

# **LIMITED DESIGNATED SUBSTANCE SURVEY REPORT (NEW CUSTODIAL ROOM PROJECT)**

**King Albert Public School  
49 Glenelg Street West,  
Lindsay, Ontario**

**Presented to:**

Trillium Lakelands District School Board  
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**December 20, 2023**

**Maple Project No. 21402**

## **EXECUTIVE SUMMARY**

Maple Environmental Inc. ('Maple') was retained by Trillium Lakelands District School Board ('TLDSB') to perform a survey for Designated Substances as well as polychlorinated biphenyls (PCBs) and mould within King Albert Public School located at 49 Glenelg Street West, Lindsay, Ontario (the 'Site'). It is our understanding that the building requires a survey to identify possible hazardous building materials that may be disturbed during the Daycare Addition Project.

The Custodial Room Survey encompassed the areas identified on the architectural drawings provided by Jason Lowe Architect which includes the Room 109, Cloak Room 109A, and Hallway 102. The findings of the current survey are summarized below. Please refer to the main body of this report for details on all materials.

### **Asbestos**

No asbestos-containing materials (ACM) were identified within the surveyed area at the time of the assessment.

Maple has concerns with the built-up profile of the flooring in Room 109 as compared to the Corridor as it may be concealing additional layers of flooring.

It should be noted that due to the presence of solid walls and ceilings (i.e. masonry walls and above solid ceilings) throughout the survey area, access for viewing within the wall and ceiling cavities was not always possible. Suspect asbestos-containing materials may be present within wall and ceiling cavities that were not identified in this report but are suspected to be present. Caution should be taken when demolishing solid walls and ceilings within the areas being surveyed.

### **Lead**

Based on these criteria and the results of the sample analysis, the green paint finishes are considered to be "Lead-Containing" and the Tan paint finishes to be "Low-Level Lead" (virtually safe).

It should be noted that lead may also be present in wiring connectors, electric cable sheathing, solder joints on copper piping, ceramic glazes, lead sheeting, masonry mortar, and as sub-surface layers to the most recent paint layers currently applied, where present at the Site.

### **Mercury**

Mercury vapour is present in all fluorescent light tubes. Liquid mercury is also present in thermostatic switches located within the surveyed area.

### **Silica**

Free crystalline silica, present as common construction sand, is present in all concrete and masonry products where present within the surveyed areas.

### **Mould**

No visible mould or water staining was observed within the surveyed areas at the time of the assessment.

It is possible that mould growth is present in concealed areas such as wall or ceiling cavities, pipe chases, etc. or in areas not currently assessed by Maple. The client should notify Maple should any water damage or suspect mould growth be discovered.

### **PCBs**

The fluorescent lamp fixtures observed contained T8 fluorescent light tubes. T8 fixtures have electronic ballast and are considered as not containing PCB.

## **RECOMMENDATIONS**

Based on the Laboratory Analytical Results and observations made on Site, Maple provides the following recommendations:

- Maple recommends destructive testing of the raised flooring in Classroom 109 to confirm the presence or absence of potential asbestos-containing flooring that maybe concealed.
- Disturbance of paint finishes that are considered "Lead-Containing" should be completed using Lead abatement procedures as appropriate in accordance with EACC and Ministry of Labour Guidelines as outlined in Section 5.0 of the Report.
- Remove all mercury containing components (including fluorescent light tubes) prior to renovations if the materials are being removed. These components should be removed intact and disposed of appropriately.
- Proper dust suppression techniques and other safety precautions to control possible generation of silica dust from the demolition of concrete and masonry products present in the surveyed area should follow those outlined in the Ministry of Labour Guideline- Silica on Construction Projects, 2004.
- Should light fixtures containing ballasts be removed as part of the project, all ballasts not clearly marked as "non-PCB" on the label should be separated, handled and disposed of as PCB-containing or inspected by competent persons to ascertain PCB content.

Appropriate procedures for asbestos, lead, mercury and silica must be observed if these materials are likely to be disturbed by scheduled renovations. Please refer to Section 5.0 of the report to review the required procedures.

Consideration should be given to assessing other areas of the building that could be associated with the current project, including travel path, mechanical or electrical ties in the areas outside of the immediate project area, and penetrations through the slab impacting floors below or above.

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## 1.0 INTRODUCTION

Maple Environmental Inc. ('Maple') was retained by Trillium Lakelands District School Board ('TLDSB') to perform a survey for Designated Substances as well as polychlorinated biphenyls (PCBs) and mould within King Albert Public School located at 49 Glenelg Street West, Lindsay, Ontario (the 'Site'). It is our understanding that the building requires a survey to identify possible hazardous building materials that may be disturbed during the Daycare Addition Project.

The Custodial Room Survey encompassed the areas identified on the architectural drawings provided by Jason Lowe Architect which includes the Room 109, Cloak Room 109A, and Hallway 102.

Section 30 of the Ontario Occupational Health and Safety Act requires that the following Designated Substances be included in a Designated Substance Survey:

***Asbestos***

***Lead***

***Mercury***

***Silica***

***Isocyanates***

***Vinyl Chloride Monomer***

***Benzene***

***Acrylonitrile***

***Coke Oven Emissions***

***Arsenic***

***Ethylene Oxide***

Additional detailed information with respect to asbestos was collected at the time of the survey to ensure compliance with Ontario Regulation 278/05.

The assessment was performed by Richards Rebocks of Maple on November 6, 2023.

## 2.0 APPLICABLE ONTARIO REGULATIONS

Applicable Ontario Regulations for each of the materials included in the investigation are briefly described below.

### 2.1 Designated Substances and Other Hazardous Materials

Section 30 of the Occupational Health and Safety Act requires building owners or their agents (architects, general contractors, etc.) to prepare or have prepared a Designated Substance report for specified potentially hazardous materials possibly present in a facility. The owner must ensure that a prospective constructor has received a Designated Substance report before entering into a binding contract with the contractor. The owner is liable to the contractor for damages and costs arising from unreported materials (of which the owner should reasonably have been aware) and could also be subject to orders and fines from the Ministry of Labour.

The disturbance of asbestos materials on construction projects is controlled by Ministry of Labour Regulation R.R.O. 2005/278. The disposal of asbestos waste is controlled by Ministry of Environment Regulation, R.R.O. 1990/347.

There are no specific Ministry of Labour regulations for control of the other Designated Substances on construction projects. However, the Ministry of Labour actively enforces the general duty clause of the Health and Safety Act which protects workers and provides guidance on exposure monitoring, permissible exposure levels, medical monitoring, etc. for all Designated Substances.

Although Regulations exist for many of the Designated Substances, they apply to industry settings using Designated Substances in manufacturing processes, and do not apply to general property management, renovation or maintenance of buildings.

Polychlorinated Biphenyls ("PCBs") and mould were also included in the investigation, which are not specifically named as Designated Substances. No specific regulations are attached to these materials but are generally governed by the due diligence section of the Health and Safety Act for employers to protect their workers.

## **2.2 Ontario Regulation 278/05 (Asbestos)**

Ontario Regulation 278/05 applies to buildings with regards to maintenance, renovations or demolition work where asbestos-containing materials (ACM) is present and may be disturbed. The Regulation requires that a detailed asbestos inventory be performed in all buildings where friable and non-friable asbestos materials are present. The inventory must be available at the work place and must identify the type of asbestos, and location of asbestos on a room-by-room basis. The following report meets or exceeds the requirements for an asbestos survey under Ontario Regulation 278/05.

## **2.3 Ontario Regulation 347**

Ontario Regulation 347 applies to the transport of waste from the location of generation to a landfill site authorized to receive specific wastes. The regulation also prescribes procedures on how the specific wastes are to be handled at the landfill site.

The major requirements of the building owner and the person(s) removing the waste are to ensure that:

- The waste is appropriately packaged and labelled;
- The transport vehicle is appropriately placard; and
- The waste is to be transported as directly as possible to the landfill site once it leaves the site.

Some wastes require the owner to register a Generator (of waste) number and many wastes require classification that can restrict or even prohibit their disposal in landfill.

It is important to note that the building owner can be held responsible for the waste until the waste disposal site accepts it.

## **2.4 Ontario Regulation 362**

Ontario Regulation 362, made under the Ontario Environmental Protection Act applies to the waste management and transport of PCB waste from the location of generation to a landfill site authorized to receive specific wastes. The regulation also prescribes procedures on how the specific wastes are to be handled at the landfill site.

### 3.0 SURVEY SCOPE AND METHODOLOGY

The Custodial Room Survey encompassed the areas identified on the architectural drawings provided by Jason Lowe Architect which includes the Room 109, Cloak Room 109A, and Hallway 102. The methodology included the assessment for hazardous materials and how the assessment was performed is outlined below.

Where possible, Maple utilized the Site observations and representative bulk sampling results from previous Asbestos Survey Reports that were made available at the time of the survey.

In order to determine the location of materials to be included in the assessment, the project technologist entered the room where practical (i.e. where access was possible without the demolition of walls, roof or ceilings or destruction of flooring) and reviewed the components of the ceilings and walls only (locations where the equipment will be located). The inventory did not include demolition of building systems or finishes to check on possible hidden conditions.

#### 3.1 Asbestos-Containing Building Materials (ACM)

The scope of the survey included all friable asbestos products and all major non-friable asbestos materials. The term friable is applied to a material that can be readily reduced to dust or powder by hand or moderate pressure. Asbestos materials that are friable have a much greater potential to release airborne asbestos fibres when disturbed.

Typical friable asbestos materials include: sprayed fireproofing or thermal insulation, textured (stippled) plaster, and thermal mechanical insulation. Typical non-friable materials include: asbestos cement (transite) products, vinyl floor tiles, asbestos textiles and gaskets. Additional materials such as ceiling tiles, drywall joint compounds and vinyl sheet flooring are classified as non-friable, but because of their ability to release dust when disturbed are considered as “potentially friable” for the purpose of this report.

Bulk samples of materials suspected to contain asbestos were collected for analysis during the survey. Specifically, a small volume of material was removed either from a damaged section of suspect material or taken from intact material.

In these latter cases, the material from which the sample was collected was sealed with tape to temporarily prevent fibre release. Samples were placed in plastic bags and sealed until receipt by an independent laboratory.

Bulk samples were collected in accordance with regulatory sampling requirements and with sufficient frequency to obtain a general pattern of asbestos use within the building. Due to building renovations or modifications that may have occurred in the past, the consistency of the application of asbestos materials may not be uniform throughout the entire Site. It is important to note that without sampling each individual wall, pipe section, ceiling tile etc. it is not possible to identify the asbestos content of every material present in the selected areas. For this reason, visually similar materials are considered to be homogenous with those already sampled elsewhere in the building without additional analysis.

O. Reg. 278/05 prescribes that a minimum number of samples be collected of materials suspected to contain asbestos. These minimum sampling requirements are summarized in Table 1, below.

Table 1 - Suspect ACM Bulk Sampling Requirements

Type of Material	Quantity of Material Present	Minimum # of Bulk Samples Required
Surfacing Materials (i.e. sprayed fireproofing, drywall joint compound, texture coat, and plaster)	Up to 90 sq. m. (1000 sq. ft.)	3
	From 90 sq. m. (1000 sq. ft.) to 450 sq. m. (5000 sq. ft.)	5
	Greater than 450 sq. m. (5000 sq. ft.)	7
All other potential ACM	Any	3

Excluding surfacing materials, the laboratory was instructed to cease analysis within Sample Groups of homogenous materials when one of the samples in the group is found to contain asbestos. For example, if three samples of a type of vinyl floor tile are collected (as required by O. Reg. 278/05) and submitted for analysis and the first sample is positively identified as containing asbestos, the balance of the sample group is not analysed.

EMC Scientific (EMC), an independent laboratory, was selected to analyse the collected bulk suspect asbestos samples. EMC successfully participates in an "Asbestos Proficiency Analytical Testing Program" and as such, is responsible for its findings. EMC followed the Code of Practice for the identification of asbestos in bulk material, as detailed in O. Reg. 278/05. Bulk samples were analysed using the Polarized Light Microscopy ("PLM") Technique with Dispersion Staining. The identification of asbestos fibre in bulk material is based on a collective set of parameters dependent on the unique shape and crystallographic properties of each fibre as viewed through the microscope. This method is useful for the qualitative identification of asbestos and the semi-quantitative determination of asbestos content in bulk materials expressed as a percent of projected area. The method identifies types of asbestos and also measures percent of asbestos as perceived by the analyst in comparison to standard area projections or trained experience.

The recommendations made as part of this report with respect to asbestos have taken into consideration: the condition and accessibility of the material, vibration, air movement, and general activities likely to occur within the vicinity of the ACM.

In each area or room inventoried, the technician recorded the quantity, condition (GOOD, FAIR, or POOR) of each suspect asbestos-containing material. The definitions for condition and accessibility of the asbestos-containing items are as follows:

<b>GOOD</b>	Material is intact with no visible signs of damage.
<b>FAIR</b>	Material is visibly damaged but can be repaired.
<b>POOR</b>	Material is damaged beyond repair and likely needs to be removed.

Where ACM is found to be in GOOD condition and not likely to deteriorate or fall, the general recommendation would be to re-evaluate the condition of the material on an annual basis (required by O. Reg. 278/05). This recommendation can be subject to



change if the material is located in a manner that persons untrained in asbestos awareness could physically damage it.

Where ACM is found to be damaged (i.e. FAIR or POOR condition), a recommendation to have the material cleaned-up, repaired, removed, enclosed, or encapsulated is offered. The recommendation will also indicate which asbestos procedure should be used to perform the remedial work (i.e. Type 1, Type 2, Type 3, or Glove Bag Removal Methods).

### **3.2 Lead**

The investigation included the collection and analysis of all major paint colour applications for the presence of lead in the paint. Other materials that possibly contain lead were identified by known historic use, where relevant. The lead in paint samples were analysed by EMSL Canada ('EMSL'), using atomic absorption spectrophotometry. EMSL is AIHA (American Industrial Hygiene Association) and NIOSH (National Institute of Occupational Safety and Health) accredited for this type of analysis. The Laboratory Analysis Report for lead in paint samples is included with this Report as Appendix II.

### **3.3 Mercury**

The assessment included a visual identification of fluorescent light tubes, switches, electrical controls, heating system thermostats, thermometers, and other components historically known to contain mercury.

### **3.4 Other Designated Substances**

Other materials listed in Section 1.0 of this Report were identified on a visual basis where present, as part of the current assessment. It should be noted that no manufacturing or heavy industrial activities are known by Maple to occur at the Site. Therefore, Designated Substances associated with these activities (i.e. those other than Asbestos, Lead, Mercury, and Silica) would not be expected to be present in the selected areas.

### **3.5 Mould**

The assessment for mould was conducted in accordance with standard industry practice as set out in the Canadian Construction Association (CCA) "Mould Guidelines for the Canadian Construction Industry" for a visual assessment. Although there are no regulatory requirements in Ontario for such an assessment, the CCA Guidelines, and similar guidelines from other agencies have been accepted as the industry standard by most experts, consultants, the Ontario Ministry of Labour, and the Canadian Construction Association.

All guidelines and protocols for mould investigations indicate that investigations should be performed largely on a visual basis with limited collection of bulk and/or air samples. The Ontario Ministry of Labour has consistently enforced the removal of all mould from buildings regardless of mould genus or species, and therefore bulk samples or air samples for confirmation of mould are not typically collected for investigative purposes where mould is visible.

### **3.6 Polychlorinated Biphenyls**

Manufacturer's labels/codes collected from fluorescent lamp ballasts suspected of containing Polychlorinated Biphenyls ("PCBs") are compared with Environment Canada's document titled "Identification of Lamp Ballasts Containing PCBs", which identifies PCB-containing ballasts.

### **3.7 Limitations and Omissions from Scope**

Due to the nature of building construction some limitations exist as to the possible thoroughness of any building materials inventory. The field observations, measurements, and analysis are considered sufficient in detail and scope to form a reasonable basis for the findings presented in this report. Maple warrants that the findings and conclusions contained herein have been made in accordance with generally accepted evaluation methods in the industry and applicable regulations at the time of the performance of the inventory.

It is possible that conditions may exist which could not be reasonably identified within the scope of the inventory or which were not apparent during the Site investigation. Maple believes that the information collected during the investigation concerning the property is reliable. No other warranties are implied or expressed.

During a standard ACM inventory performed for the purposes of regulatory compliance, it is industry practice to exclude certain suspect asbestos-containing materials from sampling. These materials are often excluded from sampling due to the risk of compromising the health and safety of the technician, other building occupants, or the integrity of the systems with which these materials are associated. Examples of such materials include; elevator brakes, roofing felts and mastics, Secondary voltage wiring, mechanical packing and gaskets, underground services or piping, fire-doors, window caulking and levelling compound. Where observed, these materials were presumed to be ACM.

## **4.0 INVENTORY FINDINGS**

The findings of the survey are presented separately below for each of the eleven Designated Substances as well as microbial growth (mould), and polychlorinated biphenyls. Asbestos is further detailed by typical applications of asbestos.

### **4.1 Asbestos**

The following is a brief discussion of the extent to which ACM was identified in the surveyed area. The discussion is organized under the headings of materials that are generally suspected of containing asbestos. The sample numbers refer to the laboratory analysis report presented as Appendix I and summarised in Table 2 below.

Nine (9) bulk samples were collected for the determination of asbestos content and submitted to the lab to be analysed. Due to the presence of more than one phase of material in some of the original samples the laboratory may have performed multiple analyses for some samples. As a result, a total of twelve (12) samples were analyzed.

**Table 2 - Summary of Analysis of Asbestos Bulk Samples**

Sample No.	Room Name	Sample Description	Result
S01A	Cloak Room 109A	White Plaster	None Detected
		Grey Plaster	None Detected
S01B	Cloak Room 109A	White Plaster	None Detected
		Grey Plaster	None Detected
S01C	Cloak Room 109A	White Plaster	None Detected
		Grey Plaster	None Detected
S02A	Room 109 Sink Area	Off-White Joint Compound	None Detected
S02B	Room 109 Sink Area	Off-White Joint Compound	None Detected
S02C	Room 109 Sink Area	Off-White Joint Compound	None Detected
S03A	Cloak Room 109A	Off-White Caulking	None Detected
S03B	Cloak Room 109A	Off-White Caulking	None Detected
S03C	Cloak Room 109A	Off-White Caulking	None Detected

No asbestos-containing materials (ACM) identified within the surveyed area at the time of the assessment. Details of the sampling results are presented below under the headings of the most typical asbestos applications in buildings.

It should be noted that due to the presence of solid walls and ceilings (i.e. masonry block walls and above solid ceilings) throughout the survey area, access for viewing within the wall and ceiling cavities was not always possible. Suspect asbestos-containing materials may be present within wall and ceiling cavities that were not identified in this report but are suspected to be present. Caution should be taken when demolishing solid walls and ceilings within the areas being surveyed.

#### **4.1.1 Sprayed Fireproofing**

No sprayed fireproofing was identified within the surveyed area at the time of the assessment.

#### **4.1.2 Thermal Mechanical Insulation (Friable)**

No asbestos-containing mechanical insulations were identified in the building. A brief description of the insulations is provided below categorized by mechanical system type. Further, it is important to note that mechanical systems may be present within walls and ceiling cavities or pipe chases that were not accessible during this assessment.

##### **Pipe Fittings:**

No asbestos-containing pipe insulation on the fittings (i.e. elbows, tees, valves, etc.) were observed within the surveyed area at the time of the assessment.

All pipe fittings observed within the surveyed areas were either insulated with non-asbestos fibreglass and PVC or were un-insulated.

### **Pipe Straights:**

No asbestos-containing straight sections of pipe insulation were observed within the surveyed area at the time of the assessment.

All pipe straights observed were either insulated with non-asbestos fibreglass and PVC or were un-insulated.

### **Duct Systems**

All of the ductwork was observed to be either uninsulated or insulated with fiberglass insulation.

### **Mechanical Equipment**

All of the mechanical equipment were observed to be either uninsulated metal or insulated with non-asbestos fiberglass insulation.

#### **4.1.3 Texture Finish (Friable)**

No textured finishes were identified within the surveyed area at the time of the assessment.

#### **4.1.4 Acoustic Ceiling Tiles (Potentially Friable)**

No asbestos-containing acoustic ceiling tile systems were identified within the surveyed areas at the time of the assessment.

One (1) visually distinct type of ceiling tile system was observed in the surveyed areas. A brief description of each type of ceiling tile is outlined below.

- AT-01 (2'x4' Textured with Dense Pinholes present in Room 109):  
No bulk samples of AT-01 were collected as a date stamp manufacture code was present on the backside of the tile indicating that the tiles were recently manufactured and therefore not suspected to contain asbestos.

#### **4.1.5 Vinyl Sheet Flooring (Potentially Friable)**

No asbestos-containing vinyl sheet flooring finishes were identified within the surveyed area at the time of the assessment.

One (1) visually distinct type of vinyl sheet flooring finishes was observed in the surveyed area. A brief description of the flooring is outlined below.

- VSF-01 (Dark Blue flooring)  
No bulk samples of VSF-01 were collected as the flooring material had a jute backing and is therefore not suspected to contain asbestos.

#### **4.1.6 Vinyl Floor Tile (Non-Friable)**

No vinyl floor tile systems were identified within the surveyed area at the time of the assessment.

However, Maple has concerns with the built-up profile of the flooring in Room 109 as compared to the Corridor as it may be concealing additional layers of flooring.



Maple did not do any intrusive investigation of the flooring as it would destroy the integrity of the flooring and cause a tripping hazard.

#### **4.1.7 Asbestos Cement Products “Transite” (Non-Friable)**

Asbestos-containing cement panels, commonly referred to as “Transite”, were not observed to be present in the survey area.

#### **4.1.8 Drywall Joint Compound (DJC) (Potentially Friable)**

No asbestos-containing drywall joint compound was identified within the surveyed area at the time of the assessment.

Interior drywall finishes were present in the form of wall finishes present within the surveyed areas of Rooms 109.

Three (3) representative samples (Sample Set S02A-C) of drywall joint compound present on the Classroom 109 Sink Room were collected and analyzed for determination of asbestos content. Analysis of Sample Set S02 found that the samples do not contain asbestos.

#### **4.1.9 Plaster (Potentially Friable)**

No asbestos-containing plaster finishes were identified within the surveyed area at the time of the assessment.

Interior plaster finishes were present in the form of wall finishes present within the surveyed areas of Rooms 109A.

Three (3) representative samples (Sample Set S01A-C) of plaster finish present on the Cloak Room 109A walls were collected and analyzed for determination of asbestos content. Analysis of Sample Set S01 found that the samples do not contain asbestos.

#### 4.1.10 Vermiculite (Friable)

No vermiculite insulation was observed to be present within the surveyed area at the time of the assessment. It should be noted that loose fill vermiculite insulation can often be present within voids of masonry and possibly some pre-manufactured surveyed area components that would not be identified during the course of this assessment.

#### 4.1.11 Other

- White Caulking

White caulking was observed to be applied around the sink millwork in Cloak Room 109A.

Three (3) representative samples of white caulking around the sink millwork were collected (Sample Set S03A-C) and analyzed for the determination of asbestos. Analysis of Sample Set S03 found that the material was found not to contain asbestos.

#### 4.2 Lead

Three (3) bulk paint sample was collected for determination of lead content and was submitted to EMSL Canada ('EMSL') for analysis during the assessment. The sample number refers to the Certificate of Analysis Report presented as Appendix II and summarised in Table 3 below.

**Table 3 - Summary of Analysis of Lead-in-Paint Samples**

Sample No.	Locations	Sample Description	Result (%)
LBP1	Room 109	Tan Paint on Drywall Wall	<0.017
LBP2	Room 109A	Tan Paint on Plaster Wall	0.056
<b>LBP3</b>	<b>Room 109</b>	<b>Green Paint on Wall</b>	<b>0.22</b>

No regulations currently exist in Ontario defining the lower limit of lead-containing material. The Ontario Ministry of Labour (MOL) has issued a guideline for lead abatement, entitled Guideline – Lead on Construction Projects (2004) which is considered enforceable. The Guideline does not specify what constitutes a material as "lead-containing". Instead, it outlines procedures based on the concentration of airborne lead encountered during removal, as well as provides procedures and/or specific operations for lead-containing material removal.

However, the Environmental Abatement Council of Canada (EACC) document "Lead Guideline for Construction, Renovation, Maintenance or Repair" classifies paint as either "Low-Level", "Lead-Containing", or "Lead-Based" as outlined in Table 4.

**Table 4 - EACC Classification of Lead Paint**

Concentration of Lead (%)	Definition
0.1 or less	"Low-Level" Lead (Virtually Safe)
Greater than 0.1 but less than 0.5	"Lead-Containing"
0.5 or greater	"Lead-Based"

Based on these criteria and the results of the sample analysis, the green paint finishes sampled on the wood trims are considered to be "Lead-Containing" and the tan painted finishes are considered to be "Low-Level Lead" (virtually safe).

It should be noted that lead may also be present in wiring connectors, electric cable sheathing, solder joints on copper piping, ceramic glazes, lead sheeting, masonry mortar, and as sub-surface layers to the most recent paint layers currently applied, where present at the Site.

#### **4.3 Mercury**

Mercury vapour is present in all fluorescent light tubes. Liquid mercury is also present in thermostatic switches located within the surveyed area.

#### **4.4 Silica**

Free crystalline silica, present as common construction sand, is present in all concrete and masonry products where present in the Select areas surveyed.

#### **4.5 Isocyanates**

Free isocyanate compounds would not be expected to be found in a non-manufacturing facility.

#### **4.6 Vinyl Chloride Monomer**

Vinyl chloride monomer would not be expected to be found in a non-manufacturing facility.

#### **4.7 Benzene**

Benzene would not be expected to be found in a non-manufacturing facility.

#### **4.8 Acrylonitrile**

Acrylonitrile would not be expected to be found in a non-manufacturing facility.

#### **4.9 Coke Oven Emissions**

Coke oven emissions would not be expected to be found in a non-manufacturing facility.

#### **4.10 Arsenic**

Arsenic would not be expected to be found in a non-manufacturing facility.

#### 4.11 Ethylene Oxide

Ethylene oxide would not be expected to be found in a non-manufacturing facility.

#### 4.12 Mould

No visible mould or water-damaged material was observed in the surveyed areas at the time of the assessment.

It is possible that mould growth is present in concealed areas such as wall or ceiling cavities, pipe chases, etc. or in areas not currently assessed by Maple. The client should notify Maple should any water damage or suspect mould growth be discovered.

#### 4.13 Polychlorinated Biphenyls (PCBs)

The fluorescent lamp fixtures observed present in the surveyed areas contained T8 fluorescent light tubes. T8 fixtures have electronic ballast and are considered as not containing PCB.

### 5.0 RECOMMENDATIONS

#### 5.1 Asbestos

No asbestos-containing materials (ACM) identified within the surveyed area at the time of the assessment and therefore no asbestos related recommendations are warranted at this time.

Maple recommends destructive testing of the raised flooring in Classroom 109 to confirm the presence or absence of potential asbestos-containing flooring that maybe concealed.

It is important to note that due to the presence of solid wall and ceiling systems, the assessment was not able to confirm or deny the presence of ACM within wall and ceiling cavities. The presence of concealed ACM should be assumed as well as within rooms that were not accessible during the assessment. It is possible that ACM is present that was not identified in this report.

#### 5.2 Lead

The green paint present on the wood trim is considered to be "Lead-containing". Disturbance of paints that are considered Lead-Containing should be completed using Lead Abatement Procedures as appropriate in accordance with EACC and Ministry of Labour Guidelines and are generally as follows:

- Class 1 Lead Abatement Procedures (removing paint by means of chemical stripper or heat gun, removal of lead sheeting);
- Class 2A Lead Abatement Procedures (removal of lead paint using power tools equipped with HEPA vacuum attachment, removal by scraping or sanding using non-powered hand tools, or manual demolition of plaster finishes);
- Class 3A Lead Abatement Procedures (removal using power tools, welding or torching; and
- Class 3B Lead Abatement Procedures (for abrasive blasting).



Further, prior to disposal it is recommended that materials containing lead should be sampled and analyzed for Metals/Inorganics using the Toxicity Characteristic Leaching Procedure (TCLP) as described under O. Reg. 347. The testing is required to determine waste classification in accordance with Ontario Regulation 347 of R.R.O. 1990 made under the Environmental Protection Act amending Reg. 558/00.

The Tan Paint finishes sampled were found to be “Low-Level Lead” and are considered to be safe when intact.

“Low-Level Lead” paints (0.1% or less) and the mortar finishes are considered virtually safe provided that:

- Airborne lead concentrations are kept below 0.05 mg/m<sup>3</sup>;
- General dust suppression and worker hygiene procedures are utilized; and
- Torching or other activities that create fumes are not completed.

### 5.3 Mercury

Mercury vapour is present in all fluorescent light tubes. All fluorescent light tubes should be handled and disposed of appropriately.

### 5.4 Silica

Proper dust suppression techniques and other safety precautions to control possible generation of silica dust from the demolition of concrete and masonry products present in the building should follow those outlined in the Ministry of Labour Guideline- Silica on Construction Projects, 2004.

## 6.0 LIMITATIONS

Due to the nature of building construction some limitations exist as to the possible thoroughness of the subject investigation. The field observations are considered sufficient in detail and scope to form a reasonable basis for the findings presented in this report. Maple warrants that the findings and conclusions contained herein have been made in accordance with generally accepted evaluation methods in the industry and applicable regulations at the time of the performance of the assessment.

It is possible that conditions may exist which could not be reasonably identified within the scope of the investigation or which were not apparent during the site investigation. Maple believes that the information collected during the investigation period concerning the property is reliable. No other warranties are implied or expressed.

Information provided by Maple is intended for Client use ONLY. Any use by a third party, of reports or documents authored by Maple, or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Maple accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.

The liability of Maple or its staff will be limited to the lesser of the fees paid or actual damages incurred by the Client. Maple will not be responsible for any consequential or indirect damages. Maple will only be liable for damages resulting from negligence of Maple; all claims by the Client shall be deemed relinquished if not made within two years after last date of services provided.

Please contact Maple Environmental Inc. at (905) 257-4408 for inquiries regarding this project.

**MAPLE ENVIRONMENTAL INC.**

Environment, Health and Safety Consultants

**Prepared By:**



**Richards Reboks**  
*Senior Project Technologist*

**Reviewed By:**



**Kyle Prosser**  
*Senior Project Manager*

# **APPENDIX I**

## **LABORATORY ANALYSIS REPORT - ASBESTOS**

# Laboratory Analysis Report

To:

**Richards Reboks**  
Maple Environmental Inc.  
482 South Service Road East, Suite 116  
Oakville, Ontario  
L6J 2X6

**EMC LAB REPORT NUMBER:** A97811  
**Job/Project Name:** TLDSB, King Albert PS  
**Analysis Method:** Polarized Light Microscopy – EPA 600  
**Date Received:** Nov 13/23 **Date Analyzed:** Nov 17/23  
**Analyst:** John Paul Cantillon  
**Reviewed By:** Malgorzata Sybydlo

**Job No:** 21402  
**Number of Samples:** 9  
**Date Reported:** Nov 20/23

Client's Sample ID	Lab Sample No.	Description/Location	Sample Appearance	SAMPLE COMPONENTS (%)			
				Asbestos Fibres		Non-asbestos Fibres	Non-fibrous Material
S01A	A97811-1	Plaster – girls washroom wall	2 Phases: a) White, plaster b) Grey, plaster	ND			100
S01B	A97811-2	Plaster – girls washroom wall	2 Phases: a) White, plaster b) Grey, plaster	ND			100
S01C	A97811-3	Plaster – corridor	2 Phases: a) White, plaster b) Grey, plaster	ND			100
S02A	A97811-4	Drywall joint compound – sink area	White and off white, joint compound	ND			100
S02B	A97811-5	Drywall joint compound – sink area	Off white, joint compound	ND			100
S02C	A97811-6	Drywall joint compound – sink area	Off white, joint compound	ND			100
S03A	A97811-7	Caulking by sink millwork	Off white, caulking	ND			100
S03B	A97811-8	Caulking by sink millwork	Off white, caulking	ND			100
S03C	A97811-9	Caulking by sink millwork	Off white, caulking	ND			100

**Note:**

1. Bulk samples are analyzed using Polarized Light Microscopy (PLM) and dispersion staining techniques. The analytical procedures are in accordance with EPA 600/R-93/116 method.
2. The results are only related to the samples analyzed. **ND** = None Detected (no asbestos fibres were observed), **NA** = Not Analyzed (analysis stopped due to a previous positive result).
3. This report may not be reproduced, except in full without the written approval of EMC Scientific Inc. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.
4. The Ontario Regulatory Threshold for asbestos is 0.5%. The limit of quantification (LOQ) is 0.5%.

## **APPENDIX II**

### **LABORATORY ANALYSIS REPORT – LEAD**

**EMSL Canada Inc.**

2756 Slough Street, Mississauga, ON L4T 1G3

Phone/Fax: (289) 997-4602 / (289) 997-4607

<http://www.EMSL.com>[torontolab@emsl.com](mailto:torontolab@emsl.com)

EMSL Canada Or 552317594

CustomerID: 55MAPL78

CustomerPO: 21402

ProjectID:

Attn: **Richard Reboks**  
**Maple Environmental, Inc.**  
**482 South Service Road East**  
**Suite 116**  
**Oakville, ON L6J 2X6**

Phone: (905) 257-4408  
Fax: (905) 257-8865  
Received: 11/13/2023 02:29 PM  
Collected:

Project: 21402 TLDSB, King Albert, Custod

**Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\***

<i>Client Sample</i>	<i>Description</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
LBP1 552317594-0001	Site: Tan Paint on Drywall wall		11/14/2023	0.2561 g	0.0080 % wt	0.017 % wt
LBP2 552317594-0002	Site: Tan paint on plaster wall		11/14/2023	0.2521 g	0.0080 % wt	0.056 % wt
LBP3 552317594-0003	Site: Green paint on Door Frame		11/14/2023	0.2512 g	0.0080 % wt	0.22 % wt

Rowena Fanto, Lead Supervisor  
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

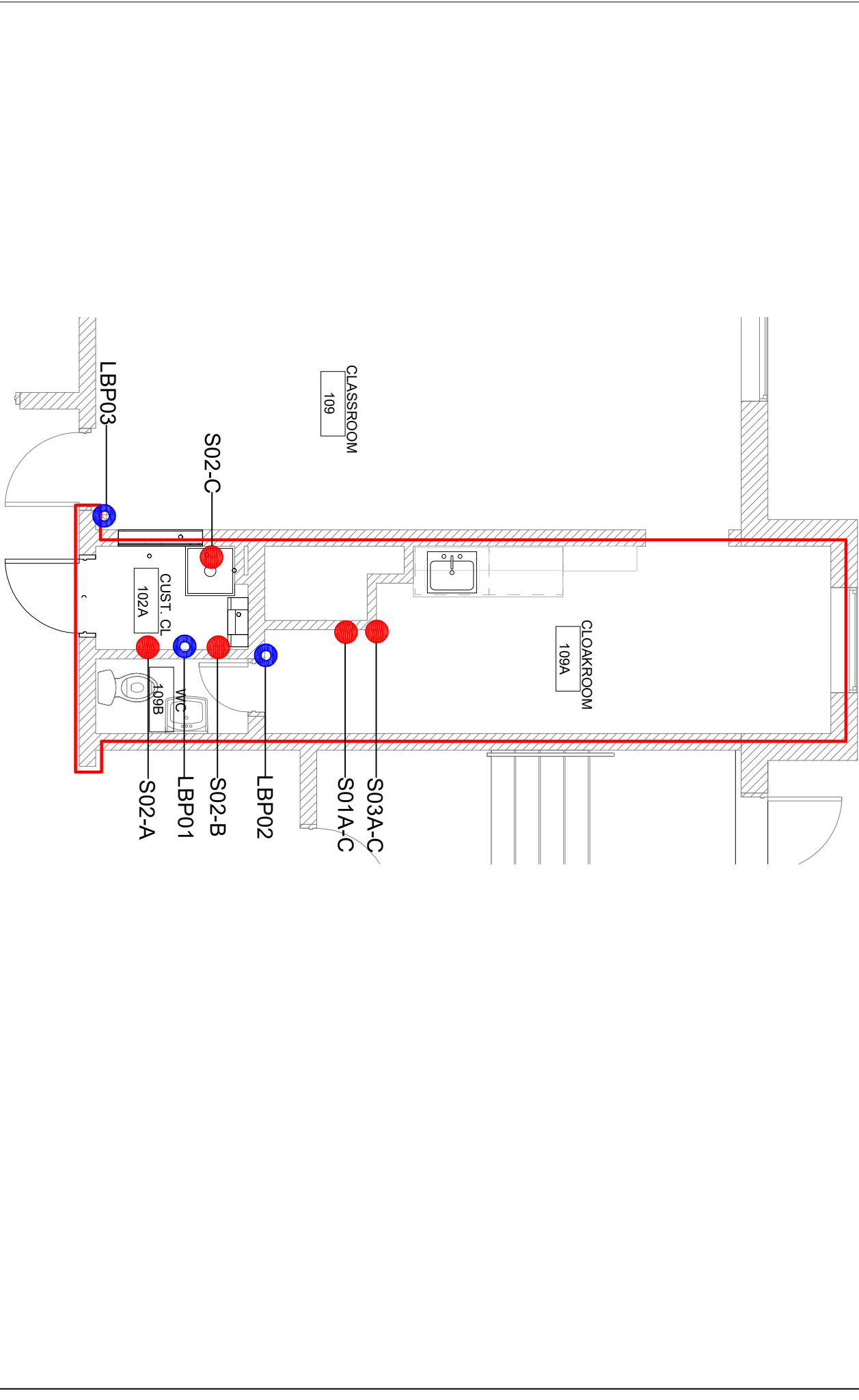
\* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.





Samples analyzed by EMSL Canada Inc. Mississauga, ON AIHA LAP, LLC-ELLAP Accredited #196142

Initial report from 11/17/2023 16:26:14

# **APPENDIX III**

## DRAWINGS



 <b>MAPLE ENVIRONMENTAL INC.</b> ENVIRONMENT, HEALTH & SAFETY CONSULTANTS		482 South Service Rd. E. - Suite 116 Oakville - Ontario - L6L 2Y6 Tel: (905) 237 4406 - Fax: (905) 237 8885 www.MapleEnvironmental.com	
PROJECT NO.: <b>21402</b>		DRAWN BY: <b>T. Ogawa</b> CHECKED BY: <b>R. Reboks</b>	
SAMPLE LOCATIONS		LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ASBESTOS BULK SAMPLE: S#		SURVEYED AREA
	LEAD BULK SAMPLE: LBP#		
Designated Substance Survey Trillium Lakelands District School Board King Albert Public School First Floor Plan		SCALE NTS SHEET DS-01	
		DATE: December 1, 2023	