

Monsanto

OCT 5 1984

PLAINTIFF'S EXHIBIT

MON-2251

LAW DEPARTMENT

P. H. Smith G3WB 4-8506

DATE September 27, 1984
SUBJECT EPA Asbestos Regulation

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The U. S. Environmental Protection Agency is giving increased attention to enforcement of regulations which have been promulgated pursuant to Section 112 of the Clear Air Act. This is particularly true with respect to asbestos, as evidenced by the recent statement by John Rasmic, EPA Stationary Source Air Compliance Monitoring Chief, in the enclosed article from the September 7 Environmental Reporter, that enforcing the asbestos standard will be a top priority for EPA regional office in the upcoming year. This should also directly affect states having Section 112 enforcement delegations.

It is important that all Monsanto sites comply fully with these regulations, a copy of which is also enclosed. Recently I learned that a plant was not familiar with the requirement that, among other things, advance written notice to the EPA is required in the event of demolition or renovation work involving materials covered by the regulations. In order to prevent this situation from recurring, will each of you please see that every facility within your operating company is made aware of these regulations and of the importance of complying with them.

P.H. Smith
P. H. Smith

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Enclosures

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CURRENT DEVELOPMENTS

objectivity the agency has shown on the lead-in-gasoline issue over the past 16 years.

Dr. Edward McCabe, a pediatrician at the University of Wisconsin Medical School and a consultant to the International Lead-Zinc Research Association, said the drop in blood-lead levels seen during the 1970s, which EPA attributes to the rise in unleaded gasoline use, is more likely due to other factors, such as a reduction in the amount of lead contained in processed foods.

Dr. Paul Hammond, professor of environmental health at the University of Cincinnati Medical Center, told the panel that a study he conducted revealed that children's blood-lead levels were directly related to the presence or absence of leaded paint in their houses. "Regardless of the level of atmospheric deposition of lead [from leaded gas combustion], the real determinant of blood lead is quality of housing," Hammond said.

Others Defend EPA Data Interpretation

Dr. Sergio Piomelli, director of pediatric oncology and hematology at Columbia University Medical School, countered that blood-lead levels in children far below what is considered "normal" are now known to cause adverse health effects. "The day when lead is removed completely from gasoline will be a great day for the health of children in this country," he told the EPA panel.

Leaded paint contributes to the problem as well, he acknowledged, but said that removal of leaded gasoline from the market will reduce the background levels of lead in children's blood and prevent some adverse health effects.

Cannon told BNA Aug. 30 that critics of EPA's interpretation of the data on the relationship between leaded gasoline use and the level of lead in blood were selecting specific studies where inconsistencies exist, but said that when all the evidence is considered, the relationship is clear. He said all available data on the subject were carefully examined by EPA scientists and a peer review panel before the administrator issued the proposal.

Lester Grant, an EPA panel member and director of the agency's Office of Environmental Criteria and Assessment in Research Triangle Park, N.C., told BNA Aug. 30 that declines in leaded gas use offer the only plausible explanation for the large drop seen in average blood-lead levels in the United States during the late 1970s. Other factors, such as a drop in the content of lead in processed food, may have contributed but cannot account for the magnitude of the decline in lead in blood, he said.

Grant said that "a major point of evidence" that a connection exists between gas and blood-lead levels is the close correlation, seen in several independent studies, between blood-lead levels and wide seasonal variations in leaded gasoline use.

Oil Industry Divided on Timing

Oil refining industry representatives appearing before the panel generally agreed that a lead phasedown is necessary to protect public health, but disagreed over its timing.

Jerrold Levine of Amoco Oil Co. told the panel that the industry would have difficulty meeting the Jan. 1, 1986, deadline for an average gasoline lead content of 0.10 gpg because conversion of production facilities needed to make more unleaded gas would not be completed.

Instituting the 0.10 limit in 1986 could result in shortages of unleaded gasoline, increased oil imports, and significant increases in gasoline prices, he said.

Levine suggested a slower phasedown schedule in which the cap on lead in gasoline would be decreased to 0.70 gpg in

mid-1985 and dropped another 0.20 gpg each year until 0.10 gpg is reached in 1988.

Representatives of Phillips, Amoco, Chevron, Exxon, Diamond Shamrock, Wickland, TCR, and Union oil companies agreed with Levine that the Jan. 1, 1986 deadline for a phasedown to 0.10 gpg could not be met by the industry without economic hardships, and proposed various more prolonged phasedown schedules.

Support for EPA Proposal

Other representatives of predominantly small or independent oil companies, including Thad Mosely of Charter International Oil Co., told the panel that most refineries could easily meet the Jan. 1, 1986, deadline for the 0.10 gpg limit in leaded gasoline because many have already started investing in the equipment necessary to increase unleaded gasoline production.

Mosely maintained that delaying the phasedown schedule would penalize companies that have made such investments and reward companies that have been "dragging their feet." EPA had warned the oil industry in 1972 that lead in gasoline probably would be phased out eventually, Mosely added.

Representatives from Ashland, Citgo, Arco, Sabre Energy, Tosco, and Crown Petroleum oil companies supported Mosely's statements on this issue.

Environmentalists Endorse Quick Phasedown

Ellen Silbergeld of the Environmental Defense Fund told the panel that EPA underestimated the beneficial health effects of a leaded gas phasedown to 0.10 gpg by Jan. 1, 1986, because it overestimated the blood-lead level that can be present before adverse health effects occur. She called for a total ban on leaded gas by Jan. 1, 1985.

Eric Goldstein, an attorney with the Natural Resources Defense Council Inc., told the panel that the organization agreed with EPA's phasedown schedule. Further restrictions on the sale of leaded gasoline may be required to prevent fuel switching, an illegal practice in which owners use leaded gasoline in engines designed for unleaded fuel, he said.

Kirk Johnson of the Center for Science in the Public Interest recommended that EPA institute a phased-in compliance to meet a lead limit of 0.10 gpg by Jan. 1, 1986. This would prevent refiners from holding off until the last minute before they change over to unleaded gasoline production, Johnson said.

A variety of special interest groups, including representatives of motorcycle companies, boating groups, and farm machinery producers, argued that engines in the vehicles they use or produce often cannot tolerate unleaded gas without being damaged. They urged a delay in the lead-phasedown program and the continued production of some leaded gasoline to run these special engines.

Enforcement

TOP EPA PRIORITIES INCLUDE ENFORCING ASBESTOS STANDARDS AT DEMOLITION SITES

Monitoring releases of asbestos at building demolition sites and enforcing asbestos air emissions standards will be a top priority for the air management staff in the Environmental Protection Agency's regional offices in fiscal 1985, John Rasmic, chief of compliance monitoring for the agency's Stationary Source Compliance Division, told BNA Aug. 31.

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For the first time, the regional offices will have to report to EPA headquarters information on asbestos demolition and renovation activities and data on violations of EPA's asbestos regulations, according to a July 12 memorandum to regional air management directors from Edward E. Reich, director of the agency's Stationary Source Compliance Division.

EPA issued national emission standards for hazardous air pollutants for asbestos in April (Current Developments, April 20, p. 2251).

Rasmit said enforcing emissions standards on stationary sources of lead will also be a high priority for EPA during fiscal 1985 due to evidence that exposure to the substance causes ill-health effects at levels much lower than the medical community originally believed (June 1, p. 146).

Another major EPA goal for enforcing Clean Air Act regulations governing stationary sources of air pollution during fiscal 1985 will be to bring into compliance an expanded list of so-called "significant violators," according to the memorandum.

It said the definition of significant violators has been expanded for fiscal 1985 to include stationary sources in Class A2, which is composed of the next to largest emitters. Class A1 sources, the largest emitters, remain on the list, the memorandum said.

To ensure that the enforcement goals are met, the memorandum instructed agency regional offices to conduct compliance inspections during fiscal 1985 at 95 percent of all major stationary sources of conventional air pollutants — such as sulfur dioxide, carbon monoxide, and particulate matter — and to conduct compliance inspections at 97 percent of all sources of hazardous air pollutants regulated under Section 112 of the Air Act.

Coal

INTERIOR UNDERTAKES SUPPLEMENTAL EIS, SAYS IT MAY DELAY PROGRAM UNTIL MID-1985

A supplemental environmental impact statement which may delay institution of the Interior Department's coal leasing program until mid-1985 will be done to determine the effects of economic and technological changes in the coal industry and revisions to the leasing program, the agency announced Aug. 30.

Interior Secretary William P. Clark said in a department statement that a supplemental EIS on coal management is needed to update the last study, done in 1979, to carry out the agency's goals of running a federal coal leasing program that promotes the U.S. interest while "protecting the environment to the fullest possible extent."

Jack Reed, a spokesman for Interior's Bureau of Land Management, told BNA Aug. 31 that the agency's decision to prepare the EIS supplement was made to comply with the National Environmental Protection Act, which calls for periodic review of all agency impact statements.

Reed said the original impact statement may be outdated now because of changes in the value of coal, the amount needed, and advances in coal mining technology since 1979.

OTA, Commission Recommendations

Reed noted that the coal leasing program is being modified to comply with recommendations of the Commission on Fair Market Value Policy and the Office of Technology Assessment, which evaluated the agency's coal program in response to congressional requests earlier this year and in 1983 (Current Developments, June 20, p. 439; March 23, p. 2094).

Reed said the secretary agreed to almost all of the recommendations made, suspending all competitive coal leasing in 1984 to put them into effect. As a result, Reed continued, there will be significant changes in the coal leasing program, which are likely to result in new environmental effects. For example, leases may be offered more frequently but in smaller parcels in the future, which could change the effect of the program on small communities, he said.

Emergency coal leasing will continue while the supplement is being prepared, according to Interior, which said a draft version probably will be available for public comment by Jan. 1, 1985.

Interior said Sept. 4 that it is accepting written comments until Oct. 4 on the agency's plan to prepare a supplemental EIS on its coal leasing program (49 FR 34976). Comments should be addressed to Director (650), Bureau of Land Management, 18th and C Streets, N.W., Washington, D.C. 20240; further information can be obtained from Tom Walker, telephone (202) 343-4636.

General Policy

HOUSE PANEL SEEKS WHITE HOUSE DATA ON CONTACTS WITH FORMER EPA OFFICIALS

A House subcommittee charged the White House with withholding information on contacts between Presidential aides and former officials of the Environmental Protection Agency who were involved in last year's controversy over the \$1.6 billion superfund hazardous waste cleanup program.

A final report issued by the Energy and Commerce Subcommittee on Investigations and Oversight on its 1983 investigations of EPA said that "the White House is currently preventing the Department of Justice from providing the Subcommittee on Oversight and Investigations with documents which directly relate to personal communications between White House officials and EPA officials, including Rita M. Lavelle."

Lavelle, former head of EPA's superfund program, was convicted last year of perjury and obstruction of a congressional panel's investigations of mismanagement and political manipulation of the superfund program (Current Developments, Dec. 9, 1983, p. 1417).

White House contacts with Lavelle "were far more extensive than either Ms. Lavelle or White House officials have acknowledged to date," according to the report, which was issued Aug. 30.

The subcommittee has been denied results of a 1983 investigation on contacts between Presidential aides and EPA officials, which was conducted at the request of Fred F. Fielding, counsel to the President, the report said.

Lavelle had extensive contacts with Craig Fuller, assistant to the President for Cabinet affairs, and with Martin Smith, an official in the White House Office of Policy Development on hazardous waste issues, according to the report.

Lavelle was the only official who faced legal charges as a result of the 1983 congressional probe, but it led to the firing or resignation of more than a dozen top EPA officials, including the administrator, Anne M. Burford, who resigned in March 1983.

President Reagan's claim of executive privilege for certain EPA superfund enforcement documents directly preceded Congress' investigation of the entire superfund program. Burford was voted in contempt of Congress for withholding the enforcement documents, but Reagan finally released them (March 11, p. 2027; March 18, p. 2075).

(b) An owner or operator may elect to comply with the requirements of § 61.243-1 and § 61.243-2.

(c) An owner or operator may apply to the Administrator for a determination of an alternative means of emission limitation that achieves a reduction in emissions of benzene at least equivalent to the reduction in emissions of benzene achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of § 61.244.

§ 61.113-61.119 (Reserved)

Subpart M—National Emission Standard for Asbestos

[Subpart M added by 49 FR 13661, April 5, 1984]

Authority: Secs. 112 and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7412, 7601(a)), and additional authority as noted below.

§ 61.140 Applicability.

The provisions of this subpart are applicable to those sources specified in §§ 61.142 through 61.153.

§ 61.141 Definitions.

All terms that are used in this subpart and are not defined below are given the same meaning as in the Act and in Subpart A of this part.

Active waste disposal site means any disposal site other than an inactive site.

Adequately wetted means sufficiently mixed or coated with water or an aqueous solution to prevent dust emissions.

Asbestos means the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos-containing waste materials means any waste that contains commercial asbestos and is generated by a source subject to the provisions of this subpart. This term includes asbestos mill tailings, asbestos waste from control devices, friable asbestos waste material, and bags or containers that previously contained commercial asbestos. However, as applied to demolition and renovation operations, this term includes only friable asbestos

waste and asbestos waste from control devices.

Asbestos material means asbestos or any material containing asbestos.

Asbestos mill means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices means any waste material that contains asbestos and is collected by a pollution control device.

[Corrected by 49 FR 25453, June 21, 1984]

Commercial asbestos means any asbestos that is extracted from asbestos ore.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations.

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event. This term includes operations necessitated by nonroutine failures of equipment.

[Corrected by 49 FR 25453, June 21, 1984]

Fabricating means any processing of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites for the construction or restoration of facilities.

Facility means any institutional, commercial, or industrial structure, installation, or building (excluding apartment buildings having no more than four dwelling units).

Facility component means any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility; or any structural member of a facility.

Friable asbestos material means any material containing more than 1 percent asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

Inactive waste disposal site means any disposal site or portion of it where additional asbestos-containing waste material will not be deposited and where the surface is not disturbed by vehicular traffic.

Manufacturing means the combining of commercial asbestos—or, in the case

of woven friction products, the combining of textiles containing commercial asbestos—with any other material(s), including commercial asbestos, and the processing of this combination into a product.

Outside air means the air outside buildings and structures.

Particulate asbestos material means finely divided particles of asbestos material.

Planned renovation operations means a renovation operation, or a number of such operations, in which the amount of friable asbestos material that will be removed or stripped within a given period of time can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Remove means to take out friable asbestos materials from any facility.

Renovation means altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.

Roadways means surfaces on which motor vehicles travel. This term includes highways, roads, streets, parking areas, and driveways.

Strip means to take off friable asbestos materials from any part of a facility.

[Corrected by 49 FR 25453, June 21, 1984]

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

[Corrected by 49 FR 25453, June 21, 1984]

Visible emissions means any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

§ 61.142 Standard for asbestos mills.

Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

[Sec. 61.142]

§ 61.143 Standard for roadways.

No person may surface a roadway with asbestos tailings or asbestos-containing waste material on that roadway, unless it is a temporary roadway on an area of asbestos ore deposits [§ 61.143 corrected by 49 FR 25453, June 21, 1984]

§ 61.144 Standard for manufacturing.

(a) *Applicability:* This section applies to the following manufacturing operations using commercial asbestos.

(1) The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap, or other textile materials.

(2) The manufacture of cement products.

(3) The manufacture of fireproofing and insulating materials.

(4) The manufacture of friction products.

(5) The manufacture of paper, millboard, and felt.

(6) The manufacture of floor tile.

(7) The manufacture of paints, coatings, caulks, adhesives, and sealants.

(8) The manufacture of plastics and rubber materials.

(9) The manufacture of chlorine.

(10) The manufacture of shotgun shell wads.

(11) The manufacture of asphalt concrete.

(b) *Standard:* Each owner or operator of any of the manufacturing operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted; or

(2) Use the methods specified by § 61.154 to clean emissions from these operations containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.145 Standard for demolition and renovation: Applicability.

The requirements of §§ 61.146 and 61.147 apply to each owner or operator of a demolition or renovation operation as follows:

(a) If the amount of friable asbestos materials in a facility being demolished is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility

components, all the requirements of §§ 61.146 and 61.147 apply, except as provided in paragraph (c) of this section.

(b) If the amount of friable asbestos materials in a facility being demolished is less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, only the notification requirements of paragraphs (a), (b), and (c) (1), (2), (3), (4), and (5) of § 61.146 apply.

[§ 61.145(b) corrected by 49 FR 25453, June 21, 1984]

(c) If the facility is being demolished under an order of a State or local governmental agency, issued because the facility is structurally unsound and in danger of imminent collapse, only the requirements in § 61.146 and in paragraphs (d), (e), (f), and (g) of § 61.147 apply.

(d) If at least 80 linear meters (200 linear feet) of friable asbestos materials on pipes or at least 15 square meters (160 square feet) of friable asbestos materials on other facility components are stripped or removed at a facility being renovated, all the requirements of §§ 61.146 and 61.147 apply.

(1) To determine whether paragraph (d) of this section applies to planned renovation operations involving individual nonscheduled operations, predict the additive amount of friable asbestos materials to be removed or stripped over the maximum period of time a prediction can be made, not to exceed 1 year.

(2) To determine whether paragraph (d) of this section applies to emergency renovation operations, estimate the amount of friable asbestos materials to be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation.

(e) Owners or operators of demolition and renovation operations are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

§ 61.146 Standard for demolition and renovation: Notification requirements.

Each owner or operator to which this section applies shall:

(a) Provide the Administrator with written notice of intention to demolish or renovate.

(b) Postmark or deliver the notice as follows:

(1) At least 10 days before demolition begins if the operation is described in § 61.145(a);

(2) At least 20 days before demolition begins if the operation is described in § 61.145(b);

(3) As early as possible before demolition begins if the operation is described in § 61.145(c);

(4) As early as possible before renovation begins.

(c) Include the following information in the notice:

(1) Name and address of owner or operator.

(2) Description of the facility being demolished or renovated, including the size, age, and prior use of the facility.

(3) Estimate of the approximate amount of friable asbestos material present in the facility in terms of linear feet of pipe, and surface area on other facility components. For facilities described in § 61.145(b), explain techniques of estimation.

[§ 61.146(c)(3) corrected by 49 FR 25453, June 21, 1984]

(4) Location of the facility being demolished or renovated.

(5) Scheduled starting and completion dates of demolition or renovation.

(6) Nature of planned demolition or renovation and method(s) to be used.

(7) Procedures to be used to comply with the requirements of this Subpart.

(8) Name and location of the waste disposal site where the friable asbestos waste material will be deposited.

(9) For facilities described in § 61.145(c), the name, title, and authority of the State or local governmental representative who has ordered the demolition.

[Approved by the Office of Management and Budget under control number 2000-0264]

§ 61.147 Standard for demolition and renovation: Procedures for asbestos emission control.

Each owner or operator to whom this section applies shall comply with the following procedures to prevent emissions of particulate asbestos material to the outside air:

(a) Remove friable asbestos materials from a facility being demolished or renovated before any wrecking or dismantling that would break up the materials or preclude access to the materials for subsequent removal. However, friable asbestos materials need not be removed before demolition if:

(1) They are on a facility component that is encased in concrete or other similar material; and

[Sec. 61.147(a)(1)]

(2) These materials are adequately wetted whenever exposed during demolition.

(b) When a facility component covered or coated with friable asbestos materials is being taken out of the facility as units or in sections:

(1) Adequately wet any friable asbestos materials exposed during cutting or disjoining operations; and

(2) Carefully lower the units or sections to ground level, not dropping them or throwing them.

(c) Adequately wet friable asbestos materials when they are being stripped from facility components before the members are removed from the facility. In renovation operations, wetting that would unavoidably damage equipment is not required if the owner or operator:

(1) Asks the Administrator to determine whether wetting to comply with this paragraph would unavoidably damage equipment, and, before beginning to strip, supplies the Administrator with adequate information to make this determination; and

(2) When the Administrator does determine that equipment damage would be unavoidable, uses a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the friable asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in § 61.154.

(d) After a facility component has been taken out of the facility as units or in sections, either:

(1) Adequately wet friable asbestos materials during stripping; or

(2) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in § 61.154.

(e) For friable asbestos materials that have been removed or stripped:

(1) Adequately wet the materials to ensure that they remain wet until they are collected for disposal in accordance with § 61.152; and

(2) Carefully lower the materials to the ground or a lower floor, not dropping or throwing them; and

(3) Transport the materials to the ground via dust-tight chutes or containers if they have been removed or stripped more than 50 feet above ground level and were not removed as units or in sections.

(f) When the temperature at the point of wetting is below 0°C (32°F):

(1) Comply with the requirements of paragraphs (d) and (e) of this section. The owner or operator need not comply with the other wetting requirements in this section; and

(2) Remove facility components coated or covered with friable asbestos materials as units or in sections to the maximum extent possible.

(g) For facilities described in § 61.145(c), adequately wet the portion of the facility that contains friable asbestos materials during the wrecking operation.

§ 61.148 Standard for spraying.

The owner or operator of an operation in which asbestos-containing materials are spray applied shall comply with the following requirements:

(a) Use materials that contain 1 percent asbestos or less on a dry weight basis for spray-on application on buildings, structures, pipes, and conduits, except as provided in paragraph (c) of this section.

(b) For spray-on application of materials that contain more than 1 percent asbestos on a dry weight basis on equipment and machinery, except as provided in paragraph (c) of this section:

(1) Notify the Administrator at least 20 days before beginning the spraying operation. Include the following information in the notice:

(i) Name and address of owner or operator.

(ii) Location of spraying operation.

(iii) Procedures to be followed to meet the requirements of this paragraph.

(2) Discharge no visible emissions to the outside air from the spray-on application of the asbestos-containing material or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(c) The requirements of paragraphs (a) and (b) of this section do not apply to the spray-on application of materials where the asbestos fibers in the materials are encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying.

(d) Owners and operators of sources subject to this section are exempt from the requirements of §§ 61.05(a), 61.07, and 61.09.

(Approved by the Office of Management and Budget under control number 2000-0284)

§ 61.149 Standard for fabricating.

(a) *Applicability.* This section applies to the following fabricating operations using commercial asbestos:

(1) The fabrication of cement building products.

(2) The fabrication of friction products, except those operations that primarily install asbestos friction materials on motor vehicles.

(3) The fabrication of cement or silicate board for ventilation hoods; ovens; electrical panels; laboratory furniture, bulkheads, partitions, and ceilings for marine construction; and flow control devices for the molten metal industry.

(b) *Standard.* Each owner or operator of any of the fabricating operations to which this section applies shall either:

(1) Discharge no visible emissions to the outside air from any of the operations or from any building or structure in which they are conducted; or

(2) Use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

§ 61.150 Standard for insulating materials.

After the effective date of this regulation, no owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this paragraph do not apply to spray-applied insulating materials regulated under § 61.148.

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[Sec. 61.150]

§61.151 Standard for waste disposal for asbestos mills.

Each owner or operator of any source covered under the provisions of § 61.142 shall:

(a) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of § 61.156; and

(b) Discharge no visible emissions to the outside air from the transfer of asbestos waste from control devices to the tailings conveyor, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air. Dispose of the asbestos waste from control devices in accordance with § 61.152(b) or paragraph (c) of this section; and

(c) Discharge no visible emissions to the outside air during the collection, processing, packaging, transporting, or deposition of any asbestos-containing waste material, or use one of the disposal methods specified in paragraphs (c) (1) or (2) of this section, as follows:

(1) Use a wetting agent as follows:

(i) Adequately mix all asbestos-containing waste material with a wetting agent recommended by the manufacturer of the agent to effectively wet dust and tailings, before depositing the material at a waste disposal site. Use the agent as recommended for the particular dust by the manufacturer of the agent.

(ii) Discharge no visible emissions to the outside air from the wetting operation or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(iii) Wetting may be suspended when the ambient temperature at the waste disposal site is less than -9.5°C (15°F). Determine the ambient air temperature by an appropriate measurement method with an accuracy of $\pm 1^{\circ}\text{C}$ ($\pm 2^{\circ}\text{F}$), and record it at least hourly while the wetting operation is suspended. Keep the records for at least 2 years in a form suitable for inspection.

(2) Use an alternative disposal method that has received prior approval by the Administrator.

§61.152 Standard for waste disposal for manufacturing demolition, renovation, spraying, and fabricating operations.

Each owner or operator of any source covered under the provisions of §§61.147 and 61.149 shall:

[61.152 corrected by 49 FR 25453, June 21, 1984]

(a) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of §61.156; and

(b) Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, transporting, or deposition of any asbestos-containing waste material generated by the source, or use one of the disposal methods specified in paragraphs (b)(1), (2), or (3) of this section, as follows:

(1) Treat asbestos-containing waste material with water;

(i) Mix asbestos waste from control devices with water to form a slurry; adequately wet other asbestos-containing waste material; and

(ii) Discharge no visible emissions to the outside air from collection, mixing, and wetting operations, or use the methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air; and

(iii) After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; and

(iv) Label the containers specified in paragraph (b)(1)(iii) as follows:

CAUTION

Contains Asbestos.
Avoid Opening or
Breaking Container.
Breathing Asbestos is HAZARDOUS
to Your Health

Alternatively, use warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.1001(g)(2)(ii).

[61.152(b)(1)(iv) corrected by 49 FR 25453, June 21, 1984]

(2) Process asbestos-containing waste material into nonfriable forms:

(i) Form all asbestos-containing waste material into nonfriable pellets or other shapes; and

(ii) Discharge no visible emissions to the outside air from collection and processing operations, or use the

methods specified by § 61.154 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) Use an alternative disposal method that has received prior approval by the Administrator.

§ 61.153 Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations.

Each owner or operator of any inactive waste disposal site that was operated by sources covered under §§ 61.142, 61.144, or 61.149 and received deposits of asbestos-containing waste material generated by the sources, shall

(a) Comply with one of the following:

(1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or

(2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material; or

(3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or

(4) For inactive waste disposal sites for asbestos tailings, apply a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Use the agent as recommended for the particular asbestos tailings by the manufacturer of the dust suppressor agent. Obtain prior approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph (a)(2) or (a)(3) of this section.

(1) Display warning signs at all entrances and at intervals of 100 m (330 feet) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-

[Sec. 61.153(b)(1)]

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containing waste material was deposited. The warning signs must:

- (i) Be posted in such a manner and location that a person can easily read the legend; and
- (ii) Conform to the requirements for 31 cm x 36 cm (20" x 14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
- (iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif Gothic or Block
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif Gothic or Block
Breathing Apparatus is Necessary to Your Health	14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) Fence the perimeter of the site in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of paragraph (a) or (b) of this section.

§ 61.154 Air-cleaning.

(a) The owner or operator who elects to use air-cleaning, as permitted by §§ 61.142, 61.144, 61.147(c)(2), 61.147(d)(2), 61.148(b)(2), 61.149(b), 61.151(b), 61.151(c)(1)(ii), 61.152(b)(1)(ii), and 61.152(b)(2)(iii) shall.

[61.154(a) corrected by 49 FR 25453, June 21, 1984]

(1) Use fabric filter collection devices, except as noted in paragraph (b) of this section, doing all of the following:

- (i) Operating the fabric filter collection devices at a pressure drop of no more than .995 kilopascal (4 inches water gage), as measured across the filter fabric; and

[61.154(a)(1)(i) corrected by 49 FR 25453, June 21, 1984]

(ii) Ensuring that the airflow permeability, as determined by ASTM Method D737-75, does not exceed 9 m³/min/m² (30 ft³/min/ft²) for woven fabrics or 11 m³/min/m² (35 ft³/min/ft²) for felted fabrics, except that 12 m³/min/m² (40 ft³/min/ft²) for woven and 14 m³/min/m² (45 ft³/min/ft²) for felted fabrics is allowed for filtering air from asbestos ore dryers; and

(iii) Ensuring that felted fabric weighs at least 475 grams per square meter (14 ounces per square yard) and is at least 1.6 millimeters (one-sixteenth inch) thick throughout; and

(iv) Avoiding the use of synthetic fabrics that contain fill yarn other than that which is spun.

(2) Properly install, use, operate, and maintain all air-cleaning equipment authorized by this section. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

(b) There are the following exceptions to paragraph (a)(1):

(1) If the use of fabric creates a fire or explosion hazard, the Administrator may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95 kilopascals (40 inches water gage pressure).

(2) The Administrator may authorize the use of filtering equipment other than that described in paragraphs (a)(1) and (b)(1) of this section if the owner or operator demonstrates to the Administrator's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material.

§ 61.155 Reporting.

(a) Within 90 days after the effective date of this subpart, each owner or operator of any existing source to which this subpart applies shall provide the following information to the Administrator, except that any owner or operator who provided this information prior to April 5, 1984 in order to comply with § 61.24 (which this section replaces) is not required to resubmit it.

(1) A description of the emission control equipment used for each process; and

(2) If a fabric filter device is used to control emissions, the pressure drop across the fabric filter in inches water gage; and

(i) If the fabric device uses a woven fabric, the airflow permeability in m³/min/m² and; if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(ii) If the fabric filter device uses a felted fabric, the density in g/m³, the minimum thickness in inches, and the airflow permeability in m³/min/m².

(3) For sources subject to §§ 61.151 and 61.152:

(i) A brief description of each process that generates asbestos-containing waste material; and

(ii) The average weight of asbestos-containing waste material disposed of, measured in kg/day; and

(iii) The emission control methods used in all stages of water disposal; and

(iv) The type of disposal site or incineration site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

(4) For sources subject to § 61.153:

(i) A brief description of the site; and

(ii) The method or methods used to comply with the standard, or alternative procedures to be used.

(b) The information required by paragraph (a) of this section must accompany the information required by § 61.10. The information described in this section must be reported using the format of Appendix A of this part.

(Sec. 114, Clean Air Act as amended (42 U.S.C. 7414)).

(Approved by this Office of Management and Budget under control number 2000-0264)

§ 61.156 Active waste disposal sites.

To be an acceptable site for disposal of asbestos-containing waste material under §§ 61.151 and 61.152, an active waste disposal site must meet the requirements of this section.

(a) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (c) or (d) of this section must be met.

(b) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(1) of this section must be met.

(1) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the

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sections of the site where asbestos-containing waste material is deposited. The warning signs must:

- (i) Be posted in such a manner and location that a person can easily read the legend; and
- (ii) Conform to the requirements of 51 cm x 38 cm (20" x 14") upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
- (iii) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block
Breathing Apparatus is Mandatory to Your Health	14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

(2) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.

(c) Rather than meet the no visible emission requirement of paragraph (a) of this section, an active waste disposal site would be an acceptable site if at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material which was deposited at the site during the operating day or previous 24-hour period is covered with either:

(1) At least 15 centimeters (6 inches) of compacted nonasbestos-containing material; or

(2) A resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. This agent must be used as recommended for the particular dust by the manufacturer of the dust suppression agent. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(d) Rather than meet the no visible emission requirement of paragraph (a) of this section, an active waste disposal site would be an acceptable site if an alternative control method for emissions that has received prior approval by the Administrator is used.

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

Subpart V—National Emission Standard for Equipment Leaks (Fugitive Emission Sources)

[Subpart V added by 49 FR 23512, June 6, 1984]

§ 61.240 Applicability and designation of sources

(a) The provisions of this subpart apply to each of the following sources that are intended to operate in a volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices or systems required by this subpart.

(b) The provisions of this subpart apply to the sources listed in paragraph (a) after the date of promulgation of this specific subpart in Part 61.

(c) While the provisions of this subpart are effective, a source to which this subpart applies that is also subject to the provisions of 49 CFR Part 60 will be required to comply with the provisions of this subpart.

§ 61.241 Definitions

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, in Subpart A of Part 61, or in specific subparts of Part 61 and the following terms shall have specific meaning given them:

"Closed-vent system" means a system that is not open to atmosphere and that is composed of piping, connections, and if necessary, flow-inducing devices that transport gas or vapor from a piece of equipment to a control device.

"Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment.

"Control device" means an enclosed combustion device, vapor recovery system, or flare.

"Double block and bleed system" means two block valves connected in series with a bleed valve or line that prevents the line between the two block valves.

"Equipment" means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, flange or other connector, product accumulator vessel in VHAP service, and any control device or systems required by this subpart.

"First attempt at repair" means to take rapid action for the purpose of stopping or reducing leakage of material to atmosphere using best practices.

"In gas/vapor service" means that a piece of equipment contains process fluid that is in the gaseous state at operating conditions.

"In liquid service" means that a piece of equipment is not in gas/vapor service.

"In situ sampling systems" means nondestructive samplers or in-line samplers.

"In vacuum service" means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) below ambient pressure.

"In VHAP service" means that a piece of equipment either contains or contacts a liquid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant (VHAP) as determined according to the provisions of § 61.245(d). The provisions of § 61.245(d) also specify how to determine that a piece of equipment is not in VHAP service.

In VOC service" means, for the purposes of this subpart, that (a) the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight (see 40 CFR 60.2 for the definition of volatile organic compound or VOC) and (b) the piece of equipment is not in liquid service as determined in 40 CFR 60.41.

"Open-ended valve or line" means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.

"Pressure release" means the emission of materials resulting from the system pressure being greater than the

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