

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

RL SR 80-06-010

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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.

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We recommend the primary responsibility for implementation of the required program as detailed in the attached instruction will reside with the Building Engineering Group at 300 Headquarters. As such, a coordinator in this organization must be identified. In addition, Building Engineering must work closely with appropriate Medical, Safety, Environmental and Building Operations Force representatives. The Building Operations Force supervisor responsible for affected buildings will ultimately be responsible for the day-to-day procedures that are required. It is strongly recommended that implementation of these guidelines be initiated immediately.

The resource impact of this letter on the Bell System is estimated as follows:

Capital

• Signage	\$10,000	
• Air Sample Test Kit	10,000	\$500 per kit
• Respirators	10,000	\$10 per cartridge type
Total Capital	\$30,000	

Expense

• Bulk Sample Analysis by Outside Laboratories	\$10,000	(\$25 to \$50 per sample)
• Air Sample Analysis by Outside Laboratories	50,000	(\$300 to \$500 per sample)
Total Expense	\$60,000	

Revenue Change

No revenue impact

Force Changes

No additional manpower required, however, certain Building Engineering Building Operations, Medical and Safety personnel must include this activity with their other responsibilities.

In addition to the above impact, there may be situations where the sprayed-on asbestos must be removed, contained or encapsulated. It is anticipated that this will occur only in areas which are to be renovated or remodeled. The cost for these activities (based on current prices per square foot of floor area renovated is estimated as follows:

• Removal	\$6 per sq. ft.
• Encapsulation	\$4 per sq. ft.
• Containment	\$3 per sq. ft. (for painting)
	\$6 per sq. ft. (for structural enclosing)

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Guidelines for Sprayed-On Asbestos
in Company-Owned and Leased Buildings

General

The following guidelines are to be used in conjunction with the general program outlined in an SR to be issued shortly, "Occupational Health and Safety - Exposure to Airborne Asbestos Fibers," in complying with OSHA standards pertaining to Bell System-owned and leased buildings which have sprayed-on asbestos used for fire protection and/or heat insulation.

OSHA Asbestos Standard 1910.1001 (July 1, 1976)

The eight hour time weighted average (TWA) airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air. In addition, no employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air. Medical surveillance is required if employees are exposed to 10 fibers per cubic centimeter 8-hour TWA) or greater.

Confirmation of Asbestos

SR-79-05-398 requested that the BOCs perform a comprehensive survey to identify all owned and leased buildings which apparently contain sprayed-on asbestos. A summary of the System results is shown as Appendix A. It was not necessary to confirm the asbestos with a bulk sample test as part of the survey, however, a number of companies have performed this testing.

As part of the steps required for compliance with the asbestos standard, it will be necessary (in each facility identified as apparently having sprayed-on asbestos) to perform a bulk sample test for confirmation that the material is or is not asbestos. If the test indicates asbestos, then an ambient air test must also be performed. Such ambient air tests will determine the level of airborne asbestos in the area on an 8-hr TWA basis. The ambient air tests should be made in areas where the asbestos exists and is in an undisturbed state, i.e., no one is working on the asbestos. If the material exists throughout the building, several typical locations should be identified and an ambient air test made in each location. It is extremely important that the ambient samples as well as the bulk be analyzed by qualified laboratories approved by NIOSH. See SR to be issued shortly, "Occupational Health and Safety - Exposure to Airborne Asbestos Fibers," for a discussion of bulk sample and ambient air sample testing.

The objectives of the bulk sample and ambient air tests are two-fold:

1. To establish a permanent record which indicates that each company has identified the existence of the material and recorded the normal airborne exposure levels. The bulk and air sample results should also be forwarded to AT&T, Real Estate and Property Management Group, 222 Mount Airy Road, Basking Ridge, New Jersey 07920.

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At least one label shall be prominently located in each area where exposed sprayed-on asbestos exists so that anyone working in the area will be alerted to the potential hazard. For unexposed areas, such as hung ceilings, the label should be located in a central control point so that the people who would have the need to enter these areas would be made aware of the asbestos and its location. This area may be the building maintenance office or a similar location. It may also be desirable to provide a wall-mounted drawing in the building manager's office illustrating asbestos covered areas in the building.

Work Procedures

In all buildings identified as having sprayed-on asbestos every effort should be made to avoid work procedures which result in disruption of the asbestos material and the resultant release of fibers into the air. Preliminary data has indicated that for routine work operations which do not require the removal or displacement of any sprayed-on asbestos, exposure levels are well below those permitted by the current OSHA standards. In those cases where some handling of the material is necessary the sprayed-on asbestos should be worked in a moistened state, if possible.

If it is not possible to avoid work procedures which result in a significant disruption of the sprayed-on material then protective clothing and respirators must be employed during the work procedures. See SR to be issued shortly "Occupational Health and Safety - Exposure to Airborne Asbestos Fibers" for a discussion of protective clothing and the OSHA requirements for respirator protection. Of particular concern are exposures to employees who work within hung ceilings, doing such work operations as installing or removing telephone cables and electrical wiring, or working on building equipment.

The above work procedure modification must be achieved through meetings with employees in the building and by posting such a policy in appropriate central work locations in the building. Before engaging in any work procedures which may disturb sprayed-on asbestos, employees must contact the Building Operations Control Center (BOCC), if implemented in that Company, or the individual in that building who is responsible for implementing these guidelines.

In addition to employee activity, it is also important that any contractor engaged in work activities which might disrupt the asbestos material be informed that they must comply with these procedures.

Remodeling or Renovation Activities

Remodeling or renovation work in areas with sprayed-on asbestos poses the greatest asbestos hazard in Bell System buildings and may require the removal, sealing or enclosure of the asbestos. As such it will be necessary to fully protect all employees by isolating the work area from the rest of the facility, and monitoring both inside and outside the work

RESULTS OF ASBESTOS SURVEY

	<u>Owned</u>		<u>Leased</u>	
	Total	W/ Asbestos	Total	W/ Asbestos
PNB	696	4	254	1
Wisconsin	320	8	72	0
NJ	388	13	223	6
NY	1001	15	357	26
Southern	1302	3	622	5
Ohio	404	0	231	4
NWB	2469	6	303	0
SNET	200	1	54	4
Michigan	483	3	317	0
Mountain	1368	4	438	5
Southwestern	2458	4	568	1
New England	812	3	347	3
C & P	839	8	363	3
Pacific	1020	9	649	9
Illinois	240	3	195	0
South Central*	1284	1	561	0
Cincinnati	70	0	19	0
Bell of Pa.	674	6	325	3
Indiana	298	0	64	0
Long Lines	4300	2	100	7
STL	26	3	2	1
195 Broadway	19	12	41	19
3SCTE	0	0	2	1
TOTALS	23,199	108	6108	108

* Not including Louisiana

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ENVIRONMENTAL PROTECTION AGENCIES REQUIREMENTS -NATIONAL EMISSION STANDARD FOR ASBESTOS61.22(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 30 meters (ca. 160 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 30 meters (ca. 160 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 30 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.

-3 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 30 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:

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- (2) 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.

49FR 26372, June 19, 1978

LLA 000555

ENVIRONMENTAL PROTECTION AGENCY REQUIREMENTS -NATIONAL EMISSIONS STANDARD FOR ASBESTOS61.22(a) 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 (n) 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:
 - (A) 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 (j) 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.

- (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

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