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## Asbestos NESHAP Clarification Regarding Analysis of Multi-Layered Systems

[Federal Register: December 19, 1995 (Volume 60, Number 243)]  
 [Rules and Regulations]  
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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 61

[FRL-5399-3]

Asbestos NESHAP Clarification Regarding Analysis of Multi-Layered Systems

AGENCY: Environmental Protection Agency.

ACTION: Notice of clarification to the final rule.

**SUMMARY:** This document provides clarification regarding the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos. It is intended to address common questions regarding situations where one or more layers which may contain asbestos are present, and supplement the January 5, 1994 Federal Register clarification (59 FR 542).

**EFFECTIVE DATE:** December 19, 1995.

**FOR FURTHER INFORMATION CONTACT:** For copies, contact Mr. Larry Tessier at 1-800-368-5888 or at (703) 305-5938. For questions about the clarification, please contact Mr. Tom Ripp at (202) 564-7003.

**SUPPLEMENTARY INFORMATION:** On November 20, 1990, the Federal Register published the Environmental Protection Agency's (the Agency's) revision of the National Emission Standards for Hazardous Air Pollutants for Asbestos (asbestos NESHAP), 40 CFR part 61, subpart M, 55 FR 48406. The asbestos NESHAP applies to any facility as defined in 40 CFR 61.141. The Agency has learned that some of the regulated community have further questions concerning the analysis of samples which may contain multiple layers, any or all of which may be asbestos containing materials (ACM) under the asbestos NESHAP. Because these questions are frequently asked, EPA is making this clarification.

### I. Clarification of Multi-Layered ACM System

At the time the original asbestos NESHAP was promulgated (April 6, 1973), a standardized reference method had not been developed to determine quantitatively the content of asbestos in a material. The definition for "friable asbestos material" was added in the October

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14, 1975 asbestos NESHAP, but still did not specify an analytical method. EPA's unwritten policy based on the definition of "friable asbestos material" was that each layer in a multi-layered system was to be analyzed as a separate material (no averaging or dilution by combining layers of asbestos-containing material with nonasbestos-containing material was allowed). The November 20, 1990 revision of the asbestos NESHAP finally specified that Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM method) be used to determine whether or not a material contains greater than one percent asbestos. Section 1.7.2.1 of the PLM method states that "When discrete strata are identified, each is treated as a separate material so that fibers are first quantified in that layer only, and then the results for each layer are combined to yield an estimate of asbestos content for the whole sample." This language has led to considerable confusion as to how to analyze multi-layered samples for NESHAP purposes. EPA published a clarification regarding the analysis of multi-layered systems in the January 5, 1994 Federal Register. This clarification basically stated that all multi-layered systems except for wall systems where joint compound was used only at the joints and nail holes must be analyzed as separate materials, and results were not allowed to be combined to determine average asbestos content (continuing the policy that dilution of an asbestos-containing material is not allowed).

The Environmental Protection Agency has received many questions about analyzing multi-layered systems for asbestos content to determine the applicability of the asbestos NESHAP since its January 5, 1994 clarification (59 FR 542). This clarification reiterates EPA's position for analysis of multi-layered samples for applicability of the asbestos NESHAP.

This clarification applies to all multi-layered systems (other than wallboard systems where asbestos-containing joint compound is used only at the joints and nail holes) under both the NESHAP and the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763) programs.

Any source sending multi-layered bulk samples to a lab may request that certain sample(s) or portions of sample(s) be composited for analysis first (to potentially reduce time and cost of sampling).

(Note: A composite sample does not mean that multiple samples may be composited into one sample. It means that multiple layers of one core sample may be composited for analysis.)

If this alternative method is chosen, then the following requirements must be followed. To analyze the composite sample, the procedures in EPA/600-93/116 "Method for the Determination of Asbestos in Bulk Building Materials" ("the Method"), specifically Section 2.3 "Gravimetry," must be used. Additionally, for the composite sample, the recommendations in Appendix D of the method must be followed. This procedure is consistent with the procedures outlined in 40 CFR Part 763, Appendix E to Subpart E (formerly Appendix A to Subpart F), which is referenced in the asbestos NESHAP (40 CFR 61.141 and 61.146), but the procedures in the new method are more clear. EPA finds that this method is an acceptable alternative method of compliance under section 61.13(h)(1)(ii). EPA intends to amend the asbestos NESHAP in the near future to refer specifically to these procedures. When using the gravimetric procedures, the result may be recorded as percent asbestos by weight.

If the result of the composite analysis shows that the average content for the multi-layered system (across the layers) is greater than one percent, then the multi-layered system must be treated as asbestos-containing and analysis by layers is not necessary. If the result of the composite sample analysis indicates that the multilayered system as a whole contains asbestos in the amount of one percent or less, but greater than none detected, then analysis by layers is required to ensure that no layer in the system contains greater than one percent asbestos. If any layer contains greater than one percent asbestos, that layer must be treated as asbestos-containing. This will have the effect of requiring all layers in a multi-layered system to be treated as asbestos-containing if the layers can not be separated without disturbing the asbestos-containing layer. Once any one layer is shown to have greater than one percent asbestos, further analysis of the other layers is not necessary if all the layers will be treated as asbestos-containing. If several of the layers will be removed without removing the entire system, then all layers that will be disturbed must be analyzed. This includes the material being removed; however, the material being removed may be analyzed using the composite analysis procedures. Please note that the same requirements to perform point counting as stated in our May 8, 1991 clarification (see enclosed memorandum) still apply for any layers being analyzed

individually.

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Dated: September 28, 1995.

Richard Biondi,

Acting Director, Manufacturing, Energy, and Transportation Division,  
Office of Compliance.

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