



CITY PROCEDURE

SECTION: HUMAN RESOURCES

NO: HR-HS-75

REFERENCE: HEALTH AND SAFETY

Date

November 26, 2024

Next Review Date:

November 2026

TITLE: ASBESTOS MANAGEMENT PROGRAM

1.0 POLICY STATEMENT

- 1.1 The Corporation of The City of Dryden shall require all workers, Contractors, Consultants, and Subcontractors to comply with the Ontario Occupational Health and Safety Act Regulation 278/05, Designated Substances – Asbestos on Construction Projects and in Buildings and Repair Operations as well as the Environmental Protection Act, Regulation 347, General – Waste Management.
- 1.2 The purpose of this program is to ensure all identified locations containing asbestos risks are monitored for the protection of any worker, contractor, or member of the public who may come into the area.

2.0 DEFINITIONS

As used in these policies and procedures, the following terms shall have the meaning as:

- Asbestos:
 - Means any of the fibrous silicates listed in O. Reg. 278/02 subsection (2); actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite.
- Asbestos-Containing Materials:

- Means material that contains 0.5% or more asbestos by dry weight.
- Building:
 - Means any structure, vault, chamber or tunnel including, without limitation, the electrical, plumbing, heating and air handling equipment (including rigid duct work) of the structure, vault, chamber, or tunnel.
- Construction:
 - Includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.
- Constructor, Consultants, and Subcontractors:
 - A company or person who is retained by contract to perform, wholly or partially, a construction project, maintenance activity or any other work or duties for the City.
- Demolition:
 - Includes dismantling and breaking up.
- Friable Material:
 - Means material that,
 - When dry, can be crumbled, pulverized, or powdered by hand pressure, or
 - Is crumbled, pulverized, or powdered.
- Notice of Project:
 - A document submitted to the Ministry of Labour, Immigration, Training, and Skills Development of Ontario (MOL) that notifies work with regards to excavation or asbestos. This is to be submitted prior to the work commencing.
- Project:
 - Means a construction project, and includes:
 - The construction of, but not limited to, a building, bridge, structure, industrial establishment, shaft, tunnel, trench, excavation, highway, street, runway, parking lot, conduit, sewer, water main, service connection, etc.
 - The moving of a building or structure, and

- Any work or undertaking or any lands or appurtenances used in connection with construction
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3.0 GENERAL

- 3.1 This program does not apply to workers when engaged in the following authority, as per the Fire Protection and Prevention Act:
- a) Fire suppression,
 - b) Rescue and emergency services,
 - c) Investigation of the cause, origin and circumstances of a fire or explosion or condition that might have caused a fire, explosion, loss of life, or damage to property
- 3.2 The Manager or Program Administer organizing the abatement work shall ensure that:
- a) All workers will be made aware of the certification of the testing of the materials, identifying the type of asbestos found.
 - b) All workers involved in asbestos abatement operations have Asbestos Abatement Training program certification and/or Asbestos Awareness Training as required in s.19 of O.Reg. 278/05. The contractor will provide a copy of certification for all workers.
 - c) All workers have been mask fit to the required respirator as required in Section 13 of O. Reg. 278/05 and O. Reg. 185/19. The contractor will provide a copy of current proof of fit testing for all workers.
 - d) The contractor will provide their copy of their Asbestos Management Program as well as an Asbestos Waste Disposal plan with the other required contractor documentations.
- 3.3 Notify appropriate designates immediately, verbally and in writing, upon discovery of site conditions and/or hazardous materials not apparent from the project scope of work (O. Reg. 248/05, 10(8)) and send the material away for testing
- a) The MOL

- b) The owner,
The contractor, and
 - c) The Joint Health and Safety Committee or Health and Safety Representative, if any, for the workplace.
- 3.4 Notify the MOL immediately, verbally and in writing, before commencing a Type 3 Operation, and Type 2 Operation in which one square metre or more of insulation is to be removed.
 - a) The requirements for notification of Type 2 apply to removing insulation that is asbestos-containing material from a pipe, duct, or similar structure using a glove bag.
- 3.5 All workers, Contractors, Consultants, and Subcontractors will avoid performing asbestos removal operations during adverse weather conditions (e.g. strong winds, excessive precipitation, etc.) which may disperse asbestos-containing material debris and/or dust beyond the capacity of the work site to contain such debris/dust.
- 3.6 Respirators will be worn as required in Ontario Regulation 278/05. All respirators must be fit tested prior to use. See Appendix B.
- 3.7 If using water,
 - a) A wetting agent must be added to the water.
 - i. Example: Fiberlock Penewet
 - b) Do not use excessive amounts of water during removal and cleaning operations. Do not allow any gross asbestos-containing debris to enter local water ways.
- 3.8 Drop sheets and cleaning cloths will not be reused. Barriers and portable enclosures can be reused as long as they are rigid and can be cleaned thoroughly by HEPA vacuum or by damp wiping.
- 3.9 Compressed air must not be used to clean up and remove dust from any surface.
- 3.10 Eating, drinking, chewing or smoking must not be permitted in the work area.
- 3.11 Cover and secure waste bins for abatement if applicable. Waste transfer to the bins must be done in such a manner as to inhibit the physical breakage of waste

packaging.

a) Waste bins must be (O. Reg 278/05 s. 15(5)):

- i. Dust tight,
- ii. Suitable for the type of asbestos material,
- iii. Impervious to asbestos,
- iv. Identified as asbestos waste,
- v. Cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before being removed from the work area, and
- vi. Removed from the workplace frequently and at regular intervals.

b) In addition, waste transported to a waste disposal site shall (O. Reg 347 s. 17(2-5)):

- i. Be in a rigid, impermeable, sealed container of sufficient strength to accommodate the weight and nature of the waste
 - If in a cardboard box, the waste must be sealed in a six-mil polyethylene bag placed within the box,
 - Every container must be free from puncture, tears, or leaks, and
 - The external surface of every container and of every vehicle or vessel used for the transport of asbestos waste must be free from asbestos waste.
- ii. Or, where the asbestos waste is being transported in bulk, be transported by means of a waste management system that is subject to an environmental compliance approval that specifically authorizes the transportation of asbestos waste in bulk.

3.12 All ACM waste must be disposed as such as per the Asbestos Tipping Process/Requirement from the City of Dryden's Public Works department.

3.13 As per City requirement, the contractor must create their own Asbestos Waste Disposal plan. If unable to dispose the ACM at the Dryden Landfill, the following

information will be submitted to the Project Administrator within two weeks (2) of completion of asbestos removal operation:

- a) Copies of weigh bills for the disposal of the asbestos waste at the disposal site;
- b) Waste disposal receipts, identifying the quantities of asbestos waste and the haulage company used to transport the asbestos waste; and
- c) Signed certification from a certified industrial hygienist that the asbestos removal and disposal work was carried out in compliance with all relevant legislation according to the plan.

4.0 ASBESTOS-CONTAINING MATERIALS (ACM)

- 4.1 The City is responsible for preparing a record containing the location and condition of ACM and other material that may be ACM or is treated as if it were ACM in specified circumstances. Whether said material is friable or non-friable, in the case of sprayed on material the type of asbestos (if known) or a statement that the material will be treated as though it contained a type of asbestos other than chrysotile (in any other case). See Appendix A.
- 4.2 The report must be reviewed or updated at least once every 12 months and whenever the owner becomes aware of new information.
- 4.4 A copy of the report for each building will be kept on the Health and Safety board at each workplace.
- 4.3 The City will inspect the ACM mentioned in the record yearly to ensure the material is not crumbling, damaged, failing, compromised, etc. The inspection consists of a visual inspection and documentation that the material has been reviewed.

5.0 ASBESTOS AWARENESS

5.1 Asbestos Awareness Training

- a) As per section 19(1) of the O. Reg. 278/05, workers working in a Type 1, Type 2, or Type 3 operation must receive instruction and training provided by a competent person in the following subjects:

- i. The hazards of asbestos exposure.
 - ii. Personal hygiene.
 - iii. Work practices.
 - iv. Cleaning and disposal of respirators and protective clothing.
- b) The Joint Health and Safety Committee or the Health and Safety Representative will be advised of the time and place where the instruction and training are to be carried out.
- c) The training will be completed by a competent person. The competent person is any worker who has received Asbestos Awareness training. They can include, but not limited to:
 - i. Health and Safety Coordinator.
 - ii. Project and Asset Manager.
 - iii. Facility Staff.
 - iv. Operations Manager.
 - v. Waterworks Manager.
 - vi. Community Services Manager.
 - vii. Airport Manager.
 - viii. Lead hand positions.

5.3 Asbestos Abatement Training Program

- a) Every worker involved in a Type 3 operation must successfully complete the Asbestos Abatement Worker Training certification program.
- b) Every supervisor of a worker involved in a Type 3 operation must successfully complete the Asbestos Abatement Supervisor Training certification program.

- c) Both certification programs must be approved by the Ministry of Advanced Education and Skills Development.
- 5.4 The Health and Safety Coordinator will review this program with all City of Dryden workers. All new workers will review this program during orientation. All workers must be informed of:
- a) The location of all asbestos containing materials.
 - b) For each location, whether the material is friable or non-friable.
 - c) For sprayed-on friable material, for each location, the type of asbestos or whether the material will be treated as though it contained a type of asbestos other than chrysotile.

6.0 ASBESTOS REMOVAL

- 6.1 Type 1 operations present the lowest exposure risk, generally including the installation or removal of ACM products that are non-friable, that is, material that is not easily crumbled between the thumb and the fingers or is not already crumbled. The work must be done without damaging the material, or where the material will be damaged, the spread of fibres must be controlled by wetting the material and using non-powered handheld tools.
- a) Type 1 Operations include:
 - i. Installation or removal of ACM ceiling tiles (less than 7.5 m²) without damage,
 - ii. Installation or removal of non-friable ACM, other than ceiling tiles, without damage,
 - iii. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable ACM that is wetted and where the work is done using non-powered hand-held tools, and
 - iv. Removal of less than one square metre of drywall where ACM joint-filling compounds were used.
 - b) "Damage" includes breakage, cutting, abrading, grinding, sanding, and vibration.

c) Measures and Procedures for Type 1 Operations:

- i. Remove visible dust from surfaces with a damp cloth or HEPA vacuum.
- ii. Use drop sheets of polyethylene or other impervious materials.
- iii. Drywall containing less than 1 square meter of asbestos-containing joint compound must be wetted before during the work.
- iv. A wetting agent must be added to water used to control the spread of dust.
- v. Frequently, at regular intervals, and immediately upon completing work, dust and waste must be cleaned up, removed using a HEPA vacuum or by damp mopping or wet sweetening. Dust, waste and drop sheets must be placed in a container that meets this regulation.
- vi. Drop sheets and Polyethylene sheeting used for barriers and enclosures shall be wetted and appropriately discarded and not be reused unless they are rigid and can be thoroughly cleaned.
- vii. Compressed air must not be used to clean up dusts.
- viii. Eating, drinking, chewing or smoking shall not be permitted in the work area.
- ix. Although respiratory protection is not required for Type 1 operations, a worker may request one and the employer must provide it. The respirator must be NIOSH approved and selected in accordance with Table 2 of this regulation. The worker must wear and use the respirator as prescribed. See Appendix C.
- x. Although protective clothing is not required for Type 1 operations, a worker may request it and the employer must provide it. The clothing and it must be selected in accordance with this regulation. The worker must wear the protective clothing as prescribed. See Appendix C.
- xi. Before leaving the work area the worker must decontaminate the protective clothing using a HEPA vacuum or damp wiping before removing the protective clothing or place it in an appropriate waste

container.

- xii. Facilities must be available for workers to wash hands and face before leaving the work area.

6.2 The procedures for Type 2 and Type 3 are outlined in O. Reg. 278/05. As much as possible, Type 2 and Type 3 operations use qualified third-party contract services. The contractor must provide an Asbestos Waste Disposal plan. Project Administrators will refer to Appendix D for removal procedure requirements for Type 2 and Type 3.

a) The following types of operations are classified as Type 2 operations:

- i. The removal of all or part of a false ceiling to access a work area, if ACM is likely to be lying on the surface of the false ceiling
- ii. Enclosure of friable ACM
- iii. Application of tape, a sealant or other covering to pipe or boiler insulation that is ACM
- iv. Installing or removing ACM ceiling tiles that cover an area of 7.5 m² or more if the work is done without damaging the tiles
- v. The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship
- vi. Breaking, cutting, drilling, abrading, grinding, sanding, or vibrating non-friable ACM using non-powered hand-held tools if the material is not wetted
- vii. Cleaning or removing filters used in air handling equipment in a building that has sprayed ACM fireproofing
- viii. Removal or disturbance of one square metre or less of friable ACM during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car
- ix. Glove bag removals of ACM insulation

- x. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done by means of power tools that are attached to dust-collecting devices equipped with High Efficiency Particulate Aerosol (HEPA) filters
 - xi. Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag, or
 - xii. An operation that may expose a worker to ACM and is not classified as Type 1 or 2.
- b) Work with friable or non-friable ACM that has the potential to generate high concentrations of asbestos fibres in air is classified as Type 3. Type 3 operations include:
- i. Removal or disturbance of more than one square metre of friable ACM
 - ii. Spray application of a sealant to friable ACM
 - iii. Cleaning or removal of air-handling equipment, including rigid ducting but not including filters, in a building that has sprayed ACM fireproofing
 - iv. Repair, alteration or demolition of a kiln or furnace made, in part, of refractory materials that are ACM
 - v. Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable ACM with power tools not attached to dust-collecting devices with HEPA filters, and
 - vi. Repair, alteration or demolition of a building in which asbestos products were manufactured, unless asbestos was cleaned up and removed before March 16, 1986.

6.3 When working with friable ACM, drywall or ceiling tiles, the type of operation is based on the total area on which work is done consecutively in a room or enclosed area even if work is divided into smaller jobs.

6.4 The Ministry of Labour must be notified if there is a dispute about the classification of an operation. Work on the operation must be stopped until the Ministry of Labour has provided its decision in writing

Appendix A

Summary: Hazardous Building Materials Assessment (Management) and Mould Air Sampling - Pinchin

Please refer to the report for further information

Airport Maintenance Building

- Asbestos-containing materials not found

Airport Terminal

- Asbestos-containing materials not found

Aquatic Centre

- Vinyl floor tiles
 - Chrysotile
 - Non-fibrous material
- Pipe insulation
 - Chrysotile
 - Non-fibrous material

City Hall

- Vinyl sheet flooring
 - Chrysotile
 - Non-fibrous material

Fire Station #1

- Asbestos-containing materials not found

Library

- Vinyl sheet flooring
 - Chrysotile
 - Non-fibrous material
- There may be other areas where asbestos is found, but unable to test due to being in an inaccessible space

Public Works Building

- Drywall joint compound
 - Chrysotile
 - Non-fibrous material
- Vinyl floor tile
 - Chrysotile
 - Non-fibrous material

Dryden Museum

- Vinyl floor tile – two locations
 - Chrysotile
 - Non-fibrous material

Fire Hall #2

- Asbestos-containing materials not found

Need to be tested: DPS Building & Senior Center

Appendix B
Respiratory Protection Requirements
Ontario Regulation 278/05 Table 2

Work Category		Required respirator
Type 1 Operations		
Worker requests that the employer provide a respirator to be used by the worker, as described in paragraph 12 of section 14		Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Type 2 Operations		
Work described in paragraph 1 of subsection 12 (3)		One of the following:
		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
		- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
Work described in paragraphs 2 to 7 and 9 to 11 of subsection 12 (3)		Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter
Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material containing asbestos by means of power tools, if the tool is attached to a dust collecting device equipped	Material is not wetted	One of the following:
		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high

with a HEPA filter as described in paragraph 8 of subsection 12 (3)		efficiency filter or N-100, P-100 or R-100 particulate filter
		<ul style="list-style-type: none"> - Negative pressure (demand) supplied air respirator equipped with a full-facepiece - Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
	Material is wetted to control spread of fibre	Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter

Type 3 Operations

Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable material containing asbestos by means of power tools, if the tool is not attached to a dust collecting device equipped with a HEPA filter as described in paragraph 5 of subsection 12 (4)	Material is not wetted	Pressure demand supplied air respirator equipped with a half mask
	Material is wetted to control spread of fibre	One of the following:
		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		<ul style="list-style-type: none"> - Negative pressure (demand) supplied air respirator equipped with a full-facepiece - Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)

Work with friable material containing asbestos, as described in paragraphs 1 to 4 and 6 of subsection 12 (4)	Material is not wetted	Pressure demand supplied air respirator equipped with a full facepiece
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Work with friable material, as described in paragraphs 1 to 4 and 6 of subsection 12 (4), that contains a type of asbestos other than chrysotile	Material was applied or installed by spraying,	Pressure demand supplied air respirator equipped with a half mask
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Work with friable material, as described in	and is wetted to control spread of fibre	One of the following:
paragraphs 1 to 4 and 6 of subsection 12 (4), that contains only chrysotile asbestos		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
		- Negative pressure (demand) supplied air respirator equipped with a full-facepiece
Work with friable material containing asbestos, as described in paragraphs 1 to 4 and 6 of subsection 12 (4)	Material was not applied or installed by spraying, and is wetted to control spread of fibre	- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)
		One of the following:
		- Air purifying full-facepiece respirator with N-100, R-100 or P-100 particulate filter
		- Powered air purifying respirator equipped with a tight-fitting facepiece (half or full-facepiece) and a high efficiency filter or N-100, P-100 or R-100 particulate filter
- Negative pressure (demand) supplied air respirator equipped with a full-facepiece	- Continuous flow supplied air respirator equipped with a tight fitting facepiece (half or full-facepiece)	

Appendix C

Requirements for Type 1 Operations where a Worker Requests a Respirator or Protective Clothing

1. If a worker requests a respirator the employer must provide a NIOSH approved air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter as set out in Table 2, and the worker must wear and use the respirator. [section 14, paragraph 12]
2. The respirator must be fitted so that there is an effective seal between the respirator and the worker's face unless the respirator is equipped with a hood or helmet. [subsection 13 (1)(a)]
3. The respirator must be assigned to the worker for his or her exclusive use, if practicable. [subsection 13 (1)(b)]
4. The respirator must be used and maintained as per the employer's written procedures that comply with the manufacturer's specifications. [subsection 13 (1)(c)]
5. A respirator that has been issued for the exclusive use of one worker must be cleaned, disinfected and inspected after use on each shift, or more often if necessary. [subsection 13(1)(d)]
6. A respirator that is used by more than one worker must be cleaned, disinfected and inspected after each use. [subsection 13 (1)(d)]
7. A respirator must have damaged or deteriorated parts replaced before being used by a worker. [subsection 13(1)(e)]
8. A respirator must be stored in a convenient, clean and sanitary location when not in use [subsection 13(1)(f)]
9. If respirators are used in the workplace the employer must establish written procedures regarding the selection, care and use of respirators. [subsection 13(3)(a)]
10. A copy of the procedures shall be given to and reviewed with each worker who is required to wear a respirator. [subsection 13(3)(b)]
11. A worker shall not be assigned to an operation that requires the use of a respirator unless he or she is physically able to perform the operation while wearing the respirator. [section 13 (4)]

12. If a worker requests protective clothing the employer must provide clothing as required by section 15, paragraph 12 and the worker must wear it. [section 14, paragraph 13]
13. A worker who is provided with protective clothing shall, before leaving the work area, decontaminate the protective clothing using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing [subsection 14 subparagraph 14 i]
14. Protective clothing that will not be reused must be placed in a waste container as described in section 15 paragraph 5 [subsection 14 subparagraph 14 ii]

Appendix D

Type 2 and Type 3 Measures and Procedures Checklists

Adapted from [Infrastructure Health and Safety Association's Asbestos Summary](#)

Additional reference: [Ontario A Guide To Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations](#)

Notice of Type 3 and certain Type 2 Operations

Before beginning a Type 3 operation, or removal of more than one square meter of insulation using a glove bag (Type 2), the constructor or employer shall notify, orally and in writing, the Ministry of Labour. The notice shall include:

- Name and address of the person giving the notice,
- Name and address of the owner,
- Municipal address or description of where the work will be carried out,
- Description of the work,
- Starting date and duration, and
- Name and address of the supervisor.

Respirator

A respirator assigned to a worker must:

- Be for their exclusive use,
- Must be fit-tested unless it is equipped with a hood or helmet,
- Be used and maintained according to the employer's written procedures,
- Be cleaned, disinfected and inspected after each use,
- Have damaged or deteriorated parts replaced, and
- Be stored in a convenient, clean and sanitary location.

For supplied-air respirators:

- Compressed air used for breathing must meet the standards set out in Table 1 of CSA Z180.1-00 – *Compressed Breathing Air and System (2000)*.
- If an oil-lubricated compressor is used to supply air, a continuous carbon monoxide monitor with alarm must be provided.
- For ambient breathing air systems, the air intake must be located in accordance with Appendix B of CSAZ180.1-00 – *Compressed Breathing Air and System (2000)*.

When respirators are used at work, the employer must establish written procedures for the selection, care and use of the respirators and those procedures must be reviewed by each worker required to wear a respirator.

A worker who is required to wear a respirator must be physically able to perform the work while using the respirator.

Measures and procedures apply to Type 2 and 3 Operations

- A sufficient number of warning signs must be posted in the work area to warn about of the hazards. The signs must read “There is an asbestos dust hazard and access to the work area is restricted to personal wearing protective clothing and equipment”.
- A wetting agent must be added to water and used to control the spread of dust.
- Eating, drinking, chewing or smoking shall not be permitted in the work area.
- Use dust-tight, impervious waste containers suitable for the waste. The container must be identified and cleaned with a damp cloth or HEPA vacuum before being removed from the work area.
- Dust and waste shall be cleaned up and removed using a HEPA vacuum or by damp mopping or wet sweeping and placed in a suitable waste container. Drop sheets shall not be reused.
- Polyethylene sheeting and similar material must not be reused. They must be wetted and placed in an appropriate waste container.
- Barriers and portable enclosures must be rigid. If they are to be reused they shall be cleaned by HEPA vacuum or by damp wiping.

- Every worker who enters the work area must be provided with a NIOSH approved respirator in accordance with Table 2 of this regulation. The employer must also ensure protective clothing is provided to workers that is impermeable to asbestos fibres, consists of a head and full body covering fitting snugly at the ankles, wrists and neck, and that suitable footwear is worn. If protective clothing is torn it shall be repaired or replaced.
- Compressed air is not permitted for cleaning dust from surfaces.
- Only persons wearing protective clothing and equipment shall enter the work area.

Additional measures and procedures for Type 2 Operations

- A HEPA vacuum must be used to clean up any ACM that may be lying on the surface of a false ceiling when removing all or part of it for access.
- Damp wiping or a HEPA vacuum must be used to clean up friable material that is crumbled, pulverized or powdered and is lying on any surface before it is disturbed.
- Friable ACM that is not crumbled, pulverized or powdered and may be disturbed or removed during the work must be wetted before the work begins and throughout.
- Polyethylene drop sheets or other suitable materials must be used to prevent the spread of dust.
- For the following two operations if carried on indoors:
 - Removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling, or
 - The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.
- The spread of dust shall be prevented by:
 - Using an enclosure of polyethylene or other suitable material that is impervious to asbestos (including, if the enclosure is opaque, one or more

- transparent window areas to allow observation of the entire work area from outside the enclosure), if the work area is not enclosed by walls,
- Disabling the mechanical ventilation system serving the work area, and
 - Sealing the ventilation ducts to and from the work area.
 - Before leaving the work area, workers must decontaminate using a HEPA vacuum or damp wiping.
 - Facilities must be available for workers to wash hands and face before leaving the work area.

For glove bag operations the following procedures apply in addition to the procedures required for Type 2

- Walls, barricades, fencing or other suitable means shall be used to separate the work area from the rest of the workplace.
- The mechanical ventilation system serving the work area shall be disabled and all openings or voids including ducts must be sealed.
- Drop sheets made of polyethylene or other impervious material are to be placed under the work area.
- The glove bag must be made of strong and impervious material and equipped with:
 - Sleeves and gloves that are permanently sealed to the body of the bag,
 - Valves or openings to allow insertion of a vacuum hose and the nozzle of a water sprayer,
 - A tool pouch with a drain,
 - A seamless bottom and a means of sealing off the lower portion of the bag, and
 - A high strength double throw zipper and removable straps, if the bag is to be moved during the removal operation.
- A glove bag must have a proper seal otherwise it cannot be used.

- The glove bag must be inspected before it is attached to insulation jacketing or coating.
- The glove bag must be inspected before it is attached to pipe, duct or other similar structure and at regular intervals and shall not be used if defects are detected. The contents of the glove bag must be wetted and the disposed of along with the glove bag in an appropriate container. The work area shall be cleaned by HEPA vacuum before removal work is resumed.
- The air inside the bag shall be removed through an elasticized valve, by means of a vacuum equipped with a HEPA filter. The pipe, duct or similar structure shall be wiped down and sealed with a suitable encapsulant and the glove bag, with the waste inside, shall be placed in an appropriate waste container. The work area shall be cleaned by damp wiping or by HEPA vacuum.

Additional Measures and Procedures for Type 3 Operations

- The work area shall be separated from the rest of the workplace by walls, the placing of barricades or fencing or other suitable means.
- The following procedures apply to Type 3 operations involving breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.
- Polyethylene enclosures or other suitable impervious materials must be used if the work area is not enclosed by walls. The enclosure must also include one or more transparent windows to allow observation from outside the enclosure. A curtain made from polyethylene or other suitable impervious material must be installed at each entrance or exit from the work area.
- Excluding outdoor operations or work in buildings to be demolished, a ventilation system equipped with a HEPA filtered exhaust unit must be used to create and maintain a negative air pressure of 0.02 inches of water within the enclosed area relative to the area outside of the enclosure. The air pressure must be measured at regular intervals. The air intake must be taken from an area free from contamination of any hazardous dusts, vapours, smoke, fume, mist or gas.
- A competent person must inspect and maintain the ventilation system. The inspection is required before each use and damaged or defective parts replaced before the ventilation system is used.

- Before leaving the work area, workers must decontaminate using a HEPA vacuum or damp wiping.
- Facilities for the washing of hands and face shall be made available to workers and shall be used by every worker when leaving the work area.

The following procedures apply to Type 3 operations carried on outdoors involving the following activities:

- The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.
- The spray application of a sealant to friable asbestos-containing material.
- Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.
- Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.

When performing work:

- ACM must be thoroughly wetted before and during removal unless it is hazardous to do so.
- Dust and waste shall not be permitted to fall freely from one work level to another.
- After the work area has been cleaned up using the HEPA vacuum or by damp mopping or wet sweeping, the work area must be washed down with water.
- Temporary electrical power for tools and equipment in wet removal operations shall be equipped with ground fault circuit interrupters.
- The decontamination facility shall be located as close as practicable to the work area and shall consist of
 - A room suitable for changing into protective clothing and for storing contaminated protective clothing and equipment,

- A shower room as described by this regulation, and
- A room suitable for changing into street clothes and for storing clean clothing and equipment.
- The decontamination rooms shall be arranged in sequence and constructed so that any person entering or leaving the work area must pass through each room.
 - When leaving the work area, a worker shall enter the decontamination facility and shall, in the following order,
 - Decontaminate his or her protective clothing by using a vacuum equipped with a hepa filter, or by damp wiping, before removing the protective clothing,
 - If the protective clothing will not be reused, place it in an appropriate waste container,
 - Shower, and
 - Remove and clean the respirator.

The following procedures apply to Type 3 operations carried on indoors involving the following activities:

- The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.
- The spray application of a sealant to friable asbestos-containing material.
- Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.
- Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.

Repairing, altering or demolishing all or part of any building in which asbestos is or was used in the manufacture of products, unless the asbestos was cleaned up and removed before March 16, 1986.