

Summary of Changes (v19.08)

1. Comprehensive updates necessary for TG 13281 Attachment B Technical Guide (last update was done in May 2003) and now incorporated into TG 13281 (was part of TG13280).

**Removal and Disposal of Asbestos Containing  
Materials (ACM) (Attachment B)  
TECHNICAL GUIDE**

**TG 13281**

**SUMMARY OF EPA INTERPRETATIVE RULE FOR ROOFING PROJECTS (40 CFR 61)**

New APPENDIX A TO Subpart M - Interpretative Rule Governing Roof Removal Operations. The following is a summary as used in the Interpretative Rule.1. Applicability of the Asbestos NESHAP:

- A. Asbestos-containing material (ACM) is material containing more than 1% asbestos as determined using Polarized Light Microscopy.
  - 1) ACM is classified as "friable" or "nonfriable".
    - a) Friable: When dry, can be crumbled, pulverized or reduced to powder by hand pressure.
    - b) Nonfriable: When dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.
- B. Nonfriable ACM is further classed as follows:
  - 1) Category I: Asbestos containing gaskets, packing, resilient floor covering, mastic, and asphalt roofing products (built up roofing, single-ply membrane systems, shingles, underlayment felts, roof coatings and mastics and base flashing). ACM roofing products that use bituminous or resinous binders (such as coal tars or pitches) are also considered to be Category I ACM.
  - 2) Category II: All other nonfriable ACM including asbestos-cement shingles, tiles, transite panels and boards. Category II is more likely to become friable when damaged than is Category I.
  - 3) Potential for fiber release depends on:
    - a) Condition of material.
    - b) Nature of disturbance.
    - c) Amount of ACM.
- C. ACM regulated under NESHAP is referred to as "regulated asbestos-containing material" (RACM) and includes:
  - 1) Friable ACM.
  - 2) Category I nonfriable ACM that has become friable.
  - 3) Category I nonfriable ACM that has been or will be sanded, ground, cut or abraded.
  - 4) Category II nonfriable ACM that has already been or is likely to become crumbled, pulverized or reduced to powder.
- D. Threshold Amounts of Asbestos Containing Roofing Material:
  - 1) Threshold amounts below which NESHAP does not regulate is as follows:
    - a) Single family homes or residential buildings with four or fewer units.
    - b) Roofing projects less than 160 SF regardless of removal method, type of material (Cat I or II) or its condition (friable or nonfriable). Recommend least destructive method of removal.

- c) Roof cutter method for removing 5,580 SF of Category I roofing will create 160 SF of RACM (determined by EPA). Therefore, removal of less than 5,580 SF by this method.
    - d) For any size, if slicing or other method that does not sand, grind, cut or abrade is used.
  - 2) Category II (A/C Shingles). Not regulated by NESHAP when:
    - a) Less than 160 SF regardless of the removal method.
    - b) Any area, if the material is not crumbled, pulverized, reduced to powder, or contaminated with RACM (from other ACM that has been crumbled, pulverized or reduced to powder).
  - 3) A/C Shingle Removal (Category II ACM Removal): A/C Shingles become regulated ACM (RACM) if the material has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material during demolition or renovation. Merely breaking an A/C shingle that is not friable does not necessarily cause the material to become RACM.
- E. Cutting Verses Slicing and Manual Methods for Removal of Category I ACM:
  - 1) Rotating blade cutters (RB) or other equipment that sand, grind or abrade roof materials are subject to NESHAP. The use of manual methods (using equipment such as axes, hatchets, or knives, spud bars, pry bars, and shovels but not power saws) or methods that slice, shear, or punch (using equipment such as a power slicer or power plow) does not constitute "cutting, sanding, grinding or abrading". Therefore, they are not subject to regulation.
  - 2) Power removers or power tear-off machines which are used to pry the material up from the deck after being cut is not regulated.
- 2. Notification:
  - A. Notification for demolition is always required to HDOH in accordance with the Asbestos Notification of Demolition & Renovation form. Roof removal, when not a part of a demolition job, is "renovation" and notification is not required if the "Threshold Amounts" of this summary are not exceeded.
  - B. Te advance notification except for emergencies if the notification requirement is applicable.
- 3. Emission Control Practices:
  - A. Requirements to Adequately Wet and Discharge No Visible Emission: Principal controls shall be adequately wet, and asbestos wastes handled, collected and disposed of properly.
  - B. Exemptions from Wetting Requirements:
    - 1) Exceptions. Damage to building, equipment inside or safety hazard. Requires written approval from HDOH.
    - 2) Alternative control methods to wetting include local exhaust ventilation system (captures dust and does not produce visible emissions). Other methods that have received the written approval of the EPA.
    - 3) Wetting Exemption. Air or roof surface temperature below freezing.

4. Waste Collection and Handling:
  - A. Waste removed and handled in a manner which makes it not subject to NESHAP can be disposed of as non-asbestos waste.
  - B. When a Rotary Blade (RB) cutter is used to cut Category I ACM, the damaged material from the cut (the sawdust or debris) is ACM subject to NESHAP if the thresholds are met or exceeded. However, if the remainder of the roofing is free of sawdust and debris generated by cutting, it can be disposed of as non-asbestos waste (as long as the remainder of the roof is in fact non-asbestos material or if it is Category 1 asbestos material and the removal methods do not further sand, grind, cut, or abrade the roof material).
  - C. When using a RB cutter to cut Category I ACM, the dust and debris resulting from cutting must be collected as soon as possible after the cutting and kept wet until placed in leak tight containers.
  - D. If the debris from cutting is not collected immediately, it should be lightly misted frequently to keep the material from drying and to prevent air-borne emissions.
5. Waste Disposal:
  - A. Disposal Requirements: As soon as practical, all collected dust and debris from cutting as well as any contaminated roofing squares, must be taken to a landfill. During loading and unloading, asbestos warning signs must be affixed to the vehicles.
  - B. Waste Shipment Record: A waste shipment record (WSR) must be maintained for each shipment of NESHAP regulated material.
  - C. Landfill Requirements: Landfill may have more stricter requirements than EPA (NESHAP), HAR 501 standards. Ensure that the most current landfill requirements are specified.
6. Training: For roof removals subject to NESHAP at least one on-site supervisor trained in the provisions of NESHAP must be present during the removal of ACM. AHERA training courses, or other courses with similar content, are acceptable training.

END OF SECTION 13281 - ATTACHMENT B