PLAINTIFF'S EXHIBIT

UC-4273

AUG 24 1976

Environmental Protection Department
South Charleston Plant

August 23, 1976

To: Mr. J. H. Murray
Building 307-2

cc: Mr. H. H. Frazier
Mr. J. L. Worstell/Mr. W. C. Young
SHARE Committee - 514

From: Mr. B. L. Murray

Subject: Potential of Asbestos Exposure From Storeroom Materials
Plant Stores, Building 307-1 & North Charleston Storage
Building 8-505
South Charleston Plant
Project No. 514-H-307-8-505-76

Jim, as you requested, we have made an initial determination of the potential of asbestos exposure at the two storeroom locations in the South Charleston Plant including North Charleston Storage, Building 8-505.

In surveying these areas with Mr. Arlie Lynch and Mr. Ray Harris, the storage areas were found clean and orderly with minimal deposits of dust from asbestos material. However, as Mr. H. H. Frazier from the Institute Plant pointed out in his report (attached) of an asbestos dust exposure study, it is recommended to isolate the materials containing asbestos fibers. This could be accomplished by storing all materials in plastic containers including the asbestos cloth on rolls. In this way the employee dispensing the material would be freeing the bulk of the asbestos dust inside of the plastic container.

According to Arlie the majority of the asbestos containing material is dispensed as stored and eliminate the untangling and preparation of small quantities of the material.

Based upon these observations, compliance with the program of isolating the asbestos containing material, and the air sampling results from Mr. Frazier, we feel that the potential for exposures of the stores employees' to asbestos dust exceeding 2 fiber/cc greater than 5 μ in length will not be exceeded.

An Environmental Health Data Sheet is attached for Asbestos.

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Attachment

UCC 011655

UNION CARBIDE CORPORATION

CHEMICALS AND PLASTICS DIVISION

ENVIRONMENTAL HEALTH DATA SHEET

SOUTH CHARLESTON PLANT

4

HEALTH HAZARD
NIOSH

SECTION I

Manufacturer's Name _____

Chemical Asbestos Trade Name _____

Chemical Family (Chrysotile) Serpentine Formula $3MgO.2SiO_2 \cdot 2H_2O$

Magnesium Silicate

Good heat resistance
High tensile strength and flexibility

SECTION II - Physical Properties

Boiling Point (°F) _____ Specific Gravity 2.5 Vapor Pressure (mmH_g) _____

Vapor Density (Air=1) _____ %Volatile by volume _____ Solubility in water _____

Odor-Characteristic (TO) _____ Flash Point (°F) NA Molecular Weight _____

**5f/ml>5 μ long

Decomposition Products _____ TLV(PPM) _____ Melting Point (°C) _____

Action Level _____

Lower Explosive Limit (LEL) _____ Upper Explosive Limit (UEL) _____

Evaporation Rate (Butyl Acetate=1) Color - White

SECTION III - Health Hazard Data

Ingestion - LD_{50} - If accidentally swallowed, report to the Medical Department.

Skin Penetration - Wear protective clothing. If contacted, wash affected skin areas with water. Vacuum protective clothing before removal.

Skin Irritation - Wear protective clothing. If contacted, wash affected skin areas with water. Maintain and laundry protective clothing. Store, transport and dispose of clothing in sealed non-reusable containers marked "Asbestos - Contaminated Clothing".

Breathing - Prolonged inhalation of the asbestos particle may cause delayed lung injury. Wear respiratory protection and use with adequate ventilation.

Eyes - If exposed, wash eyes with water. Report to the Medical Department.

Spills - Clean up - wet the material before handling where possible. If loose material must be cleaned up dry, use vacuum cleaning or sweeping compound to keep dust under control.

Waste Disposal - Collect in plastic bags - Landfill.

Air Sampling and Analysis -- Collect on membrane filter and analyze by phase contrast illumination.

** - 8 hour time-weighted average 2 f/ml>5 μ effective July 1, 1976
OSHA is proposing 0.5 f/ml 5 μ - ceiling limit 5 f/m>5 u.

* U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE - PUBLIC HEALTH SERVICE - CRITERIA FOR A RECOMMENDED STANDARD - OCCUPATIONAL EXPOSURE TO ASBESTOS - 1972.

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(Name) Mr. P. H. Day
vision
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Date July 9, 1976

ER - Industrial Hygiene

Subject Employee Exposure to Asbestos - Plant Stores Building 330

py to Mr. J. E. McDermott, Jr.
Dr. R. J. Sexton
Mr. F. Williams

In response to questions by Plant Stores Employees, you have asked for asbestos exposure levels to be determined at certain locations within Building 330. Evaluation of storage conditions and dispensing methods has been made together with appropriate area and personal sample collection. The conditions of sampling and results are reported as follows:

SAMPLE DATE	TYPE SAMPLE	SPECIFIC LOCATION AND/OR CONDITIONS	ASBESTOS FIBERS/ML AIR COUNT	TLV
6-7-76	Area	Asbestos rope storage and dispensing.	0.13	2.0
6-16-76	Personal*	employee untangled and prepared 10# of 3/4" Asbestos Rope for dispensing.	0.76	2.0
6-16-76	Personal*	Employee replaced rope in bin and swept aisle of fallen fibers - five minutes.	0.0	2.0
6-16-76	Area	3' above rope storage Bin - during two five-minute sampling periods above.	0.35	2.0
6-16-76	Personal*	During five-minute sampling period, Employee Simulated filling gasket orders from Row 43, 46, and 51 bins.	1.0	2.0
6-16-76	Area	4-1/2 feet above Row 43 gasket bins during personal sampling above.	0.0	2.0
6-16-76	Area	6" above floor during above sampling--includes three passages through aisle and two trips on transporter.	0.0	2.0

*All personal samples were collected on the person of and with the cooperation of Mr. R. O. Hanna. A 3M respirator was worn by Mr. Hanna, at our request

The potential for excessive employee exposure to asbestos fibers is apparent at the different storage bin locations and especially at the asbestos rope dispensing bin. Each time rope or gaskets are removed from the storage bin, asbestos fibers are released and are plainly visible. Liberated fibers are deposited and/or are accumulated on the floor with the potential of becoming airborne due to sweeping or generated air currents.

Although the potential for excessive exposure appears to be serious, the results obtained during our sampling evaluation are well within the limits of the new TLV of two fibers greater than five micrometers per milliliter of air. One reasonable explanation for the lower than expected values is that fibers being liberated are large and of sufficient density that they do not easily become airborne. Asbestos must, nevertheless, be controlled wherever possible.

Union Carbide trial exhibit UC-4273: B. L. Murray to J. H. Murray on Potential Asbestos Exposure from South Charl... Published by AsbestosClaims.Law
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Ideally, asbestos containing materials would be stored in a separate room, having proper ventilation, at locations such as Plant Stores. Our measurements, however, do not indicate exposure levels of a magnitude to justify isolated storage as a requirement. We do offer recommendations for your consideration, as follows:

FIRST: Relocate the storage area of 3/4" asbestos rope to a more remote area of the building where there is less order filling activity. Provide a partially enclosed spool type dispenser to avoid work with an entangled mass of material, which appears to be encountered each time an order is filled. Another option would be to have employees wear 3M Respirators and prepare pre-weighed or lengths of rope in plastic bags for ready order filling.

SECOND: Consideration be given to individual and/or count numbers of metal reinforced gaskets being stored and dispensed in plastic bags. This practice would avoid possible exposure of employees other than Stores personnel to asbestos liberated from the gaskets through handling until final application.

THIRD: Make 3M Respirators readily available to all Stores personnel for use during asbestos and other job tasks where need for a respirator is apparent.

Please inform Mr. Hoffman and Mr. Carey of the results of the above listed samplings and should there be further questions, please call me.

H. H. Frazier

HHF/kjs

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