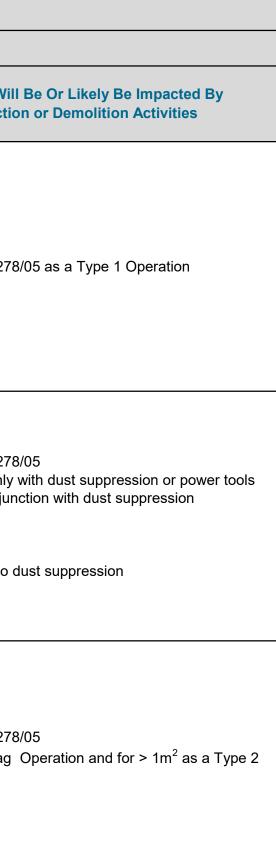
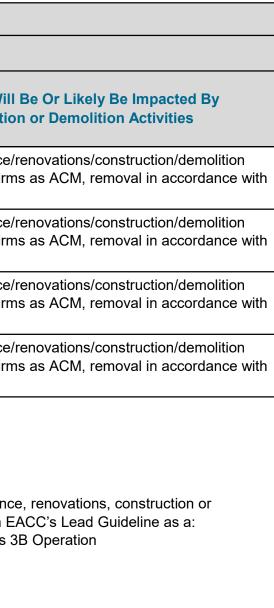


		Table 4.4 - Summary of D	esignated Substances an	d Recommended Actions		
	Sir Winston Churchill Secondary School					
Material	Location(s)	Material Description	Management Requirements If No Impacts to Material	Recommended Actions If Material Will Maintenance, Renovation, Constructio		
Potentially Concealed Asbestos	Block Wall Cavities in 2041 and 2044	Vermiulite	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/ activities, if present and sampling confirm O. Reg. 278/05		
Potentially Concealed Asbestos	Behind White Board in 2041	Mastic and/or Gasket Material	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/ activities, if present and sampling confirm O. Reg. 278/05		
Potentially Concealed Doors Throughout Build Asbestos Doors Throughout Build		Door Core Insulation	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/ activities, if present and sampling confirm O. Reg. 278/05		
Potentially Concealed Asbestos	Electrical Wiring Throughout Interior of Building	Jacketing on Electrical Wiring	In place management in accordance with O. Reg. 278/05	Invasive inspection prior to maintenance/ activities, if present and sampling confirm O. Reg. 278/05		
Lead- Containing Paint	Classroom 2044	Gray Paint	In place management in accordance with EACC's Lead Guideline	Removal as required prior to maintenanc demolition activities in accordance with E Class 1, Class 2A, Class 3A, or a Class 3		
Low Level Lead Containing Paint	Classroom 2041	Beige Paint	None	 General hygiene procedures during renov General dust control, Washing of hands and face at on-site fa No smoking, eating, chewing gum or dr No abrasive blasting. 		



ovation activities:

e facilities, drinking in the work area,

Table 4.4 - Summary of Designated Substances and Recommended Actions							
	Sir Winston Churchill Secondary School						
Material	Location(s)	Material Description	Management Requirements If No Impacts to Material	Recommended Actions If Material Will Maintenance, Renovation, Constructio			
Mercury	ercury Throughout Interior of Building in Light Fixtures Fixtures		None	Intact removal and storage with no on-sit a licensed facility			
Silica	lica Throughout Interior and Brick and Mortar, Concrete, Fill and Exterior of Building Hardscaping		None	Conduct any work during renovation, der Ministry of Labour Guideline Silica on Co			
Suspect PCBs			SOR/2008-273, the PCB Regulations, permits continued use of in-service PCB-containing light ballasts until the end of service life or until December 31, 2025	Assess Each Ballast Upon Removal Fron disposal of any PCB-containing ballasts i			
Notes:							

Notes:

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.
 Recommended actions are the minimum required actions, as prescribed by the appropriate Acts, regulations, guidelines, standards, codes and general best practice measure 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 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.
 All waste generated is subject to characterization and disposal in accordance with Ontario Regulation 347.

II Be Or Likely Be Impacted By on or Demolition Activities
ite crushing and disposal of materials to
molition activities in accordance with the Construction Projects
om Service Appropriate storage and in accordance with SOR/2008-273
res. Prior to demolition, the Contractor may re followed and afford protection for the



Laboratory Certificates of Analysis





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: 45429-101 Custody:

Report Date: 11-Jan-2024 Order Date: 5-Jan-2024

Order #: 2401229

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

Paracel ID	Client ID
2401229-01	S01A
2401229-02	S01B
2401229-03	S01C
2401229-04	S02A
2401229-05	S02B
2401229-06	S02C
2401229-07	S03A
2401229-08	S03B
2401229-09	S03C
2401229-10	S04A
2401229-11	S04B
2401229-12	S04C
2401229-13	S05A
2401229-14	S05B
2401229-15	S05C
2401229-16	S06A
2401229-17	S06B
2401229-18	S06C
2401229-19	S07A
2401229-20	S07B
2401229-21	S07C

Approved By:

Emma Diaz

Senior Analyst

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



Certificate of Analysis Client: MTE Consultants Inc. (Burlington)

Client PO:

2401229-12

03-Jan-24

Grey

Mortar

Order #: 2401229

Report Date: 11-Jan-2024

Order Date: 5-Jan-2024

% Content

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[AS-PT] 0.5 99.5

Project Description: 45429-101

Asbestos, PLM Visual Estimation **MDL - 0.5%**					
Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification
2401229-01	03-Jan-24	Grey	Sealant	No	Client ID: S01A
					Non-Fibers
2401229-02	03-Jan-24	Grey	Sealant	No	Client ID: S01B
					Non-Fibers
2401229-03	03-Jan-24	Grey	Sealant	No	Client ID: S01C
					Non-Fibers
2401229-04	03-Jan-24	Brown	Mastic	No	Client ID: S02A
					Non-Fibers
2401229-05	03-Jan-24	Brown	Mastic	No	Client ID: S02B
					Non-Fibers
2401229-06	03-Jan-24	Brown	Mastic	No	Client ID: S02C
					Non-Fibers
2401229-07	03-Jan-24	Grey	Levelling Compound	No	Client ID: S03A
					Non-Fibers
2401229-08	03-Jan-24	Grey	Levelling Compound	No	Client ID: S03B
					Non-Fibers
2401229-09	03-Jan-24	Grey	Levelling Compound	No	Client ID: S03C
					Non-Fibers
2401229-10	03-Jan-24	Grey	Mortar	Yes	Client ID: S04A
					Chrysotile
					Non-Fibers
2401229-11	03-Jan-24	Grey	Mortar		Client ID: S04B

OTTAWA - MISSISSAUGA - HAMILTON - KINGSTON - LONDON - NIAGARA - WINDSOR - RICHMOND HILL

not analyzed, positive stop

not analyzed, positive stop

Client ID: S04C

(FI RΔ ABORATORIES LTD.

Certificate of Analysis Client: MTE Consultants Inc. (Burlington)

03-Jan-24

2401229-21

Black

Sealant

Client PO:

Order #: 2401229

Report Date: 11-Jan-2024

Order Date: 5-Jan-2024

% Content

40 30 30

40 30 30

40 30 30

3 97

100

100

100

Project Description: 45429-101

2401229-13 03-Jan-24 2401229-14 03-Jan-24 2401229-15 03-Jan-24 2401229-16 03-Jan-24	Grey Grey Grey	Ceiling Tile Ceiling Tile Ceiling Tile	No	Client ID: S05A Cellulose MMVF Non-Fibers Client ID: S05B Cellulose MMVF Non-Fibers
2401229-15 03-Jan-24			No	MMVF Non-Fibers Client ID: S05B Cellulose MMVF
2401229-15 03-Jan-24			No	Non-Fibers Client ID: S05B Cellulose MMVF
2401229-15 03-Jan-24			No	Client ID: S05B Cellulose MMVF
2401229-15 03-Jan-24			No	Cellulose MMVF
	Grey	Ceiling Tile		MMVF
	Grey	Ceiling Tile		
	Grey	Ceiling Tile		Non-Fibers
	Grey	Ceiling Tile		
2401229-16 03-Jan-24			No	Client ID: S05C
2401229-16 03-Jan-24			Cellulose	
2401229-16 03-Jan-24			MMVF	
2401229-16 03-Jan-24				Non-Fibers
	Grey	Sealant	Yes	Client ID: S06A
				Chrysotile
				Non-Fibers
2401229-17 03-Jan-24	Grey	Sealant		Client ID: S06B
				not analyzed, positive st
2401229-18 03-Jan-24	Grey	Sealant		Client ID: S06C
				not analyzed, positive sto
2401229-19 03-Jan-24	Black	Sealant	No	Client ID: S07A
				Non-Fibers
2401229-20 03-Jan-24	Black	Sealant	No	Client ID: S07B

OTTAWA - MISSISSAUGA - HAMILTON - KINGSTON - LONDON - NIAGARA - WINDSOR - RICHMOND HILL

No

Non-Fibers

Non-Fibers

Client ID: S07C



Certificate of Analysis Client: MTE Consultants Inc. (Burlington) Client PO:

Project Description: 45429-101

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

** Analytes in bold indicate asbestos mineral content.

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	Analysis Date
Asbestos, PLM Visual Estimation	AppE to SubE of 40CFR Part763 and EPA/600/R-93/116	1 - Mississauga	CALA 3762	5-Jan-24
Mississauga Lab: 15 - 6800 Kitimat R	d Mississauga, Ontario, L5N 5M1			

Qualifier Notes

Sample Qualifiers :

AS-PT: Asbestos quantitation by PLM Point Count method.

Work Order Revisions | Comments

None

PARACEL		1229		Office 319 St. Laurent Blvd. 7a, Ontario K1G 4J8 300-749-1947 racel@paracellabs.com	Chain of Custod (Lab Use Only)	y	
Client Name:	Project Refer	199.00			Page . of .		
Contact Name: Consultants Inc.		unce. 4 5	5429	- 10]	Turnaround Time	e:	
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Matrix: Air BBulk Tape Lift Swab Other					SK Other:		
Analyses: 🗋 Microscopic Mold 🗍 Culturable Mold 🗍 Bacteria GR	AM 🗆 P	CM Asbes	tos 🖾 PL	M Asbestos Chatfield Asb	estos 🔲 TEM Asbestos		
Paracel Order Number:				As	bestos - Bulk		
2401229		Air		Identify Distinct Building			
. Sample ID	Sampling Date		Analysis	(if not specified, all materials		Positive Stop?	
15010-0	0/103	(L)	Required		identified will be analyzed) *		
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6 SOCA - C				motor Ralas	x	B	
8 5074-0		_	_	North Fields	*	B	
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If left blank, all distinct materials identified in the samples will be analyzed and reported	separately as	per EPA 600/	/R-93/116. Ad	ditional charges will apply.			
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RELIABLE.

351 Nash Road North, unit 9B Hamilton, ON L8H 7P4 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: 45429-101 Custody:

Report Date: 10-Jan-2024 Order Date: 5-Jan-2024

Order #: 2401193

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

Paracel ID **Client ID** 2401193-01 LP1 - Grey 2401193-02 LP2 - Beige

Approved By:

Milan Ralitsch, PhD Senior Technical Manager

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 Client: MTE Consultants Inc. (Burlington) Client PO: Order #: 2401193

Report Date: 10-Jan-2024 Order Date: 5-Jan-2024

Project Description: 45429-101

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 6020 - Digestion - ICP-MS	9-Jan-24	9-Jan-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 Client: MTE Consultants Inc. (Burlington) Client PO:

Project Description: 45429-101

Sample Results

Lead					Matrix: Paint
Paracel ID	Client ID	Sample Date	Units	MDL	Result
2401193-01	LP1 - Grey	3-Jan-24	ug/g	5	2560
2401193-02	LP2 - Beige	3-Jan-24	ug/g	5	655

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	224	5	ug/g	183			20.50	50	
Matrix Spike									
Lead	59.1	5.00	ug/g	7.3	104	70-130			

PARACEL		TRU RES REL	PONS	SIVE.							37.			el I	D: 2	240				
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Criteria: O. Reg. 153/04 (As Amended) Table RS0						B (Sto	orm)		UB (S	anita	ry) M	lunici	pality	:	1999			Other:		
Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water)	SS (Storm	Sanitary S	ewer) P	(Paint) A (Air) O	(Other)	Re	quire	ed A	nalys	ses										
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Chain of Custody (Env) - Rev 0.7 Feb. 2016



MTE Consultants Inc. (Burlington)	
1016 Sutton Drive, Unit A	
Burlington, ON L7L 6B8	
Attn: Gavin Oakes	
	Report Date: 10-Jan-2024
Client PO:	Order Date: 5-Jan-2024
Project: 45429-101	
Custody:	Order #: 2401249
This Certificate of Analysis contains analytical data applicable to the following samples as submitted:	

Paracel ID	Client ID
2401249-01	PCB1
2401249-02	PCB2
2401249-03	PCB3

Approved By:

Nasa

Dale Robertson, BSc

Laboratory Director



Client: MTE Consultants Inc. (Burlington)

Client PO:

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PCBs, total	SW846 8082A - GC-ECD	9-Jan-24	9-Jan-24

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Page 2 of 8

Order #: 2401249

Report Date: 10-Jan-2024

Order Date: 5-Jan-2024



Client: MTE Consultants Inc. (Burlington)

Client PO:

Report Date: 10-Jan-2024

Order Date: 5-Jan-2024

		D0D4	DODO	DODO			T
	Client ID:	PCB1	PCB2	PCB3	-		
	Sample Date:	03-Jan-24 10:00	03-Jan-24 10:00	03-Jan-24 10:00	-	-	-
	Sample ID:	2401249-01	2401249-02	2401249-03	-		
	Matrix:	Other	Other	Other	-		
	MDL/Units						
PCBs					•		
PCBs, total	5 ug/g	<5	<5	<5	-	-	-
Decachlorobiphenyl	Surrogate	114%	131%	125%	-	-	-



Client: MTE Consultants Inc. (Burlington)

Client PO:

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	11.9		%	119	60-140			

Report Date: 10-Jan-2024

Order Date: 5-Jan-2024



Client: MTE Consultants Inc. (Burlington)

Client PO:

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	11.4		%		114	60-140			

Report Date: 10-Jan-2024

Order Date: 5-Jan-2024



Client: MTE Consultants Inc. (Burlington)

Client PO:

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs PCBs, total	25	5	ug/g	ND	123	60-140			
Surrogate: Decachlorobiphenyl	12.1		%		121	60-140			

Report Date: 10-Jan-2024

Order Date: 5-Jan-2024



Client: MTE Consultants Inc. (Burlington)

Client PO:

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

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

Order #: 2401249

Report Date: 10-Jan-2024

Order Date: 5-Jan-2024

PARACEL TR LABORATORIES LTD. RE					Paracel ID: 2401249								Chain of Custody (Lab Use Only)				
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2461249				Sample Taken		PHCs F1-F4+BTEX		ICP			3						
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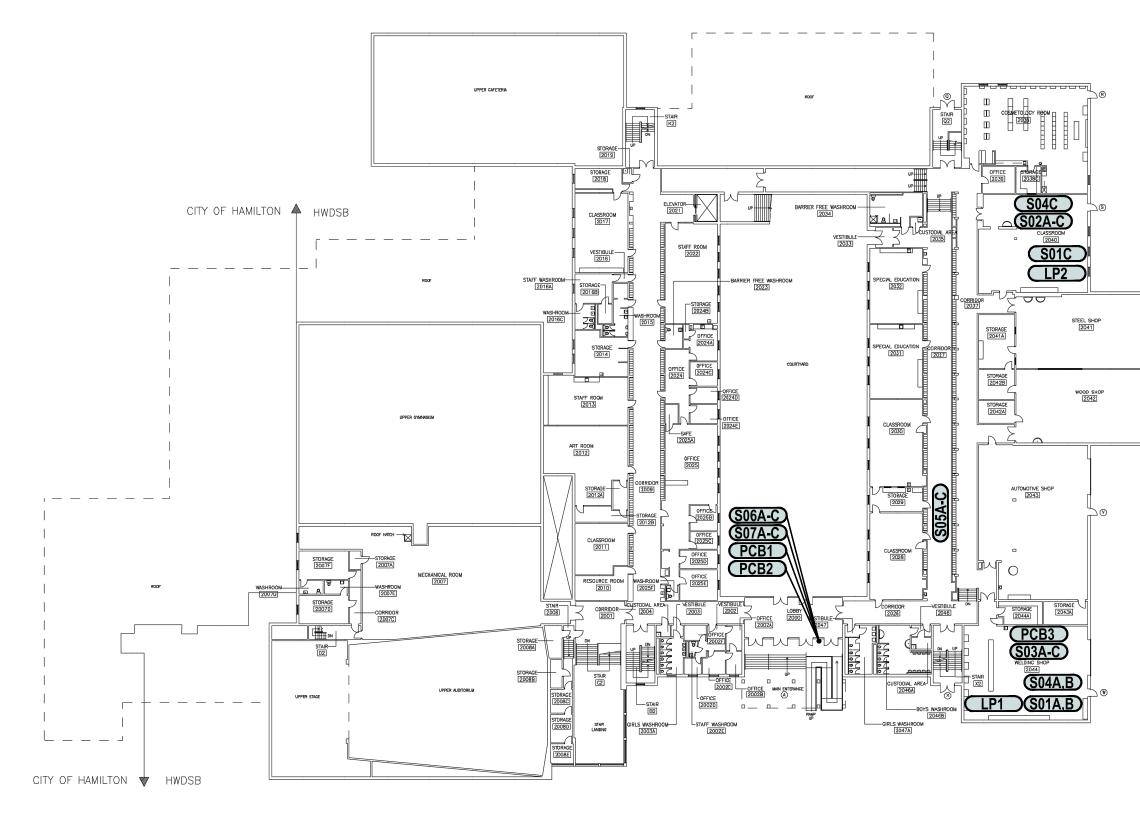
Chain of Custody (Env) - Rev 0.7 Feb. 2016

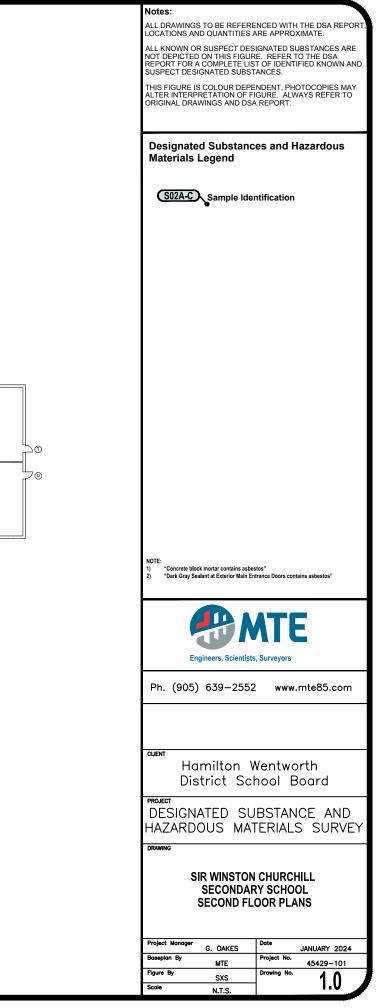


Figures



20, 2018 — 2:00 pm — Plotted By: MVanRuyven







Photographic Log





Photograph No. 1 – Suspect asbestos-containing pipe fittings at ceiling level in room 2044. The ceiling was too high to be safely sampled. Additional fittings are assumed present above the ceiling tiles.



Photograph No. 2 – Gray paint in room 2044 is lead-containing. Exposed pipe straights were fiberglass.



Photograph No. 3 – Gray interior window sealant in 2044 and 2041 is non-asbestos.



Photograph No. 4 – Floor levelling compound in 2044 is non-asbestos.



Photograph No. 5 – Suspect asbestos pipe fittings at ceiling level in room 2041. Additional fittings are assumed present above the ceiling tiles.



Photograph No. 6 – Brown wall mastic residue in 2041 was found to be non-asbestos.



Photograph No. 7 – Concrete block mortar in 2044 and 2041 was found to contain asbestos.



Photograph No. 8 – Exterior dark gray sealant at main entrance doors contains asbestos.