PLAINTIFF'S EXHIBIT DUP-893

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I. SCOPE

This procedure presents the permissible asbestos dust exposure limits, method of controlling asbestos dust exposures, hygiene factors, respiratory protective equipment, and method of sampling asbestos dust concentrations in the work area.

II. PERMISSIBLE ASBESTOS DUST EXPOSURE LIMITS

A. "Asbestos fibers" means fibers longer than 5 micrometers, which may become airborne.

B. The maximum airborne concentration shall not exceed an 8-hour time-weighted average (TWA) of 5 fibers longer than 5 microns per cubic centimeter of air.

C. At no time may the airborne concentration of asbestos fibers exceed a ceiling of 10 fibers per cubic centimeter of air.

D. The 8-hour time-weighted average (TWA) is the average concentration occurring over a period of 8 continuous hours.

E. After July 1, 1976, the TWA is reduced from 5 to 2 fibers per cubic centimeter.

III. CONTROL OF ASBESTOS DUST

A. Compliance with permissible exposure limits must be accomplished with Engineering Controls, such as but not limited to enclosure, vacuum sweeping, and local exhaust ventilation, shall be used to meet the permissible exposure limits.

B. Compliance with permissible exposure limits may not be achieved by use of respirators or shift rotation of employees except:

1. During the time period necessary to install Engineering controls; i.e., vacuum systems where insulation is normally handled, cut, or fabricated for field erection.

2. In work situations where Engineering controls are not technically feasible or feasible to the extent insufficient to reduce the airborne concentrations of asbestos fibers below the permissible limits.

3. In emergencies.

C. Suitable non-asbestos bearing materials should be specified and used where asbestos contributes to a dust concentration exceeding the permissible exposure limits.

D. Handle cartons of asbestos with care to minimize creation of dust

2. Removing insulation under conditions where it has been positively demonstrated that the TWA or ceiling concentrations do not exceed 10 times the permissible asbestos dust exposure limits through sampling on the actual or duplicated jobs.

the insulation to be removed prior to removal, except when the insulation has been fabricated and protected to withstand removal, removal and reinstallation provided the protection shall [illegible]

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III. CONTROL OF ASBESTOS DUST (CONT'D.)

E. Vacuum upon opening and prior to removal of material, new cartons of asbestos-containing material to remove dust accumulation.

F. All hand-operated or power-operated tools which may produce or release asbestos fibers in excess of permissible exposure limits shall be provided with a dust collection system.

G. Work areas where asbestos-containing material is being handled shall be vacuum cleaned with an approved vacuum system. No dry sweeping shall be performed nor shall air hoses be used to aid in cleanup.

H. Work areas where asbestos-containing material is being handled shall be thoroughly vacuum cleaned daily to prevent accumulation of dust.

I. Asbestos cement, mortar, coatings, grout, plaster, etc., shall be mixed in closed bags or other closed containers.

J. Discard dried-out cement. Do not attempt to rework.

K. Dampen insulation to be removed prior to removal, except where the insulation has been fabricated and protected to withstand repeated removal and reinstallation provided the protection is still intact.

L. Insulation to be removed will be knife cut and handled carefully. Breaking off with a hammer or similar instrument is not permissible.

M. Caution signs conforming to Figure 1, Engineering Standard S4T, shall be posted at all approaches to areas where asbestos concentrations may be above permissible exposure limits.

N. Caution signs shall be placed at a sufficient distance to permit an employee to read the signs and take necessary precautions before entering the area. Caution signs shall be as shown in Figure 1 of Engineering Standard S4T.

IV. PROTECTIVE EQUIPMENT

A. A reusable or single use air purifying respirator meeting the Bureau of Mines Schedule 21C is required when installing or fabricating asbestos-containing material when the TWA or ceiling concentrations are reasonably expected not to exceed 10 times the permissible asbestos dust exposure limits.

B. Atmosphere supplying respiration meeting Bureau of Mines Schedule 19B are required when the TWA is reasonably expected to exceed 10 times the permissible asbestos dust exposure limits, and when insulation is being removed or sprayed regardless of fiber concentration.

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IV. PROTECTIVE EQUIPMENT (CONT'D.)

C. Persons handling asbestos-containing materials where the permissible limits may be exceeded will wear coveralls, rubber overshoes, and approved respirators. Separate change facilities will be provided.

V. SAMPLING AND RECORDKEEPING

A. Sampling is required where employees are exposed to asbestos dust to determine the employee's exposure.

B. Sampling of each operation must be taken in a frequency and pattern to represent accurately the employee's exposure over his work period.

C. The initial sampling program must determine the 8-hour time-weighted average.

D. Intervals between samples shall not exceed six months.

E. Each sampling period shall be of at least a 15-minute duration.

F. Pump and filters used for sampling shall be as shown in Engineering Standard S4T.

G. Sampling procedure shall be as shown in Engineering Standard S4T.

H. Exhibit "A" shall be completed for each sampling period.

I. Sampling will be performed by Engineering Technical Services.

J. Records of personnel and environmental monitoring shall be maintained by the Employee Relations Department for three (3) years. Records shall be made available to employees.

VI. DISPOSAL

A. Asbestos waste shall be collected for disposal in sealed, impermeable bags or containers. Caution labels shall be attached.

B. Asbestos contaminated clothing to be laundered shall be handled in sealed, labeled bags. Persons involved in handling the clothing shall be instructed in proper handling.

C. Vacuum system must discharge in separators or filters in accordance with Engineering Standard S4T.

D. All containers of asbestos containing waste will be buried.

E. Caution labels conforming to Figure 2, Engineering Standard S4T, shall be used to identify containers of raw materials, scrap, waste, other products containing asbestos and asbestos contaminated clothing.

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Contamination of other clothing or articles in change rooms must be avoided through use of separate change facilities or equivalent protection utilizing means such as physical separation or partitions

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VII. PERSONAL HYGIENE AND MEDICAL TESTS

A. Persons handling insulation will vacuum clean their clothing and shoes at the conclusion of each assignment, before break period, lunch period, and at shift change.

B. Asbestos contaminated clothing to be laundered shall be handled in sealed, labeled bags. Persons involved in the handling of the clothing for laundering shall be instructed to empty the clothing directly into tubs of water wighout shaking. After the bags have been emptied, they are to be retied and disposed of by burying.

C. Employees handling insulation will have an annual medical examination which shall include as a minimum, a chest x-ray (posterior-anterior 14 x 17), a history of elicit symptomatology of respiratory disease, and pulminary function tests to include forced vital capacity (FVC) and forced expiratory volumn at 1 sec. (FEV)

D. Medical Records shall be retained a minimum of 20 years.

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