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June 21, 2024

Premier Project Number: 624024.CE OILC / Colliers Project Number: 1105014-274159 Sent via e-mail: Assad.Kazeely@Colliersprojectleaders.com

Colliers Project Leaders Inc. 485 Pinebush Road, Suite 202 Cambridge, Ontario N1T 0A6

Attention: Assad Kazeely Project Manager

RE: 1105014-274159 – DESIGNATED SUBSTANCE SURVEY CAYUGA DETECHMENT PARKING LOT PAVING 72 HIGHWAY 54, CAYUGA, ONTARIO

1.0 INTRODUCTION

Premier Environmental Services Inc. (Premier) was retained by Colliers Project Leaders Inc. (Colliers) on behalf of Ontario Infrastructure and Lands Corporation (OILC) to conduct a Designated Substance Survey (DSS) of project-specific work areas at 72 Highway 54, Cayuga, Ontario (the Site). We understand that this assessment work is required for regulatory compliance purposes as part of the Cayuga OPP Detachment Parking Lot Paving project (the Project) at the Site.

A site plan depicting the location of samples collected is provided as Figure 1 in Attachment A. Photographs taken at the Site are presented in Attachment B.

The planned Project includes removal and replacement of the asphalt present in the north parking lot, laneway and the western portion of the south parking lot.

The Survey area included a review of all accessible areas detailed above.

Premier conducted the DSS at the Site on May 31, 2024. The DSS work was conducted in accordance with the DSS requirements outlined under Ontario Regulation 490/09, Designated Substances of the Ontario Occupational Health and Safety Act (OHSA) and Ontario Regulation 278/05, Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations (O. Reg. 278/05).

The following substances have been "designated" under O. Reg. 490/09: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica, and vinyl chloride. Four (4) of these eleven (11) substances may be encountered in structures such as those found on the Site and include:

- Asbestos in building materials;
- Lead in surface coatings, batteries, and in solder used in joints of copper pipe;
- Mercury in thermometers, thermostats, pressure gauges, electrical switches and relays; and
- Silica in brick, ceramic, concrete, masonry, and stone.

Premier also inspected accessible areas of the on-Site buildings for visible evidence of the following hazardous materials:

- Benzene;
- Polychlorinated biphenyls (PCBs);
- Ozone-depleting substances (ODS);
- Urea formaldehyde foam insulation (UFFI);
- Mould impacted building materials;
- Bulk chemical storage; and
- Radioactive materials.

PCBs are regulated under federal regulations of the Canadian Environmental Protection Act. These are commonly found in electrical equipment such as transformers and light ballasts.

Under Section 30 (1) of the OHSA the owner shall determine whether any designated substances are present at the project site. If present, a list of these substances must be compiled and provided to all bidders at the tendering stage prior to demolishing or renovating a building. A DSS identifies the designated substances present, their locations, concentrations, and approximate quantities. This information allows contractors involved in demolition or renovation activities to take the appropriate steps in controlling the exposure of workers and the general public to the designated substances that are present.

244 Montrose Street North, Upper 1 Cambridge, Ontario N3H 2H7 During the DSS, Premier staff collected representative samples of potential asbestoscontaining materials (ACMs) and lead surface coatings for laboratory analysis. Premier also made observations of any potential designated and/or hazardous substances, including mercury, silica, benzene, PCBs, ODS, UFFI, mould impacted building materials, bulk chemical storage, and radioactive materials for the purpose of identifying additional substances which may be considered hazardous.

2.0 SITE REVIEW

At the request of Colliers, Premier completed a visual review for designated substances and laboratory testing for suspect asbestos and lead at the Site. Mr. Anthony Gamoyda of Premier visited the Survey area on May 31, 2024.

2.1 Site Description

The on-Site building is a single-storey concrete structure with an exterior brick facia which was constructed in 1991. The Site operates as the local Ontario Provincial Police detachment.

The survey area comprises of the north parking lot, laneway and the western portion of the south parking lot is provided as Figure 1 in Attachment A. Photographs taken at the Site are presented in Attachment B.

2.2 Previous Reports

No previous report were provided to Premier for review.

3.0 ASBESTOS

Asbestos use, maintenance, and removal within buildings is regulated under O. Reg. 278/05 of the *Occupational Health and Safety Act* which outlines requirements relating to the definition of asbestos, air quality, asbestos bulk sampling, asbestos management, and asbestos removal.

Minimum bulk sample requirements are specified in Table 1 of O. Reg. 278/05. As per O. Reg. 278/05, the definition of an ACM is a material containing 0.5% or more of asbestos by dry weight. The regulation also sets out requirements for asbestos abatement.

Bulk samples of potential ACMs were collected by Premier from within the Survey area. All bulk sample analysis of potential ACMs was performed by Paracel Laboratory Scientific Inc. (Paracel) of Mississauga, Ontario, a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory. As per the requirements of O. Reg. 278/05, a specific number of samples (ranging from 1 to 7 depending on quantity and type of material) are required to confirm the absence of asbestos under Polarized Light Microscopy (PLM) analysis.

Only one positive result (i.e., confirming the presence of asbestos) is required to classify a material as asbestos-containing. However, confirmation of non-asbestos content requires analysis of all samples in each homogenous set. Therefore, Premier's sampling strategy involved the collection of a sufficient number of bulk samples of each homogeneous material to meet regulatory requirements, followed by instruction to Paracel to cease analysis when one (1) sample within a series has already proven positive for asbestos. Sampling required a

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small amount of material to be removed either from a damaged section of suspect material or cut from intact material and then repaired by sealing with tape to prevent fiber release. The collected samples were placed in plastic bags and sealed for shipment to Paracel. A formal chain of custody procedure was maintained between Premier and Paracel during sample transport. Samples were then analyzed by Paracel following the PLM analytical procedures prescribed by O. Reg. 278/05.

When conducting a DSS, certain materials are considered to be asbestos without verification by bulk sampling. This assumption is undertaken for one or more of the following reasons:

- The material is considered to be homogeneous (same texture, age and colour) as a material that was previously sampled, or the material is visually identifiable as asbestos;
- The material is inaccessible and generally known or suspected to be present;
- There is an inherent danger in sampling the material (e.g., energized equipment);
- Sampling the material would cause significant damage to a mechanical component (e.g., Transite piping);
- Sampling the material would cause significant damage to a structural component or breach a water barrier; and
- Time constraints or access restrictions (i.e., interpolating the presence of a material to inaccessible units/spaces in a building).

Therefore, for the purpose of this Survey, the following materials are assumed to contain asbestos, if encountered, and are not considered to be within the Project area:

- Fire stop; and
- High voltage wiring.

3.1 Asbestos Laboratory Results

Materials suspected of containing asbestos were delineated in each respective homogenous area for sampling. A total of ten (10) bulk samples of potential ACMs were collected for analysis. Bulk samples of potential ACMs were submitted to for PLM analysis on May 31, 2024. Upon completion of the analyses, EMC Scientific provided Premier with the laboratory results. Table 1 in Attachment C presents the results of the laboratory bulk asbestos analysis, and a copy of the laboratory certificate of analysis is provided in Attachment D.

A Site plan showing the bulk sampling locations are presented as Figure 1 in Attachment A.

The following provides a brief summary of all suspect ACMs identified, examined, and sampled on the Site:

- Black asphalt (ASP101) from the older asphalt covering the majority of the parking lot; and
- Black asphalt (ASP102) from the newer section of asphalt on the laneway.

Based on a review of the asbestos analysis results, asbestos was not detected by the laboratory in any of the suspect materials with the following exceptions.

4.0 LEAD

The Surface Coating Materials Regulations (SOR/2005-109) under the Federal Hazardous Products Act limits the amount of lead in surface coating materials to 0.009% by dry weight. O. Reg. 490/09 provides a time weighted average occupational exposure limit of 0.05 mg/m³ for airborne lead. This regulation also sets out the requirements for respiratory protection and a lead control program.

The Ministry of Labour (MOL) Guideline for *Lead on Construction Projects* (April 2011) and the Environmental Abatement Council of Ontario (EACO) *Lead Guideline for Construction, Renovation, Maintenance or Repair* (October 2014) provide additional guidance for controlling exposure to lead. These guidance documents should be referenced by employers and construction managers prior to initiating any work involving lead surface coatings.

The EACO Guidance document defines lead-containing paints and surface coatings as those containing greater than 0.1% (or 1,000 ppm) lead. Lead-based paints and surface coatings are those that contain greater than 0.5% (or 5,000 ppm) lead.

A lead content of 0.1 % (or 1,000 ppm) or less is considered a de minimis (virtually safe) level of lead in paint or surface coatings, provided that aggressive disturbance or heating does not occur. Construction operations involving lead-based paints or surface coatings should always be completed in accordance with the procedures listed in the EACO guidance document that corresponds to the appropriate classification of work operation.

Premier did not identify any suspect lead-based paint in the Survey area.

Lead is likely present in the emergency lighting batteries and may be present in the solder used in joints of the copper pipes used for water services within the on-Site buildings. It is not anticipated that these materials would be affected by the proposed project.

5.0 BENZENE

No potential sources of benzene were observed during a visual review of the Survey area.



6.0 MERCURY

The light bulbs located throughout the on-Site buildings are considered to be mercurycontaining until proven otherwise. Mercury vapour is still present in many light bulbs manufactured today. If the Project work requires that these materials be disturbed, proper removal and disposal methods must be used, which include removing the bulbs intact and transporting to a recycling facility that accepts mercury bulbs. Best Management Practices for this may be found in the Code of Practice for the Environmentally Sound Management of Endof-life Lamps Containing Mercury, published by Environment and Climate Change Canada in February 2017.

No other potential sources of mercury were observed within the Survey area.

7.0 SILICA

Asphalt, brick, ceramic tiles, concrete, concrete block, and mortar are assumed to contain silica, and may release respirable crystalline silica if disturbed under certain conditions. No other assumed or potential sources of silica were observed during the visual review of the Survey area.

8.0 PCBs

Premier did not observe any potential PCB-containing transformers within the Survey area during the visual review of the on-Site building. Typically, fluorescent light ballasts that are energized are not dismantled due to health and safety precautions. Therefore, all light ballasts labels must be checked for a non-PCB label prior to disposal. If the light ballast is not labeled as non-PCB, it is considered to be PCB-containing and must be disposed of as such.

9.0 MOULD

No evidence of mould growth was observed within the Survey area.

10.0 OZONE DEPLETING SUBSTANCES (ODS)

No sources of ODS were observed in the on-Site work area.

11.0 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Urea Formaldehyde Foam Insulation (UFFI) is composed of a mixture of urea-formaldehyde resin, a foaming agent, and compressed air. It was used by injecting foam in exterior wood frame and masonry walls in order to insulate difficult to reach cavities. It was primarily in use in residential construction from 1975 to 1978, though it was in-use in commercial and industrial developments to a lesser degree. During the mixing and curing of the insulation, as well as during its eventual deterioration, quantities of formaldehyde gas would be released into the air causing accumulation within the building. UFFI was banned in Canada in December 1980 as a precautionary measure to evaluate health concerns due to the off-gassing of the formaldehyde gas. Recent studies performed in structures containing UFFI reported non-significant levels of interior formaldehyde gas.

UFFI is not suspected to be present within the Survey area.

12.0 BULK CHEMICAL STORAGE

Premier did not observe any bulk chemical storage during the visual review of the Survey area.

13.0 RADIOACTIVE MATERIALS

No potential sources of radioactive materials were observed within the survey area.

14.0 SUMMARY

Based on the findings of this DSS, the following may be concluded:

- Laboratory analysis of the older and newer black asphalt collected from the parking lot indicate that these materials are not asbestos containing materials (ACMs);
- No other potential ACMs were identified based upon the sampling completed, or visual review of materials to be disturbed by the planned work. Suspect materials were sampled in accordance with the provincial requirements for asbestos as prescribed under O. Reg. 278/05;
- No lead based surface coatings or other lead containing materials are expected to be disturbed as part of the project; and
- Asphalt, brick, ceramic tiles, concrete, concrete block, and mortar used in the construction of the on-Site buildings are assumed to contain silica. Asphalt pavement milling machines use a rotating cutter drum to remove deteriorated road surfaces for recycling. The removal of this asphalt surface has the potential to release respirable crystalline silica.

15.0 **RECOMMENDATIONS**

Based on the results of this DSS, the following measures are recommended at the Site:

- It is anticipated that this Project will involve the removal of asphalt, which is presumed to be a silica-containing material. Dust generating pavement removal activities should be controlled in accordance with the MOL guideline Silica on Construction Projects (April 2011); and
- Monitoring during any abatement activities, demolition and/or renovation work should be conducted by a qualified engineering firm.

16.0 CLOSURE

The use of this report is subject to the Statement of Limitations presented in Attachment E of this report. The reader's attention is specifically drawn to the Statement of Limitations as it is considered essential that they be followed for the proper use and interpretation of this report. If you have any questions regarding this report, please contact the undersigned.

Sincerely,

Premier Environmental Services Inc.

Anthony Gamovda, B.Sc. Environmental Scientist

P. Geo Senior Project Manager

Appendices (5):

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Attachment A – Figures Attachment B – Photographic Log Attachment C – Tables Attachment D – Certificates of Analysis Attachment E – Statement of Limitations

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P: 519-653-7140 F: 519-653-8907 ATTACHMENT A – Figures



ATTACHMENT B – Photographic Log



PHOTOGRAPHIC LOG

Client Name
Colliers Project Leaders

Site Location

72 Highway 54, Cayuga, ON

Project No.

624024.CE

Photo No.	Date:	
1	31-June-24	-
Direction Ph		
Northeast	2	
Description:		
A view of the building, lane sample locati	1	



Photo No.	Date: 31-June-24	
Direction Ph	oto Taken:	
Description: A view of the north		
parking lot		





PHOTOGRAPHIC LOG

Client Name					
Colliers	Project	Leaders			

Site Location

72 Highway 54, Cayuga, ON

Project No.

624024.CE

Photo No.	Date:	
3	31-June-24	
Direction Photo Taken:		
Southeast		
Description:		
A view of the north parking lot and laneway.		









PHOTOGRAPHIC LOG

Client Name		Site Location	Project No.
Colliers Project Leaders		72 Highway 54, Cayuga, ON	624024.CE
Photo No. 5	Date: 31-June-24		and the second
Direction Ph North	oto Taken:		
Description:			
A view of the parking lot.	south		

ATTACHMENT C – Tables

TABLE 1 BULK SAMPLE DATA SHEET FOR ASBESTOS ANALYSIS 72 HIGHWAY 54, CAYUGA, ON

Sample ID Number	Material Description	Location	Analytical Results	Asbestos Finding	Asbestos Type
ASP101-a	Older black asphalt	North parking lot	ND	N/A	N/A
ASP101-b	Older black asphalt	North parking lot	ND	N/A	N/A
ASP101-c	Older black asphalt	Laneway	ND	N/A	N/A
ASP101-d	Older black asphalt	Laneway	ND	N/A	N/A
ASP101-e	Older black asphalt	South parking lot	ND	N/A	N/A
ASP101-f	Older black asphalt	South parking lot	ND	N/A	N/A
ASP101-g	Older black asphalt	South parking lot	ND	N/A	N/A
ASP102-a	Newer black asphalt	Laneway patch	ND	N/A	N/A
ASP102-b	Newer black asphalt	Laneway patch	ND	N/A	N/A
ASP102-c	Newer black asphalt	Laneway patch	ND	N/A	N/A

NOTES:

<u>ND</u> – None detected (no asbestos fibres were observed). Once a positive test result is found, the other samples in the homogenous set are not analyzed. If no positive asbestos test result is found analysis continues in the homogenous set until either a positive result is found or all samples are analyzed.

 $\underline{N/A}$ – Not applicable as analysis for asbestos indicated non-detectable results or sample was not analyzed and considered positive for asbestos since homogenous material tested positive.



ATTACHMENT D – Certificate of Analysis



Laboratory Analysis Report

Reviewed By: Malgorzata Sybydle							
Lab				SAMPLE COMPONENTS (%)			
Client's Sample ID	Sample No.	Description/Location	Sample Appearance	Asbestos Fibres	Non- asbestos Fibres	Non- fibrous Material	
ASP101A	A104929-1	Asphalt, Black, North Lot	Black, tar	ND		100	
ASP101B	A104929-2	Asphalt, Black, North Lot	Black, tar	ND		100	
ASP101C	A104929-3	Asphalt, Black, South driveway	Black, tar	ND		100	
ASP101D	A104929-4	Asphalt, Black, South lot	Black, tar	ND		100	
ASP101E	A104929-5	Asphalt, Black, South lot	Black, tar	ND		100	
ASP101F	A104929-6	Asphalt, Black, South lot	Black, tar	ND		100	
ASP101G	A104929-7	Asphalt, Black, South lot	Black, tar	ND		100	
ASP102A	A104929-8	Black Asphalt Patch, South driveway	Black, tar	ND		100	
ASP102B	A104929-9	Black Asphalt Patch, South driveway	Black, tar	ND		100	
ASP102C	A104929-10	Black Asphalt Patch, South driveway	Black, tar	ND		100	

To:

Anthony Gamoyda Premier Environmental Services Inc. 244 Montrose Street North, Unit 1 Upper Cambridge, Ontario N3H 2H7

EMC LAB REPORT NUMBER: A104929

Date Received: Jun 3/24

Analyst: Elizabeth Mierzynski

Job/Project Name: Analysis Method: Polarized Light Microscopy – EPA 600

Date Analyzed: Jun 10/24

Job No: 624024.CE Number of Samples: 10 Date Reported: Jun 11/24

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%.

ATTACHMENT E – Statement of Limitations

STATEMENT OF LIMITATIONS

The information given herein is specifically for this project and Colliers Project Leaders Inc. (the Client) only and for the scope of work described herein. It may not be sufficient for other uses. Premier Environmental Services Inc. (Premier) does not accept responsibility for use by third parties.

The data, conclusions, and any recommendations which are present in this report, and the quality thereof, are based on a scope authorized by the Client. Note however, that no scope of work, no matter how exhaustive can, identify all hazardous materials or all conditions above and below ground. For example, conditions between sample locations may differ from those encountered in the investigation and observed or measured conditions may change with time. This report therefore cannot warranty that all conditions on or off the Site are presented by those identified at specific locations.

Any recommendations or conclusions provided that are based on conditions or assumptions reported herein will inherently include any uncertainty associated with those conditions or assumptions. In fact, many aspects involving professional judgment such as remediation criteria contain a degree of uncertainty which cannot be eliminated. This uncertainty should be managed by periodic review and refinement as additional information becomes available.

Note also that standards, guidelines, and practice related to environmental investigations may change with time. Those which are applied at the time of this investigation may be obsolete or unacceptable at a later date.

Any comments given in this report on potential remediation problems and possible methods are intended only for the guidance of the Client. The scope of work may not be sufficient to determine all of the factors that may affect construction or clean-up methods and costs. For example, should materials suspected of containing asbestos be identified within previously inaccessible areas (e.g., beneath a floor slab or behind a concrete wall), additional asbestos sampling and analyses may be required in order to be compliant with Ontario Regulation 278/05. Contractors bidding on this project or undertaking abatement or remediation should, therefore, make their own interpretation of the factual information presented and draw their own conclusions as to how the conditions may affect their work.

Any results from an analytical laboratory, title searcher, or other subcontractor reported herein have been carried out by others, and Premier cannot warranty their accuracy. Similarly, Premier cannot warranty the accuracy of information supplied by the Client or any Site representatives.