

Therefore, HEPA vacuuming is still required in this situation.

A correcting amendment is being made to paragraph (g)(1)(i), the general provision requiring HEPA vacuuming of dust and debris, to acknowledge that paragraph (g)(8)(ii)(D) contains an exception to the requirement for HEPA vacuuming of dust and debris in the case of removal of built-up roofs from smooth bases. The amendment to paragraph (g)(1)(i) does not affect the general requirement that dust and debris associated with non-intact roofing material be HEPA vacuumed.

#### *(e) Small Removal and Repair Jobs*

Before a roof has reached the end of its useful life and must be replaced, it can develop leaks that must be repaired. When only a small area of an asbestos-containing roof is disturbed during a removal or repair job, the potential for exposure is much lower than for a complete roof removal job, and all of the precautions required for Class II or III roof removal jobs are not needed. It would, for example, be unnecessarily burdensome to require a HEPA vacuum to be lifted to a roof and connected to a possibly distant source of electricity if only a negligible amount of dust must be collected. Accordingly, a new paragraph (g)(8)(ii)(H) is being promulgated to provide that removal or repair of intact roofing less than 25 square feet in area does not require use of wet methods or HEPA vacuuming as long as manual methods which do not render the material non-intact are used and no visible dust is created. By requiring that hand methods be used and no visible dust be released, the exception is limited to situations where the work is done in a manner that does not release significant numbers of asbestos fibers. Moreover, OSHA believes that the 25 square foot figure, which represents a 5-foot square area, represents a reasonable cutoff between small repair jobs that do not require the full range of protection and larger jobs that present the potential for significant exposures.

Paragraph (g)(8)(ii)(H) is located in a section of the standard that addresses methods of compliance for Class II work. However, a job that qualifies for the exception also does not require use of wet methods and HEPA vacuuming under provisions of the standard applicable to Class III and Class IV roofing operations.

#### *(f) Clarifying Corrections*

Several corrections are being made to the regulatory language to clarify OSHA's intent and avoid uncertainty

among employers who must comply with the standard.

Paragraph (f)(2)(ii), which describes the basis for making initial exposure assessments, is being corrected to state more directly that the initial exposure assessment must be based on jobsite monitoring unless a negative exposure assessment has been made.

The introductory sentence of paragraph (g)(8)(iii) is being corrected to clarify OSHA's intent that the requirements of paragraph (g)(8)(iii) do not apply to removal of ACM from roofs but only to removal of ACM from building exteriors other than roofs.

Paragraph (k)(7)(ii) is being corrected to assure that signs demarcating a regulated area provide accurate information as to whether respirators and protective clothing are required in the area. As originally written, the provision required all such signs to state that respirators and protective clothing must be worn in the regulated area. However, this information was sometimes inaccurate, because certain work must be performed in regulated areas even when the employees in the area are not required to wear respirators and protective clothing. For example, all Class II work must be performed in regulated areas, but respirators and/or protective clothing are not required during such work if the material remains substantially intact during removal and a negative exposure assessment has been made. Accordingly, paragraph (k)(7)(ii) is being corrected to provide that signs marking regulated areas must state that respirators and protective clothing must be worn within the area only when the standard in fact requires such protection.

#### *(g) Clarifying Interpretations*

**Definition of "intact":** The term "intact" is used in a number of provisions of the standard relating to roofing work. For example, several paragraphs discussed above differentiate between "intact" and "non-intact" roofing materials. Similarly, paragraph (g)(8)(ii)(A), which applies to Class II roofing removals, requires that roofing material be removed in an "intact" state to the extent feasible. "Intact" is defined at paragraph (b) to mean "that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that it is no longer likely to be bound with its matrix." Accordingly, paragraph (g)(8)(ii)(A) is satisfied when the roofing material is removed in a manner that does not cause it to crumble, become pulverized, or otherwise damaged in a manner that is likely to release asbestos fibers. Also, if asbestos-containing roofing material is not removed "in a

substantially intact state," paragraph (h)(1)(ii) requires respirator use. In short, the meaning of the term "intact" has considerable importance in determining whether and how roofing operations are regulated under the standard.

Roofing materials that are separated into pieces in the process of removal or repair are not considered to be "non-intact" solely because the material has been cut, sliced, pried, or otherwise separated into smaller units for the purpose of removal. The condition of the smaller units or pieces of removed roofing (for example, a 2 foot by 2 foot section of built-up roofing) must be evaluated against the definition of the term "intact" in paragraph (b) of the standard in order to determine whether the roofing material has been rendered "non-intact" by a removal or repair operation. For example:

a. Built-up roofing (BUR) that has been cut into smaller sections (e.g., using a power roof cutter) and pried up from the roof is not deemed to be "non-intact" solely because it has been separated into pieces. If the pieces of removed BUR have "not crumbled, been pulverized, or otherwise deteriorated so that [they] are no longer likely to be bound with [their] matrix," then they are "intact" as defined in paragraph (b) of the standard. On the other hand, the dust created by the destructive force of the cutting blade of a power roof cutter would be considered "non-intact."

b. The same interpretation applies to other roofing materials which are typically removed by dividing them into smaller units. For example, roof mastics and cements are usually pried, chipped or scraped off; asphalt felt underlayments are sliced and rolled-up or sometimes scraped-off or chipped-off; and flashings are sliced into manageable units and then pried-up. The fact that roofing materials have been removed in this fashion does not by itself render them non-intact under the standard. Rather, the removed pieces of roofing must be evaluated to determine whether they are "intact" as defined in paragraph 1101(b) of the standard.

c. Likewise, although asbestos-cement (A/C) shingles are pried up by hand and removed as individual units of roofing, occasionally incidental breakage of the shingles will occur even during careful removal procedures. Such incidental breaking does not in and of itself render the material non-intact under the standard; the question is whether the shingles (whether broken or not) have been crumbled, pulverized, or otherwise are not likely to be bound with their cementitious matrix as a result of the removal operation. The same interpretation applies to incidental breakage of other asbestos-containing roofing materials during removal or subsequent handling.

Paragraph (h)(1)(ii) requires that respirators be used if the material is not removed in a "substantially intact state." This provision does not require