

**REPORT
TO
THE HALTON DISTRICT SCHOOL BOARD**

**SURVEY AND ASSESSMENT OF
ASBESTOS-CONTAINING MATERIALS
SHERIDAN PUBLIC SCHOOL
OAKVILLE, ONTARIO**

Prepared by:

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Revised August 2013

701931-000





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701931-000

30 August 2013

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

Attention: Mr. Terry De Medeiros
Regional Supervisor, Facilities Maintenance

Re: **Revised Survey of Asbestos-containing Materials**
Sheridan Public School
Oakville, Ontario

Dear Mr. De Medeiros:

We are pleased to submit our revised report on the survey of asbestos-containing materials. This report has been updated to include information regarding the friability of asbestos-containing materials on the floor plan(s).

We trust that the enclosed is suitable for your current purposes. Please call if you have any questions.

Yours very truly,

DECOMMISSIONING CONSULTING SERVICES

A handwritten signature in black ink, appearing to read 'Rein Andre', written in a cursive style.

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

Enc.

EXECUTIVE SUMMARY

Site inspections were carried out by DCS staff on 12 January 2000 to determine the locations and assess the condition of friable materials and select non-friable materials at Sheridan Public School. Representative locations, including spaces above accessible suspended ceilings, were inspected throughout the facility, in a systematic, room-by-room manner.

Visual inspections and laboratory analyses of representative samples of suspect materials confirm that no friable asbestos was observed in Sheridan Public School.

Non-friable vinyl flooring suspected of containing asbestos was found in various locations throughout the building.

No acoustic ceiling tile (non-friable) applications were found to contain asbestos.

Asbestos is classified as a “designated substance” in Ontario, information on the presence of asbestos-containing materials is to be provided to prospective constructors on a project to be carried out in this building as part of the tendering information.

This report should be updated following any significant renovations or modifications to the facility.

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1.0 INTRODUCTION

Decommissioning Consulting Services Limited (DCS) was retained by The Halton District School Board to conduct a survey of the locations of friable asbestos-containing materials and select non-friable materials at Sheridan Public School, Oakville, Ontario and assess its condition. This information should be provided by the Board to staff and outside contractors who may disturb the materials, and to building occupants who are situated adjacent to the materials.

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 manufactured products 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 around the mid-1970s. Most buildings constructed prior to about 1975 contain some form of friable construction material with an asbestos content. The use of asbestos in non-friable products has not been banned in Ontario to date and is still being used in some new construction.

In the event of renovations, modifications or demolition, it is possible that friable asbestos-containing materials (such as insulation on piping and sprayed fireproofing in chases, behind walls and above suspended plaster ceilings) may be encountered in locations that are presently inaccessible. Confirmatory testing of any such materials could be undertaken as the need arises or the materials can be assumed to contain asbestos based on findings in adjacent areas.

Information presented in this report is to be provided to:

- i) any Board employees who may work in close proximity to, and thereby potentially disturb any asbestos-containing materials;
- ii) any prospective contractors bidding on, or undertaking any work with the potential to disturb asbestos-containing material; and
- iii) any tenants or lessees of the school facilities, at or adjacent to, the location of the asbestos-containing material.

2.0 ASSESSMENT

During the survey, the technician assesses the condition of all friable materials. 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.

No recommendations for corrective measures were given in this facility.

Refer to Appendix D for a description of assessment methodology.

2.1 RESULTS

There were no recommended corrective actions at Sheridan Public School.

The Board has an Asbestos Management Program in place, applicable to all facilities known to contain friable asbestos-containing material, with provision for:

- i) periodic reassessment of asbestos applications;
- ii) notification of all parties who may potentially disturb asbestos-containing materials of its location (maintenance staff, custodians, outside contractors, etc.);
- iii) use of prescribed procedures during any work which could involve disturbance of asbestos materials; and
- iv) training of staff who could be involved in asbestos-related work (pipe repairs, for example).

3.0 SURVEY

3.1 METHODOLOGY

Site inspections were carried out by DCS staff in January 2000 to determine the locations of friable materials and acoustic tiles in the building. All accessible areas, including spaces above accessible suspended ceilings, were inspected throughout the facility.

Bulk samples of material suspected of containing asbestos were collected by DCS staff during the course of the site inspection and were forwarded to EMSL Analytical Inc. (EMSL) and/or Chatfield Technical Consulting Limited (Chatfield) for analysis. Both labs hold 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.

3.2 RESULTS

On the basis of the survey work carried out, we report that no friable asbestos was observed in Sheridan Public School.

Locations of vinyl flooring suspected of containing asbestos are identified on the attached floor plan(s).

A summary of the results of laboratory analysis of bulk samples is presented in Table 3.1. The laboratory reports are provided in Appendix C. An abbreviated summary of the locations of asbestos-containing materials is presented in Appendix B.

TABLE 3.1

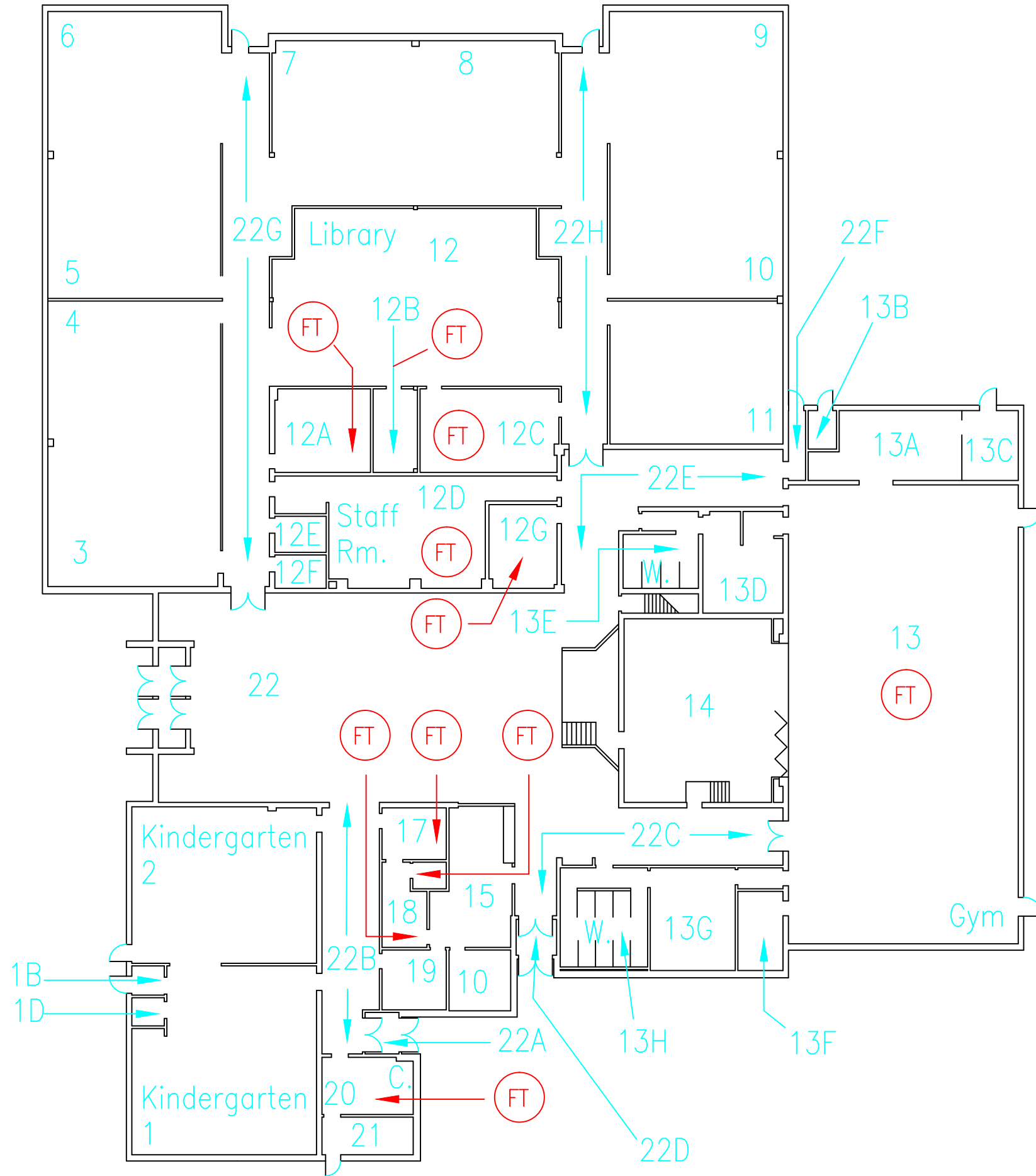
SUMMARY OF LABORATORY ANALYSIS OF BULK SAMPLES

SHERIDAN PUBLIC SCHOOL

SAMPLE N^o	LOCATION	DESCRIPTION	ASBESTOS CONTENT
1	Area 22A	Texture coat	None detected
2	Area 22B	2' x 4' ceiling tile	None detected

APPENDIX A

FLOOR PLANS



LEGEND:

- 1 FUNCTIONAL SPACE
- THROUGHOUT FUNCTIONAL SPACE
- * ABOVE CEILING ASSEMBLY
- FT SUSPECT ASBESTOS FLOOR TILE (NON-FRIABLE)

NOTES:

1.

REVISIONS:

No.	Date:	By:	Revisions

REFERENCE:

1.



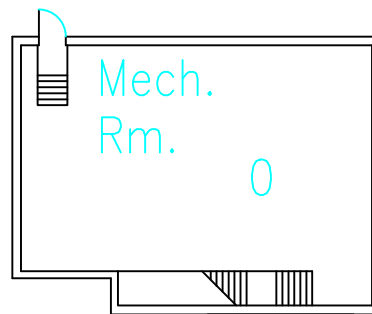
HALTON DISTRICT SCHOOL BOARD

SHERIDAN PUBLIC SCHOOL

LOCATION OF ASBESTOS CONTAINING MATERIALS

FIRST FLOOR

Drawn By: J.B.S.	Approved By: R.A.	Project No: 701931-000
Date: AUG 2013	Scale: N.T.S	Drawing No: 701931-000-1



LEGEND:

- 1 FUNCTIONAL SPACE
- THROUGHOUT FUNCTIONAL SPACE
- * ABOVE CEILING ASSEMBLY

NOTES:

1.

REVISIONS:

No.	Date:	By:	Revisions

REFERENCE:

1.



DECOMMISSIONING CONSULTING SERVICES

HALTON DISTRICT SCHOOL BOARD

SHERIDAN PUBLIC SCHOOL

LOCATION OF ASBESTOS CONTAINING MATERIALS

SECOND FLOOR

Drawn By: J.B.S.	Approved By: R.A.	Project No: 701931-000
Date: AUG 2013	Scale: N.T.S	Drawing No: 701931-000-2

APPENDIX B

BUILDING ASSESSMENT SURVEY FOR ASBESTOS-CONTAINING MATERIALS

BUILDING ASSESSMENT SURVEY FOR ASBESTOS CONTAINING MATERIALS

BUILDING NAME: Sheridan Public School

Functional space identification:	Level	Area	Usage	Physical size (ft)	width	length	height	floor area
			Plaster/Drywall					

Date: Jan 12/00 **Consultant:** DCS Ltd **Consultant Job #:** 47022 **Inspector:** P. Harrison

Component Of the Room Assembly	Asbestos Content	Location Within Space	Description c/w Quantity (ft, sq ft, qty)	Friable or Non-Friable	Condition (see Ftn #1)	Risk Rating (see Ftn #2)
Floor						
Walls						
Ceiling						
Mechanical (Piping- specify Dia.)						
Fireproofing (Sprayed)						
Other						

Notes and Comments:
Review prior to renovations

Footnote #1- Good = intact Fair = minor damage Poor = significant damage.
Footnote #2-High Potential = (1) Moderate Potential = (2) Low Potential = (3) No Risk, Review Prior to Renovation = (4)

BUILDING ASSESSMENT SURVEY FOR ASBESTOS CONTAINING MATERIALS

BUILDING NAME: Sheridan Public School

Functional space identification:	Level	Area	Usage	Physical size (ft)	width	length	height	floor area
			Vinyl Tiles					

Date: Jan 12/00 **Consultant:** DCS Ltd **Consultant Job #:** 47022 **Inspector:** P. Harrison

Component Of the Room Assembly	Asbestos Content	Location Within Space	Description c/w Quantity (ft, sq ft, qty)	Friable or Non-Friable	Condition (see Ftn #1)	Risk Rating (see Ftn #2)
Floor						
Walls						
Ceiling						
Mechanical (Piping- specify Dia.)						
Fireproofing (Sprayed)						
Other						

Notes and Comments:
Refer to floor plan for location of suspect vinyl flooring

Footnote #1- Good = intact Fair = minor damage Poor = significant damage.
Footnote #2-High Potential = (1) Moderate Potential = (2) Low Potential = (3) No Risk, Review Prior to Renovation = (4)

APPENDIX C

LABORATORY REPORTS

**EMSL ANALYTICAL INC. AND
CHATFIELD TECHNICAL CONSULTING LIMITED**



Attn.: Rein Andre
Decommissioning Consulting Services Limited
 121 Granton Dr
 Unit 11
 Richmond Hill, ONT L4B 3N4

Monday, January 31, 2000
 Ref Number: BU00198

POLARIZED LIGHT MICROSCOPY (PLM) - POINT COUNT

Performed by EPA 600/R-93/116 Method*

Project: 47022 / Sheridan Public School

Sample	Location	Appearance	Sample Treatment	ASBESTOS		NON-ASBESTOS	
				%	Type	% Fibrous	% Non-Fibrous
#1	Area 22A texture coat, white	White Non-Fibrous Homogeneous	Crushed		None Detected		100.% Matrix
#2	Area 22B 2x4ft SCT	Grey Fibrous Homogeneous	Teased		None Detected	60.% Cellulose 10.% Min. Wool	30.% Matrix

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

Note: Analytical Sensitivity is < 0.5% Asbestos

Eric Fischer
 Analyst

Approved
 Signatory

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Thus negative PLM results cannot be guaranteed. EMSL suggests that samples reported as <1% or none detected be tested with either SEM or 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. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

Analysis performed by EMSL Buffalo (NVLAP Air and Bulk #200056, NYSDOH ELAP# 11606)

APPENDIX D

ASSESSMENT METHODOLOGY

APPENDIX D

ASSESSMENT METHODOLOGY

An assessment of the condition of asbestos-containing building materials involves the evaluation by the technician of a number of factors including:

1. **GENERAL CONDITION:** The condition of the asbestos-containing materials may indicate the possibility of fibres being released to the area and the potential for future fibre release. An assessment of the condition of the material depends upon a combination of the quality of the installation, adhesion of the material to the underlying substrate, cohesion of the material to itself, deterioration, vandalism and/or damage.

Good:	No damage
Fair:	Minor damage
Poor:	Major damage with fallen debris

2. **WATER DAMAGE:** Water can dislodge, delaminate and disturb friable asbestos materials that are otherwise in good condition. Note that damage may not be obvious but delayed, massive failure can occur due to added water weight, delamination of application from substrate and a breaking down of material binding compounds. Also, water can carry fibres as a slurry to other areas where evaporation will leave a collection of fibres that can become re-entrained (re-suspended) in air. **Presence of water damage is noted as Yes or No.**

3. **ACCESSIBILITY:** If the asbestos material can be reached, it is accessible and subject to accidental or intentional contact and damage. Material which is accessible is most likely to be disturbed in the future either by accident or intentionally and, therefore, this factor is one of the most important indicators of exposure potential. The proximity of the friable material to heating, ventilation, lighting and plumbing systems requiring maintenance or repair also indicates accessibility.

Easy access: less than nine feet high in public and high traffic areas.

Limited access: above nine feet high or low traffic areas.

Restricted access: areas secured and normally serving maintenance and custodial staff.

No access: behind mechanical barriers such as ceiling systems, gypsum board, bulkheads, etc., except at hatches or entrance points.

In schools, the behaviour of the student population should be considered in evaluation of accessibility. For example, students involved in sport activities may accidentally cause damage to the material on the walls and ceilings of gymnasiums. Material that is easily accessible is also subject to damage by vandalism. The presence of damage is the most obvious indicator for accessibility.

4. **ACTIVITIES/MOVEMENT (CONTACT, AIR MOVEMENT, VIBRATION):** This factor combines the effects of general causes that may result in contact or damage to friable material. These causes include air movement, building vibration from machinery or any other source, and activity levels of students or building workers. This factor is also an indication of future exposure potential. **Activity is normally noted as Low, Moderate or Heavy.**
5. **AIR PLENUM (DIRECT AIRSTREAM):** Friable asbestos-containing material within an air plenum or in an air stream, if undisturbed, has a low potential of contaminating the building's environment. However, it must be considered since contamination of large areas may result from contact or damage during maintenance, repairs or renovations. **This condition is normally noted as Yes or No.**
6. **ASBESTOS CONTENT (TYPE AND PERCENT):** While all asbestos materials present an exposure potential, those with a high percentage of asbestos can release more fibres. The regulations require that the form of asbestos must be reported individually; Chrysotile, Amosite, Crocidolite and Amphibole other than Amosite and Crocidolite (Actinolite, Anthophyllite and Tremolite), as well as the amount as a percentage; none detected, less than 1%, 1 to 5%, 5 to 25%, 25 to 50%, 50 to 75%, and more than 75%.
7. **FRIABILITY:** The term friable is applied to material that can be crumbled, pulverized, or reduced to powder in the hand. In order to evaluate the material in question, it should be touched, although a visual evaluation may be made based on knowledge of standard applications. The asbestos-containing material can vary in degree of friability:

Very friable: spray-applied fibrous fireproofing, damaged cementitious applications and thermal insulation.

Moderately friable: undamaged spray-applied cementitious fireproofing and various acoustic applications.

Somewhat friable: undamaged trowel-applied and preformed thermal insulation.

Non-friable: material that, when dry, cannot be crumbled, pulverized or powdered by hand pressure, i.e., manufactured products.

The more friable the material, the greater the potential for asbestos fibre release.

The *Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations* made under the *Occupational Health and Safety Act*, R.R.O. 1990, O.Reg. 838, as amended by O.Reg. 510/92, requires that fallen material be cleaned up and corrective measures be undertaken where material will continue to deteriorate and fall. Recommendations for appropriate corrective measures are based on evaluation of the above-defined factors and are consistent with the requirements of the Regulation. The Board may choose to undertake additional work based on past experience or Board policy.

Repair of thermal insulation usually consists of the application of canvas and lagging (encapsulant) to seal areas of damage. This option is selected where damage to a section of insulation is limited and of a minor nature (such that repair activities are not likely to cause a significant disturbance to the underlying friable material) and is not likely to recur due to its accessibility.

Repair of spray-on materials, fireproofing and acoustic, usually involves the application of encapsulant to limited areas of degraded or damaged materials to seal loose edges. Note that existing materials must have sufficient strength to support the added weight of the repair.

Removal of friable thermal insulation or spray-applied material is recommended as the corrective action in areas where: the asbestos-containing material is damaged beyond repair; repair would result in disturbing as much fibre as removal; there is insufficient strength to support a repair; repeat damage cannot be easily avoided, or planned alterations or renovations would result in major disturbance.

In addition to repair and removal, other corrective actions which may be recommended include:

- cleaning of asbestos-containing debris using a HEPA vacuum and/or wet wiping of the contaminated surface;
- sealing exposed ends of insulation with canvas and encapsulant;
- shielding sections of insulation which are highly accessible to further damage; and
- enclosure of friable asbestos applications with gypsum board or metal cladding to provide protection.

Corrective actions are prioritized as requiring either immediate (priority 1) or short-term (priority 2) attention based on hazard potential.

PRIORITY 1: Applications in poor general condition with easy access and subject to recurrent potential damage, including material subject to the effects of air movement, vibration and material which has fallen onto surfaces.

PRIORITY 2: Applications which may have minor damage with limited or restricted access or materials in good condition but with easy access.