UC 149-2

UNION CARBIDE

INTERNAL CORRESPONDENCE

FAR/WNJ.

MINING AND METALS DIVISION • P. O. BOX K, KING CITY, CALIFORNIA 93930

PLAINTIFF'S EXHIBIT

UC-2453

To (Name) Mr. E. A. Piersall
Division Mining & Metals Div.
Location Grand Junction, Colorado

Date August 29, 1972

Originating Dept.

Answering letter date

Subject

Copy to Messrs: J. F. Emerson
W. N. Johnson
P. W. McDaniel
J. A. Riddle

Attached find the results of the off-site air sampling carried out at the King City mill by 2 employees of the State and Industrial Hygiene Laboratory on April 24, 1972, and reported by me, by letter, on May 2, 1972.

The report was given to us by Mr. John L. Maloney, Air Sanitation Engineer, Monterey-Santa Cruz County Unified Air Pollution Control District. A comparison is made between the Plant-downwind sample and the San Lucas-downwind sample analysed by electron microscopic to show pollution from the Plant. Nothing is offered in the way of explanation for the total concentration contained in the plant-upwind sample. It is apparent that we will be the star target for this group.

Very truly yours,

Floyd H. Larrison, Jr.

/clg

SEP 5 1972

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STATE OF CALIFORNIA—HUMAN RELATIONS AGENCY RONALD REAGAN, Governor

DEPARTMENT OF PUBLIC HEALTH
2151 BERKELEY WAY
BERKELEY 94704

August 4, 1972

Edward W. Munson
Air Pollution Control Officer
Monterey-Santa Cruz County Unified
Air Pollution Control District
Courthouse
P.O. Box 487
Salinas, CA 93901

Dear Mr. Munson:

Dr. Mueller, Les Carpenter and I would like to thank you and Mr. Maloney for your excellent cooperation and assistance in making it possible for the AIHL to collect ambient air samples near the Union Carbide asbestos processing plant in order to evaluate their asbestos method and to collect ambient air data.

Samples of air were collected in April and May, 1972 (1) 1,600 feet upwind of the Union Carbide asbestos processing plant at King City, California, (2) 400 feet downwind from this plant, and (3) 3.3 miles downwind in the small community of San Lucas. Two cubic meters of air were sampled at sites one and two, and 14 cubic meters of air at site three, using 0.8 µm pore size. 47 mm membrane filters (Millipore) at a rate of 10 l per minute. Wind was blowing from the northwest at 12 to 30 miles per hour during each sampling period. Samples were prepared for optical and electron microscopic examination using the AIHL method.

The following table shows the analytical results of these collected air samples as performed by electron (EM) and light microscopy (LM).

TABLE

Asbestos Concentration in Air Samples Taken in Monterey-Santa Cruz County APCD

Date	Site	LN	Concentration Fibers/liter EM >5 µm	EM Total	LM >5 µm	LM Total
4/24/72	1. Upwind of Plant	20310-1	0	16,200	0	0
4/24/72	2. Downwind of Plant	20310-2	5410	99,000	109	113
5/15-16/72	3. Downwind in San Lucas	20367	0	1,010	0.6	0.6

Site 1. Union Carbide Plant, King City, upwind 1600 feet
2. Union Carbide Plant, King City, downwind 400 feet
3. San Lucas, downwind 3.3 miles from Union Carbide Plant

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It is apparent that at Site 2, there was a susbstantial increase in asbestos concentration. However, in the nearest community, 3.3. miles downwind total fiber concentration as measured by electron microscopy was approximately one percent of that at Site 2.

Although the light microscopic method counts only a small fraction of the fibers actually present, we applied that method for the sake of comparison to the occupational threshold limit value (TLV) which is based on the LM method. The current TLV for asbestos is 5,000 fibers per liter for fibers longer than 5 μm, a level which is considerably greater than the level we observed in these samples using LM.

Although asbestos is a well-publicized health hazard, the dosage of the fiber count and size that is harmful to human health is still unknown. Thus, for assessment of the potential health hazard, the Union Carbide asbestos plant should be kept under surveillance until the actual toxicity of ambient asbestos fiber concentrations has been evaluated and a standard for ambient air promulgated.

In order to further evaluate our asbestos method and to collect plant emissions and ambient air data, we would again appreciate receiving the benefit of your excellent cooperation at our earliest mutual convenience to collect additional air samples at the three sites.

Sincerely yours,

Peter K. Mueller, Ph.D., Chief
Air and Industrial Hygiene Laboratory

Glenn R. Smith

Glenn R. Smith
Public Health Chemist

GRS:ahl,2

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