File: Asbestos

INTERNAL CORRESPONDENCE

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(Name) Mr. D. R. Paugh
ision Mr. B. H. Thomas
ation

Date August 2, 1977

Originating Dept. IH/EP

by to Mr. J. W. Biddle
Mr. G. F. Hurley

Subject Compliance with EPA Asbestos Regulation

Gentlemen:

Enclosed is a copy of an outline received from Mr. R. A. Huber, maintenance operations manager for SHARE. This letter provides guidance for compliance with the EPA regulation, 40CFR61, Hazardous Air Pollutants, as it applies to the removal and disposal of asbestos-containing insulation and the notification of regulatory authorities. The outline summarizes the key requirements and suggests a standard format for notifying agencies.

Please extend this information to those departments in Field Construction responsible for this type of work. Ask that they thoroughly review their procedures and implement any changes that are considered necessary to comply with the removal and disposal requirements.

If you have any questions, please do not hesitate to contact us.

Best regards,

S. D. Herzog

SDH/mac

Enclosure

PLAINTIFF'S EXHIBIT
UC-3450

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File Asbestos EPA

MONDAY, JUNE 19, 1978
PART III



ENVIRONMENTAL PROTECTION AGENCY

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Asbestos Standard; Amendments

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[6560-01]

Title 40—Protection of the Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

[FRL 869-7]

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Amendments to Asbestos Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule amends the national emission standard for asbestos by extending the requirements of the provisions which apply to the spraying of asbestos-containing materials and to demolition and renovation operations. These amendments are a result of a determination that the standard did not require control of asbestos emissions during spray application of asbestos-containing materials other than fireproofing and insulation or during the demolition and renovation of structures where friable asbestos materials other than fireproofing and insulation are present.

EFFECTIVE DATE: June 19, 1978.

ADDRESS: A summary of the public comments on the proposed amendments and EPA's responses is contained in the Standards Support Document which may be obtained upon written request from the EPA Library (MD-35), Research Triangle Park, N.C. 27711 (specify *Standards Support Document: Promulgated Amendments to National Emission Standard for Asbestos*, EPA 450/2-77-030, January, 1978). The Standards Support Document is also available for public inspection and copying at the EPA Public Information Reference Unit, Room 2922 (EPA Library), 401 M Street SW., Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT:

Don R. Goodwin, Director, Emission Standards and Engineering Division (MD-13), Environmental Protection Agency, Research Triangle Park, N.C. 27711, telephone number 919-541-5271.

SUPPLEMENTARY INFORMATION: On March 2, 1977 (42 FR 12121), amendments to the national emission standard for asbestos were proposed under section 112 of the Clean Air Act. Interested persons participated in the rulemaking by submitting comments to EPA. The comments have been considered and, where determined by the Administrator to be appropriate, changes reflecting these comments have been incorporated into the promulgated amendments.

Under section 112(e) of the Clean Air Act, as amended in 1977, the Administrator may promulgate a "design, equipment, work practice, or operational standard, or combination thereof" for control of a hazardous air pollutant if it is infeasible to prescribe an emission standard under section 112(b) for the pollutant. Such infeasibility occurs, for example, when "a hazardous pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such a pollutant" or when "the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations." The spraying of friable asbestos materials and demolition or renovation of buildings containing such materials are sources of asbestos emissions for which EPA believes it is not feasible to prescribe a numerical emission standard. This is because asbestos cannot be emitted through a conveyance which readily captures emissions for measurement and because such measurement, in any event, would be technologically and economically impractical. Therefore, work practice standards rather than emission standards are being promulgated.

This promulgation is not affected by the *Supreme Court decision in Adamo Wrecking Co. v. U.S.* (No. 76-911, decided January 10, 1978). That case arose in the narrow context of a criminal enforcement proceeding and was decided on an interpretation of section 112 prior to its amendment in 1977. The court held that the pre-1977 version of section 112 did not authorize a portion of the national emission standard for asbestos (prescribing certain work practices for demolition and renovation activities) because it consisted of requirements other than numerical limitations on emissions. The 1977 amendments to section 112 now clearly authorize the Administrator to promulgate work practice or other nonnumerical standards in order to control emissions of hazardous air pollutants. Another important 1977 amendment to the Clean Air Act explicitly authorizes citizens and States, under section 304, to enforce work practice and other nonnumerical standards promulgated under section 112.

Summary of Amendments

The national emission standard for asbestos currently regulates demolition and renovation operations involving asbestos-containing insulation and fireproofing materials and prohibits the spray application of these materials if they contain more than 1 percent asbestos. The promulgated amendments extend coverage of the demolition and renovation provisions (40 CFR 61.22(d)) to all friable asbestos materials and extend the coverage of the asbestos spraying provisions (40 CFR 61.22(e)) to all materials which contain more than 1 percent asbestos. Materials in which the asbestos fibers are encapsulated with a bituminous or resinous binder and which are not friable after drying are exempt from the spraying provisions.

Summary of Environmental and Economic Impacts

The promulgated amendments to the asbestos standard will have a significant beneficial environmental impact by reducing emissions of asbestos to the atmosphere. There will be minimal solid waste and water pollution impacts from the increased amount of friable asbestos materials which must be removed and disposed of in conjunction with demolition or renovation. No impact on national energy consumption is anticipated.

The amendments to the demolition and renovation provisions may increase the cost of demolition or renovation because of the increased amount of friable asbestos-containing materials which will be covered by these regulations. Comments from representatives of the demolition industry, however, did not address this point. Therefore, this impact is not expected to be significant.

Spray-on asbestos-containing decorative coatings are the primary products prohibited by the amendments to the spraying restrictions. Since substitutes are available for these products, no significant adverse economic impacts are expected to result from prohibiting their use.

Significant Comments

During the public comment period, EPA received 24 letters commenting on the proposed amendments. These included 16 from industry, 3 from other governmental agencies, and 5 from other interested parties. As a result of these comments, there has been only one significant change made to the amendments since proposal. This change involves the spraying restriction in § 61.22(e). The proposed amendments would have prohibited the spraying of all materials containing more than 1 percent asbestos by weight.

Several commenters, however, requested that EPA exempt from the spraying restrictions certain bituminous- and resinous-based asbestos-containing coatings. These coatings are typically used as roofing compounds, waterproofing of insulation exposed to the weather, automobile undercoatings, and industrial maintenance coatings.

Based on information supplied by the commenters, there are no acceptable substitutes available for these

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uses of asbestos. Among the most likely substitutes which have been investigated are glass, cotton, wood, cellulose, mineral wool, hemp, and other types of inorganic and organic fibers; gelling and thickening agents; clay thickeners, including attapulgite; ground cork; styrofoam; ground rubber; vermiculite; feldspar; polyethylene fibrous powders; and ceramic fibers. Generally, these substitutes have been found to be unacceptable because of unsatisfactory durability; insufficient bulk; unsatisfactory qualities related to fibrous reinforcing, homogeneity, and adhesiveness; agglomeration during spraying; and settlement in the container over time. Furthermore, if asbestos fibers are released during application of the coatings, during their service life, or during demolition or renovation, the fibers will not remain airborne because they are encapsulated by droplets of the binder and are too heavy to remain suspended.

Because there do not appear to be acceptable substitutes available and any beneficial environmental impact resulting from the prohibition of this use of asbestos would be negligible, the spraying of materials in which the asbestos fibers are encapsulated by a bituminous or resinous binder and which are not friable after drying is exempt from the provisions of § 61.22(e) of the promulgated amendments.

There were several other significant comments which did not result in changes to the amendments. To aid enforcement of the proposed spraying restrictions in § 61.22(e), commenters suggested that products should be labeled as to their asbestos content if they contain in excess of 1 percent asbestos by dry weight and have the potential for spray-on application. Requiring labeling would constitute a significant change in the amendments and would require reproposal. Rather than reproposing, the need for this provision will be assessed during enforcement of the amendments and, if appropriate, labeling requirements will be proposed.

One commenter suggested that the regulation be extended to require removal of existing asbestos-containing sprayed materials which present significant risks to human health due to deterioration, particularly in buildings accessible to the public. The proposed amendments would have only prohibited the future application of asbestos-containing spray material.

This problem is being addressed through the preparation of a guidance document which will assist governmental agencies and private individuals who must decide on proper action to take when sprayed asbestos materials are found in existing buildings. The first volume of this document discusses criteria for determining whether asbestos material in a building is a problem; the current knowledge of hazards from spray-on asbestos in buildings; and alternative corrective actions that may be taken, including acceptable removal procedures and the use of sealants for the coating of material. The second volume of the document, which is expected to be available in late 1978, will present the results of studies which will be done on sealants to determine their effectiveness and acceptability for coating asbestos materials. Copies of the first volume of this document may be obtained upon written request from the Emission Standards and Engineering Division (MD-13), Environmental Protection Agency, Research Triangle Park, N.C. 27711 (specify *Sprayed Asbestos-Containing Materials in Buildings: A Guidance Document*).

The lack of EPA reference methods for making various asbestos measurements was of concern to some commenters. Specifically, they suggested that EPA publish a method for determining the percentage of asbestos in spray materials and reference OSHA-NIOSH procedures for measuring airborne asbestos particulate matter from spraying operations.

A number of methods for the analysis of asbestos-containing samples are now in use and the variability of results obtained by these methods is extremely wide. In an attempt to standardize procedures and reduce this variability, an EPA provisional electron microscope procedure for measuring the concentration of asbestos in air samples has been developed. This method can also be used for analysis of material samples. It will be further evaluated and refined for use in actual field studies and it found acceptable, may eventually serve as the basis for an EPA reference method. The procedure is available in a publication entitled Electron Microscope Measurement of Airborne Asbestos Concentrations: A Provisional Methodology Manual, EPA 600/2-77-178, August 1977. Copies of this document may be obtained upon written request from the Environmental Sciences Research Laboratory (MD-49), EPA, Research Triangle Park, N.C. 27711.

The OSHA-NIOSH method measures airborne asbestos fiber concentrations by phase contrast microscopy. It measures only those fibers which are longer than 5 microns and does not differentiate between asbestos and other fibers. While such a method may be sufficient for enforcing the OSHA workplace asbestos standard, it is not sufficient as an indicator of total asbestos concentration in the ambient air. Many asbestos fibers are smaller than the smallest measured by the OSHA-NIOSH method and these fibers can contribute significantly to the amount of asbestos which may be present in the ambient air. The provisional electron microscope method described above is useful for estimating airborne asbestos fiber concentrations with greater precision.

Some commenters suggested that since asbestos is a carcinogen and no threshold level for health effects has been established, the 1 percent allowable asbestos content for spray-on materials permits too much environmental contamination and should be lowered considerably, if not completely eliminated. The 1 percent allowable asbestos content was selected primarily to allow the spray application of materials which contain trace amounts of asbestos which occur in numerous natural substances and which could not be reduced or eliminated without effectively banning the use of these materials.

MISCELLANEOUS

NOTE.—The Environmental Protection Agency has determined that this document does not contain a major action requiring preparation of an Economic Impact Analysis under Executive Orders 11821 and 11949 and OMB Circular A-107.

Dated: June 13, 1978.

BARBARA BLUM,
Acting Administrator.

In Part 61 of Chapter I, Title 40, of the Code of Federal Regulations, §§ 61.21 and 61.22 are amended as follows:

Subpart B—National Emission Standard for Asbestos

1. Section 61.21 is amended by revising paragraphs (m), (q), and (r) to read as follows:

§ 61.21 Definitions.

* * * * *

(m) "Renovation" means the removing or stripping of friable asbestos materials used on any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member. Operations in which load-supporting structural members are wrecked or taken out are excluded.

* * * * *

(q) "Removing" means taking out friable asbestos materials used on any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member from any building, structure, facility, or installation.

(r) "Stripping" means taking off friable asbestos materials from any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member.

* * * * *

2. Section 61.22 is amended by revising paragraphs (d), (d)(1)(i), (d)(1)(ii),

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(d)(2)(iii), (d)(4)(i), (d)(4)(ii), (d)(4)(iii), (d)(4)(iv), (e), and (e)(2); and adding paragraph (e)(3) to read as follows:

§ 61.22 Emission standard.

* * * * *

(d) *Demolition and renovation.* The requirements of this paragraph shall apply to any owner or operator of a demolition or renovation operation who intends to demolish any institutional, commercial, or industrial building (including apartment buildings having more than four dwelling units), structure, facility, installation, or portion thereof which contains any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member that is covered or coated with friable asbestos materials, except as provided in paragraph (d)(1) of this section; or who intends to renovate any institutional, commercial, or industrial building, structure, facility, installation, or portion thereof where more than 80 meters (ca. 260 feet) of pipe covered or coated with friable asbestos materials are stripped or removed, or more than 15 square meters, (ca. 160 square feet) of friable asbestos materials used to cover or coat any duct, boiler, tank, reactor, turbine, furnace, or structural member are stripped or removed.

(1) (i) The owner or operator of a demolition operation is exempted from the requirements of this paragraph: *Provided,* (A) The amount of friable asbestos materials in the building or portion thereof to be demolished is less than 80 meters (ca. 260 feet) used on pipes, and less than 15 square meters (ca. 160 square feet) used on any duct, boiler, tank, reactor, turbine, furnace, or structural member, and (B) the notification requirements of paragraph (d)(1)(ii) are met.

(ii) Written notification shall be postmarked or delivered to the Administrator at least 20 days prior to commencement of demolition and shall include the information required by paragraph (d)(2) of this section, with the exception of the information required by paragraphs (d)(2) (iii), (vi), (vii), (viii), and (ix) of this section, and shall state the measured or estimated amount of friable asbestos materials which is present. Techniques of estimation shall be explained.

(2) * * *

(iii) Description of the building, structure, facility, or installation to be demolished or renovated, including the size, age, and prior use of the structure, and the approximate amount of friable asbestos materials present.

* * * * *

(4) * * *

(i) Friable asbestos materials, used on any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member, shall be removed from any building, structure, facility or installation subject to this paragraph. Such removal shall occur before wrecking or dismantling of any portion of such building, structure, facility, or installation that would break up the friable asbestos materials and before wrecking or dismantling of any other portion of such building, structure, facility, or installation, that would preclude access to such materials for subsequent removal. Removal of friable asbestos materials used on any pipe, duct, or structural member which are encased in concrete or other similar structural material is not required prior to demolition, but such materials shall be adequately wetted whenever exposed during demolition.

(ii) Friable asbestos materials used on pipes, ducts, boilers, tanks, reactors, turbines, furnaces, or structural members shall be adequately wetted during stripping, except as provided in paragraphs (d)(4)(iv), (d)(4)(vi), or (d)(vii) of this section.

(iii) Pipes, ducts, boilers, tanks, reactors, turbines, furnaces, or structural members that are covered or coated with friable asbestos materials may be taken out of any building, structure, facility, or installation subject to this paragraph as units or in sections provided the friable asbestos materials exposed during cutting or disjoining are adequately wetted during the cutting or disjoining operation. Such units shall not be dropped or thrown to the ground, but shall be carefully lowered to ground level.

(iv) The stripping of friable asbestos materials used on any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member that has been removed as a unit or in sections as provided in paragraph (d)(4)(iii) of this section shall be performed in accordance with paragraph (d)(4)(ii) of this section. Rather than comply with the wetting requirement, a local exhaust ventilation and collection system may be used to prevent emissions to the outside air. Such local exhaust ventilation systems shall be designed and operated to capture the asbestos particulate matter produced by the stripping of friable asbestos materials. There shall be no visible emissions to the outside air from such local exhaust ventilation and collection systems except as provided in paragraph (f) of this section.

* * * * *

(e) *Spraying.* There shall be no visible emissions to the outside air from the spray-on application of materials containing more than 1 percent asbestos, on a dry weight basis, used on equipment and machinery, except as provided in paragraph (f) of this section. Materials sprayed on buildings, structures, structural members, pipes, and conduits shall contain less than 1 percent asbestos on a dry weight basis.

* * * * *

(2) Any owner or operator who intends to spray asbestos materials which contain more than 1 percent asbestos on a dry weight basis on equipment and machinery shall report such intention to the Administrator at least 20 days prior to the commencement of the spraying operation. Such report shall include the following information: * * *

(3) The spray-on application of materials in which the asbestos fibers are encapsulated with a bituminous or resinous binder during spraying and which are not friable after drying is exempted from the requirements of paragraphs (e) and (e)(2) of this section.

* * * * *

(Secs. 112 and 301(a) of the Clean Air Act as amended (42 U.S.C. 7412, 7601(a)).)

[FR Doc. 78-16891 Filed 6-16-78; 8:45 am]

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