PLAINTIFF'S
EXHIBIT
DUP-1576

This information (attached)
was sent to Kathy Hagerty of
Legal on 4/20/82.

b. For exposures expected to be above 2, but less than 5 fibers per cm^3, sample for 45 minutes to 4 hours.

c. For exposures expected to be higher than 5 fibers per cm^3, sample for 30 minutes to 2 hours depending upon experience and consultation with the laboratory which will count the fibers.

7.4.3 Sampling atmospheres containing asbestos fibers with high levels of other dusts: sample times will vary depending upon the amount of other dusts present. The laboratory which will count the fibers should be consulted to obtain approximate sample times.

7.4.4 Equipment All sampling must be done on membrane filters of 0.8 micrometers porosity mounted in an **open-faced** filter holder. The Millipore cellulose acetate 0.8 micrometer filter, catalog number MAWP 037A0, is recommended. Particulate sampling equipment is described in S13T, section 10.

7.4.5 Analysis must be done at qualified laboratories. Completed samples are placed in a mailing tube, sealed, and sent to a qualified laboratory with 2 copies of the sampling record.

a. It is recommended that an unexposed filter be included with each batch of samples as a blank.

b. All determinations shall be made by the membrane filter method at 400 to 450X (magnification) (4 mm objective) with phase contrast illumination.

7.5 Employee Notification. Employees should be notified of exposure monitoring results. Any employee [illegible] have been exposed above the permissible exposure limits in section 3 shall be notified, in writing, within 5 days of the finding and of corrective action being taken. Notification is required even if employee was wearing protective equipment at the time of exposure.

7.6 Exposure records shall be maintained at least 20 years. Other recordkeeping requirements will generally require records be kept for longer periods.

7.6.1 Employees and former employees shall have reasonable access to records which indicate the employee's own exposure to asbestos.

7.7 Affected employees or their representatives shall be given reasonable opportunity to observe monitoring and review the results.

8. MEDICAL SURVEILLANCE

8.1 Each site should maintain list(s) of employees who have documented asbestos exposure. The plant medical group must be kept informed of those listed. The list(s) should identify the following.

8.1.1 Those currently exposed to asbestos:

a. All employees working in jobs that require handling of asbestos which might become airborne (such as carpenters working with Transite, insulators, pipefitters, and millwrights).

b. All employees working in jobs which are exposed to measurable quantities of asbestos. The lower limit of reliable quantification of the required measurement technique is 0.1 fibers/cm^3 of air, see Ref (4).

8.1.2 Those who during their Du Pont employment have previously worked in jobs with an exposure described in 8.1.1.

8.1.3 Those with a known off-plant asbestos exposure prior to or during employment at Du Pont. At time of employment and periodically thereafter, care should be taken to record any history of off-plant exposure to asbestos.

8.1.4 Those whose x-rays show changes of the type which are known to result from asbestos exposure.

8.2 Medical Examinations Preplacement, [illegible] termination medical examinations must be [illegible] to employees in an occupation exposed to asbestos [illegible] examinations must include, as a minimum, a PA chest x-ray, medical history, and pulmonary function tests.

8.3 "Guidelines for Physicians" [see Ref (5)] contains additional information on interpretation and frequency of x-rays for asbestos exposed employees.

9. CLOTHING AND CHANGE ROOMS

9.1 Special clothing, such as coveralls, head covering, gloves, and foot covering shall be required where exposures exceed ceiling limits of section 3 [illegible] removal of asbestos insulation, see 4.4.

9.2 Change rooms shall be provided for [illegible] working in jobs in which the 8-hour TWA or ceiling limits of section 3 are exceeded.

9.2.1 Separate clothing lockers or similar arrangements are required in those change rooms to prevent contamination of street clothes from work clothing.

9.3 Laundering of asbestos-contaminated clothes must be done to prevent the release of asbestos fibers into the air.

9.3.1 Those laundering contaminated clothing shall be informed of the need to prevent release of asbestos fibers.

9.3.2 Contaminated clothing shall be transported in sealed impermeable containers labeled in accordance with section 12.

10. EPA ASBESTOS EMISSION REGULATIONS

10.1 Application. Regulations also have been promulgated by the Environmental Protection Agency (EPA), Ref (7). These apply to friable asbestos materials which contain more than 1 percent asbestos by weight and which can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Du Pont operations within this criterion normally will be limited to renovation or demolition involving asbestos insulation.

10.1.1 Renovation involves removing or stripping away asbestos from pipes, ducts, boilers, tanks, reactors, furnaces, other equipment or structural members. **Demolition** involves wrecking or removal of a load-supporting structural member (beams or load-supporting walls) and any related removing or stripping of friable asbestos materials. During **demolition** asbestos shall be removed or stripped prior to the wrecking or taking out of load-supporting structural members.

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10.1.2 When an individually scheduled renovation or demolition job amounts to more than the quantities listed below, a detailed report shall be filed with EPA (and in some cases a state or local agency) prior to removal. The removal operation shall follow the other requirements of this standard, particularly 4.4.

a. 260 linear ft (80 m) of asbestos containing pipe insulation

b. 160 ft^2 (15 m^2) of asbestos-containing insulation on ducts, boilers, tanks, or structural members

For planned, but not individually scheduled, renovations a long-range estimate of the total amount of asbestos to be removed or stripped must be made. The period covered must be at least 30 days, but not more than a year. EPA must be given notice if the amounts estimated exceeds 10.1.2 a or b.

10.1.3 When renovation amounts to less than 10.1.2 a or b, notice to EPA is not required.

10.1.4 When demolition amounts to less than 10.1.2 a or b, a simplified report shall be filed with the EPA prior to removal. The removal operation also shall follow the other requirements of this standard, particularly 4.4.

10.1.5 The requirements of this standard should more than meet the additional precautions specified by EPA regarding wetting, containerizing, disposal, and exhausting.

10.2 Waste Disposal. All asbestos waste, including items such as scrap, empty bags or clothing to be discarded, vacuum system collection, and other wastes which may create airborne dust concentrations, shall be collected and disposed of in sealed, impermeable bags, or containers. Caution labels shall be attached conforming to section 12.

10.2.1 All disposal sites must have specific warning signs, fencing, and dust suppression methods as required by the EPA regulation (40 CFR 61.25).

10.3 For specific report and compliance requirements, refer to the EPA regulations, section 61.22d of Ref (7). Local or state regulations also should be reviewed since they may be more restrictive.

11. TRAINING

11.1 In areas where people work with asbestos, employees should be trained with the goal of increasing knowledge of:

a. Work practices involving asbestos and the potential for fiber emissions

b. The physical characteristics of asbestos

c. Diseases which may result from exposure to asbestos fibers including the role of smoking in lung cancer

d. Reasons for, and methods of, exposure monitoring

e. The purpose and nature of engineering and work practice control methods, personal protective equipment and clothing, and personal hygiene

f. The elements of medical surveillance

12. CAUTION SIGNS AND LABELS

12.1 Caution signs conforming to Figure 1 [illegible] posted at all approaches to areas where asbestos concentrations may be above permissible exposure [illegible]. They shall be placed at a sufficient distance to permit employee to read the signs and take necessary precautions before entering the area.

12.2 Caution labels conforming to Figure 2 [illegible] used to identify containers of raw material, waste, other products containing asbestos, and asbestos contaminated clothing.

12.3 Identification labels are suggested for identification of asbestos-containing and asbestos-free insulation, see SN218P.

13. REFERENCES

1. Asbestos: An Information Resource, National Cancer Institute, DHEW Publication No. (NIH) 78-1681 (May 1978).

2. Selikoff, L. J., Hammond, E. C., Chay, J. P., "Asbestos Exposure, Smoking and Neoplasia," JAMA 204:106-112 (1968).

3. NIOSH Method P&CAM 239: "Asbestos Fibers in Air," NIOSH Manual of Analytical Methods, Second Ed, Vol 1, DHEW (NIOSH) Publication No. 77-157-A.

4. "USPHS/NIOSH Membrane Filter Method by Evaluating Asbestos Fibers," NIOSH Technical Report No. 79-127 (February 1979).

5. Du Pont Medical Division, "Guidelines for Physicians," Section R, Interpretation of X-rays (March 29, 1979).

6. "Industrial Ventilation - A Manual of Recommended Practice," 15th Ed, American Conference of Governmental Industrial Hygienists (1978).

7. National Emission Standard for Asbestos, Title 40, Code of Federal Regulations: Subpart B, 61.20 through 61.25 (40 CFR 61.20-61.25). Originally published in Federal Register, 48292 (October 14, 1975).

8. Occupational Safety and Health Standards, Part 1910, sections 1910.1001 and 1910.134 (29 CFR 1910).

9. Pabco Technical Bulletin PTB - 4B-7A, "Asbestos Identification in Old Calsil Insulation" (February 15, 1979).

10. NIOSH/OSHA Respirator Decision Logic, OSHA Industrial Hygiene Manual, Chapter III.

11. E. Hyatt, "Respirator Protection Factors," Las Alamos Scientific Laboratory Publication LA-6084 (January 1976).

12. P. L. Lowry et al, "Performance of Single-Use Respirators," American Industrial Hygiene Assoc J., 38, p 462 (September 1, 1977).

Portions printed in red meet OSHA regulations Section 1910.1001 (formerly 93a)

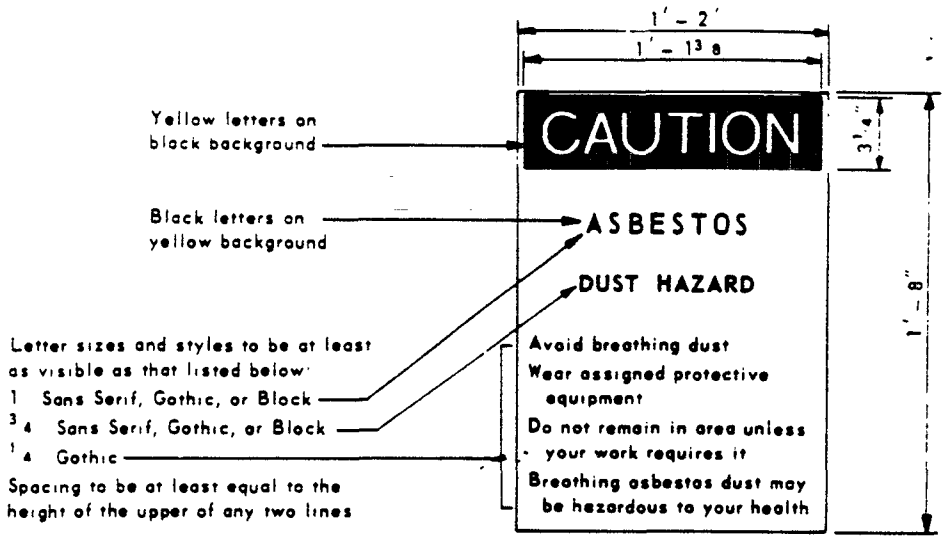

FIGURE 1 - CAUTION SIGN, ASBESTOS DUST

CAUTION

Contains asbestos fibers

Avoid creating dust

Breathing asbestos dust
may cause serious bodily
harm

Label size and printing to be readily visible and legible.

FIGURE 2 - TYPICAL CAUTION LABEL *

* Available from M & M Displays, 3301 Maiden Lane, Philadelphia, PA 19145

Figures 1 and 2 meet OSHA requirements, Section 1910 1001 (formerly 93a).