

**REPORT
TO
THE HALTON DISTRICT SCHOOL BOARD**

**UPDATED SURVEY OF
ASBESTOS-CONTAINING MATERIALS
SAM SHERRATT PUBLIC SCHOOL
649 LAURIER AVENUE
MILTON, ONTARIO**

Prepared by:

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September 2014

702161-000





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702161-000

8 September 2014

Halton District School Board
J.W. Singleton Education Center
2050 Guelph Line P.O. Box 2005
Burlington, Ontario L7R 3Z2

Attention: Mr. Terry DeMedeiros
Regional Supervisor, Facilities Maintenance.

Re: **Updated Survey of Asbestos-Containing Materials**
Sam Sherratt Public School
649 Laurier Avenue
Milton, Ontario

Dear Sirs:

We are pleased to submit our updated report on the survey of asbestos-containing materials.

The report was updated based on information provided by the Halton District School Board.

We trust that this report meets your current requirements. Please call if you have any questions or if you require further assistance.

Yours very truly,

DECOMMISSIONING CONSULTING SERVICES

Ada Nguyen, Dipl. Tech.
Industrial Hygiene Technologist

Rein Andre, B.A.
Manager, Hazardous Materials Group

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1.0 INTRODUCTION

Decommissioning Consulting Services (DCS) was retained by The Halton District School Board (the Board) to prepare an updated survey of the locations of asbestos-containing materials at Sam Sherratt Public School, 649 Laurier Avenue, Milton, Ontario using information provided by the Board.

Asbestos has been widely used in buildings, both in friable applications (materials which can be easily crumbled such as pipe and tank insulation, sprayed-on fireproofing and acoustic and texture coat applications) and in non-friable materials such as floor tile, fire-rated ceiling tile, gaskets, cement board, cement pipe, drywall joint compound and so on. Plaster applications (walls, ceilings, bulkheads, etc.) may also contain asbestos. The use of asbestos in friable applications was curtailed in Ontario around the mid-1970s. Most buildings constructed prior to about the mid-1970s contain some form of friable asbestos-containing material. The use of asbestos in certain non-friable products continued beyond the 1970s. A sample list of suspect asbestos-containing building materials is provided in Appendix C.

Control of exposure to asbestos is governed in Ontario by Regulation 278/05 - *Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations*. Disposal of asbestos waste (friable and non-friable materials) is governed by Ontario Regulation 278/05 and by Ontario Regulation 347, Waste Management - General.

The major requirements of O.Reg. 278/05 with respect to asbestos surveys and assessments are as follows:

Survey Records:

- non-friable asbestos-containing materials (e.g., vinyl floor tiles, ceiling tiles, drywall joint compound, plaster, etc.) are to be included in asbestos survey records effective 1 November 2007;
- asbestos survey records are to be updated:
 - (a) at least once in every 12-month period;
 - (b) whenever the owner becomes aware of new information; and

- asbestos-containing materials are to be inspected at reasonable intervals in order to determine their condition.

Bulk Samples:

- the minimum number of bulk samples to be collected from an area of homogeneous material is set out in Table 1 of the regulation (Table 1 is reproduced below).
- if analysis establishes that a bulk material sample contains 0.5 per cent or more asbestos by dry weight:
 - (a) it is not necessary to analyze other bulk material samples taken from the same area of homogeneous material; and
 - (b) the entire area of homogeneous material from which the bulk materials sample was taken is deemed to be asbestos-containing material.

TABLE 1.1

**BULK MATERIAL SAMPLES
(FROM O.REG. 278/05)**

| ITEM | TYPE OF MATERIAL | SIZE OF AREA OF HOMOGENEOUS MATERIAL | MINIMUM NUMBER OF BULK MATERIAL SAMPLES TO BE COLLECTED |
|------|--|---|---|
| 1. | Surfacing material, including without limitation material that is applied to surfaces by spraying, by trowelling or otherwise, such as acoustical plaster on ceilings and fireproofing materials on structural members | Less than 90 square metres | 3 |
| | | 90 or more square metres, but less than 450 square metres | 5 |
| | | 450 or more square metres | 7 |
| 2. | Thermal insulation, except as described in Item 3 | Any size | 3 |
| 3. | Thermal insulation patch | Less than 2 linear metres or 0.5 square metres | 1 |
| 4. | Other material | Any size | 3 |

In practice, application of the Table 1 requirements means that the specified minimum number of negative (i.e., less than 0.5% asbestos) bulk sample analysis results will be required in order to classify a material as non-asbestos.

Section 10 of O.Reg. 278/05 – *Owner’s Responsibility before requesting tender or arranging work* – requires that an owner shall have an investigation carried out in order to determine if materials, that are likely to be handled, dealt with, disturbed or removed during the alteration of a building, are asbestos-containing and, if so, whether the asbestos-containing material is friable or non-friable and to identify the type of asbestos in the material. Section 10 also requires that the owner shall have a report prepared detailing the investigation findings which is to be provided to any prospective constructor.

Corrective Actions

If asbestos-containing thermal insulation has fallen and is being disturbed so that exposure to the material is likely to occur, O.Reg. 278/05 requires that the owner shall cause the fallen material to be cleaned up and, if it is readily apparent that material will continue to fall because of the deterioration, the owner shall repair, seal, remove or permanently enclose the material.

O.Reg. 278/05 classifies the asbestos work operations into three types (Type 1, 2 and 3) and specifies procedures to be followed in conducting asbestos abatement work.

2.0 METHODOLOGY

2.1 SURVEY

Site inspections were carried out by DCS staff on 6 December 2012 to determine the locations of building construction materials suspected of containing asbestos. DCS reviewed information outlined in previous reports prepared by DCS for the Board entitled *Survey and Assessment of Asbestos-Containing Materials, Sam Sherratt Public School, Milton, Ontario* dated March 2000 and *Designated Substances and Hazardous Materials Survey, Sam Sherratt Public School, 649 Laurier Avenue, Milton, Ontario* dated January 2013, to prepare this updated report. All readily accessible areas, including spaces above accessible suspended ceilings, were inspected throughout the facility.

Representative bulk samples of material were collected by DCS staff during the course of the site inspections and were forwarded to EMSL Canada Inc. (EMSL) for analysis of asbestos content. EMSL holds a current Certificate of Accreditation for Bulk Asbestos Fibre Analysis under the Voluntary Accreditation Program (NVLAP). Determination of the locations of asbestos-containing materials were made based on results of bulk sample analysis, and on visual observations and physical characteristics of the applications at each inspection location.

2.2 ASSESSMENT

During the survey, the condition of all friable materials is assessed. Assessment involves the evaluation of a number of factors, including:

- asbestos content;
- physical damage;
- water damage;
- accessibility;
- adjacent activity, vibrations;
- air distribution system (air plenum); and
- friability.

Recommendations for appropriate corrective measures are based on findings of the assessment and consist primarily of either repair or removal (and replacement) of the asbestos-containing materials. All asbestos-containing materials observed were noted to be in good condition, and as such, there were no recommended corrective actions.

3.0 SURVEY RESULTS

On the basis of the survey work carried out, we report that no friable asbestos-containing materials are present in Sam Sherratt Public School in accessible locations.

All thermal insulation, with the exception of glass fibre material, should be assumed to contain asbestos unless a bulk sample analysis indicates otherwise.

Visual inspections and laboratory analyses of representative bulk samples of materials confirm that non-friable asbestos-containing materials are present in the following accessible applications:

- 12” x 12” vinyl floor tiles in Rooms 16C, 16D, 16E, 16H, 16I, 16J, 19A, 19B, 20A, 21A, 29A, 31 and 31A.

A room-by-room summary of the locations and conditions of asbestos-containing materials identified is presented in Table 3.2. The locations of accessible asbestos-containing materials are identified on the floor plans provided in Appendix A.

A summary of the results of laboratory analysis of bulk samples is presented in Table 3.1. The laboratory reports are provided in Appendix B.

TABLE 3.1

**SUMMARY OF LABORATORY ANALYSES OF BULK SAMPLES
SAM SHERRATT PUBLIC SCHOOL**

| SAMPLE N^o | LOCATION | DESCRIPTION | ASBESTOS CONTENT |
|-----------------------------|-----------------|---|---------------------------------------|
| 1-A | Room: 8 | 12" x 12" vinyl floor tile, beige with beige fleck. | None Detected (TEM) |
| 1-B | Room: 7 | 12" x 12" vinyl floor tile, beige with beige fleck. | None Detected |
| 1-C | Room: 31 | 12" x 12" vinyl floor tile, beige with beige fleck. | None Detected |
| 2-A | Room: 8 | 12" x 12" vinyl floor tile, grey with grey fleck. | None Detected (TEM) |
| 2-B | Room: 9B | 12" x 12" vinyl floor tile, grey with grey fleck. | None Detected |
| 2-C | Room: 9B | 12" x 12" vinyl floor tile, grey with grey fleck. | None Detected |
| 3-A | Room: 8 | Vinyl base board, grey. | None Detected (TEM) |
| 3-B | Room: 7 | Vinyl base board, black. | None Detected |
| 3-C | Room: 9 | Vinyl base board, grey. | None Detected |
| 4-A | Room: 10 | 12" x 12" vinyl floor tile, dark beige with beige fleck | 0.99% Chrysotile⁽¹⁾ |
| 5-A | Room: 31 | 12" x 12" vinyl floor tile, beige with wide beige flecks. | 0.73% Chrysotile |
| 6-A | Room: 8 | Mastic, black under vinyl floor tile. | None Detected (TEM) |
| 6-B | Room: 7 | Mastic, black under vinyl floor tile. | None Detected |
| 6-C | Room: 9B | Mastic, black under vinyl floor tile. | None Detected |
| 7-A | Room: 8 | Mastic yellow, under base board. | None Detected (TEM) |
| 7-B | Room: 7 | Mastic yellow, under base board. | None Detected |
| 7-C | Room: 9 | Mastic yellow, under base board. | None Detected |
| 8-A | Room: 8 | Caulking, white on interior door frame. | None Detected (TEM) |
| 8-B | Room: 7 | Caulking, white on interior door frame. | None Detected |
| 8-C | Room: 9 | Caulking, white on interior door frame. | None Detected |
| 9-A | Room: 8 | Caulking, cream on interior window frame. | None Detected (TEM) |
| 9-B | Room: 7 | Caulking, cream on interior window frame. | None Detected |
| 9-C | Room: 9 | Caulking, cream on interior window frame. | None Detected |
| 10-A | Room: 8 | Mastic, brown from carpet. | None Detected (TEM) |
| 10-B | Room: 8 | Mastic, brown from carpet. | None Detected |
| 10-C | Room: 8 | Mastic, brown from carpet. | None Detected |
| 11-A | Room: 8 | Caulking, clear, exterior door frame. | None Detected (TEM) |
| 11-B | Room: 8 | Caulking, clear, exterior window frame. | None Detected |
| 11-C | Room: 8 | Caulking, clear, exterior expansion joint in brick. | None Detected |

| SAMPLE N ^o | LOCATION | DESCRIPTION | ASBESTOS CONTENT |
|-----------------------|------------|---|---------------------|
| 12-A | Room: 15 | Mastic, black, under vinyl floor tile. | None Detected (TEM) |
| 12-B | Room: 15 | Mastic, black, under vinyl floor tile. | None Detected |
| 12-C | Room: 15 | Mastic, black, under vinyl floor tile. | None Detected |
| 13-A | Room: 31 | Thermal insulation on pipe fitting, cementitious. | None Detected (TEM) |
| 13-B | Room: 20 | Thermal insulation on pipe fitting, cementitious. | None Detected |
| 13-C | Room: 117A | Thermal insulation on rain water leader hub, cementitious. | None Detected |
| 14-A | Room: 8 | 2' x 4' ceiling tile, fissures on 2' with brown back. | None Detected |
| 14-B | Room: 7 | 2' x 4' ceiling tile, fissures on 2' with brown back. | None Detected |
| 14-C | Room: 9 | 2' x 4' ceiling tile, fissures on 2' with brown back. | None Detected |
| 15-A | Room: 32 | 2' x 4' ceiling tile, deep wide random fissures with red back. | None Detected |
| 15-B | Room: 33 | 2' x 4' ceiling tile, deep wide random fissures with red back. | None Detected |
| 15-C | Room: 33 | 2' x 4' ceiling tile, deep wide random fissures with red back. | None Detected |
| 16-A | Room: 32 | 2' x 4' ceiling tile, fissure on 2' with white coloured face and dark brown back. | None Detected |
| 16-B | Room: 18 | 2' x 4' ceiling tile, fissure on 2' with white coloured face and dark brown back. | None Detected |
| 16-C | Room: 18 | 2' x 4' ceiling tile, fissure on 2' with white coloured face and dark brown back. | None Detected |
| 17-A | Room: 8 | Drywall joint compound, wall. | None Detected |
| 17-B | Room: 28 | Drywall joint compound, ceiling. | None Detected |
| 17-C | Room: 33B | Drywall joint compound, ceiling. | None Detected |

NOTES:

“Asbestos-containing material” is defined as material that contains 0.5% or more asbestos by dry weight.

Chrysotile = Chrysotile asbestos

Bulk samples were analyzed by Polarized Light Microscopy (PLM) analysis, except where “TEM” is noted, in which case Transmission Electron Microscopy analysis was also performed.

- (1) Asbestos-containing materials collected in this area have since been removed. Results provided here are for reference purposes only.

TABLE 3.2

**SUMMARY OF ASBESTOS-CONTAINING MATERIALS
SAM SHERRATT PUBLIC SCHOOL**

| LEVEL | ROOM | MATERIAL | ASBESTOS CONTENT | LOCATION WITHIN SPACE | ESTIMATED QUANTITY | FRIABLE OR NON-FRIABLE | CONDITION | COMMENTS |
|-------|------|----------|------------------|-----------------------|--------------------|------------------------|-----------|---|
| 1 | 1 | | | | | | | NACMO |
| 1 | 2 | | | | | | | NACMO |
| 1 | 3 | | | | | | | NACMO |
| 1 | 4 | | | | | | | NACMO |
| 1 | 5 | | | | | | | NACMO |
| 1 | 6 | | | | | | | NACMO |
| 1 | 7 | | | | | | | NACMO |
| 1 | 7A | | | | | | | NACMO |
| 1 | 8 | | | | | | | NACMO |
| 1 | 8A | | | | | | | NACMO |
| 1 | 8B | | | | | | | NACMO |
| 1 | 9 | | | | | | | NACMO |
| 1 | 9A | | | | | | | NACMO |
| 1 | 9B | | | | | | | NACMO |
| 1 | 9C | | | | | | | NACMO |
| 1 | 10 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2013 |
| 1 | 11 | | | | | | | NACMO |

| LEVEL | ROOM | MATERIAL | ASBESTOS CONTENT | LOCATION WITHIN SPACE | ESTIMATED QUANTITY | FRIABLE OR NON-FRIABLE | CONDITION | COMMENTS |
|-------|------|-------------------|------------------|-----------------------|--------------------|------------------------|-----------|---|
| 1 | 12 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2013 |
| 1 | 13 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2013 |
| 1 | 14 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2013 |
| 1 | 15 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2013 |
| 1 | 16 | | | | | | | NACMO |
| 1 | 16A | | | | | | | NACMO |
| 1 | 16B | | | | | | | NACMO |
| 1 | 16C | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 16D | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 16E | Vinyl floor tiles | 0.73% Chrysotile | Floor | <10 sq. m | Non-Friable | G | |
| 1 | 16F | | | | | | | NACMO |
| 1 | 16G | | | | | | | NACMO |
| 1 | 16H | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 16I | Vinyl floor tiles | 0.73% Chrysotile | Floor | <10 sq. m | Non-Friable | G | |
| 1 | 16J | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 17 | | | | | | | NACMO |
| 1 | 17A | | | | | | | NACMO |
| 1 | 17B | | | | | | | NACMO |
| 1 | 17C | | | | | | | NACMO |
| 1 | 18 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2014 |

| LEVEL | ROOM | MATERIAL | ASBESTOS CONTENT | LOCATION WITHIN SPACE | ESTIMATED QUANTITY | FRIABLE OR NON-FRIABLE | CONDITION | COMMENTS |
|-------|------|-------------------|------------------|-----------------------|--------------------|------------------------|-----------|--|
| 1 | 19 | | | | | | | NACMO. Vinyl floor tiles reportedly installed in 2010 |
| 1 | 19A | Vinyl floor tiles | 0.99% Chrysotile | Floor | <10 sq. m | Non-Friable | G | |
| 1 | 19B | Vinyl floor tiles | 0.99% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 19C | | | | | | | NACMO |
| 1 | 20 | | | | | | | NACMO |
| 1 | 20A | Vinyl floor tiles | 0.99% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | NACMO |
| 1 | 20B | | | | | | | NACMO |
| 1 | 21 | | | | | | | NACMO |
| 1 | 21A | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | NACMO |
| 1 | 21B | | | | | | | No access at the time of inspections |
| 1 | 22 | | | | | | | NACMO |
| 1 | 22A | | | | | | | No access at the time of inspections. Entrance boarded up. |
| 1 | 26 | | | | | | | NACMO |
| 1 | 26A | | | | | | | No access at the time of inspections. Entrance boarded up. |
| 1 | 27 | | | | | | | NACMO |
| 1 | 28 | | | | | | | NACMO |
| 1 | 29 | | | | | | | NACMO |
| 1 | 29A | Vinyl floor tiles | 0.73% Chrysotile | Floor | <10 sq. m | Non-Friable | G | |
| 1 | 30 | | | | | | | NACMO |

| LEVEL | ROOM | MATERIAL | ASBESTOS CONTENT | LOCATION WITHIN SPACE | ESTIMATED QUANTITY | FRIABLE OR NON-FRIABLE | CONDITION | COMMENTS |
|-------|------|-------------------|------------------|-----------------------|--------------------|------------------------|-----------|----------|
| 1 | 30A | | | | | | | NACMO |
| 1 | 30B | | | | | | | NACMO |
| 1 | 30C | | | | | | | NACMO |
| 1 | 30D | | | | | | | NACMO |
| 1 | 30E | | | | | | | NACMO |
| 1 | 31 | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 31A | Vinyl floor tiles | 0.73% Chrysotile | Floor | 10-50 sq. m | Non-Friable | G | |
| 1 | 32 | | | | | | | NACMO |
| 1 | 33 | | | | | | | NACMO |
| 1 | 33A | | | | | | | NACMO |
| 1 | 33B | | | | | | | NACMO |
| 1 | 33C | | | | | | | NACMO |

NOTES:

< = Less than.

> = Greater than.

Chrysotile = Chrysotile Asbestos

Condition: G = Good.

F = Fair.

P = Poor.

NACMO: No Asbestos-Containing Materials Observed.

NOTE!: Asbestos may also be present in locations that are presently inaccessible (e.g., in pipe chases, behind walls, above solid suspended ceilings and below carpets).

4.0 DISCUSSION

The owner of a building is required to provide information on the locations of asbestos-containing material to:

- i) any person who is an “occupier”⁽¹⁾ of the building. The occupier is then responsible for providing the information to their own employees;
- ii) any prospective constructors, contractors and subcontractors prior to requesting tenders or arranging for the demolition, alteration or repair of all or part of a building. The information to be provided shall identify whether any material that is likely to be handled, dealt with, disturbed or removed is asbestos-containing material; describe the condition of the material; state whether the material is friable or non-friable; and contain drawings, plans and specifications, as appropriate, to show the locations of material;
- iii) any employer with whom the owner arranges or contracts for work not described in ii) above that may involve asbestos-containing material or is to be carried out in close proximity to and may disturb the material;
- iv) owner’s staff, if they perform work that involves asbestos-containing material or work that is to be carried out in close proximity to and may disturb the material.

If material suspected of containing asbestos which is not identified in the asbestos survey records is discovered during the course of any work in a facility, then either the constructor or the owner is required to immediately notify (orally and in writing):

- a) an inspector at the office of the Ministry of Labour nearest the workplace;
- b) the owner;
- c) the contractor; and
- d) the joint health and safety committee or the health and safety representative.

⁽¹⁾ An “occupier” is defined as:

- (a) a person who is in physical possession of premises, or
- (b) a person who has responsibility for and control over the condition of premises or the activities carried on there, or control over persons allowed to enter the premises.

The owner is also responsible for providing tenderers with a list of designated substances (including asbestos) at the tendering stage of a project.

This report was prepared as part of the asbestos management program, not for the purposes of construction or renovation projects. Additional investigation and testing may be required prior to construction or renovation projects.

Bulk sampling of building materials was carried out in accordance with the minimum sampling requirements specified in Table 1 of O.Reg. 278/05. We recommend that additional samples of certain types of material which may have been mixed on site at the time of construction (plaster, drywall joint compound, ceiling texture coat, etc.) be tested for asbestos content prior to the disturbance of these materials at the time of renovations, alterations or demolition work.

Asbestos may also be present in materials which were not sampled during the course of the asbestos survey carried out by DCS, including, but not limited to, roofing materials, fire doors, select vinyl floor tile mastics, cementitious levelling compound under vinyl flooring, grout, select caulking, gaskets in piping, internal components of boilers, paints and coatings, components of electrical equipment, (e.g. – electrical wiring insulation, non-metallic sheathed cable, electrical panel partitions, arc chutes, high-grade electrical paper, etc.), concrete, etc., and/or in locations that are presently inaccessible (e.g., in pipe chases, behind walls, above solid suspended ceilings, and below carpets). Asbestos may also be present in the form of vermiculite insulation in cavities in concrete or cement block walls (used as in-fill insulation). Destructive investigation would be required to determine if asbestos vermiculite is present in concrete block walls. Confirmatory testing of any such materials could be undertaken as the need arises (i.e., at the time of renovations, modifications or demolition) or the materials can be assumed to contain asbestos based on findings in adjacent areas.

As noted above, if any materials which may contain asbestos and which were not tested during the course of the asbestos survey are discovered during any construction activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

5.0 USE AND LIMITATIONS OF THIS REPORT

This report, prepared for the Halton District School Board, does not provide certification or warranty, expressed or implied, that the investigation conducted by DCS identified all asbestos-containing materials present in the subject facilities. The work undertaken by DCS was directed to provide information on the presence of asbestos-containing building materials based on visual inspection of readily accessible areas of the building and on the results of laboratory analysis of bulk samples of material gathered in the course of the visual inspection. The survey did not include for identification of asbestos in process materials, equipment (including electrical equipment and wiring), furniture (e.g., chairs, table tops, chalkboards, etc.), nor material outside of the building (e.g. asphaltic pavement).

This report was prepared by DCS for the Halton District School Board. Any use which a third party makes of the report, or reliance on, or decisions to be based on it, is the responsibility of such third parties.

APPENDIX A

FLOOR PLANS

DCS

Sep. 12. 2014 - 12:05pm - USER jebore
 Z:\02000 Series\702161-000\702161-00_SAM_SHERATT_PS.dwg



LEGEND:

- 15 FUNCTIONAL SPACE
- THROUGHOUT FUNCTIONAL SPACE
- FT ASBESTOS FLOOR TILE (NON-FRIABLE)

NOTES:

1. INTERIORS OF ALL FIRE DOORS ARE ASSUMED TO CONTAIN ASBESTOS.

REVISIONS:

| No. | Date: | By: | Revisions |
|-----|-------|-----|-----------|
| | | | |
| | | | |
| | | | |

REFERENCE:

- 1.



HALTON DISTRICT SCHOOL BOARD
 SAM SHERRATT PUBLIC SCHOOL

UPDATED ASBESTOS SURVEY
LOCATION OF ASBESTOS CONTAINING MATERIALS
FIRST FLOOR

| | | |
|------------------|-------------------|--------------------------|
| Drawn By: P.A.L. | Approved By: R.A. | Project No: 702161-000 |
| Date: SEPT. 2014 | Scale: N.T.S | Drawing No: 702161-000-1 |

APPENDIX B

LABORATORY REPORTS

EMSL CANADA INC.



EMSL Canada Inc.

10 Falconer Drive, Unit #3 Mississauga, ON L5N 3L8
Phone/Fax: 289-997-4602 / (289) 997-4607
<http://www.emsl.com> / torontolab@emsl.com

EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

Attn: Ryan Farnsworth
Decommissioning Consulting Services Ltd.
121 Granton Drive
Unit 11
Richmond Hill, ON L4B 3N4
Phone: (905) 882-5984
Fax: (905) 882-8962
Collected:
Received: 12/10/2012
Analyzed: 12/14/2012
Proj: 701723-000

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

Client Sample ID: 1-A **Lab Sample ID:** 551205971-0001
Sample Description: ROOM: 8/12"X12" VINYL FLOOR TILE, BEIGE WITH BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|--------------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Gray /Tan /Various | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Gray /Tan /Various | 0.0% | 100% | None Detected | |

Client Sample ID: 1-B **Lab Sample ID:** 551205971-0002
Sample Description: ROOM: 7/12"X12" VINYL FLOOR TILE, BEIGE WITH BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | White | 0% | 100% | None Detected | |

Client Sample ID: 1-C **Lab Sample ID:** 551205971-0003
Sample Description: ROOM: 31/12"X12" VINYL FLOOR TILE, BEIGE WITH BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | White | 0% | 100% | None Detected | |

Client Sample ID: 2-A **Lab Sample ID:** 551205971-0004
Sample Description: ROOM: 8/12"X12" VINYL FLOOR TILE, GREY WITH GREY FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|---------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Gray /Various | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Gray /Various | 0.0% | 100% | None Detected | |

Client Sample ID: 2-B **Lab Sample ID:** 551205971-0005
Sample Description: ROOM: 9B/12"X12" VINYL FLOOR TILE, GREY WITH GREY FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Gray/White | 0% | 100% | None Detected | |

Client Sample ID: 2-C **Lab Sample ID:** 551205971-0006
Sample Description: ROOM: 9B/12"X12" VINYL FLOOR TILE, GREY WITH GREY FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Gray/White | 0% | 100% | None Detected | |



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EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

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

Client Sample ID: 3-A **Lab Sample ID:** 551205971-0007
Sample Description: ROOM: 8/VINYL BASE BOARD, GREY

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|---------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Gray /Various | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Gray /Various | 0.0% | 100% | None Detected | |

Client Sample ID: 3-B **Lab Sample ID:** 551205971-0008
Sample Description: ROOM: 7/VINYL BASE BOARD, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Black | 0% | 100% | None Detected | |

Client Sample ID: 3-C **Lab Sample ID:** 551205971-0009
Sample Description: ROOM: 9/VINYL BASE BOARD, GREY

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Gray | 0% | 100% | None Detected | |

Client Sample ID: 4-A **Lab Sample ID:** 551205971-0010
Sample Description: ROOM: 10/12"X12" VINYL FLOOR TILE, DARK BEIGE WITH BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|--------------------|------------------------------|-------------|------------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Gray /Tan /Various | 0.0% | 99.0% | 0.99% Chrysotile | |
| TEM Grav. Reduction | 12/14/2012 | | Positive Stop (Not Analyzed) | | | |

Client Sample ID: 4-B **Lab Sample ID:** 551205971-0011
Sample Description: ROOM: 12/12"X12" VINYL FLOOR TILE, DARK BEIGE WITH BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|------------------------------|-------------|----------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | | Stop Positive (Not Analyzed) | | | |

Client Sample ID: 4-C **Lab Sample ID:** 551205971-0012
Sample Description: ROOM: 13/12"X12" VINYL FLOOR TILE, DARK BEIGE WITH BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|------------------------------|-------------|----------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | | Stop Positive (Not Analyzed) | | | |

Client Sample ID: 5-A **Lab Sample ID:** 551205971-0013
Sample Description: ROOM: 31/12"X12" VINYL FLOOR TILE, BEIGE WITH WIDE BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|------------|------------------------------|-------------|------------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Brown /Tan | 0.0% | 99.3% | 0.73% Chrysotile | |
| TEM Grav. Reduction | 12/14/2012 | | Positive Stop (Not Analyzed) | | | |

Client Sample ID: 5-B **Lab Sample ID:** 551205971-0014
Sample Description: ROOM: 31/12"X12" VINYL FLOOR TILE, BEIGE WITH WIDE BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|------------------------------|-------------|----------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | | Stop Positive (Not Analyzed) | | | |



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EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

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

Client Sample ID: 5-C **Lab Sample ID:** 551205971-0015

Sample Description: ROOM: 16H/12"X12" VINYL FLOOR TILE, BEIGE WITH WIDE BEIGE FLECK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|----------|------------------------------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | | | | | Stop Positive (Not Analyzed) |

Client Sample ID: 6-A **Lab Sample ID:** 551205971-0016

Sample Description: ROOM: 8/MASTIC, BLACK UNDER VINYL FLOOR TILE

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|-----------------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Brown /Various /Black | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Brown /Various /Black | 0.0% | 100% | None Detected | |

Client Sample ID: 6-B **Lab Sample ID:** 551205971-0017

Sample Description: ROOM: 7/MASTIC, BLACK UNDER VINYL FLOOR TILE

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Black | 0% | 100% | None Detected | |

Client Sample ID: 6-C **Lab Sample ID:** 551205971-0018

Sample Description: ROOM: 9B/MASTIC, BLACK UNDER VINYL FLOOR TILE

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Black | 0% | 100% | None Detected | |

Client Sample ID: 7-A **Lab Sample ID:** 551205971-0019

Sample Description: ROOM: 8/MASTIC, YELLOW UNDER BASE BOARD

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|---------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Brown /Yellow | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Brown /Yellow | 0.0% | 100% | None Detected | |

Client Sample ID: 7-B **Lab Sample ID:** 551205971-0020

Sample Description: ROOM: 7/MASTIC, YELLOW UNDER BASE BOARD

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan | 0% | 100% | None Detected | |

Client Sample ID: 7-C **Lab Sample ID:** 551205971-0021

Sample Description: ROOM: 9/MASTIC, YELLOW UNDER BASE BOARD

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan | 0% | 100% | None Detected | |

Client Sample ID: 8-A **Lab Sample ID:** 551205971-0022

Sample Description: ROOM: 8/CAULKING, WHITE ON INTERIOR DOOR FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|-------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Gray /White | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Gray /White | 0.0% | 100% | None Detected | |



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EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

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

Client Sample ID: 8-B **Lab Sample ID:** 551205971-0023

Sample Description: ROOM: 7/CAULKING, WHITE ON INTERIOR DOOR FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White | 0% | 100% | None Detected | |

Client Sample ID: 8-C **Lab Sample ID:** 551205971-0024

Sample Description: ROOM: 9/CAULKING, WHITE ON INTERIOR DOOR FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White | 0% | 100% | None Detected | |

Client Sample ID: 9-A **Lab Sample ID:** 551205971-0025

Sample Description: ROOM: 8/CAULKING, CREAM ON INTERIOR WINDOW FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|--------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | White /Cream | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | White /Cream | 0.0% | 100% | None Detected | |

Client Sample ID: 9-B **Lab Sample ID:** 551205971-0026

Sample Description: ROOM: 7/CAULKING, CREAM ON INTERIOR WINDOW FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Cream | 0% | 100% | None Detected | |

Client Sample ID: 9-C **Lab Sample ID:** 551205971-0027

Sample Description: ROOM: 9/CAULKING, CREAM ON INTERIOR WINDOW FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Cream | 0% | 100% | None Detected | |

Client Sample ID: 10-A **Lab Sample ID:** 551205971-0028

Sample Description: ROOM: 8/MASTIC, BROWN FROM CARPET

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|---------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Brown /Yellow | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Brown /Yellow | 0.0% | 100% | None Detected | |

Client Sample ID: 10-B **Lab Sample ID:** 551205971-0029

Sample Description: ROOM: 8/MASTIC, BROWN FROM CARPET

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan | 0% | 100% | None Detected | |

Client Sample ID: 10-C **Lab Sample ID:** 551205971-0030

Sample Description: ROOM: 8/MASTIC, BROWN FROM CARPET

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan | 0% | 100% | None Detected | |



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EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

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

Client Sample ID: 11-A **Lab Sample ID:** 551205971-0031
Sample Description: ROOM: 8/CAULKING, CLEAR, EXTERIOR DOOR FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Clear | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Clear | 0.0% | 100% | None Detected | |

Client Sample ID: 11-B **Lab Sample ID:** 551205971-0032
Sample Description: ROOM: 8/CAULKING, CLEAR, EXTERIOR DOOR FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Clear | 0% | 100% | None Detected | |

Client Sample ID: 11-C **Lab Sample ID:** 551205971-0033
Sample Description: ROOM: 8/CAULKING, CLEAR, EXTERIOR DOOR FRAME

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Clear | 0% | 100% | None Detected | |

Client Sample ID: 12-A **Lab Sample ID:** 551205971-0034
Sample Description: ROOM: 15/MASTIC, BLACK UNDER VINYL FLOOR TILE

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|--------------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | own /Various /Blac | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | own /Various /Blac | 0.0% | 100% | None Detected | |

Client Sample ID: 12-B **Lab Sample ID:** 551205971-0035
Sample Description: ROOM: 15/MASTIC, BLACK UNDER VINYL FLOOR TILE

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Black | 0% | 100% | None Detected | |

Client Sample ID: 12-C **Lab Sample ID:** 551205971-0036
Sample Description: ROOM: 15/MASTIC, BLACK UNDER VINYL FLOOR TILE

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Black | 0% | 100% | None Detected | |

Client Sample ID: 13-A **Lab Sample ID:** 551205971-0037
Sample Description: ROOM: 31/THERMAL INSULATION ON PIPE FITTING, CEMENTITIOUS

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|---------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Gray /Various | 0.0% | 100% | None Detected | |
| TEM Grav. Reduction | 12/14/2012 | Gray /Various | 0.0% | 100% | None Detected | |

Client Sample ID: 13-B **Lab Sample ID:** 551205971-0038
Sample Description: ROOM: 20/THERMAL INSULATION ON PIPE FITTING, CEMENTITIOUS

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Beige | 0% | 100% | None Detected | |



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EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

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

Client Sample ID: 13-C **Lab Sample ID:** 551205971-0039
Sample Description: ROOM: 117A/THERMAL INSULATION ON RAIN WATER LEADER HUB, CEMENTITIOUS

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Beige | 0% | 100% | None Detected | |

Client Sample ID: 14-A **Lab Sample ID:** 551205971-0040
Sample Description: ROOM: 8/2'X4' CEILING TILE, FISSURES ON 2' WITH BROWN BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White | 80% | 20% | None Detected | |

Client Sample ID: 14-B **Lab Sample ID:** 551205971-0041
Sample Description: ROOM: 7/2'X4' CEILING TILE, FISSURES ON 2' WITH BROWN BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White | 80% | 20% | None Detected | |

Client Sample ID: 14-C **Lab Sample ID:** 551205971-0042
Sample Description: ROOM: 9/2'X4' CEILING TILE, FISSURES ON 2' WITH BROWN BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/13/2012 | Tan/White | 80% | 20% | None Detected | |

Client Sample ID: 15-A **Lab Sample ID:** 551205971-0043
Sample Description: ROOM: 32/2'X4' CEILING TILE, DEEP WIDE RANDOM FISSURES WITH RED BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|----------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White/Pink | 90% | 10% | None Detected | |

Client Sample ID: 15-B **Lab Sample ID:** 551205971-0044
Sample Description: ROOM: 33/2'X4' CEILING TILE, DEEP WIDE RANDOM FISSURES WITH RED BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|----------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White/Pink | 90% | 10% | None Detected | |

Client Sample ID: 15-C **Lab Sample ID:** 551205971-0045
Sample Description: ROOM: 33/2'X4' CEILING TILE, DEEP WIDE RANDOM FISSURES WITH RED BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/13/2012 | | 90% | 10% | None Detected | |

Client Sample ID: 16-A **Lab Sample ID:** 551205971-0046
Sample Description: ROOM: 32/2'X4' CEILING TILE, FISSURE ON 2' WITH WHITE COLOURED FACE AND DARK BROWN BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White | 80% | 20% | None Detected | |



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EMSL Canada Order 551205971
Customer ID: 55DCSL97
Customer PO: 701723-000
Project ID:

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

Client Sample ID: 16-B **Lab Sample ID:** 551205971-0047

Sample Description: ROOM: 18/2'X4' CEILING TILE, FISSURE ON 2' WITH WHITE COLOURED FACE AND DARK BROWN BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/12/2012 | Tan/White | 80% | 20% | None Detected | |

Client Sample ID: 16-C **Lab Sample ID:** 551205971-0048

Sample Description: ROOM: 18/2'X4' CEILING TILE, FISSURE ON 2' WITH WHITE COLOURED FACE AND DARK BROWN BACK

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|------|---------------|-----------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM | 12/13/2012 | Tan/White | 80% | 20% | None Detected | |

Client Sample ID: 17-A **Lab Sample ID:** 551205971-0049

Sample Description: ROOM: 8/DRYWALL JOINT COMPOUND, WALL

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Tan /White | 0.0% | 100% | None Detected | |

Client Sample ID: 17-B **Lab Sample ID:** 551205971-0050

Sample Description: ROOM: 28/DRYWALL JOINT COMPOUND, CEILING

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/12/2012 | Tan /White | 0.0% | 100% | None Detected | |

Client Sample ID: 17-C **Lab Sample ID:** 551205971-0051

Sample Description: ROOM: 33B/DRYWALL JOINT COMPOUND, CEILING

| TEST | Analyzed Date | Color | Non-Asbestos | | Asbestos | Comment |
|---------------------|---------------|------------|--------------|-------------|---------------|---------|
| | | | Fibrous | Non-Fibrous | | |
| PLM Grav. Reduction | 12/13/2012 | Tan /White | 0.0% | 100% | None Detected | |

Analyst(s)

| | | |
|----------------|---------------------|------|
| Alice Feng | PLM | (3) |
| | PLM Grav. Reduction | (1) |
| Matthew Davis | PLM | (28) |
| | PLM Grav. Reduction | (15) |
| Merriam Haffar | TEM Grav. Reduction | (11) |


Kevin Pang
or other Approved Signatory

Any questions please contact Kevin Pang.

None Detected = <0.5%. 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. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 12/14/2012 16:23:26

APPENDIX C

**SAMPLE LIST OF SUSPECT ASBESTOS-CONTAINING BUILDING MATERIALS
FROM A *GUIDE TO THE REGULATION RESPECTING ASBESTOS ON
CONSTRUCTION PROJECTS AND IN BUILDINGS AND REPAIR OPERATIONS***

APPENDIX C

SAMPLE LIST OF SUSPECT ASBESTOS-CONTAINING BUILDING MATERIALS

There are an estimated 3,000 products that contain asbestos. In Ontario, asbestos was widely used in sprayed-on material and in pipe and boiler insulation until 1973⁽¹⁾. The use of many other asbestos-containing materials continued until the mid-1980s. Asbestos is still used in the manufacture of a limited number of products, including some floor tiles, cement products, friction materials and textiles. The following list was adapted from the United States Environmental Protection Agency's (EPA) *Sample List of Suspect Asbestos Containing Materials*⁽²⁾. It is not an all inclusive list but is intended as a general guide to show which types of building materials may contain asbestos.

Possible Asbestos-Containing Materials in Buildings

- Acoustical Plaster
- Adhesives
- Asphalt Floor Tile
- Base Flashing
- Blown-in (Loose Fill) Insulation
- Boiler Insulation
- Breaching Insulation
- Caulking/Putties
- Ceiling Tiles and Lay-in Panels
- Cement Pipes
- Cement Siding
- Cement Wallboard
- Construction Mastics (floor tile, carpet, ceiling tile, etc.)
- Cooling Towers
- Decorative Plaster
- Ductwork Flexible Fabric Connections
- Electrical Cloth
- Electrical Wiring Insulation
- Elevator Brake Shoes
- Elevator Equipment Panels
- Fire Doors
- Fireproofing Materials
- Flooring Backing
- Heating and Electrical Ducts
- High Temperature Gaskets
- HVAC Duct Insulation
- Joint Compounds
- Pipe Insulation (corrugated air-cell, block, etc.)
- Roofing Felt
- Roofing Shingles
- Spackling Compounds
- Sprayed-on Insulation
- Taping Compounds (thermal)
- Textured Paper Products
- Vinyl Floor Tile
- Vinyl Sheet Flooring
- Vinyl Wall Coverings
- Wallboard

(1) J.S. Dupre, J.F. Mustard & R.J. Uffin, *Report of the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario*, Ontario Ministry of the Attorney General, Toronto, Ontario, 1984, page 12.

(2) U.S. Environmental Protection Agency, <http://www.epa.gov/Region06/6pd/asbestos/asbmatl.htm>.