

May 11th, 2018

CM3 File No. TLW-1928

Ms. Marilyn Steinburg
Property Owner – 22 Hawthorne Avenue
1425 Doctor Penfield Avenue
Montreal, Quebec H3G 2V1

Mr. David Cutler
Victor Ages Vallance LLP
112 Lisgar Street
Ottawa, Ontario K1Y 0N1

**Project Specific Designated Substance Survey
22 Hawthorne Avenue
Ottawa, Ontario**

Summary

CM3 Environmental (CM3) was commissioned by David Cutler of Victor Ages Vallance LLP on behalf of Marilyn Steinburg to conduct a Project Specific Designated Substance Survey (DSS) of the residence located at 22 Hawthorne Avenue in Ottawa, Ontario (Site). Specifically, CM3 obtained bulk building material samples of suspected asbestos-containing materials (ACMs) throughout the house. The work was completed to satisfy the requirements of Section 30 Ontario Occupational Health and Safety Act (OSHA) and Ontario Regulation 278/05 “Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations” (O.Reg. 278/05) prior to the planned renovations. The report must be referenced in its entirety when extracting data or results of the assessment.



Joel Marcellus of CM3 completed the site investigation and sampling on April 30th, 2018. Based on the findings of the visual inspection, suspect materials were documented, collected and subsequently submitted for analysis at a 3rd party analytical laboratory.

Scope of Work

The scope of this project was to determine the location, condition, quantity and type of hazardous materials present in the work area. The surveyors include building structural components, finishes, mechanical and electrical systems. For the purposes of this project, the following designated substances are included in the assessment:

- Asbestos
- Lead
- Mercury
- Silica

The remaining designated substances are not typically found in the construction of buildings of this type, and are usually exclusive to industrial processes, and are therefore not included as part of this report (Ethylene Oxide, Vinyl Chloride, Benzene, Arsenic, Coke Oven Emissions, Acrylonitrile, Isocyanates).

A summary of the other designated substances and hazardous materials is provided in **Appendix A**.

In addition, the following Hazardous Building Materials are not Designated Substances regulated by 490/09, but could pose a significant risk to health and safety of workers, occupants, and the environment are included as part of this report. The Ministry of Labour (MOL) recognizes them as workplace hazards and enforces worker protection under the General Duty Clause 25(2)(h) of the OHS Act. Clause 25(2)(h) states that the employers are required to “take every precaution reasonable in the circumstances for the protection of a worker”. In such cases the MOL will refer to industry standards and guidelines for the safe handling and management of such materials.

- Polychlorinated Biphenyls (PCBs); and,
- Ozone Depleting Substances (ODSs).

The scope did not include personal items or equipment (owner or occupant), buried or underground services or areas requiring significant demolition to assess. Wall and ceiling cavities were accessed wherever possible. Destructive investigative techniques were not employed.

Asbestos

The presence of asbestos was primarily assessed by visual inspection. Based on the visual assessment suspect materials were selected for laboratory analysis in accordance with O.Reg. 278/05.

CM3 collected thirty-four (34) representative samples from ten (10) distinct types of materials that were suspected to contain asbestos. Potential ACMs sampled during the designated substance survey included wall and ceiling plaster, ceiling texture coat, drywall joint compound, two (2) styles of ceiling stipple, interior caulking, exterior caulking, brick, brick mortar, cinder block, cinder block mortar, foundation parging cement and asphalt shingles. The samples were submitted to EMSL Canada Inc. of Ottawa, ON, for asbestos analysis via polarized light microscopy (PLM) on a regular turnaround basis.

The analytical results are presented in **Appendix B** and are summarized in the following table:

Table 1: Summary of Laboratory Analytical Results - Asbestos Containing Materials

Sample ID	Material	Location	Friability	Asbestos Concentration
PLA-01A-E	Plaster Finishes	Throughout	Non-Friable	None Detected
DJC-01A-E	Drywall Joint Compound	Throughout	Non-Friable	None Detected
VT-01A-C	9" x 9" Vinyl Tile (Brown)	Beneath Stairs	Non-Friable	None Detected
VT-02A-C	9" x 9" Vinyl Tile (Beige)	Beneath Stairs	Non-Friable	None Detected

Sample ID	Material	Location	Friability	Asbestos Concentration
GL-01A-C	Window Glazing	Interior	Non-Friable	None Detected
CLK-01A-C	Caulking (Grey)	Exterior	Non-Friable	1% Chrysotlie
MOR-01A-C	Mortar (Walls)	Basement	Non-Friable	None Detected
MOR-02A-C	Brick Mortar	Basement	Non-Friable	None Detected
MOR-03A-C	Brick Mortar (Walls)	Exterior	Non-Friable	None Detected
MOR-04A-C	Brick Mortar (Foundation)	Exterior	Non-Friable	None Detected

Based on the analytical results the exterior window caulking was confirmed to contain **1% chrysotile asbestos**. The exterior window caulking is considered to be an asbestos containing material and is therefore subject to the procedures outlined in O.Reg 278/05. It should be noted that the window caulking is unlikely to be disturbed by the proposed work.

The analytical report indicated that asbestos was not detected in any of the samples collected from the residence and submitted for analysis. Therefore the materials are not subject to the procedures outlined in O.Reg 278/05.

Analytical results are provided in **Appendix B**.

Lead

Lead is a naturally occurring metal element and is the most common metal found in the environment. Pure metallic lead was primarily used to make products such as electric storage batteries, ammunition, solder, radiation shields, pipes and sheaths for electric cables. The most common organic lead compounds are tetraethyl (TEL) and tetra methyl (TML) lead that were used as anti-knock agents in gasoline. Inorganic lead compounds such as lead oxides, chromates, carbonates and nitrates are commonly found in insecticides, pigments, paints, frits, glasses, plastics and rubber compounds.

The Canadian Federal Government has been limiting the amount of lead in paint to 0.5 percent (5,000 ppm) since 1976. Paint used in buildings before 1960 probably contained elevated levels of lead. If the building was built after 1980, it is unlikely that interior paint contains elevated concentrations of lead; if it was built after 1992, exterior paint probably does not contain lead. The Surface Coating Materials Regulation (SOR/2010-224 dated March, 2011), pursuant to the 2005 Hazardous Products Act, limits the allowed concentration of lead in a paint applied to manufactured products to 0.009 percent (90 ppm) of lead. Any paint containing lead at a concentration of 0.5% by weight (i.e. 5,000ug/g, or 5,000ppm) or greater is considered to be a lead-based paint (LBP). These paints represent the greatest potential exposure if disturbed. Paints confirmed to contain lead at a concentration of at least 0.009% by weight (i.e. 90ug/g, or 90ppm) but less than 0.5% by weight are considered to be lead-containing paints (LCP). These paints may present an exposure hazard depending on the type of work activities (i.e. degree of disturbance) and length of exposure. Paint with lead concentrations below 0.009% by weight are not considered to be lead-containing and represent little to no lead exposure hazard.

Paint chip samples were collected from painted surfaces within the building. All paint chip samples were collected by scraping down to the base material substrate to ensure collected of all layers of paint. Care was taken to avoid collection of the underlying substrate to reduce analytical substrate matrix interference.

Paint chip samples were submitted to a third party laboratory (EMSL) for the determination of lead content. Analysis was conducted by the laboratory following EPA 6020 – Digestion, ICP-MS. Results were reported by the laboratory as micrograms per grams (ug/g).

A variety of paints were observed throughout the building. The paint samples submitted for analysis represent the overall majority of the paint that exists within the project area. Paints that exist on a single door, a cabinet, a small area, etc., may be considered lead based paint.

A total of five (5) samples of paints were collected throughout the building and submitted for analysis.

- LS-01 – White Door Paint – Kitchen – 3,100ppm;
- LS-02 – Beige Wall Paint – Hallway – 180ppm;
- LS-03 – Blue Wall Paint – Living Room – 210ppm;
- LS-04 – White Trim Paint – Hallway – 200ppm; and
- LS-05 – Cream Door Paint – Entrance – 15,000ppm;

Based on the analytical results the cream door paint collected from the entrance was found to contain a lead concentration of greater than 5,000ppm and is therefore considered to be lead based paint.

All other paints sampled were found to contain lead concentrations greater than 90ppm and are therefore all considered to be lead containing.

Lead may be present in solder joints, glazing on ceramic finishes, and on all copper piping throughout the subject building.

Analytical results are presented in **Appendix B**.

Mercury

A thermostat with a mercury containing switch is present in the living room. In addition, mercury may also have been used as a preservative in paint applications.

ODSs

ODS's can be found in applications such as refrigerants in heat pumps, refrigerators, freezers and air conditioners (A/C). A refrigerator was present in the kitchen.

PCBs

No PCB-containing equipment was observed at the subject site.

Silica

Crystalline silica is assumed to be present in the plaster, drywall, drywall joint compound, vinyl flooring, brick mortar, foundation parging, caulking, glazing and any other cementitious materials present in the project area.

Recommendations

Based on the above findings CM3 provides the following recommendations for review.

Asbestos

- Disturbance of friable and non-friable ACMs is regulated by Ontario Regulation 278/05. Prior to disturbance, removal or demolition, the project owner must ensure that all ACMs are removed.
- The asbestos abatement must be conducted competent workers in accordance with Ontario Regulation 278/05.
- If required, the removal of the asbestos containing caulking may be conducted as a Type 1 operation as long as the material is wetted prior to and during removal.
- If the use of power tools is required for the removal of any asbestos containing materials Type 3 asbestos abatement procedures must be implemented.
- All waste generated during the asbestos abatement operations must be properly handled and packaged in accordance with O.reg 278/05 and disposed of in accordance with Ontario Regulation 347.

Lead

- During renovation or demolition work that may disturb the painted surfaces ensure that work area is well ventilated and measures are employed to limit dust generation. All work should be completed following the Ministry of Labour “Guideline –Lead on Construction Projects”.

Mercury

- If removed. best management practices dictate that the thermostat be carefully removed, containerized and picked up and disposed of by a licensed hazardous materials contractor in accordance with Ontario Regulation 347/09 (as amended) prior to demolition.

ODSs

- All non-base building ODS containing equipment should be removed from the building prior to demolition. If the equipment cannot be removed, all ozone depleting refrigerants must be removed by an individual, licensed to perform such work in accordance with the Ozone Depleting Substance Regulation 1998 SOR/99-7 under the Canadian Environmental Protection Act, prior to the disposal of any ozone depleting substance-containing equipment.

Silica

- During renovation or demolition ensure that work areas are well ventilated, wash stations are present for worker protection and that the maximum allowable airborne concentration for all silica forms is not exceeded. All work should be completed following the Ministry of Labour “Guideline – Silica on Construction Projects”

Limitations

This report has been prepared and the work referred to in this report has been undertaken by CM3 Environmental Inc. for **Marilyn Steinburg**. It is intended for the sole and exclusive use of **Ottawa**

Marilyn Steinburg and their authorized agents for the purpose(s) set out in this report. Any use of, reliance on or decision made based on this report by any person other than **Marilyn Steinburg** for any purpose, or by **Marilyn Steinburg** for a purpose other than the purpose(s) set out in this report, is the sole responsibility of such other person or **Marilyn Steinburg** and CM3 Environmental Inc. make no representation or warranty to any other person with regard to this report and the work referred to in this report and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

Any conclusions or recommendations made in this report reflect CM3 Environmental Inc.'s judgment based on the following limited investigations: visual site inspection(s) on the date(s) set out in this report; examination of public records; and interviews with individuals having information about the site. While efforts have been made to substantiate information provided by third parties, CM3 Environmental Inc. makes no representation or warranty as to its completeness or accuracy.

This report has been prepared for specific application to this site. Unless otherwise stated, the findings cannot be extended to previous or future site conditions; portions of the site which were unavailable for direct investigation; subsurface locations which were not investigated directly; or chemical parameters, materials or analysis which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site; and substances addressed by the investigation may exist in areas of the site not investigated or in quantities not ascertained.

Nothing in this report is intended to constitute or provide a legal opinion. CM3 Environmental Inc. makes no representation as to the requirements of or compliance with environmental laws, rules, regulations or policies established by federal, provincial or local government bodies. Revisions to the regulatory standards referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary.


Other than by **Marilyn Steinburg and their authorized agents** and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted without the express written permission of CM3 Environmental Inc.

Respectfully submitted,

CM3 Environmental Inc.

Reviewed by:


Joel Marcellus
Project Coordinator


Trent Windsor, C.E.T.
Principal, Project Manager

Appendix A
Other Designated Substances

The following are not typically found in most buildings and are usually exclusive to specific industrial process:

Acrylonitrile

Acrylonitrile is used to produce polymers such as acrylonitrile-butadiene-styrene (ABS) resins. These polymers are used in the manufacturing of a wide range of commercial products (i.e., automotive parts, clothing, carpets, etc.). The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to airborne acrylonitrile is to be maintained at the lowest practical level and not exceed an eight hour average concentration of 4.3 mg/m³ of air (2 ppmv).

In its hardened polymer form, acrylonitrile is not expected to release emissions that would exceed the allowable limits. Pure acrylonitrile was not identified within the project area.

Arsenic

Arsenic can be found in paint on roofing flashings, floors, walls and on the underside of the concrete ground floor structures in old buildings. The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to airborne arsenic is to be maintained at the lowest practical level and not exceed an eight hour average concentration of 10 µg/m³ of air.

Considering the age of the building, arsenic could be present in the above listed materials. However, there is a low probability of finding arsenic-based coatings and minor amounts of this metal did not justify that the sampling be performed in the present assessment.

Benzene

Benzene is typically found in petroleum based products such as gasoline and diesel fuels, asphalt and other hydrocarbon based products. The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to airborne benzene is to be maintained at the lowest practical level with a view to achieving an ambient air concentration lower than 3.2 mg/m³ of air (1 ppmv) and not exceed an eight hour average concentration of 16 mg/m³ of air (5 ppmv).

Direct sources of benzene emissions were not identified within the project area.

Coke Oven Emissions

Coke Oven Emissions result from burning of coke. The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to coke oven emissions are to be maintained at the lowest practical level and not to exceed an eight hour average concentration of 0.15 mg/m³ of air.

Direct sources of coke oven emissions were not identified within the project area.

Ethylene Oxide

Ethylene Oxide is a common by-product of fumigation or sterilization procedures. The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to airborne ethylene oxide is to be maintained at the lowest practical level and not exceed an eight hour average concentration of 1.8 mg/m³ of air (1 ppmv).

Materials or processes that may release ethylene oxide to ambient air were not identified within the project area.

Isocyanates

Isocyanates are mainly used in the manufacture of plastics, foams and coatings. The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to isocyanate dust is to be maintained at the lowest practical level and not exceed an eight hour average concentration of $0.2 \mu\text{moles}/\text{m}^3$ of air (0.005 ppmv).

Manufactured products under normal conditions do not typically pose a health risk. However, sawing or scraping uncured polyurethane that still contains some unreacted-NCO groups will release isocyanate dust. Uncured polyurethanes were not identified within the project area.

Vinyl Chloride

Vinyl Chloride is found in many applications such as PVC pipes and fittings. The Time-Weighted Average Exposure Limits (TWAEL) of a worker exposed to vinyl chloride emission is to be maintained at the lowest practical level and not exceed an eight hour average concentration of $5.2 \text{mg}/\text{m}^3$ of air (1 ppmv).

Vinyl chloride in the PVC compound is bound in a solid matrix that is unlikely to become airborne. Vinyl chloride emissions are not likely to exceed the prescribed limits within the project area.

Appendix B
Analytical Results



EMSL Canada Inc.

22 Antares Drive Suite 102 Ottawa, ON K2E 7Z6
 Phone/Fax: (343) 882-6076 / (343) 882-6077
<http://www.EMSL.com> / ottawalab@EMSL.com

EMSL Canada Order 671800848
 Customer ID: 55CMTE42
 Customer PO:
 Project ID:

Attn: Joel Marcellus Phone: (613) 820-4343
 CM3 Environmental Inc. Fax:
 5710 Akins Rd Collected: 4/30/2018
 Stittsville, ON K2S 1B8 Received: 5/01/2018
 Analyzed: 5/07/2018

Proj: TLW1928 - 22 Hawthorne

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: PLA-01A-Skim Coat **Lab Sample ID:** 671800848-0001
Sample Description: Entrance/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: PLA-01A-Base Coat **Lab Sample ID:** 671800848-0001A
Sample Description: Entrance/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	1%	99%	None Detected	

Client Sample ID: PLA-01B-Skim Coat **Lab Sample ID:** 671800848-0002
Sample Description: Dining Rm/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: PLA-01B-Base Coat **Lab Sample ID:** 671800848-0002A
Sample Description: Dining Rm/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	1%	99%	None Detected	

Client Sample ID: PLA-01C-Skim Coat **Lab Sample ID:** 671800848-0003
Sample Description: Basement Stair/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: PLA-01C-Base Coat **Lab Sample ID:** 671800848-0003A
Sample Description: Basement Stair/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	1%	99%	None Detected	

Client Sample ID: PLA-01D-Skim Coat **Lab Sample ID:** 671800848-0004
Sample Description: Basement Stair/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	White	0%	100%	None Detected	



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 Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: PLA-01D-Base Coat **Lab Sample ID:** 671800848-0004A
Sample Description: Basement Stair/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Gray	1%	99%	None Detected	

Client Sample ID: PLA-01E-Skim Coat **Lab Sample ID:** 671800848-0005
Sample Description: 2nd Floor/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	White	0%	100%	None Detected	

Client Sample ID: PLA-01E-Base Coat **Lab Sample ID:** 671800848-0005A
Sample Description: 2nd Floor/Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Gray	0%	100%	None Detected	

Client Sample ID: DJC-01A **Lab Sample ID:** 671800848-0006
Sample Description: Dining Rm/Drywall Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: DJC-01B **Lab Sample ID:** 671800848-0007
Sample Description: Dining Rm/Drywall Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: DJC-01C **Lab Sample ID:** 671800848-0008
Sample Description: Dining Rm/Drywall Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: DJC-01D **Lab Sample ID:** 671800848-0009
Sample Description: Living Rm/Drywall Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	White	0%	100%	None Detected	

Client Sample ID: DJC-01E **Lab Sample ID:** 671800848-0010
Sample Description: Living Rm/Drywall Joint Compound

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	White	0%	100%	None Detected	



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Customer ID: 55CMTE42
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Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: VT-01A **Lab Sample ID:** 671800848-0011

Sample Description: Under Stairs/9"x9" Vinyl Tile (brown)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Brown	45%	55%	None Detected	

Client Sample ID: VT-01B **Lab Sample ID:** 671800848-0012

Sample Description: Under Stairs/9"x9" Vinyl Tile (brown)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Brown	45%	55%	None Detected	

Client Sample ID: VT-01C **Lab Sample ID:** 671800848-0013

Sample Description: Under Stairs/9"x9" Vinyl Tile (brown)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Brown	45%	55%	None Detected	

Client Sample ID: VT-02A **Lab Sample ID:** 671800848-0014

Sample Description: Under Stairs/9"x9" Vinyl Tile (beige)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Beige	45%	55%	None Detected	

Client Sample ID: VT-02B **Lab Sample ID:** 671800848-0015

Sample Description: Under Stairs/9"x9" Vinyl Tile (beige)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Beige	45%	55%	None Detected	

Client Sample ID: VT-02C **Lab Sample ID:** 671800848-0016

Sample Description: Under Stairs/9"x9" Vinyl Tile (beige)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Beige	45%	55%	None Detected	

Client Sample ID: GL-01A **Lab Sample ID:** 671800848-0017

Sample Description: Interior/Window glazing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	

Client Sample ID: GL-01B **Lab Sample ID:** 671800848-0018

Sample Description: Interior/Window glazing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	100%	None Detected	



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Client Sample ID: GL-01C **Lab Sample ID:** 671800848-0019
Sample Description: Interior/Window glazing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	White	0%	100%	None Detected	

Client Sample ID: CLK-01A-Caulking 1 **Lab Sample ID:** 671800848-0020
Sample Description: Exteiror/Caulking (grey)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	10%	90%	None Detected	

Client Sample ID: CLK-01A-Caulking 2 **Lab Sample ID:** 671800848-0020A
Sample Description: Exteiror/Caulking (grey)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	White	0%	99%	1% Chrysotile	

Client Sample ID: CLK-01B **Lab Sample ID:** 671800848-0021
Sample Description: Exterior/Caulking (grey)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018					Positive Stop (Not Analyzed)

Client Sample ID: CLK-01C **Lab Sample ID:** 671800848-0022
Sample Description: Exterior/Caulking (grey)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018					Positive Stop (Not Analyzed)

Client Sample ID: MOR-01A **Lab Sample ID:** 671800848-0023
Sample Description: Basement/Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	0%	100%	None Detected	

Client Sample ID: MOR-01B **Lab Sample ID:** 671800848-0024
Sample Description: Basement/Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	0%	100%	None Detected	

Client Sample ID: MOR-01C **Lab Sample ID:** 671800848-0025
Sample Description: Basement/Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Gray	0%	100%	None Detected	



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Client Sample ID: MOR-02A **Lab Sample ID:** 671800848-0026
Sample Description: Basement/Brick Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	0%	100%	None Detected	

Client Sample ID: MOR-02B **Lab Sample ID:** 671800848-0027
Sample Description: Basement/Brick Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	0%	100%	None Detected	

Client Sample ID: MOR-02C **Lab Sample ID:** 671800848-0028
Sample Description: Basement/Brick Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Gray	0%	100%	None Detected	

Client Sample ID: MOR-03A **Lab Sample ID:** 671800848-0029
Sample Description: Exterior/Brick Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Red	0%	100%	None Detected	

Client Sample ID: MOR-03B **Lab Sample ID:** 671800848-0030
Sample Description: Exterior/Brick Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Red	0%	100%	None Detected	

Client Sample ID: MOR-03C **Lab Sample ID:** 671800848-0031
Sample Description: Exterior/Brick Mortar (walls)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Red	0%	100%	None Detected	

Client Sample ID: MOR-04A **Lab Sample ID:** 671800848-0032
Sample Description: Exterior/Brick Mortar (foundation)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	0%	100%	None Detected	

Client Sample ID: MOR-04B **Lab Sample ID:** 671800848-0033
Sample Description: Exterior/Brick Mortar (foundation)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/04/2018	Gray	0%	100%	None Detected	



EMSL Canada Inc.

22 Antares Drive Suite 102 Ottawa, ON K2E 7Z6
Phone/Fax: (343) 882-6076 / (343) 882-6077
<http://www.EMSL.com> / ottawalab@EMSL.com

EMSL Canada Order 671800848
Customer ID: 55CMTE42
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: MOR-04C

Lab Sample ID: 671800848-0034

Sample Description: Exterior/Brick Mortar (foundation)

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	5/07/2018	Gray	0%	100%	None Detected	

Analyst(s):

Ewa Krupinska PLM (25)
Hilary Belleville PLM (13)

Reviewed and approved by:

Simon Parent, Laboratory Manager
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Ottawa, ON

Initial report from: 05/07/2018 10:21:24

**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

EMSL Canada Or 551805058

CustomerID: 55CMTE42

CustomerPO: TLW1928

ProjectID:

Attn: **Joel Marcellus**
CM3 Environmental Inc.
5710 Akins Rd
Stittsville, ON K2S 1B8

Phone: (613) 820-4343
 Fax:
 Received: 05/02/18 11:02 AM
 Collected: 4/30/2018

Project: TLW1928 - 22 Hawthorne

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
L5-01	551805058-0001	4/30/2018	5/4/2018	0.2352 g	3100 ppm
Site: White Door Paint / Kitchen					
L5-02	551805058-0002	4/30/2018	5/4/2018	0.2348 g	180 ppm
Site: Beige Wall Paint / Hallway					
L5-03	551805058-0003	4/30/2018	5/4/2018	0.2311 g	210 ppm
Site: Blue Wall Paint / Living Rm					
L5-04	551805058-0004	4/30/2018	5/4/2018	0.2322 g	200 ppm
Site: White Trim Paint / Living Rm					
L5-05	551805058-0005	4/30/2018	5/4/2018	0.1799 g	15000 ppm
Site: Cream Door Paint / Entrance					

Rowena Fanto, Lead Supervisor
 or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. 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. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Initial report from 05/09/2018 08:42:34