



Department of
Health and Safety

Asbestos Management & Abatement

Latest revised date: October 26, 2011	Page 1 of 17
Prepared by: Department of Health & Safety	S-001



1.0 LEGAL & LEGISLATIVE REQUIREMENTS

This standard provides guidance to meeting the minimum requirements of the Act & Regulations for asbestos management, specifically: Asbestos Abatement Regulation Section 11; Occupational Health & Safety Act 5 (d); and Occupational Health & Safety Regulations Part VI 48 (1), (2), (3), (4).

2.0 STANDARD

This standard sets Memorial University’s expectation for asbestos management.

Only professional externally contracted services shall remove or repair asbestos containing materials (ACM). Damaged or deteriorated ACM’s encountered during building renovation projects will be removed or ACM’s that present a specific problem will be removed, or rendered safe. The building survey will dictate whether ACM’s are to be removed or repaired.

A program of monitoring and in-place management will ensure minimum potential for asbestos exposure to those individuals handling or exposed to asbestos containing products.

3.0 PURPOSE

1. To ensure continuity of performance of asbestos related work.
2. To reduce the potential of asbestos exposure to workers, staff, faculty and the public.

4.0 DEFINITIONS

Act & Regulations: Newfoundland & Labrador Occupational Health & Safety Act & Regulations, latest edition.

Asbestos – means any of the following fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite or tremolite.

ACM - Asbestos-Containing Materials.

Asbestos Management Plan – defined by Section 11 of the Asbestos Abatement Regulation, 1998; refer to section 7.0 of this procedure for overview of Memorial University’s procedure.

Asbestos Coordinator – Facilities Management staff member whose duty is to oversee this and other asbestos related safety programs.

Latest revised date: October 26, 2011	Page 2 of 17
Prepared by: Department of Health & Safety	S-001



Departmental Project Administrator – The person who is assigned ownership of the asbestos project; may be a manager, supervisor, project coordinator, etc.

NIBS – National Institute of Building Sciences.

5.0 APPLICATION AND SCOPE

This procedure applies to all asbestos management and abatement at Memorial University and supersedes all other procedures or methods of asbestos management and abatement.

6.0 RESPONSIBILITY

Director of Facilities Management - The Director of Facilities Management will administer the asbestos management plan.

Deans, Directors and Managers - Responsible to ensure that the procedures for asbestos management and abatement are promulgated to faculty and staff. It is the responsibility of Deans, Directors, Managers, Faculty and Staff to adhere to and enact this standard. Additionally:

- Ensure that all supervisory personnel are aware of their responsibilities under the plan and incorporate the asbestos management plan into their day-to-day work.
- Ensure that all supervisors and employees attend training and education programs as may be periodically required.

Departmental Project Administrator - Responsibilities:

- Determine if an asbestos-containing material is present or suspected in the proposed project area. The Asbestos Coordinator will be the main contact for helping in this determination.
- Determine potential hazards through an inspection of the project area. Use a prepared checklist and permit. The Departmental Project Administrator and contractor must sign the permit. Post the permit in the work area to communicate the work.
- Upon finding ACM's, the Departmental Project Administrator must initiate appropriate control or abatement procedures.

Latest revised date: October 26, 2011	Page 3 of 17
Prepared by: Department of Health & Safety	S-001

- When the services of abatement contractors are required, the contractor will be responsible for advising the Occupational Health and Safety Branch of their abatement plan.
- Follow the Contractor Safety Management procedure when dealing with contractors.
- Maintain continuous liaison with the contractor to ensure the project runs in a smooth and safe manner to completion. Ensure the area is restored for occupant use.
- Advise employees assigned to the project of the presence of asbestos and instruct them to follow established procedures.
- Plan the work to take place at a time of reduced activity if possible.

Department of Health & Safety– Responsibilities:

- Establish a measurement system to measure compliance to this procedure.
- Ensure high-level asbestos related incidents are investigated. Take necessary intervention at the job site to ensure personnel and public safety.
- Prepare and submit a written investigation report, within five days, to the Director of Facilities Management of any incidents of non-compliance to this procedure.
- Provide technical and procedural advice for asbestos management compliance and abatement.
- Establish and ensure the enacting of an inspection program to monitor conditions of asbestos-containing materials in campus facilities. The *Asbestos Coordinator* shall conduct the asbestos inspections.
- Direct liaison with government health and safety agencies relating to asbestos management, abatement, and control matters.
- Coordinating and conducting periodic asbestos safety training and education programs and maintain employee-training records as appropriate.

Asbestos Coordinator (AC) – Responsibilities:

Latest revised date: October 26, 2011	Page 4 of 17
Prepared by: Department of Health & Safety	S-001

- The AC assists the Manager Safety & Environmental Services with implementation of this procedure.
- Conduct building inspections to ascertain presence and condition of ACM.
- Overall coordinator of asbestos related information including building surveys.
- The AC provides technical advice to the Departmental Project Administrator and Supervisor in carrying out this procedure.

Supervisor(s) – Responsibilities:

- Assumes the role of Departmental Project Administrator for all work where maintenance employees may encounter materials containing asbestos. This will include, but not be limited to, Carpentry, Plumbing, Mechanical, Electrical, Controls, Patrolmen, Technical Services Technicians, and Computing and Communications employees.
- Ensure that employees who may work around asbestos-containing materials are trained. See appendix “A - Asbestos Training Needs Matrix.”
- Advise employees of the presence of possible asbestos-containing materials in the project area. Ensure compliance with asbestos control procedures for service, maintenance, and construction projects.
- Plan the work to take place at a time of reduced activity if possible.

7.0 FORWARD

Section 11 of the Asbestos Abatement Regulations, 1998 states:

- (1) Each owner or contractor shall establish and implement a procedure to reduce the exposure of workers known as the asbestos management plan.
- (2) Where possible the procedure shall take due account of the specific features of each workplace and shall include in written form at least the following:
 - (a) a description of each operation in which asbestos dust is emitted;
 - (b) a description of the specific means for controlling exposure to asbestos dust;
 - (c) engineering plans, safety data sheets or other relevant technical information;

Latest revised date: October 26, 2011	Page 5 of 17
Prepared by: Department of Health & Safety	S-001

- (d) air monitoring data on the efficiency of control measures; and
- (e) a description of the work practices or administrative controls needed.

(3) Notwithstanding the removal procedures described, alternate methods such as passive containment including mini-enclosures and glove bags are permitted to minimize the generation of airborne asbestos fibre and control asbestos exposure to an appropriate level.

(4) Contractors, engaged to work in a plant where asbestos material is the principal product of plant operation, shall adhere to the plant's asbestos plan and additional measures acceptable to the minister which minimize the generation of asbestos dust and prevent exposure to airborne asbestos fibres by their workers.

Memorial University's Process:

This procedure constitutes Memorial University's *asbestos management plan*.

Memorial University uses Job Safety Analysis (JSA) and Hazard Assessments (HA) to assess potential hazards in the workplace. The JSA will be used to determine any operations where asbestos dust may be emitted. A Hazard Assessment conducted for each project will determine any operation during the project that may emit asbestos dust. The Asbestos Coordinator will keep permanent university records of these operations. Reference procedure: G-008 Recognition, Evaluation and Control of Hazards.

JSA or HA are done to identify the asbestos hazard and to describe the specific means of controlling the identified asbestos hazard. Engineering plans, safety data sheets and other relevant technical information is used in the JSA/HA process. Air monitoring as part of the project asbestos work and/or planned workplace inspections will help determine efficiency of control measures. The JSA/HA describes the work practices or administrative controls needed.

Employees of Memorial University are not permitted to conduct asbestos removal or repair work. Professional externally contracted service providers, following the lead of the NIBS, or approved equivalent, – Asbestos Operations and Maintenance Work Practice manual, shall do asbestos removal and repair work. This manual gives safe work practices that includes, but is not limited to, passive containment including mini enclosures and glove bags.

The Contractor Safety Management procedure ensures that externally contracted service providers follow appropriate asbestos abatement protocol as per the lead of the NIBS guide manual, or approved equivalent, and as determined by the JSA or HA.

Latest revised date: October 26, 2011	Page 6 of 17
Prepared by: Department of Health & Safety	S-001



Building assessments to identify asbestos-containing material shall be documented for all campus buildings known or suspected to contain asbestos-containing materials. Assessments shall include:

- Location of asbestos-containing materials
- Condition of material (risk assessment determines if ACM shall be removed or repaired)
- Accessibility
- Type and percent content of asbestos in building materials
- Risk assessment: Low/Moderate/High as per lead of NIBS

Personnel in affected areas will be notified of any planned maintenance, servicing, or other work that may involve disturbing ACM's. Any suspect material that is a potential hazard must be reported to the Office of Safety & Environmental Services.

Employees of Memorial University are not permitted to conduct asbestos removal or repair work. Professional externally contracted service providers, following the lead of the NIBS manual, or approved equivalent, shall do asbestos removal and repair work.

8.0 PROCEDURE

Whenever ACM's are required to be removed:

- A project must be initiated whereby an externally contracted service provider is retained.
- The project management shall follow the Contractor Safety Management procedure and process as outlined in this procedure.

Any activity that may disturb building materials shall:

- First be confirmed through the Asbestos Coordinator to confirm the presence of ACM.
 - If ACM are confirmed then this procedure must be followed.
 - If ACM presence cannot be confirmed then the AC will retain a testing consultant to determine if ACM are present.
 - A cost benefit analysis may determine that it is more cost effective to retain the professional externally contracted service provider to immediately abate the asbestos, knowing the material is a suspect ACM.

Prior to preparing any work involving asbestos:

- The Departmental Project Administrator will ascertain the possibility of contact with asbestos-containing material by:

Latest revised date: October 26, 2011	Page 7 of 17
Prepared by: Department of Health & Safety	S-001

- Consulting building survey information available from the Department of Health & Safety **or** Facilities Engineering and Development Office and confirming with the Asbestos Coordinator.

Contractor Asbestos Management Protocol

The following conditions will apply for all projects involving the services of an asbestos abatement contractor:

- Follow the “Contractor Safety Management” procedure.
- All asbestos related work to follow the lead of the NIBS guide manual.

Additionally:

- The Departmental Project Administrator will initiate a formal orientation meeting with the contractor to discuss scope of work.
- The Departmental Project Administrator and Department of Health & Safety representative will complete the appropriate pre-entry hazard assessment check.
- The contractor will prepare an abatement plan and submit to the provincial Occupational Health & Safety Branch for approval.
- Notification will be posted to advise building occupants of the planned work, estimated duration of the project, and inconvenience likely to be expected. See Appendix “B – Asbestos Abatement Notification.”
- Define perimeter of project area. Arrange relocation of occupants if necessary.
- The Department of Health & Safety and the Departmental Project Administrator will conduct ongoing inspections of the project area to ensure compliance with the NIBS guide manual.
- Contractors shall ensure that respirators are provided, maintained, inspected, and tested in accordance with CSA Standard Z94.4-M1982, Selection, Care and Use of Respirators, as periodically updated.
- Contractors shall provide positive air purifying respirators or supply air respirators with full face piece to employees who remove asbestos-containing products from a machine, building, or structure.

Latest revised date: October 26, 2011	Page 8 of 17
Prepared by: Department of Health & Safety	S-001

9.0 EVALUATION

This procedure will be reviewed periodically to reflect current regulatory changes.

10.0 COMMUNICATION

This procedure will be posted to the Department of Health & Safety web page.

Appendix “A” - Asbestos Training Needs Matrix

The training needs assessment is based on the anticipated work activities of facilities management personnel and the requirements of the NEWFOUNDLAND AND LABRADOR REGULATION 111/98 - *Asbestos Abatement Regulations, 1998 under the Occupational Health and Safety Act*. These regulations have been developed to provide safe handling procedures to minimize exposure to airborne asbestos fibres released from asbestos containing material.

The *Asbestos Abatement Regulations* apply to:

- a. every workplace covered under occupational health and safety legislation where asbestos or material containing asbestos is likely to be handled, dealt with, disturbed or removed and including every project, project owner, contractor, employer and employee engaged in or on the project;
- b. the repair, alteration or maintenance of a building containing asbestos and to the owner of it, and to every employer and employee engaged in the repair, alteration or maintenance;
- c. every building in which material that contains asbestos has been used and to the owner of it;
- d. the demolition, repair, alteration or maintenance of machinery, equipment, aircraft, ships, locomotives, railway cars and vehicles containing asbestos and to every employer and employee engaged in the demolition, repair, alteration or maintenance;
- e. manufacture of materials or products containing asbestos; and
- f. other operations involving a risk of exposure to airborne asbestos fibres.

A key component of the *Asbestos Abatement Regulations* is the requirement for worker training. Under Section 6(4) of the Asbestos Abatement Regulations persons, firms, corporations or other entities who perform limited asbestos removal work in the routine maintenance of their own property or usual place of business using their own employees need not be registered, provided the abatement work is performed and supervised by persons who are trained under section 7. The Supervisor identified in Section 6(4) must complete the 3-Day training program outlined in **Schedule A** attached.

Latest revised date: October 26, 2011	Page 9 of 17
Prepared by: Department of Health & Safety	S-001

Under Section 7 of the Asbestos Abatement Regulations the employer is required to ensure the following:

- (1) A person shall not engage in any work in connection with asbestos abatement unless the person has either:
 - (a) successfully completed a course of training and is qualified;
 - (b) is one of a crew supervised by a qualified person and has completed a program of on-site training provided by a qualified worker in keeping with **Schedule B.**
- (2) This education and training shall be provided by the employer.
- (3) Five workers shall be the maximum receiving training under each supervisor.
- (4) The owner or contractor shall be required to demonstrate that each asbestos abatement worker has received the necessary training.
- (5) Workers who ordinarily work with asbestos or are likely to be exposed to airborne asbestos shall be informed of the hazards of asbestos exposure and measures to be taken to minimize the hazards.

As indicated, based on the anticipated work that Memorial University personnel can be expected to perform, and the training requirements of the *Asbestos Abatement Regulations*, the following training matrix is initiated for staff and/or other personnel within Memorial University.

Latest revised date: October 26, 2011	Page 10 of 17
Prepared by: Department of Health & Safety	S-001

The following is a group list of training priorities:

Risk Group	Risk Category				Training	
	1	2	3	4	Supervisors	Workers
1	X				3-Days	1-Day
2	X				3-Days	1-Day
*3			X		1-Day or 3-Days	1 Day or 4-Hours
4				X	4-Hours	1-Hours

Risk Group (1) - Plumbers & Pipe Fitters

Risk Group (2) - Maintenance & Mechanical Workers

Risk Group (3) - Electricians & Custodial Workers*

Risk Group (4) - Office Personnel

Risk Category (1) Highly Possible to be exposed to Asbestos

Risk Category (2) Moderately Possible to be exposed to Asbestos

Risk Category (3) Possible to be exposed to Asbestos

Risk Category (4) Unlikely to be exposed to Asbestos

Supervisory personnel directly involved in the removal and/or handling of asbestos must complete the 3-day Asbestos Abatement Training. Supervisors who are not involved in the direct removal and/or handling should complete the 1-day course. However, if they assume direct supervision of an asbestos project, then they must complete the 3-day course.

Workers directly involved in the removal and/or handling of asbestos must complete the 1-day training program as a minimum.

Individuals from Group 3 may or may not be directly involved with asbestos. If these workers work around asbestos materials that they may come into contact with, then they will require the 1-day course. However, if there is no risk of accidental contact with asbestos, then they should complete the 4-hour awareness.

It is recommended that anyone who has the potential to come into contact with asbestos be trained in the 1-day course.

Memorial University occupational building occupants should be orientated in the One Hour course.

A complete training curriculum for the 3-day, 1-day, 4-Hour, and 1-Hour training programs is outlined below.

Latest revised date: October 26, 2011	Page 11 of 17
Prepared by: Department of Health & Safety	S-001

SCHEDULE A

Three Day Asbestos Abatement Training Program Curriculum Asbestos Abatement Supervisors

All personnel who supervise workers involved in the removal and/or handling of asbestos materials are required by the Asbestos Abatement regulations to complete the three day asbestos abatement training program. The program must include training in the following topics:

- I. Introduction to the Course.**

- II. Characteristics of Asbestos/Recognition**
 - A. Introduction to asbestos
 - B. Uses and applications
 - C. Primary areas where asbestos containing materials are found
 - D. Exposure factors
 - E. Aerodynamics of asbestos
 - F. Identification of asbestos-containing materials.

- III. Health Effects of Asbestos Exposure**
 - A. History of medical knowledge about asbestos
 - B. Normal respiratory function, anatomy and defense mechanisms
 - C. Diseases associated with asbestos exposure
 - D. Medical surveillance.

- IV. Respiratory Protection**
 - A. History of respirator usage
 - B. Respirators used for asbestos work
 - 1. Air purifying
 - 2. Powered air purifying (PAPR)
 - 3. Type "C" or supplied air
 - C. Guidelines for use of respiratory protection
 - D. Training in respirator use, maintenance and inspection
 - E. OSHA requirements for an approved respiratory protection program.

- V. Control Methods.**

- VI. Elements of a Worker Protection Program**
 - A. Air monitoring
 - B. Survey techniques for identification of asbestos containing materials
 - C. Respiratory protection -overview
 - D. Personal hygiene

Latest revised date: October 26, 2011	Page 12 of 17
Prepared by: Department of Health & Safety	S-001

E. Decontamination procedures -overview.

VII. Work Procedures for Removal, Repair and Abatement of Asbestos-Containing Materials

- A. Outline for proper procedures
 - 1. Setting up the work area
 - 2. Preparing the job
 - 3. Removal of asbestos-containing materials
 - 4. Cleanup
 - 5. Waste disposal
 - 6. Decontamination procedures.

VIII. Regulations

- A. Federal agencies and regulations
 - 1. OSHA asbestos standard
 - 2. Employer and employee responsibility in safety and health
- B. Local agencies and regulations.

IX. Safety Factors on Asbestos Maintenance and Repair Jobs

- A. Ladders and scaffolding
- B. Electrical hazards
- C. Emergency procedures
- D. Heat stress
- E. Non-asbestos air contaminants
- F. Fire and explosion hazards
- G. Slips, trip and falls
- H. Confined spaces.

X. Work Practices Practical Experience (hands-on with skill testing).

XI. Review of Key Elements of Course

- A. Job set-up
- B. Removal and/or sealing materials
- C. Waste disposal
- D. Cleanup
- E. Decontamination
- F. Respirator fit testing
- G. Glove bags.

XII. Evaluation

- A. Exam.

SCHEDULE B

**One Day Asbestos Abatement Training Program Curriculum
Asbestos Abatement Workers**

Latest revised date: October 26, 2011	Page 13 of 17
Prepared by: Department of Health & Safety	S-001



Department of
Health and Safety

All personnel who take part in the direct removal and/or handling of asbestos materials are required by the Asbestos Abatement regulations to complete the one day asbestos abatement training program. The program must include training in the following topics:

- I. Asbestos Production and Uses
- II. Friable and Non-Friable Products
- III. Friable Sprayed Products Used in Buildings
- IV. Insulation used on Mechanical Systems
- V. Health Effects -Occupational and Non-Occupational
- VI. Regulations
- VII. Classifications of Asbestos Work
- VIII. Worker Protection
- IX. The Respirator Program - Respiratory Protection & Respirator Fit Testing
- X. Protective Clothing
- XI. Hands-on Training (Glove Bag Methods, Small Enclosure)

Latest revised date: October 26, 2011	Page 14 of 17
Prepared by: Department of Health & Safety	S-001

SCHEDULE C

4 Hour Asbestos Awareness Training Program Curriculum Administrative Staff & Others

All personnel who occupy a facility containing asbestos are required to be informed of the hazards and the requirements of the Asbestos Abatement Regulations. The employer is required to inform all staff of the hazard risks by providing an Asbestos Awareness training Program. The program must include training in the following topics:

- I. What is Asbestos? - Asbestos Production and Uses
- II. Asbestos Identification? - Friable and Non-Friable Products
- III. Where is Asbestos Found? - Friable Sprayed Products Used in Buildings
- IV. What are the Health Effects of exposure to Asbestos?
- V. Are there Regulations pertaining to Asbestos? - Nfld Asbestos Abatement Regulations
- VI. How do we determine if asbestos is present?
- VII. If asbestos is present, what must be done about it?
- VIII. What is an Asbestos Management Plan (AMP)?
- IX. What are my responsibilities under the AMP?

SCHEDULE D

Latest revised date: October 26, 2011	Page 15 of 17
Prepared by: Department of Health & Safety	S-001



Department of
Health and Safety

1 Hour Asbestos Awareness Training Program Curriculum Office Personnel and Others Who Are Unlikely To Be Exposed To Asbestos

- Similar outline to above but with less detail.
- An awareness session to explain to occupants what to do and not do if suspect asbestos is found.

Appendix “B” Asbestos Abatement Notification

Facilities Management wishes to advise building occupants of asbestos abatement work that will take place in this building. The work will follow the lead of the Occupational

Latest revised date: October 26, 2011	Page 16 of 17
Prepared by: Department of Health & Safety	S-001



Department of
Health and Safety

Health & Safety Act and its regulations, and the Memorial University Asbestos Management & Abatement Policy. Facilities Management asks all occupants to observe the following precautions:

- Do not disturb the work site or material in any way or manner
- Respect and observe signage and the contractors work area
- Report any possible infractions to the Manager of Safety & Environmental Services at 737-4393 or to Security for after hours at 737-4100

Isolation of the work area and signs will be posted to give warning and to identify the work area. Shut down or modification, as necessary, of the air handling system will prevent contamination of occupied spaces. Only competent and certified personnel are permitted to enter or work in the designated asbestos abatement area. Completion of work and removal of signs indicate a safe place, students and staff may now re-enter the work area.

Asbestos Abatement Particulars:

Building: Any Building
Room # 1000
Contractor: Any Contractor
Contact: John Doe
Phone # 1234
Date: August 17, 2005
Time: 10 pm to Midnight

Facilities Management apologizes for any inconvenience this work may cause.

Best Regards,

(Supervisors Name)

Latest revised date: October 26, 2011	Page 17 of 17
Prepared by: Department of Health & Safety	S-001