

6/16/95

Section 10 - Emission Standards for Asbestos

10.1 The provisions of 40 CFR, Part 61, Subpart M (1992) are hereby incorporated into this Regulation by reference. Whenever the word "Administrator" is used in 40 CFR, Part 61, Subpart M (1992) it shall be replaced by the word "Secretary". The provisions of this Regulation, with the exception of Section 10.9, are applicable to all **NESHAP** projects.

**DEFINITIONS**

**"CRITICAL SEALS"**: **"Critical seals"** are defined as a minimum of two (2) separate layers of 6-mil *plastic sheeting* over all openings, sealed appropriately.

**"DECONTAMINATION UNIT"**: A **"decontamination unit"** is a room attached to the work area that is intended to be used for the removal of contaminated items and tools, with a "clean room" adjacent to it wherein workers may obtain protective clothing and respirators prior to entering the work area.

**"ENCLOSURE"**: An **"enclosure"** for an asbestos abatement work area consists of barriers on all sides of the work area. These barriers will be a minimum of 6-mils thick, and completely separate the work area from the surrounding area. The **"enclosure"** will be of sufficient size as to provide a safe working environment, with ease of both entry and exit. The **"enclosure"** will be equipped with a portable negative air machine, as described in this Regulation.

**"NESHAP"**: **"NESHAP"** means the **"National Emission Standards for Hazardous Air Pollutants"**.

**"PLASTIC SHEETING"**: **"Plastic sheeting"** is a sheet of material 6-mils thick that is impermeable when sealed.

**"VIEWING PORT"**: A **"viewing port"** is a section of clear, transparent, shatterproof material, greater than or equal to 6" in thickness and 18" square.

10.2 Portable negative air-handling equipment equipped with a High Efficiency Particulate Air ("**HEPA**") filter that will supply a minimum of four (4) air changes per hour and maintain a minimum of 0.02 inch of water (static pressure) between the work area and the area outside of the work area must be utilized. A *manometer* or similar monitoring device shall be used to monitor the pressure differential between the work area and the area outside of the work area. Wet removal will be used in conjunction with negative air. Roofing and siding materials located on the exterior of a structure are excluded from this requirement. Alternative asbestos control methods must receive prior approval by the Secretary, pursuant to Section 10.10, before being implemented.

10.3 Demolition: prior to the initiation of asbestos removal subject to this Regulation, the following are required:

- (a) Before beginning any demolition project, cover all windows, doors, and other openings with *critical seals*.
- (b) If a structure or building is to be partially demolished, construct a barrier of *plastic sheeting* sealed with tape to

prevent asbestos from entering any portion of the structure or building not to be demolished, and seal ducts, including air conditioning and heat ducts, before wetting and removal.

10.4 Renovation: prior to the initiation of asbestos removal subject to this Regulation, the following are required:

- (a) Before beginning any renovation project, remove all movable objects from the work area and cover all non-movable objects with *plastic sheeting* taped securely in place. Cover floors, other large areas such as walls, and all windows in the work area with *plastic sheeting* sealed with tape. Shut down all forced-air ventilation in the work area and seal exhaust and intake ducts with *critical seals*.
- (b) Construct double barriers of *plastic sheeting* at all entrances and exits to work area. Construct a *decontamination unit* connected to the work area to be used for removal of contaminated items and tools. Provide a clean room where workers obtain protective clothing and respirators before entering the work area.
- (c) The containment area shall have clear *viewing ports* of adequate size installed on all accessible walls to permit optimum viewing of the work area. Windows shall be maintained in a clean and unobscured manner at all times.
- (d) The integrity of the containment seals and portable negative air machine(s) shall be maintained throughout the project.

10.5 Cleaning and Monitoring:

- (a) Buildings or structures which are to be completely demolished shall have no residue of asbestos material visible in the work area after all asbestos materials are removed in accordance with *NESHAP*.
- (b) For *NESHAP* asbestos projects other than demolition:
  - 1. Precleaning is required prior to installing the *plastic sheeting* in areas where dust, debris or asbestos is visibly present. The *decontamination unit* and *critical seals* shall be in place with the negative air machine(s) installed and operating before precleaning commences.
  - 2. After removal of asbestos materials and cleaning of the work area, a visual inspection shall be accomplished to ensure that all asbestos-containing or contaminated material has been removed. The work area shall be dry and ready for clearance air monitoring at the time of this inspection. The final visual inspection and clearance air monitoring shall be conducted by a Certified Field Technician employed by a Certified Professional Service Firm.
  - 3. Aggressive air sampling procedures shall be used within the work area during clearance air monitoring. After the visual inspection, forced-air equipment (such as a 1-horsepower leaf blower) shall be used to direct exhaust air against all walls, ceilings,

floors, ledges and other surfaces in the work area. This should take at least 5 minutes per 1,000 square feet of floor area. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space). Place the fan on slow speed and point it toward the ceiling. Sampling will be accomplished immediately after this procedure. The aggressive air sampling procedure shall not be required for an asbestos project conducted outside of an enclosed structure when such project has been approved in accordance with Section 10.10 of this Regulation. The sampling shall ensure that the airborne concentration of asbestos fibers equal to or longer than 5 microns is less than 0.01 fiber per cubic centimeter (*f/cc*). This sampling may be analyzed using *Phased Contrast Optical Microscopy* ("PCM") or *Transmission Electron Microscopy* ("TEM"). When using PCM, samples shall be analyzed in accordance with the "**NIOSH**" **7400 Method** specified by the National Institute for Occupational Safety and Health "**NIOSH**". The Department may require analysis by TEM. Samples analyzed using PCM will consider all fibers counted to be asbestos. Crawlspace with soil floors are to be tested non-aggressively to avoid overloading sample collection cassettes.

4. If the airborne concentration of asbestos fibers is not less than 0.01 *f/cc*, then clean-up procedures shall be repeated until compliance is achieved. Recleaning shall include the use of HEPA vacuums and/or wet-wiping of all surfaces with the portable negative air-handling equipment operating. After recleaning is complete, the sequence of visual inspection and aggressive air sampling shall be repeated.

#### 10.6 Signs and Labels:

Warning signs: Display DANGER signs whenever airborne asbestos fibers may be present, in accordance with applicable OSHA Regulations and the **National Emission Standards for Hazardous Air Pollutants** ("**NESHAP**").

#### 10.7 Work Practices:

- (a) Wet asbestos materials to be stripped or removed with a water solution containing a surfactant that will adequately wet the material.
- (b) Dispose of all asbestos-containing waste, sealing tape, *plastic sheeting*, mopheads, sponges, filters, and disposable clothing in clearly labeled, sealed containers. The containers shall be labeled in accordance with Section 10.6;

#### 10.8 Storage and Transportation:

- (a) The storage of clearly-labelled asbestos waste containers awaiting transport to an authorized disposal facility shall be in a secured location to prevent access by unauthorized personnel. The asbestos material shall be kept wet until disposed-of at an approved landfill.

- (b) All vehicles or transportation containers (e.g., dumpsters) will be lined on the sides and floor with one (1) layer of 6-mil *plastic sheeting* to be removed and properly disposed-of with the load of asbestos waste.
- (c) Transportation and disposal of asbestos waste shall occur within forty-five (45) days of removal, in a manner that will not permit the release of asbestos fibers into the ambient air.
- (d) Vehicles that transport asbestos waste must be properly licensed in accordance with Section 7 of the Solid Waste Regulations.

10.9 Control of asbestos from any non-NESHAP asbestos project. A person engaged in any asbestos project not subject to NESHAP shall take precautions to prevent asbestos from becoming airborne, including, but not limited to:

- (a) Wetting the asbestos material (except asbestos to be encapsulated);
- (b) Taking measures such as sealing the work area and using appropriate work practices to minimize the dispersal of particulate asbestos;
- (c) Leaving no visible residue of asbestos after completing the project;
- (d) Sealing asbestos waste in an appropriate container;
- (e) Disposing of the asbestos at a site or landfill approved by the Department in a manner that prevents asbestos from becoming airborne; and
- (f) Receipts and records of proper disposal shall be made available to the Department upon request.

10.10 The Department may, on a case-by-case basis, approve an alternative procedure for control of emissions from an asbestos project provided that the person submits the alternative procedure to the Department in writing, and demonstrates to the satisfaction of the Department that the alternative procedure provides an equivalent or greater control of asbestos emissions into the air.

Additional documents applicable for asbestos in the State of Delaware:

- The State of Delaware Contractor/Supervisor/Worker Certification Program;
- The State of Delaware Solid Waste Regulations, Section 7, governing solid waste; and
- The U.S. Department of Labor, Occupational Safety and Health Administration ("*OSHA*"):
  - Title 29 CFR, Part 1926.1101; and
  - Title 29 CFR, Part 1910.1001.