United States Steel Corporation

Interorganization Correspondence

To: Safety & Environmental Health Representatives
Steel Operations
Ore, Stone & Lake Shipping Operations
Texas Uranium Operations
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Chief Mine Inspectors - Coal Operations
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PLAINTIFF'S EXHIBIT USX-116

Subject: Procedures for Removing Insulation Materials Containing Asbestos

Attached is the procedure we recommend to be used for removing asbestos insulation materials. Use of this procedure should effectively control employee exposure to airborne asbestos fibers.

JBM

JFQ/mdd
Attachment

PROCEDURES FOR REMOVING INSULATION MATERIALS CONTAINING ASBESTOS

Both OSHA and MSHA have established a permissible exposure level of 2 asbestos fibers, longer than 5 microns, per cubic centimeter of air over an 8-hour work period. In addition, both agencies have set a maximum concentration of 10 fibers per cubic centimeter of air, longer than 5 microns, which is not to be exceeded at any time during the workday.

The teardown or removal of asbestos insulation materials from walls, ceilings, steam pipes, furnaces, etc., has the potential to generate atmospheric asbestos concentrations well in excess of these exposure limits. In the event that any such material is to be removed from any area or operation at a U. S. Steel facility, the following control measures are recommended as guidelines to minimize employee exposures to airborne fibers.

A. Work Practices - to minimize dust generation

1. Prior to handling, the insulation should be thoroughly wetted with water.

2. The insulation should be removed in as large of sections as possible. That is, the amount of fracturing should be minimized.

3. Where the insulation must be cut, hand tools, such as chisels or knives, are preferable rather than hand saws or power tools.

4. The insulation should be collected and placed in sealed, labeled impermeable bags or other closed impermeable containers. The labels should state:

CAUTION

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

BREATHING ASBESTOS DUST MAY CAUSE

SERIOUS BODILY HARM

B. Personal Protective Equipment

All employees involved in the operation should be required to wear NIOSH-approved respirators. The use of a particular type respirator shall be determined by the exposure level as outlined below.

Air Purifying Dust Respirator (Must have specific NIOSH approval for protection against asbestos-containing dusts) Ex. - MSA Comfo II-Type F filter - Norton Model 7506	- Not more than 10 times the 8-hr. time-weighted average exposure level or the ceiling concentration.
Powered Air Purifying Respirator	- Not more than 100 times the TWA exposure level or ceiling concentration.
Type "C" Supplied Air Respirator	- Not more than 1000 times the TWA exposure level or ceiling concentration.

If the asbestos is thoroughly wetted, hand tools are used to remove the asbestos, and the operation is in an area of good general ventilation, air purifying respirators should be adequate to reduce employee exposures to below the permissible levels. Respirator wearers should be instructed to wash the respirators and change filters, where applicable, daily. They should also be given proper fitting instructions. Due to the extremely hazardous nature of asbestos, it is important to comply with the appropriate regulations governing the use of respiratory protection. For those facilities under OSHA jurisdiction, these regulations are stated in 29 CFR 1910.134. MSHA requires a respirator program consistent with the provisions of ANSI Z88.2-1969.

C. Monitoring

The employees' asbestos exposures; i.e., those removing the insulation and other employees, such as operating personnel who may be exposed to the insulation dust, should be monitored at the beginning of the operation and periodically thereafter until the exposure levels are established. It is not necessary to monitor each employee exposure during every monitoring period. Breathing-zone samples should be collected on open-face 37mm Millipore Type AA filters with a sampling rate of 2.0 liters/minute. The sampling time is determined by the total particulate concentration. Sampling periods of 15 minutes to 8 hours are acceptable. Since the individual fibers must be counted microscopically, the sample must not be too heavy. A slight filter discoloration is acceptable. Environmental Health-Pittsburgh will conduct the asbestos counting.

D. Personal Hygiene

1. The employees should be instructed to wash hands, face and forearms prior to drinking, eating or smoking.

2. The contaminated work clothing should be thoroughly vacuum cleaned prior to removal. Coveralls or similar whole body clothing is recommended.

E. Housekeeping

Dry sweeping of the insulation should be prohibited. Vacuum cleaning methods should be utilized on floors and other exposed surfaces contaminated with asbestos.

F. Restricted Area

All employees whose work does not require occupancy in the area of insulation removal should be prohibited.

G. Training

The employees should be instructed to the hazards of asbestos and the precautionary measures that are being taken to control their exposures.

H. Disposal

Asbestos waste should be accumulated separately from other refuse, and the local haulers contracted to dispose of this material must be informed that the waste products contain asbestos.

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