

Subject: Occupational Safety and Health -  
Sprayed-on Asbestos in Company-owned and Leased Buildings

SL SR 80-06-010

type letter: Strong Recommendation

date: June 3, 1980

distribution lists: STF 108, HRD 020, HRD 057, STF 102

file no.

sl: SR 80-06-010

related letters:

other:

to: AVP - Support Services  
Copies to Medical Directors, Safety, and Environmental Coordinators.

from: AVP - Support Services

description: Provides guidelines required for OSHA compliance in company-owned and leased buildings with sprayed-on asbestos.

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Section 29 CFR 1910.1001 of standards issued by the Occupational Health and Safety Administration (OSHA) requires all employers to establish and maintain an effective program for protecting their employees against asbestos exposures which are above acceptable levels. The major areas of concern for the Bell System in this matter are in automotive operations (brakes and clutches) and in buildings (sprayed-on fire protection and insulation).

The attached document considers sprayed-on asbestos in company-owned and leased buildings, and is one of a series of Bell System guidelines intended to satisfy the requirements of the standards. Previous documents include:

- . SR 79-05-398 "Occupational Safety and Health - Exposure to Airborne Asbestos Fibers - Request for Survey" - surveys all System-owned and leased buildings to determine if sprayed-on asbestos was used.
- . RL 79-07-254 "Asbestos Hazards in Leased Buildings" - recommends that facilities under consideration for lease, containing sprayed-on asbestos, be reviewed before final decision.
- . GL 73-08-054 "Motor Vehicle Maintenance - Protection Against Exposure to Asbestos Fibers" - provides general procedures for protecting employees against asbestos exposure in garages.
- . GL 77-07-024 "Motor Vehicle Maintenance - Brakes and Clutches" - provides specific recommendations for protecting employees against asbestos exposure while performing maintenance operations on brakes and clutches.

PLAINTIFF'S EXHIBIT

ATT-419

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LLA 001150

In addition, an SR will be issued shortly entitled "Occupational Safety and Health - Exposure to Airborne Asbestos Fibers" which will provide basic information to establish an overall asbestos control program.

The results of the survey of approximately 29,000 owned and leased Bell System buildings (SR 79-05-398) indicates that there are less than 1% or 216 (108 owned and 108 leased) buildings which are suspected to have sprayed-on asbestos. However, bulk sample tests necessary to determine if a substance is asbestos were not performed in all cases during the survey.

Concurrent with the building survey, Bell Laboratories was requested to perform tests to determine the possible levels of exposure where asbestos was present. The results of these tests may be summarized as follows:

- . If sprayed-on asbestos is undisturbed, airborne levels of asbestos are well below OSHA standards (typical office or work space environment).
- . During typical work operations which do not require the removal or displacement of the sprayed-on material, exposure levels are below OSHA standards.
- . During any work operations where there is significant disruption of the sprayed-on material, there may be exposures above the OSHA standard (for example, work in crawl spaces or ceilings or removing ceiling panels).
- . During renovations, ripouts and remodeling activities, airborne asbestos levels are generally above OSHA standards.

As a result of the above it is recommended that:

1. Bulk sample tests be performed to confirm the presence or absence of asbestos in each of the 216 buildings identified in the survey, and any other building which may have asbestos.
2. Warning signs, labels, or other means of control must be provided for employees who must perform work in an area where sprayed-on material may be disturbed.
3. Methods must be developed to minimize or eliminate the possibility of excessive exposure during renovations or removal activities in the affected buildings. The Environmental Protection Agency (EPA) has specific requirements on these activities.
4. A disposal procedure must be established for any collected asbestos-contaminated materials. The EPA also has requirements on this activity.

LLA 001151

ENVIRONMENTAL PROTECTION AGENCIES REQUIREMENTS -  
NATIONAL EMISSION STANDARD FOR ASBESTOS  
61.22(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 paragraphs (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.

43 FR 26372, June 19, 1978

- (2) Written notice of intention to demolish or renovate shall be provided to the Administrator by the owner or operator of the demolition or renovation operation. Such notice shall be postmarked or delivered to the Administrator at least 10 days prior to commencement of demolition, or as early as possible prior to commencement of emergency demolition subject to paragraph (d)(6) of this section, and as early as possible prior to commencement of renovation. Such notice shall include the following information:

LLA 001152

- (i) Name of owner or operator.
- (ii) Address of owner or operator.
- (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.

43 FR 26372, June 19, 1978

- (iv) Address or location of the building, structure, facility, or installation.
  - (v) Scheduled starting and completion dates of demolition or renovation.
  - (vi) Nature of planned demolition or renovation and method(s) to be employed.
  - (vii) Procedures to be employed to meet the requirements of this paragraph and paragraph (j) of this section.
  - (viii) The name and address or location of the waste disposal site where the friable asbestos waste will be deposited.
  - (ix) Name, title, and authority of the State or local governmental representative who has ordered a demolition which is subject to paragraph (d)(6) of this section.
- (3) (i) For purposes of determining whether a planned renovating operation constitutes a renovation within the meaning of this paragraph, the amount of friable asbestos material to be removed or stripped shall be:
- (A) For planned renovating operations involving individually non-scheduled operations, the additive amount of friable asbestos material that can be predicted will be removed or stripped at a source over the maximum period of time for which a prediction can be made. The period shall be not less than 30 days and not longer than one year.
  - (B) For each planned renovating operation not covered by paragraph (d)(3)(i)(A), the total amount of friable asbestos material that can be predicted will be removed or stripped at a source.
- (ii) For purposes of determining whether an emergency renovating operation constitutes a renovation within the meaning of this paragraph, the amount of friable asbestos material to be removed or stripped shall be the total amount of friable asbestos material that will be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation.

LLA 001153

- (4) The following procedures shall be used to prevent emissions of particulate asbestos material to outside air:
- (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.

43FR 26372, June 19, 1978

LLA 001154

- (v) All friable asbestos materials that have been removed or stripped shall be adequately wetted to ensure that such materials remain wet during all remaining stages of demolition or renovation and related handling operations. Such materials shall not be dropped or thrown to the ground or a lower floor. Such materials that have been removed or stripped more than 50 feet above ground level, except those materials removed as units or in sections, shall be transported to the ground via dust-tight chutes or containers.
- (vi) Except as specified below, the wetting requirements of this paragraph are suspended when the temperature at the point of wetting is below 0°C (32°F). When friable asbestos materials are not wetted due to freezing temperatures, such materials on pipes, ducts, boilers, tanks, reactors, turbines, furnaces, or structural members shall, to the maximum extent possible, be removed as units or in sections prior to wrecking. In no case shall the requirements of paragraphs (d)(4)(iv) or (d)(4)(v) be suspended due to freezing temperatures.
- (vii) For renovation operations, local exhaust ventilation and collection systems may be used instead of wetting as specified in paragraph (d)(4)(ii), to prevent emissions of particulate asbestos material to outside air when damage to equipment resulting from the wetting would be unavoidable. Upon request and supply of adequate information, the Administrator will determine whether damage to equipment resulting from wetting to comply with the provisions of this paragraph would be unavoidable. Such local exhaust ventilation systems shall be designed and operated to capture the asbestos particulate matter produced by the stripping and removal of friable asbestos material. 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.
- (5) Sources subject to this paragraph are exempt from the requirements of 61.05(a), 61.07, and 61.09.
- (6) The demolition of a building, structure, facility, or installation, pursuant to an order of an authorized representative of a State or local governmental agency, issued because that building is structurally unsound and in danger of imminent collapse is exempt from all but the following requirements of paragraph (d) of this section:
  - (i) The notification requirements specified by paragraph (d)(2) of this section;
  - (ii) The requirements on stripping of friable asbestos materials from previously removed units or sections as specified in paragraph (d)(4)(iv) of this section;

- (iii) The wetting, as specified by paragraph (d)(4)(v) of this section, of friable asbestos materials that have been removed or stripped;
- (iv) The portion of the structure being demolished that contains friable asbestos materials shall be adequately wetted during the wrecking operation.

39 FR 15936, May 3, 1974;  
40 FR 45292, October 14, 1975

LLA 001156

ENVIRONMENTAL PROTECTION AGENCY REQUIREMENTS -

NATIONAL EMISSIONS STANDARD FOR ASBESTOS

61.22(j) WASTE DISPOSAL

Waste disposal for manufacturing, fabricating, demolition, renovation and spraying operations: The owner or operator of any source covered under the provisions of paragraphs (c), (d), (e), or (h) of this section shall meet the following standards:

- (1) There shall be no visible emissions to the outside air except as provided in paragraph (j)(3) of this section, during the collection; processing, including incineration; packaging; transporting; or deposition of any asbestos-containing waste material which is generated by such source.
- (2) All asbestos-containing waste material shall be deposited at waste disposal sites which are operated in accordance with the provisions of 61.25.
- (3) Rather than meet the requirement of paragraph (j)(1) of this section, an owner or operator may elect to use either of the disposal methods specified under (j)(3)(i) and (ii) of this section, or an alternative disposal method which has received prior approval by the Administrator:
  - (i) Treatment of asbestos-containing waste material with water:
    - (A) Control device asbestos waste shall be thoroughly mixed with water into a slurry and other asbestos-containing waste material shall be adequately wetted. There shall be no visible emissions to the outside air from the collection, mixing and wetting operations, except as provided in paragraph (f) of this section.
    - (B) After wetting, all asbestos-containing waste material shall be sealed into leak-tight containers while wet, and such containers shall be deposited at waste disposal sites which are operated in accordance with the provisions of 61.25.

LLA 001157

- (C) The containers specified under paragraph (j)(3)(i)(B) of this section shall be labeled with a warning label that states:

Caution  
Contains Asbestos  
Avoid Opening or Breaking Container  
Breathing Asbestos is Hazardous  
to Your Health

Alternatively, warning labels specified by Occupational Safety and Health Standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910-93a(g)(2)(ii) may be used.

- (ii) Processing of asbestos-containing waste material into non-friable forms:
- (A) All asbestos-containing waste material shall be formed into non-friable pellets or other shapes and deposited at waste disposal sites which are operated in accordance with the provisions of 61.25.
  - (B) There shall be no visible emissions to the outside air from the collection and processing of asbestos-containing waste material, except as specified in paragraph (f) of this section.
- (4) For the purpose of this paragraph (j), the term all asbestos-containing waste material as applied to demolition and renovation operations covered by paragraph (d) of this section includes only friable asbestos waste and control device asbestos waste.