PLAINTIFF'S EXHIBIT

UC-2131

UNION CARBIDE CORPORATION

ENGINEERING, MANUFACTURING AND TECHNOLOGY SERVICES DEPARTMENT
HEALTH, SAFETY AND ENVIRONMENTAL TECHNOLOGY
SOUTH CHARLESTON, WEST VIRGINIA

MEMORANDUM

October 28, 1986

TO: [redacted]

COPY: Mr. S. W. Clark
Mr. J. F. Dodd
Mr. D. A. Gosselin
Dr. P. R. Kavasmaneck
Mr. J. E. Neff

FROM: T. E. Hanning

SUBJECT: Review of South Charleston Plant Procedures
Removal and Disposal of Asbestos Materials

The following updates/changes apply to the 514 Maintenance Department's procedure for handling and disposal of asbestos insulation:

Definitions

1. The OSHA allowable limit for personnel exposure to asbestos was revised in July 1986.

2. The 8-hour time-weighted average for asbestos shall not exceed 0.2 fibers, longer than five micrometers, per cubic centimeter of air.

3. There is no ceiling concentration in the revised standard.

4. The revised standard calls for an action level of 0.1 fibers, no longer than five micrometers, per cubic centimeter of air. This level triggers monitoring, medical, and employee information and training requirements.

UCC 006585

Overview of Procedure

1. The warning signs mentioned in Item 4 should state:

   DANGER - ASBESTOS:
   CANCER AND LUNG DISEASE
   HAZARD-AUTHORIZED PERSONNEL ONLY:
   RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED
   IN THIS AREA

2. Item 7 should be expanded to read: Remove asbestos to special containers for handling/disposal. These containers should be properly labeled as follows:

   DANGER - CONTAINS ASBESTOS FIBERS:
   AVOID CREATING DUST;
   CANCER AND LUNG DISEASE HAZARD.

   Disposal containers should be leak-tight and discarded in an approved landfill.

3. Item 6 should be expanded to state: Where feasible, the employer shall establish negative-pressure enclosures before commencing removal, demolition, and renovation operations.

Respirators

Disposable (throw away) respirators are not permitted under the July 1986 asbestos revision. Respirators are to be selected by the following scheme.

Airborne Concentration	Required Respirator
1. Not in excess of 2.0 f/cc (10 X PEL)	1. Half-mask air-purifying respirator equipped with high-efficiency filters.
2. Not in excess of 10.0 f/cc (50 X PEL)	1. Full-facepiece air purifying respirator equipped with high-efficiency filters.
3. Not in excess of 20 f/cc (100 X PEL)	1. Any powered air-purifying respirator equipped with high efficiency filters. 2. Any supplied-air respirator operated in continuous flow mode.
4. Not in excess of 200 f/cc (1000 X PEL)	1. Full facepiece supplied-air respirator operated in pressure demand mode.

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5. Greater than 200 f/cc (greater than 1000 X PEL or unknown concentration)	1. Full facepiece supplied-air respirator operated in pressure demand mode equipped with auxiliary positive pressure self-contained breathing apparatus.

OSHA has also required that employers provide powered air-purifying respirators for employees who request them for concentrations of asbestos-fibers less than 100 times the PEL. This recognizes that the proper use of respirators may depend on the worker's comfort and preference for various types of respirators.

Work Area Precautions

Warning signs should contain the same message as stated in Number 1 under Overview of Procedure in this letter.

Wet Cleanup

Any asbestos insulation left in place will contain a visible label, where feasible. The label will contain the same information as stated in Number 2 under Overview of Procedure in this letter.

Clothing Storage

Two separate lockers or containers shall be provided each employee, so separated or isolated as to prevent contamination of the employee's street clothes from his work clothes. Employees exposed to asbestos during their work shift must shower before leaving the plant and must not leave wearing contaminated work clothing. Employees working in asbestos areas must have ready access to filtered air lunchrooms and must wash their face and hands prior to eating or smoking. Protective clothing must not be worn in the lunchroom unless cleaned beforehand.

We question the use of vacuums to clean asbestos - contaminated clothing unless high-efficiency filters are attached to the vacuum exhaust. This action could also prevent an employee from properly disposing his clothing after a designated work period.

Laundering

Caution labels will contain the same information as stated in Number 2 under Overview of Procedure in this letter.

Disposal by Trucking

Under RCRA truck drivers do not need a properly filled-out manifest for asbestos disposal.

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References

The 1972 standard is redesignated as 29 CFR 1910.1101 to distinguish it from the revised standard for general industry which is designated as 29 CFR 1910.1001. Asbestos information for construction activities is under 29 CFR 1926.58.

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