

**REPORT
TO
THE HALTON DISTRICT SCHOOL BOARD**

**UPDATED SURVEY OF
ASBESTOS-CONTAINING MATERIALS
DR. CHARLES BEST PUBLIC SCHOOL
3110 PARKGATE CRESCENT
BURLINGTON, ONTARIO**

Prepared by:

DECOMMISSIONING CONSULTING SERVICES

121 Granton Drive, Unit 11
Richmond Hill, Ontario L4B 3N4
CANADA

Tel: (905) 882-5984
Fax: (905) 882-8962
E-Mail: engineers@dcsltd.ca
Web Page: www.dcsltd.ca

September 2014

702161-000





DECOMMISSIONING CONSULTING SERVICES

121 Granton Drive, Unit 11
Richmond Hill, Ontario L4B 3N4
Canada

Tel 905 882 5984
Fax 905 882 8962
Email engineers@dcsltd.ca
www.dcsltd.ca

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
Dr. Charles Best Public School
3110 Parkgate Crescent
Burlington, 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

:an

TABLE OF CONTENTS

PAGE

LETTER OF TRANSMITTAL

1.0	INTRODUCTION	1-1
2.0	METHODOLOGY	2-1
2.1	SURVEY	2-1
2.2	ASSESSMENT	2-1
3.0	SURVEY RESULTS	3-1
4.0	DISCUSSION	4-1
5.0	USE AND LIMITATIONS OF THIS REPORT	5-1

LIST OF APPENDICES

AT REAR OF REPORT

A	Floor Plans
B	Laboratory Reports – EMSL Canada Inc.
C	Sample List of Suspect Asbestos-Containing Building Materials from <i>A Guide to the Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations</i>

LIST OF TABLES

PAGE

1.1	Bulk Material Samples (from O.Reg. 278/05).....	1-2
3.1	Summary of Laboratory Analyses of Bulk Samples.....	3-2
3.2	Summary of Asbestos-Containing Materials	3-6

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 Dr. Charles Best Public School, 3110 Parkgate Crescent, Burlington, 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 in were carried out by DCS staff on 8 and 28 January and 11 February 2013 in designated areas in the facility related to renovation activities performed in 2013 to determine the locations of building construction materials suspected of containing asbestos. DCS also reviewed information outlined in previous reports prepared by DCS for the Board entitled *Survey and Assessment of Asbestos-Containing Materials, Dr. Charles Best Public School, Burlington, Ontario* dated March 2007 and *Designated Substances and Hazardous Materials Survey, Dr. Charles Best Public School, 3110 Parkgate Crescent, Burlington, Ontario* dated February 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 friable asbestos-containing materials are present in Dr. Charles Best Public School in accessible applications:

- Thermal insulation applied to pipe fittings above and below ceilings throughout the facility; and
- Spray-applied cementitious fireproofing on roof decking in Stair C and Second Floor Mechanical Room.

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 throughout the facility; and
- Cement piping above and below ceilings throughout the facility.

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
DR. CHARLES BEST PUBLIC SCHOOL**

SAMPLE Nº	LOCATION	DESCRIPTION	ASBESTOS CONTENT
VFTA-J-1	Room 'J'	12"x12" vinyl floor tile; cream with black streaks	18.3% Chrysotile (TEM)
VFTB-COR1-1	Corridor 1	12"x12" vinyl floor tile; blue with red specks	None Detected (TEM)
VFTB-COR1-2	Corridor 1	12"x12" vinyl floor tile; blue with red specks	None Detected
VFTB-COR1-3	Corridor 1	12"x12" vinyl floor tile; blue with red specks	None Detected
VFTC-C-1	Room 'C'	12"x12" vinyl floor tile; beige with red streaks	None Detected (TEM)
VFTC-C-2	Room 'C'	12"x12" vinyl floor tile; beige with red streaks	None Detected
VFTC-C-3	Room 'C'	12"x12" vinyl floor tile; beige with red streaks	None Detected
VFTD-JKSK-1	Room JK/SK	12"x12" vinyl floor tile; green	1.1% Chrysotile (TEM)
VFTE-STR-1	Staircase 'A'	12"x12" vinyl floor tile; grey	11.7% Chrysotile (TEM)
VFTF-GYM-1	Gym	12"x12" vinyl floor tile; cream with grey streaks	None Detected (TEM)
VFTF-GYM-2	Gym	12"x12" vinyl floor tile; cream with grey streaks	None Detected
VFTF-GYM-3	Gym	12"x12" vinyl floor tile; cream with grey streaks	None Detected
SCTA-J-1	Room 'J'	2'x4' suspended ceiling tile; stippled surface with random pinhole	None Detected
SCTA-J-2	Room 'J'	2'x4' suspended ceiling tile; stippled surface with random pinhole	None Detected
SCTA-J-3	Room 'J'	2'x4' suspended ceiling tile; stippled surface with random pinhole	None Detected
SCTB-J-1	Room 'J'	2'x4' suspended ceiling tile; random short fissure	None Detected
SCTB-J-2	Room 'J'	2'x4' suspended ceiling tile; random short fissure	None Detected
SCTB-J-3	Room 'J'	2'x4' suspended ceiling tile; random short fissure	None Detected
TPS-WASHA-1	Girls Washroom 'A'	Transite pipe straight	None Detected
PFI-J-1	Room 'J'	Pipe fitting insulation	71% Chrysotile
PFI-J-2	Room 'J'	Pipe fitting insulation	76% Chrysotile
PFI-J-3	Room 'J'	Pipe fitting insulation	93% Chrysotile

SAMPLE N ^o	LOCATION	DESCRIPTION	ASBESTOS CONTENT
FP-UMR-1	Upper Mechanical Room	Fireproofing	9.5% Chrysotile
FP-UMR-2	Upper Mechanical Room	Fireproofing	6.8% Chrysotile
FP-UMR-3	Upper Mechanical Room	Fireproofing	8.3% Chrysotile
FP-UMR-4	Upper Mechanical Room	Fireproofing	11% Chrysotile
FP-UMR-5	Upper Mechanical Room	Fireproofing	12% Chrysotile
DWJC-C-1	Class 'C'	Drywall joint compound	None Detected
DWJC-C-3	Class 'C'	Drywall joint compound	None Detected
DWJC-C-3	Class 'C'	Drywall joint compound	None Detected
TXT-EXT-1	Exterior Vestibule	Texture coat ceiling	None Detected
TXT-EXT-2	Exterior Vestibule	Texture coat ceiling	None Detected
TXT-EXT-3	Exterior Vestibule	Texture coat ceiling	None Detected
WP-COR1-1	Corridor 1	Wall plaster	None Detected
WP-COR1-2	Corridor 1	Wall plaster	None Detected
WP-COR1-3	Corridor 1	Wall plaster	None Detected
WP-COR2-4	Corridor 2	Wall plaster	None Detected
WP-COR2-5	Corridor 2	Wall plaster	None Detected
1-A	Room C (103)	Mastic under non-asbestos-containing vinyl floor tiles – black coloured	None Detected (TEM) ⁽²⁾
1-B	Room D (103)	Mastic under non-asbestos-containing vinyl floor tiles – black coloured	None Detected ⁽²⁾
1-C	Room D (103)	Mastic under non-asbestos-containing vinyl floor tiles – black coloured	None Detected ⁽²⁾
2-A	Room C (103)	Vinyl baseboard – black colour	<0.25% Chrysotile (TEM) ^{(1) (2)}
2-B	Room D (103)	Vinyl baseboard – black colour	None Detected ⁽²⁾
2-C	Room E (107)	Vinyl baseboard – black colour	None Detected ⁽²⁾

SAMPLE N ^o	LOCATION	DESCRIPTION	ASBESTOS CONTENT
3-A	Room C (103)	Mastic on vinyl baseboard – cream coloured	<0.25% Chrysotile (TEM) ⁽¹⁾⁽²⁾
3-B	Room D (103)	Mastic on vinyl baseboard – cream coloured	None Detected ⁽²⁾
3-C	Room E (107)	Mastic on vinyl baseboard – cream coloured	None Detected ⁽²⁾
4-A	Room C (103)	Mastic on carpet – yellow coloured	None Detected (TEM) ⁽²⁾
4-B	Room D (103)	Mastic on carpet – yellow coloured	None Detected ⁽²⁾
4-C	Room JK/SK B (111)	Mastic on carpet – yellow coloured	None Detected ⁽²⁾
5-A	Room E (107)	12” x 12” vinyl floor tile – beige coloured with light and dark fleck	None Detected (TEM) ⁽²⁾
5-B	Room E (107)	12” x 12” vinyl floor tile – beige coloured with light and dark fleck	None Detected ⁽²⁾
5-C	Room E (107)	12” x 12” vinyl floor tile – beige coloured with light and dark fleck	None Detected ⁽²⁾
6-A	Room E (107)	Mastic under vinyl floor tile sample #5 – grey coloured	None Detected (TEM) ⁽²⁾
6-B	Room E (107)	Mastic under vinyl floor tile sample #5 – grey coloured	None Detected ⁽²⁾
6-C	Room E (107)	Mastic under vinyl floor tile sample #5 – grey coloured	None Detected ⁽²⁾
7-A	Corridor 2	12” x 12” vinyl floor tile – green coloured with black, purple and green fleck	None Detected (TEM) ⁽²⁾
7-B	Corridor 2	12” x 12” vinyl floor tile – green coloured with black, purple and green fleck	None Detected ⁽²⁾
7-C	Corridor 2	12” x 12” vinyl floor tile – green coloured with black, purple and green fleck	None Detected ⁽²⁾
8-A	Room JK/SK A (112)	12” x 12” vinyl floor tile – green coloured with light and dark fleck	None Detected (TEM) ⁽²⁾
8-B	Room JK/SK A (112)	12” x 12” vinyl floor tile – green coloured with light and dark fleck	None Detected ⁽²⁾
8-C	Room JK/SK B (111)	12” x 12” vinyl floor tile – green coloured with light and dark fleck	None Detected ⁽²⁾
9-A	Room C (103)	Caulking on interior window frame – brown coloured	None Detected (TEM) ⁽²⁾
9-B	Room D (103)	Caulking on interior window frame – brown coloured	None Detected
9-C	Room JK/SK B (111)	Caulking on exterior window frame – brown coloured	None Detected ⁽²⁾
10-A	Room JK/SK A (112)	Caulking on interior door frame – white coloured	None Detected (TEM) ⁽²⁾
10-B	Room AW (112A)	Caulking on interior door frame – white coloured	None Detected ⁽²⁾
10-C	Room JK/SK B (111)	Caulking on interior door frame – white coloured	None Detected ⁽²⁾

SAMPLE N ^o	LOCATION	DESCRIPTION	ASBESTOS CONTENT
11-A	Room JK/SK B (111)	Caulking on interior door frame – grey coloured	None Detected (TEM) ⁽²⁾
11-B	Room JK/SK B (111)	Caulking on interior door frame – grey coloured	None Detected ⁽²⁾
11-C	Room JK/SK B (111)	Caulking on exterior door frame – grey coloured	None Detected ⁽²⁾
12	Corridor 3	Cement pipe	4.2% Amosite 12.6% Chrysotile ⁽²⁾

NOTES:

Room designations in parentheses () in the “Location” column correspond to room designations presented on the floor plans provided in Appendix A.

- (1) “Asbestos-containing material” is defined as material that contains 0.5% or more asbestos by dry weight.
- (2) Sample results derived from a DCS report entitled *Designated Substances and Hazardous Materials Survey, Dr. Charles Best Public School, 3110 Parkgate Crescent, Burlington, Ontario* dated February 2013

Chrysotile = Chrysotile asbestos

Amosite = Amosite 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.

TABLE 3.2

**SUMMARY OF ASBESTOS-CONTAINING MATERIALS
DR. CHARLES BEST PUBLIC SCHOOL**

LEVEL	ROOM	MATERIAL	ASBESTOS CONTENT	LOCATION WITHIN SPACE	ESTIMATED QUANTITY	FRIABLE OR NON-FRIABLE	CONDITION	COMMENTS
1	101							NACMO
1	102							NACMO
1	103							NACMO
1	104							NACMO
1	105							NACMO
1	106							NACMO
1	107							NACMO
1	108							NACMO
1	111							NACMO
1	111A							NACMO
1	112							NACMO
1	112A							NACMO
1	Boy's Change Room							NACMO
1	Boy's Washroom A	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	<5 fittings	Friable	G	
1	Boy's Washroom B	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	<5 fittings	Friable	G	
1	Caretaker's Room A	Pipe fitting insulation	71%-93% Chrysotile	Below ceiling	5-10 fittings	Friable	G	
1	Caretaker's Room B	Pipe fitting insulation	71%-93% Chrysotile	Below ceiling	5-10 fittings	Friable	G	

LEVEL	ROOM	MATERIAL	ASBESTOS CONTENT	LOCATION WITHIN SPACE	ESTIMATED QUANTITY	FRIABLE OR NON-FRIABLE	CONDITION	COMMENTS
1	Chair Storage Room	Pipe fitting insulation	71%-93% Chrysotile	Below ceiling	<5 fittings	Friable	G	
		Cement piping	4.2% Amosite 12.6% Chrysotile	Below ceiling	<3 m	Non-Friable	G	
		12" vinyl floor tiles	18.3% Chrysotile	Floor	10-50 sq. m	Non-Friable	G	
1	Classroom G	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	<5 fittings	Friable	G	Vinyl floor tiles were reportedly installed in 2010.
1	Classroom H							NACMO Asbestos-containing vinyl floor tiles may be present under carpet
1	Classroom I							NACMO Asbestos-containing vinyl floor tiles may be present under carpet
1	Classroom J	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	10-20 fittings	Friable	G	
		12" vinyl floor tiles	18.3% Chrysotile	10% Floor	<10 sq. m	Non-Friable	G	Asbestos-containing vinyl floor tiles may be present under carpet
1	Classroom K							NACMO Asbestos-containing vinyl floor tiles may be present under carpet
1	Classroom L							NACMO Asbestos-containing vinyl floor tiles may be present under carpet
1	Classroom M							NACMO Asbestos-containing vinyl floor tiles may be present under carpet
1	Corridor 1	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	<5 fittings	Friable	G	

LEVEL	ROOM	MATERIAL	ASBESTOS CONTENT	LOCATION WITHIN SPACE	ESTIMATED QUANTITY	FRIABLE OR NON-FRIABLE	CONDITION	COMMENTS
1	Corridor 2	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	5-10 fittings	Friable	G	
1	Corridor 3	Cement piping	4.2% Amosite 12.6% Chrysotile	Above ceiling and inside pipe chase	<3 m	Non-Friable	G	
1	Corridor 4							NACMO
1	Exterior Storage Room	Pipe fitting insulation	71%-93% Chrysotile	Below ceiling	5-10 fittings	Friable	G	
1	Girls Change Room							NACMO
1	Girls Washroom A	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	10-20 fittings	Friable	G	
		Cement piping	4.2% Amosite 12.6% Chrysotile	Above ceiling	<3 m	Non-Friable	G	
1	Girls Washroom B	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	5-10 fittings	Friable	G	
1	Gym	Pipe fitting insulation	71%-93% Chrysotile	Below ceiling	10-20 fittings	Friable	G	
1	Gym Storage Room	Pipe fitting insulation	71%-93% Chrysotile	Above and below ceiling	10-20 fittings	Friable	G	
		Cement piping	4.2% Amosite 12.6% Chrysotile	Above and below ceiling	3-15 m	Non-Friable	G	
1	Library Resource Room	Cement piping	4.2% Amosite 12.6% Chrysotile	Above ceiling	3-15 m	Non-Friable	G	
1	Main Concourse	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	>20 fittings	Friable	G	
		Cement piping	4.2% Amosite 12.6% Chrysotile	Above ceiling	3-15 m	Non-Friable	G	
1	Music Room							NACMO
1	Nurse Room B							NACMO
1	Nurse Washroom	Pipe fitting insulation	71%-93% Chrysotile	Above ceiling	5-10 fittings	Friable	G	
1	Office							NACMO
1	Principal's Office							NACMO
	Vice Principal's Office							NACMO

LEVEL	ROOM	MATERIAL	ASBESTOS CONTENT	LOCATION WITHIN SPACE	ESTIMATED QUANTITY	FRIABLE OR NON-FRIABLE	CONDITION	COMMENTS
1	Special Ed. Room							NACMO
1	Staff Room	12" vinyl floor tiles	18.3% Chrysotile	Floor	50-100 sq. m	Non-Friable	G	
1	Stair A	Pipe fitting insulation	71%-93% Chrysotile	Below ceiling	<5 fittings	Friable	G	
		Cement piping	4.2% Amosite 12.6% Chrysotile	Below ceiling	<3 m	Non-Friable	G	
		12" vinyl floor tiles (grey coloured)	11.7% Chrysotile	50% Floor	<10 sq. m	Non-Friable	G	
1	Stair B	12" vinyl floor tiles (grey coloured)	11.7% Chrysotile	50% Floor	<10 sq. m	Non-Friable	G	
1	Stair C	Cementitious fireproofing	6.8%-12% Chrysotile	Metal roof decking	<10 sq. m	Friable	G	
1	Supply Room A	12" vinyl floor tiles	18.3% Chrysotile	Floor	10-50 sq. m	Non-Friable	G	
2	Second Floor Mechanical Room	Cementitious fireproofing	6.8%-12% Chrysotile	Metal roof decking	10-50 sq. m	Friable	G	

NOTES:

< = Less than.

> = Greater than.

Chrysotile = Chrysotile Asbestos

Amosite = Amosite 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

LEGEND:

- 1 FUNCTIONAL SPACE
- THROUGHOUT FUNCTIONAL SPACE
- * ABOVE CEILING ASSEMBLY
- Pf ASBESTOS ON PIPE FITTINGS ONLY (FRIABLE)
- f/P ASBESTOS FIREPROOFING (FRIABLE)
- FT ASBESTOS VINYL FLOOR TILES (NON-FRIABLE)
- CP ASBESTOS CEMENT PRODUCT (NON-FRIABLE)

NOTES:

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

REVISIONS:

No.	Date:	By:	Revisions

REFERENCE:

- 1.

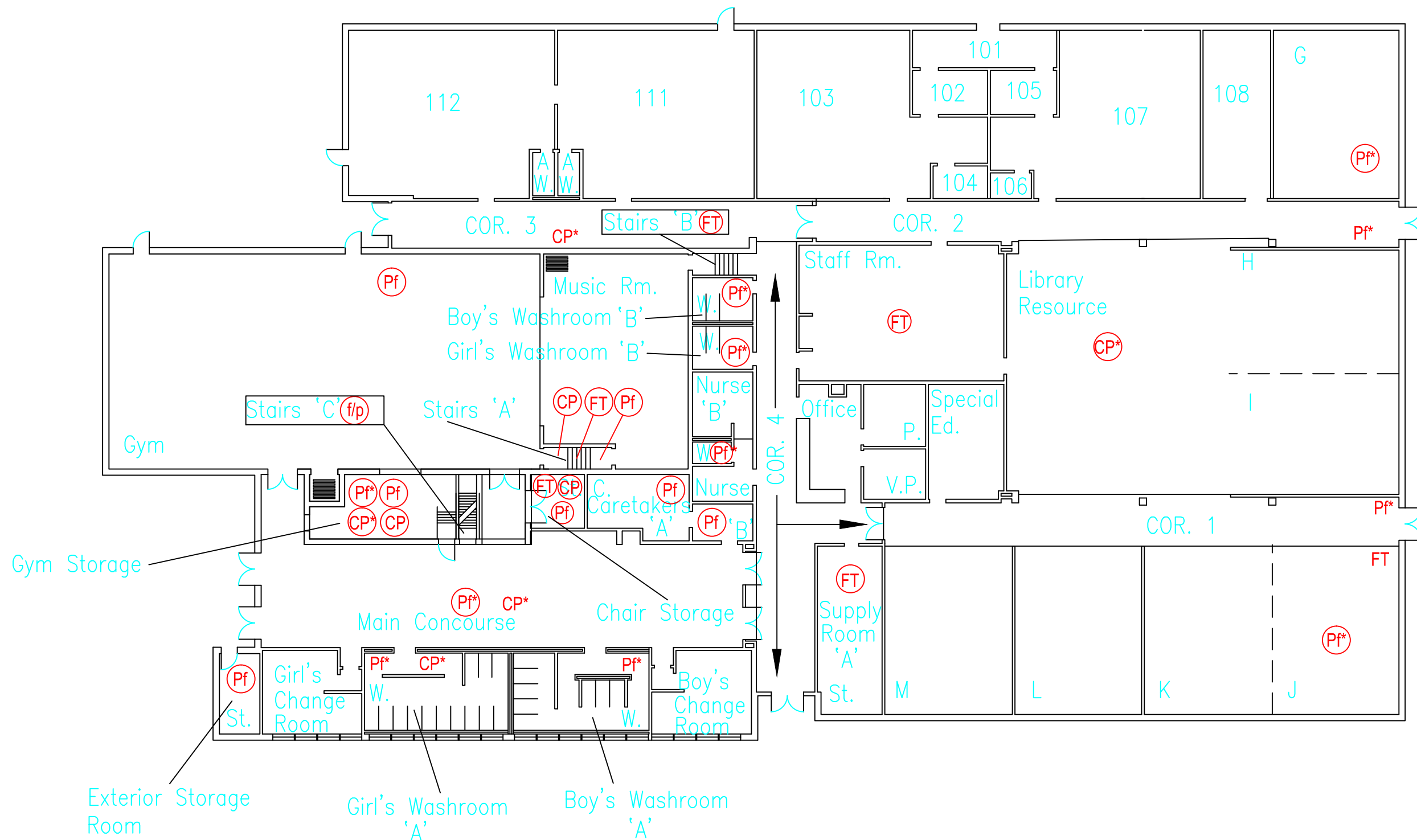


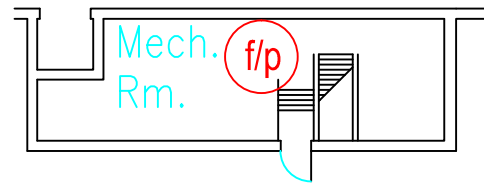
DECOMMISSIONING CONSULTING SERVICES

HALTON DISTRICT SCHOOL BOARD

DR. CHARLES BEST PUBLIC SCHOOL
UPDATED SURVEY OF ASBESTOS-CONTAINING MATERIALS
 LOCATION OF ASBESTOS CONTAINING MATERIALS
 FIRST FLOOR

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





LEGEND:

- 1 FUNCTIONAL SPACE
- THROUGHOUT FUNCTIONAL SPACE
- f/P ASBESTOS FIREPROOFING (FRIABLE)

NOTES:

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

REVISIONS:

No.	Date:	By:	Revisions

REFERENCE:

- 1.



DECOMMISSIONING CONSULTING SERVICES

HALTON DISTRICT SCHOOL BOARD

DR. CHARLES BEST PUBLIC SCHOOL

UPDATED SURVEY OF

ASBESTOS-CONTAINING MATERIALS

LOCATION OF ASBESTOS CONTAINING

MATERIALS

SECOND FLOOR

Drawn By: P.A.L.	Approved By: J.D.	Project No: 702161-000
Date: SEPT. 2014	Scale: N.T.S	Drawing No: 702161-000-2

APPENDIX B

LABORATORY REPORTS

EMSL CANADA INC.



EMSL Analytical, Inc.

490 Rowley Road, Depew, NY 14043

Phone: (716) 651-0030 Fax: (716) 651-0394 Email: buffalolab@emsl.com

Attn: **Ryan Dillon**
Decommissioning Consulting Services Ltd.
121 Granton Drive, Unit 11
Richmond Hill, Ontario, CN L4B3N4

Fax: (905) 882-8962 Phone: (905) 882-5984
Project: **49131 / Dr. C. Best**

Customer ID: DCSL97
Customer PO: 49131
Received: 01/10/07 10:00 AM
EMSL Order: 140700086
EMSL Proj:
Analysis Date: 1/16/2007
Report Date: 1/22/2007

Polarized Light Microscopy (PLM) - Point Count Performed by EPA 600/R-93/116
Method with Gravimetric Reduction and 400 Point Count

SAMPLE ID	LOCATION	APPEARANCE	(% Matrix Organic Acid		ASBESTOS % TYPES	NON- ASBESTOS % Fibrous	NON- ASBESTOS % NON-FIBROUS
WP-COR1-1 140700086-0034	wall plaster corridor 1 pillars	White/Green	12.5	64.2	None Detected		23.4 Non-fibrous (other)
WP-COR1-2 140700086-0035	wall plaster corridor 1 pillars	White/Gray	8.8	59.6	None Detected		31.6 Non-fibrous (other)
WP-COR1-3 140700086-0036	wall plaster corridor 1 pillars	White/Gray	12.7	59.8	None Detected		27.5 Non-fibrous (other)
WP-COR2-4 140700086-0037	wall plaster corridor 2 pillars	White/Gray	10.8	53.1	None Detected		36.0 Non-fibrous (other)
WP-COR2-5 140700086-0038	wall plaster corridor 2 pillars	White/Gray	7.2	47.9	None Detected		44.9 Non-fibrous (other)

Analytical Sensitivity <0.5% Asbestos.

Analyst(s)

Rhonda McGee (2)

Tom Hanes (3)

or other approved signatory

Disclaimers: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. EMSL Analytical Inc. suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical Inc. This report must not be used to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layer samples. EMSL Analytical Inc. liability is limited to the cost of sample analysis. Samples received in good condition unless otherwise noted.



EMSL Analytical, Inc.

490 Rowley Road, Depew, NY 14043

Phone: (716) 651-0030 Fax: (716) 651-0394 Email: buffalolab@emsl.com

Attn: **Ryan Dillon**
Decommissioning Consulting Services Ltd.
121 Granton Drive, Unit 11
Richmond Hill, Ontario, CN L4B3N4

Fax: (905) 882-8962 Phone: (905) 882-5984
Project: **49131 / Dr. C. Best**

Customer ID: DCSL97
Customer PO: 49131
Received: 01/10/07 10:00 AM
EMSL Order: 140700086
EMSL Proj:
Analysis Date: 1/19/2007
Report Date: 1/22/2007

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
VFTA-J-2 140700086-0001	12"x12" VFT cream w/black streaks class room .l				Not Analyzed
Positive Stop					
VFTA-J-3 140700086-0002	12"x12" VFT cream w/black streaks class room .l				Not Analyzed
Positive Stop					
VFTB-COR1-2 140700086-0003	12"x12" VFT blue w/red specks corridor 1	Green Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
VFTB-COR1-3 140700086-0004	12"x12" VFT blue w/red specks corridor 1	Green Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
VFTC-C-2 140700086-0005	12"x12" VFT beige w/red streaks class room c	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
VFTC-C-3 140700086-0006	12"x12" VFT beige w/red streaks class room c	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
VFTD-JKSK-2 140700086-0007	12"x12" VFT green JK/SK class room				Not Analyzed
Positive Stop					
VFTD-JKSK-3 140700086-0008	12"x12" VFT green JK/SK class room				Not Analyzed
Positive Stop					
VFTE-STRA-2 140700086-0009	12"x12" VFT gray staircase A				Not Analyzed
Positive Stop					

Analyst(s) _____

Rhonda McGee (11)
Tom Hanes (22)

Rhonda McGee

or other approved signatory

Unless otherwise noted, the results in this report have not been blank corrected. Samples received in good condition unless otherwise noted.

Analysis performed by EMSL Buffalo (NVLAP #200056-0), NY ELAP #11606



EMSL Analytical, Inc.

490 Rowley Road, Depew, NY 14043

Phone: (716) 651-0030 Fax: (716) 651-0394 Email: buffalolab@emsl.com

Attn: **Ryan Dillon**
Decommissioning Consulting Services Ltd.
121 Granton Drive, Unit 11
Richmond Hill, Ontario, CN L4B3N4

Fax: (905) 882-8962 Phone: (905) 882-5984
Project: **49131 / Dr. C. Best**

Customer ID: DCSL97
Customer PO: 49131
Received: 01/10/07 10:00 AM
EMSL Order: 140700086
EMSL Proj:
Analysis Date: 1/19/2007
Report Date: 1/22/2007

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
VFTE-STRA-3 140700086-0010	12"x12" VFT gray staircase A				Not Analyzed
Positive Stop					
VFTF-GYM-2 140700086-0011	12"x12" VFT cream w/gray streaks gym storage	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
VFTF-GYM-3 140700086-0012	12"x12" VFT cream w/gray streaks gym storage	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
SCTA-J-1 140700086-0013	2'x4' SCT stippled surface w/RPH classroom .1	Gray Fibrous Homogeneous	50.00% Cellulose 30.00% Min. Wool	20.00% Non-fibrous (other)	None Detected
SCTA-J-2 140700086-0014	2'x4' SCT stippled surface w/RPH classroom .1	Gray Fibrous Homogeneous	50.00% Cellulose 30.00% Min. Wool	20.00% Non-fibrous (other)	None Detected
SCTA-J-3 140700086-0015	2'x4' SCT stippled surface w/RPH classroom .1	Gray Fibrous Homogeneous	40.00% Cellulose 30.00% Min. Wool	30.00% Non-fibrous (other)	None Detected
SCTB-J-1 140700086-0016	2'x4' SCT random short fissure classroom .1	Gray Fibrous Homogeneous	30.00% Cellulose 30.00% Min. Wool	40.00% Non-fibrous (other)	None Detected
SCTB-J-2 140700086-0017	2'x4' SCT random short fissure classroom .1	Gray Fibrous Homogeneous	30.00% Cellulose 30.00% Min. Wool	40.00% Non-fibrous (other)	None Detected
SCTB-J-3 140700086-0018	2'x4' SCT random short fissure classroom .1	Gray Fibrous Homogeneous	40.00% Cellulose 30.00% Min. Wool	30.00% Non-fibrous (other)	None Detected

Analyst(s)
Rhonda McGee (11)
Tom Hanes (22)

Rhonda McGee
or other approved signatory

Unless otherwise noted, the results in this report have not been blank corrected. Samples received in good condition unless otherwise noted.
Analysis performed by EMSL Buffalo (NVLAP #200056-0), NY ELAP #11606



EMSL Analytical, Inc.

490 Rowley Road, Depew, NY 14043

Phone: (716) 651-0030 Fax: (716) 651-0394 Email: buffalolab@emsl.com

Attn: **Ryan Dillon**
Decommissioning Consulting Services Ltd.
121 Granton Drive, Unit 11
Richmond Hill, Ontario, CN L4B3N4

Customer ID: DCSL97
Customer PO: 49131
Received: 01/10/07 10:00 AM
EMSL Order: 140700086

Fax: (905) 882-8962 Phone: (905) 882-5984
Project: 49131 / Dr. C. Best

EMSL Proj:
Analysis Date: 1/19/2007
Report Date: 1/22/2007

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
TPS-WASHA-1 140700086-0019	transite pipe straight girls student washroom A	Gray Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
PFI-J-1 140700086-0020	pipe fitting insulation class J	Gray Fibrous Homogeneous		29.00% Non-fibrous (other)	71.00% Chrysotile
PFI-J-2 140700086-0021	pipe fitting insulation class J	Gray Fibrous Homogeneous		24.00% Non-fibrous (other)	76.00% Chrysotile
PFI-J-3 140700086-0022	pipe fitting insulation class J	Gray Fibrous Homogeneous		7.00% Non-fibrous (other)	93.00% Chrysotile
FP-UMR-1 140700086-0023	fireproofing upper mechanical room	Gray Fibrous Homogeneous		90.50% Non-fibrous (other)	9.50% Chrysotile
FP-UMR-2 140700086-0024	fireproofing upper mechanical room	Gray Fibrous Homogeneous		93.20% Non-fibrous (other)	6.80% Chrysotile
FP-UMR-3 140700086-0025	fireproofing upper mechanical room	Gray Fibrous Homogeneous		91.70% Non-fibrous (other)	8.30% Chrysotile
FP-UMR-4 140700086-0026	fireproofing upper mechanical room	Gray Fibrous Homogeneous		89.00% Non-fibrous (other)	11.00% Chrysotile
FP-UMR-5 140700086-0027	fireproofing upper mechanical room	Gray Fibrous Homogeneous		88.00% Non-fibrous (other)	12.00% Chrysotile

Analyst(s) _____

Rhonda McGee (11)
Tom Hanes (22)

Rhonda McGee

or other approved signatory

Unless otherwise noted, the results in this report have not been blank corrected. Samples received in good condition unless otherwise noted.
Analysis performed by EMSL Buffalo (NVLAP #200056-0), NY ELAP #11606



EMSL Analytical, Inc.

490 Rowley Road, Depew, NY 14043

Phone: (716) 651-0030 Fax: (716) 651-0394 Email: buffalolab@emsl.com

Attn: **Ryan Dillon**
Decommissioning Consulting Services Ltd.
121 Granton Drive, Unit 11
Richmond Hill, Ontario, CN L4B3N4

Fax: (905) 882-8962 Phone: (905) 882-5984
Project: **49131 / Dr. C. Best**

Customer ID: DCSL97
Customer PO: 49131
Received: 01/10/07 10:00 AM
EMSL Order: 140700086
EMSL Proj:
Analysis Date: 1/19/2007
Report Date: 1/22/2007

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
DWJC-C-1 140700086-0028	drywall joint compound class C	White Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
DWJC-C-2 140700086-0029	drywall joint compound class C	White Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
DWJC-C-3 140700086-0030	drywall joint compound class C	White Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
TXT-EXT-1 140700086-0031	texture coat ceiling exterior vestibule	Gray/White Non-Fibrous Heterogeneous		100.00% Non-fibrous (other)	None Detected
TXT-EXT-2 140700086-0032	texture coat ceiling exterior vestibule	Gray/White Non-Fibrous Heterogeneous		100.00% Non-fibrous (other)	None Detected
TXT-EXT-3 140700086-0033	texture coat ceiling exterior vestibule	Gray/White Non-Fibrous Heterogeneous		100.00% Non-fibrous (other)	None Detected

Analytical Sensitivity <0.5% Asbestos.

Analyst(s) _____
Rhonda McGee (11)
Tom Hanes (22)

Rhonda McGee

or other approved signatory

Unless otherwise noted, the results in this report have not been blank corrected. Samples received in good condition unless otherwise noted.
Analysis performed by EMSL Buffalo (NVLAP #200056-0), NY ELAP #11606



EMSL Analytical, Inc.

490 Rowley Road, Depew, NY 14043

Phone: (716) 651-0030 Fax: (716) 651-0394 Email: buffalolab@emsl.com

Attn: **Ryan Dillon**
Decommissioning Consulting Services Ltd.
121 Granton Drive, Unit 11
Richmond Hill, Ontario, CN L4B3N4

Fax: (905) 882-8962 Phone: (905) 882-5984
Project: **49131 / Dr. C. Best**

Customer ID: DCSL97
Customer PO: 49131
Received: 01/10/07 10:00 AM
EMSL Order: 140700086
EMSL Proj:
Analysis Date: 1/16/2007
Report Date: 1/22/2007

Asbestos Analysis of Non-Friable Organically Bound materials by Transmission Electron Microscopy via NYS ELAP Method 198.4

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES	% TOTAL ASBESTOS
VFTA-J-1 140700086-0039	12"x12" VFT cream w/black streaks class room J	Gray	81.7	None	18.3% Chrysotile	18.3
VFTB-COR1-1 140700086-0040	12"x12" VFT blue w/red specks corridor 1	Green	100.0	None	No Asbestos Detected	
VFTC-C-1 140700086-0041	12"x12" VFT beige w/red streaks class room c	Gray/Beige	100.0	None	No Asbestos Detected	
VFTD-JKSK-1 140700086-0042	12"x12" VFT green JK/SK class room	Green	98.9	None	1.1% Chrysotile	1.1
VFTE-STR-1 140700086-0043	12"x12" VFT gray staircase A	Gray	88.3	None	11.7% Chrysotile	11.7
VFTF-GYM-1 140700086-0044	12"x12" VFT cream w/gray streaks gym storage	Gray	100.0	None	No Asbestos Detected	

Analytical Sensitivity <0.5% Asbestos

Analyst(s) _____
Ken Najuch (6)

Rhonda Mc Gee

or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted.

ACCREDITATIONS: NVLAP #200056-0 and NY STATE ELAP #11606



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 551300528
 Customer ID: 55DCSL97
 Customer PO: 701754-000
 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: 1/29/2013
Analyzed: 2/01/2013

Proj: DR. CHARLES BEST P.S.

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:** 551300528-0001

Sample Description: ROOM: C/MASTIC: BLACK COLOURED UNDER NON-ASBESTOS VINYL FLOOR TILE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Black	0.0%	100%	None Detected	

Client Sample ID: 1-B **Lab Sample ID:** 551300528-0002

Sample Description: ROOM: D/MASTIC: BLACK COLOURED UNDER NON-ASBESTOS VINYL FLOOR TILE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Black	0%	100%	None Detected	

Client Sample ID: 1-C **Lab Sample ID:** 551300528-0003

Sample Description: ROOM: D/MASTIC: BLACK COLOURED UNDER NON-ASBESTOS VINYL FLOOR TILE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Black	0%	100%	None Detected	

Client Sample ID: 2-A **Lab Sample ID:** 551300528-0004

Sample Description: ROOM: C/VINYL BASEBOARD - BLACK COLOURED

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Black	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Black	0.0%	100%	<0.25% Chrysotile	

Client Sample ID: 2-B **Lab Sample ID:** 551300528-0005

Sample Description: ROOM: D/VINYL BASEBOARD - BLACK COLOURED

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Black	0%	100%	None Detected	

Client Sample ID: 2-C **Lab Sample ID:** 551300528-0006

Sample Description: ROOM: E/VINYL BASEBOARD - BLACK COLOURED

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Black	0%	100%	None Detected	



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 551300528
 Customer ID: 55DCSL97
 Customer PO: 701754-000
 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: 551300528-0007

Sample Description: ROOM: C/MASTIC - CREAM COLOURED FROM VINYL BASEBOARD

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Tan	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Tan	0.0%	100%	<0.25% Chrysotile	

Client Sample ID: 3-B

Lab Sample ID: 551300528-0008

Sample Description: ROOM: D/MASTIC - CREAM COLOURED FROM VINYL BASEBOARD

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Brown/Tan	0%	100%	None Detected	

Client Sample ID: 3-C

Lab Sample ID: 551300528-0009

Sample Description: ROOM: E/MASTIC - CREAM COLOURED FROM VINYL BASEBOARD

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Brown/Tan	0%	100%	None Detected	

Client Sample ID: 4-A

Lab Sample ID: 551300528-0010

Sample Description: ROOM: C/MASTIC - YELLOW COLOURED FROM CARPET

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Tan	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Tan	0.0%	100%	None Detected	

Client Sample ID: 4-B

Lab Sample ID: 551300528-0011

Sample Description: ROOM: D/MASTIC - YELLOW COLOURED FROM CARPET

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Tan	0%	100%	None Detected	

Client Sample ID: 4-C

Lab Sample ID: 551300528-0012

Sample Description: ROOM: B/MASTIC - YELLOW COLOURED FROM CARPET

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Tan	0%	100%	None Detected	

Client Sample ID: 5-A

Lab Sample ID: 551300528-0013

Sample Description: ROOM: E/12' x 12" VINYL FLOOR TILE - BEIGE COLOURED WITH LIGHT AND DARK FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	White /Beige	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	White /Beige	0.0%	100%	None Detected	

Client Sample ID: 5-B

Lab Sample ID: 551300528-0014

Sample Description: ROOM: E/12' x 12" VINYL FLOOR TILE - BEIGE COLOURED WITH LIGHT AND DARK FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	White/Various	0%	100%	None Detected	



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 551300528
 Customer ID: 55DCSL97
 Customer PO: 701754-000
 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:** 551300528-0015

Sample Description: ROOM: E/12' x 12" VINYL FLOOR TILE - BEIGE COLOURED WITH LIGHT AND DARK FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	White/Various	0%	100%	None Detected	

Client Sample ID: 6-A **Lab Sample ID:** 551300528-0016

Sample Description: ROOM: E/MASTIC - GREY COLOURED UNDER VINYL FLOOR TILE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Gray	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Gray	0.0%	100%	None Detected	

Client Sample ID: 6-B **Lab Sample ID:** 551300528-0017

Sample Description: ROOM: E/MASTIC - GREY COLOURED UNDER VINYL FLOOR TILE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Gray	0%	100%	None Detected	

Client Sample ID: 6-C **Lab Sample ID:** 551300528-0018

Sample Description: ROOM: E/MASTIC - GREY COLOURED UNDER VINYL FLOOR TILE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Gray	0%	100%	None Detected	

Client Sample ID: 7-A **Lab Sample ID:** 551300528-0019

Sample Description: COR. 2/12' x 12" VINYL FLOOR TILE - GREEN COLOURED WITH BLACK, PURPLE AND GREEN FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Green	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Green	0.0%	100%	None Detected	

Client Sample ID: 7-B **Lab Sample ID:** 551300528-0020

Sample Description: COR. 2/12' x 12" VINYL FLOOR TILE - GREEN COLOURED WITH BLACK, PURPLE AND GREEN FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Green	0%	100%	None Detected	

Client Sample ID: 7-C **Lab Sample ID:** 551300528-0021

Sample Description: COR. 2/12' x 12" VINYL FLOOR TILE - GREEN COLOURED WITH BLACK, PURPLE AND GREEN FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Green	0%	100%	None Detected	

Client Sample ID: 8-A **Lab Sample ID:** 551300528-0022

Sample Description: ROOM: A/12' x 12" VINYL FLOOR TILE - GREEN COLOURED WITH LIGHT AND DARK FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Green	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Green	0.0%	100%	None Detected	



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 551300528
 Customer ID: 55DCSL97
 Customer PO: 701754-000
 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:** 551300528-0023

Sample Description: ROOM: A/12' x 12" VINYL FLOOR TILE - GREEN COLOURED WITH LIGHT AND DARK FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Green	0%	100%	None Detected	

Client Sample ID: 8-C **Lab Sample ID:** 551300528-0024

Sample Description: ROOM: B/12' x 12" VINYL FLOOR TILE - GREEN COLOURED WITH LIGHT AND DARK FLECK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Green	0%	100%	None Detected	

Client Sample ID: 9-A **Lab Sample ID:** 551300528-0025

Sample Description: ROOM: C/CAULKING - BROWN COLOURED INTERIOR WINDOW FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Brown	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Brown	0.0%	100%	None Detected	

Client Sample ID: 9-B **Lab Sample ID:** 551300528-0026

Sample Description: ROOM: D/CAULKING - BROWN COLOURED INTERIOR WINDOW FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Brown	0%	100%	None Detected	

Client Sample ID: 9-C **Lab Sample ID:** 551300528-0027

Sample Description: EXT B/CAULKING - BROWN COLOURED EXTERIOR WINDOW FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Brown	0%	100%	None Detected	

Client Sample ID: 10-A **Lab Sample ID:** 551300528-0028

Sample Description: ROOM: A/CAULKING - WHITE COLOURED INTERIOR DOOR FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	White	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	White	0.0%	100%	None Detected	

Client Sample ID: 10-B **Lab Sample ID:** 551300528-0029

Sample Description: ROOM: AW/CAULKING - WHITE COLOURED INTERIOR DOOR FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	White	0%	100%	None Detected	

Client Sample ID: 10-C **Lab Sample ID:** 551300528-0030

Sample Description: ROOM: B/CAULKING - WHITE COLOURED INTERIOR DOOR FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	White	0%	100%	None Detected	



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 551300528
Customer ID: 55DCSL97
Customer PO: 701754-000
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: 551300528-0031

Sample Description: ROOM: B/CAULKING - GREY COLOURED INTERIOR DOOR FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Gray	0.0%	100%	None Detected	
TEM Grav. Reduction	2/01/2013	Gray	0.0%	100%	None Detected	

Client Sample ID: 11-B

Lab Sample ID: 551300528-0032

Sample Description: ROOM: B/CAULKING - GREY COLOURED INTERIOR DOOR FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Gray	0%	100%	None Detected	

Client Sample ID: 11-C

Lab Sample ID: 551300528-0033

Sample Description: EXT B/CAULKING - GREY COLOURED EXTERIOR DOOR FRAME

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	1/31/2013	Gray	0%	100%	None Detected	

Client Sample ID: 12

Lab Sample ID: 551300528-0034

Sample Description: COR. E/CEMENT PIPE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	1/31/2013	Gray	0.0%	83.2%	4.2% Amosite	
TEM Grav. Reduction	2/01/2013				12.6% Chrysotile	
						Positive Stop (Not Analyzed)

Analyst(s)

Matthew Davis	PLM	(22)
	PLM Grav. Reduction	(12)
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: 02/01/2013 12:05:55

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>.