

EN-1029



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WILMINGTON, DELAWARE 19880

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April 5, 1968

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SAFETY - DUST CONTROL

Industrial work producing airborne dust particle contamination is recognized as a primary contributor to employee health problems. The ability of the medical profession in identifying the personal respiratory disease of asbestosis, and the establishing of the cause to be due to extended exposure to asbestos dust have created a serious industrial concern. Federal and State legislation is being enacted to place the burden of proof on the employer for continuous conformance with Governmental Industrial Hygienists' established Threshold Limit Values for specific materials. The employer's problem becomes acute when pre-employment medical examinations are not required for the employees.

With the above-mentioned responsibility in mind, and to assure atmospheric conditions which will not contribute to the employees' health problems when working with asbestos fiber containing materials, the Construction Division is initiating the following permanent air quality control program to be effective June 1, 1968.

(OVER)

BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY

DUP 0995194

DU 048344

### Air Monitoring

Environmental air monitoring shall be conducted to provide quantitative data for site evaluation of dust control efficiency and document air quality analysis needed to demonstrate conformance with established Threshold Limit Values (TLV).

1. The Threshold Limit Value for total dust count shall be 500,000 particles per cubic ft. of air.
2. Personnel monitoring will be conducted in the insulation shops on site locations. One employee will be requested to wear the air sampler one eight-hour day each month.
3. Trained site safety personnel shall be responsible for the control, operation and adjustment of the air sampling instrument, recording required technical data associated with the air sample, mailing of air sample to laboratory for analysis and compiling records of analysis reports.
4. When soliciting participation in the air monitoring program, craft supervision and Safety Engineer should anticipate who will be involved in work which will produce the greatest dust exposure for what day of that month.
5. The personnel air sampling instrument used shall be a Universal Industrial Equipment Co., Millipore filter, Model 440B (qualified for explosion hazard areas) air sampler. The filter used shall be a .8 micron pore size, Millipore Cat. No. MAWG 037 AO, Type AA, in plastic holder. This equipment will be assigned to the sites where air monitoring is required by the Division Safety Office.
6. The filter in plastic holder, upon completion of air sampling, shall be mailed by the site Safety Engineer to Morton Corn, Ph.D., Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania 15213, attention Felix Stein. A phase microscopy analysis of submitted sample will be made and a report submitted to the site and the Division Safety Office indicating: a) fibers below 5 micron length, b) fibers above 5 micron length, and c) total number of particles. Reports indicating total particle count to be approaching or above the TLV will require determining cause of condition and taking corrective action to reduce particle count. After improvement has been applied, a second eight-hour sample shall be conducted, analyzed and documented.

### Atmospheric Dust Control

The application of the following recommendations should demonstrate conformance with the established dust TLV and provide effective dust emission control.

DUP 0995195

Atmospheric Dust Control (cont'd)

1. Materials containing Crocidolite asbestos fiber shall not be purchased or accepted for use. Materials containing Chrysotile and Amosite asbestos fibers are acceptable for use.
2. The pressure spray application of materials with any per cent of asbestos fiber content shall be eliminated.
3. All power tool and equipment operations shall be isolated from other shop facilities and fabricating operations.
4. All power shop equipment shall, when operated, have installed exhaust ventilation of sufficient capacity to remove dust particles at point of origin. Exhausted dust particles shall be collected by an effective collector system which will not allow vent-off of dust particles to the atmosphere.
5. Present controlled shop cleanliness programs shall be expanded. A vacuum cleaner should be used in lieu of broom sweeping to remove dust particles from shop equipment, work tables, ledges, floors, etc.
6. A controlled materials handling program should be adopted to eliminate the emission of dust; for example, when opening and removing materials from shipping cartons or in the handling and mixing of asbestos cements.

Respiratory Protection

Severe or isolated conditions may require that respiratory protective devices be used. Consideration should be made for adequate protection of people in adjacent areas to the work location producing this condition. A supplied air respirator or a filter respirator manufactured by Mine Safety Appliance Co., Pittsburgh, Pa., Model Dustfoe 77 with filter number BM 21 B-97 should be used.

Your usual cooperation is anticipated in administering these dust controls.

CONSTRUCTION DIVISION -



K. E. Keuper  
Division Safety Superintendent

KEK/dlm

DUP 0995196