ENVIRO-CORE INC. **P.O. BOX 57058**
HAMILTON, ONTARIO L8P 4W9

DESIGNATED SUBSTANCES SURVEY

Prepared for:

First Real Properties Limited
100 King St. W
Hamilton, ON
L8P 1A2

Re:

6th Floor
100 King St W.
Hamilton, Ontario

April 29th, 2024

DESIGNATED SUBSTANCE CONTROL - CONTRACTING - TESTING & PLANNING
TEL: (905) 527-1892 - FAX: (905) 527 9738

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1.0 INTRODUCTION

Enviro-Core Inc. was retained by Second Real Properties to conduct a designated substances survey of Floor 6, 110 King St. W. Hamilton, Ontario.

Under the Ontario *Occupational Health & Safety Act* (OHSA), an owner must determine whether any Designated Substances are present at a site and is required to prepare a list of all Designated Substances that are present. These substances may require special handling procedures. The current OHSA regulation lists the following eleven (11) substances as Designated Substances in the workplace: acrynlonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica and vinyl chloride.

Based on the estimated construction date and the reported use of the building, the survey undertaken by Enviro-Core Inc. targeted the following Designated Substances: asbestos, lead, mercury, and silica which, in our experience, are most likely to be present on-site.

The following report explains our survey methodology and summarizes the hazardous building materials found at the Site.

2.0 SITE BACKGROUND

Designated area consists of the half vacant and half occupied 6th floor.

3.0 SURVEY METHODOLOGY

During this investigation the surveyor inspected the building for construction materials suspected of containing designated substances.

Note: Repetitive testing was generally not performed. Items, which were visually similar to others tested, were considered to be of like material and were not sampled again. However, due to the variable nature of some products, several samples may have been collected of some materials.

The inaccessible spaces within the building were not inspected. This includes shafts, chases and bulkheads. Similarly, doors, motors and other equipment were not disassembled to determine composition.

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3.1 Asbestos

Materials previously assumed to contain asbestos were tested and found to be positive as per O. Reg. 278 05.

3.2 Lead-Based Paint

Lead-containing paints are present on metal doors, frames and trim as well as on equipment and apparatus in equipment closets.

3.3 Other Designated Substances

All other designated substances were identified based on visual assessment and historical usage.

4.0 REGULATORY REQUIREMENTS

" Designated Substance" as defined by the Ontario *Occupational Health & Safety Act* (OHSA) means "a biological, chemical or physical agent or combination thereof prescribed as a Designated Substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled." Under Section 30 of the OHSA an owner is required to determine whether any Designated Substances are present at the project site before beginning construction. If any portion of the project is tendered, the person issuing the tenders is required to list the Designated Substances present at the project site. The constructor is then required to ensure that every contractor and sub-contractor receives a copy of this list.

The list of Designated Substances is summarized in the following table:

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DESIGNATED SUBSTANCES

Designated Substance Regulation	(O. Reg. 490/09)	(O. Reg. 278/05)
Acrylonitrile		
Arsenic		
Asbestos		
Benzene		
Coke Oven Emissions		
Isocyanates		
Lead		
Mercury		
Silica		
Vinyl Chloride		

The Ministry of Labour (MOL) has issued a regulation (Ontario Regulation 278/05) with respect to the disturbance of asbestos on construction projects and has drafted guidelines for control of lead and silica exposures on construction projects.

Ontario Regulation 278/05 classifies all disturbance of asbestos as Type 1, Type 2 or Type 3, each of which is associated with defined work practices. All asbestos material waste is subject to special handling and disposal practices, and must be removed prior to partial or full demolition. Removal of any quantity of asbestos of more than $1m^2$ requires notification of the MOL. Disposal of asbestos waste is subject to waste management regulations under Ontario Regulation 347/90 as amended to Ontario Regulation 102/07.

The MOL guideline for the control of lead exposures during the removal of lead on construction projects does not include criteria for categorizing lead paint. The Ontario Ministry of Labour (MOL) does not have a standard to state what percentage of lead a material must have to be considered lead containing. However, the designated substance regulation (DSR) for lead, Regulation 843, specifies occupational exposure limits (OELs) for lead and, where necessary, requires implementation of a control program to ensure compliance with these OELs.

The time-weighted average (TWA) OEL for lead (i.e., all lead except tetraethyl lead) is: 0.05 milligrams per cubic meter (mg/m3) of air. However, under Subsection 3(3) of the Regulation, construction projects are excluded from the OELs and most of the other requirements of the Regulation. This exclusion should not be interpreted as meaning nothing is to be done for construction workers who are exposed to lead.

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The OELs establish an Ontario standard for worker protection for lead. Procedures that provide an equivalent level of protection should, therefore, be implemented on construction projects where exposure to lead is a hazard. Ensuring such procedures are in place would, in the words of clause 25(2)(h) of the *Occupational Health and Safety Act* (OHSA), be "taking reasonable precautions to protect the health and safety of workers".

5.0 RESULTS

5.1 Asbestos-Containing Materials

Floor	
6	Asbestos containing fire proofing spray is present on overspray on equipment & electrical apparatus, HVAC and plumbing. Asbestos containing fire proofing is also present on columns with overspray on and behind perimeter rads. Asbestos transite rainwater leaders are present adjacent washrooms and fire hose cabinets in core area. Asbestos containing drywall compound is present throughout. Asbestos containing stairwell doors are also present. Asbestos containing Parging around induction unit slab penetration in 1 location behind perimeter rads. Asbestos containing materials have been identified in Paracel Laboratories Report Order #2517249.

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Sample Code	Sample Numbers	Location	Material Description	Asbestos Content (%)
Flooring Materials				
VFT-1	1-3	Kitchenette & Server Room	Cream/Black 12”X12” VFT and Mastic	None Detected
VFT-2	1-3	Reception, Board Room & Kitchenette	Beige with Blue Flecks 12”X12” VFT and Mastic	None Detected
Wall Materials				
D	1-7	Entire Space	Drywall Joint Compound, Off-White	3% Chrysotile
PL	1-3	Center Core	Plaster White	None Detected
Ceiling Materials				
CT	1-3	Men and Women Washrooms	12”X12” Patterned Lay in Ceiling Tile,	None Detected
D	1-7	Entire Space	Drywall Joint Compound, White	3% Chrysotile
Thermal Materials				
F	1-3	Overspray in Closets, Perimeter Rads, Columns	Grey Spray on Fireproofing	5-20% Chrysotile
-	-	Entire Space, Deck and Beams	Blue Spray on Fireproofing	Not Containing
P	1	Induction unit Dependable IT	Grey Parging Cement	40% Chrysotile
Manufactured Materials				
		Various Locations Throughout Space	Steel Stairwell Door, And Wooden Bathroom Doors - Various Colors	Visually Confirmed
		Hidden Behind Drywall, Near Firehose Cabinets	Grey Pipe, Textured Finish.	Visually Confirmed

Continued...

5.2 Lead

Lead may also be present in solder joints or bell joints in plumbing within the floor, as well as on painted metal doors, trim frames and on equipment and apparatus painted in equipment closets.

5.3 Mercury

Mercury is present in fluorescent light tubes located throughout the floor.

5.4 Silica

Common construction sand contains free crystalline silica and is present in concrete products, mortar, brick etc. These construction products are typically found throughout building structures.

5.5 Acrylonitrile, Benzene, Isocyanates, Arsenic, Ethylene Oxide, Vinyl Chloride and Coke Oven Emissions

Evidence suggesting the presence of acrylonitrile, benzene, isocyanates, arsenic, ethylene oxide, vinyl chloride monomer or coke oven emissions was not observed at the site.

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6.0 RECOMMENDATIONS

The following recommendations are made with respect to the hazardous building material and Designated Substances noted at the site:

6.1 Asbestos

Any minor tasks required must be performed under Type II conditions.

ACM in affected areas should be removed utilizing Type III procedures prior to construction or renovations.

All work on HVAC should be done utilizing Type III procedures.

6.2 Lead

Lead is assumed to be present in the structural primer paint applied to structural steel in the building, as well as locations noted previously.

The lead-containing materials in the building will not generate airborne lead dust in the absence of disturbance. However, significant lead dust levels can result when uncontrolled work procedures are used on lead-based materials. The control of dust levels during the demolition of the buildings can be accomplished through proper work practices such as wetting the surface of the materials to reduce overall dust levels and providing workers with washing facilities and proper respiratory protection.

The procedures outlined in the MOL document 'Guideline - Lead on Construction Projects' (2004) should provide an adequate standard for the handling or disturbance of the material.

The disposal of construction waste containing lead is controlled under Ontario Regulation 347, as amended by O. Reg. 102/07, and may be subject to Leachate Criteria (Schedule 4) of this regulation.

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6.3 Mercury

The presence of mercury in fluorescent light tubes poses minimal risk to occupants or workers provided the equipment is handled properly and the mercury is not allowed to escape. In the event of future renovations, light tubes and thermostat tubes should be removed intact to prevent the mercury vapour from escaping.

It is good management practice to take precautions to prevent mercury vapours from becoming airborne during building demolition. Exposure to airborne mercury is regulated under R.R.O. 1990, Reg. 844 amended by O. Reg. 110/04, Regulation Respecting Mercury - made under the *Occupational Health and Safety Act.* The current TWAEV for mercury vapour is 0.025 mg/m3 (except alkyl compounds).

Mercury waste must be handled and disposed of according to Ontario Regulation 347, as amended by O. Reg. 102/07, and may be subject to Leachate Criteria (Schedule 4) of this regulation.

6.4 Silica

Disturbance of materials containing silica will occur during demolition of walls and ceilings, saw cutting floor slabs and removal of lay-in acoustic ceiling tiles containing silica and is regulated under Ontario Regulation 845/90, amended by O. Reg. 111/04. The current TWAEV for amorphous fused silica is 0.1 mg/m3 and is 0.05 mg/m3 for crystalline silica (quartz). This can be accomplished through proper work practices such as wetting the surface of the material to reduce overall dust levels and providing workers with washing facilities and proper respiratory protection.

The procedures outlined in the MOL document 'Guideline - Silica on Construction Projects' (2004) should provide an adequate standard for the handling or disturbance of the material.

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7.0 LIMITATIONS AND WARRANTY

Enviro-Core Inc. has prepared this report for the exclusive use of the Client in evaluating the Site at the time of Enviro-Core's assessment. Enviro-Core will not be responsible for the use of this report by any third party, or reliance on or any decision to be made based on it without the prior written consent of Enviro-Core. Enviro-Core accepts no responsibility for damages, if any, by any third party because of decisions or actions based of this report.

The findings and conclusions documented in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by qualified professionals currently practicing in this area of environmental assessment. No other warranty, expressed or implied, is made.

The findings contained in this report are based upon conditions as they were observed at the time of investigation. No assurance is made regarding changes in conditions subsequent to the time of investigation.

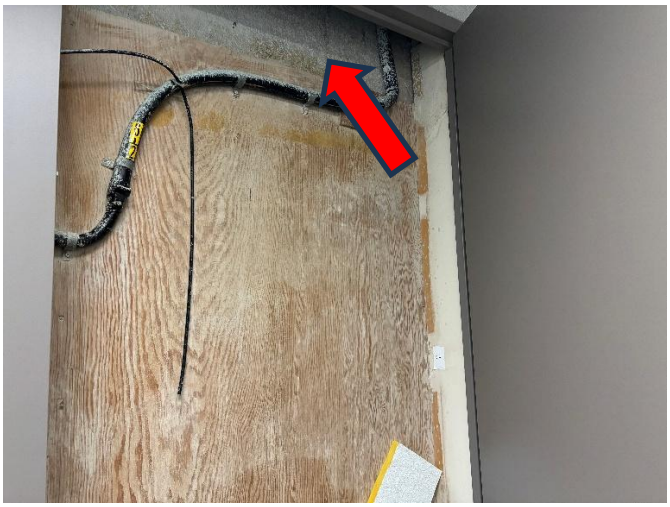
If new information is developed in the future work, Enviro-Core should be contacted to re-evaluate the conclusions of this report and to provide amendments as required.

Respectfully submitted,

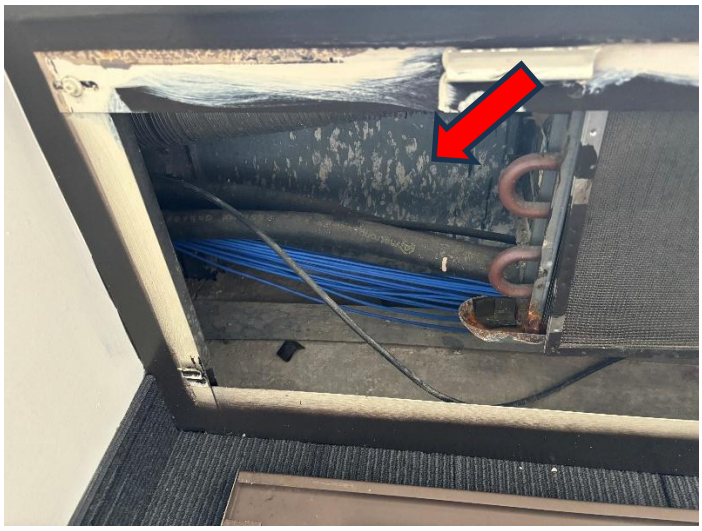
Thomas McGowan CET CSSE
Canadian Society of Safety Engineering

Appendix A
Photo Log of Asbestos Containing Materials

Designated Substance Survey
First Real Properties Limited
100 King St. W. Hamilton – 6Th Floor



Fireproofing	
Sample #s	FP 1-3
ACM Description	Grey Sprayed on Fireproofing
Asbestos Content	5 -20% Chrysotile
Locations	Overspray in Closets,
Map Code	



Fireproofing	
Sample #s	FP 1-3
ACM Description	Grey Sprayed on Fireproofing
Asbestos Content	5 - 20% Chrysotile
Picture Location	Overspray Perimeter Rads and Columns
Map Code	

Continued….

Drywall	
Sample #s	D 1-7
ACM Description	Drywall Joint Compound, Off- White
Asbestos Content	3% Chrysotile
Picture Location	Elevator Lobby
Map Code	

Drywall	
Sample #s	D 1-7
ACM Description	Drywall Joint Compound, Off - White
Asbestos Content	3% Chrysotile
Picture Location	Johnson Controls Closet
Map Code	

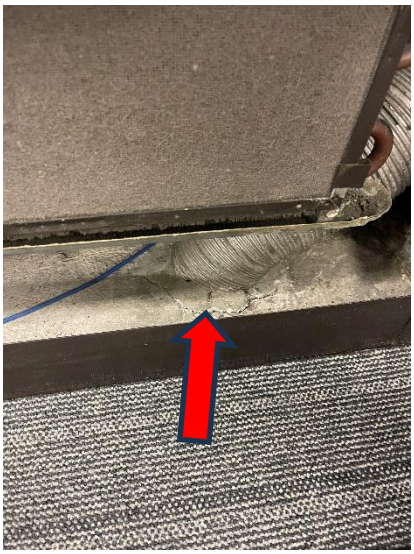
Continued….

Drywall	
Sample #s	D 1-7
ACM Description	Drywall Joint Compound, Off White
Asbestos Content	3% Chrysotile
Picture Location	Hallway
Map Code	

Bathroom Doors	
Sample #s	-
ACM Description	Bathroom Door with Asbestos within
Asbestos Content	Visually Confirmed
Picture Location	Washroom View from Hallway
Map Code	

Continued….

Stairwell Doors	
Sample #s	-
ACM Description	Stairwell Door(s) With Asbestos within
Asbestos Content	Visually Confirmed
Picture Location	South Stairwwell
Map Code	



Parging	
Sample #s	P-1
ACM Description	Induction unit dependable IT
Asbestos Content	Visually Confirmed
Picture Location	South Stairwell Door view from Office Space
Map Code	