UC 14-2

UNION CARBIDE

INTERNAL CORRESPONDENCE

METALS DIVISION • P. O. BOX 579 · 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 14

To (Name) Mr. J. E. Walsh
Division UCC - Metals
Location Atlanta, GA

Date December 8, 1978
Originating Dept. "Calidria" Asbestos
Answering letter date

Copy to Messrs. R. E. Byrne, Jr.
B. L. Ingalls
J. L. Myers
H. B. Rhodes
File

Subject Fiber Counts - Allied Construction, Dallas, Texas

The attached report contains results of airborne fiber counts obtained at Allied Construction Supplies on November 9, 1978.

Area samples obtained prior to and during the use of asbestos at locations designated 1, 2 and 3 were found to be from 0.04-5.6 fibers/cc with the highest concentrations occurring in Location 1. (Refer to diagram on page 3.) Although the overall average for area samples was low (1.4 fibers/cc), sample G-20 contained 5.6 fibers/cc. Considering the variability of the test procedures, it is possible that airborne concentrations at the time of monitoring could have exceeded the ceiling concentration limit of 10 fibers/cc. In several instances interfering particulate of a non-asbestos nature made detection of asbestos fibers difficult.

Personal samples obtained during the use of asbestos contained 0.2-4.1 fibers/cc. The average personal count was 1.92 fibers/cc. Although limited sampling prohibited the calculation of an eight-hour time-weighted average, the average personal count for the monitoring duration approached the 2 fibers/cc limit established by OSHA.

In summary, the monitoring results indicate the need for better housekeeping and handling practices with regard to asbestos.

G. J. Spencer/rm
Glenda J. Spencer

PLAINTIFF'S EXHIBIT
tabbies
UC-1409

/rmm
Attachment

AIRBORNE ASBESTOS COUNTS

for

Allied Construction Supplies
2500 Norwich Road
Dallas, Texas

Date Sampled:	November 9, 1978
Date Reported:	November 27, 1978

Samples Collected By:	Glenda J. Spencer Union Carbide Corporation
Samples Analyzed By:	Glenda J. Spencer Union Carbide Corporation
Reported By:	Glenda J. Spencer Union Carbide Corporation

Union Carbide Corporation
Metals Division
Niagara Falls, New York

SAMPLE EQUIPMENT AND TEST PROCEDURES

Sampling and dust counting were carried out in accordance with OSHA Regulation 1910.1001, using the Bayer, Zumwalde and Brown method for counting asbestos fibers by phase contrast microscopy (Bureau of Occupational Safety and Health, Feb. 1969).

Battery-powered air pumps (M.S.A. type), calibrated to 2 liters per minute, were used to collect personal breathing zone and environmental samples on Millipore membrane filters of 0.8 micron porosity.

Fiber counting was performed on a Nikon phase contrast microscope at 400X utilizing a Porton reticle for sizing and field definition.

Two results have been reported for each sample - they are:

1. Chrysotile Asbestos - Any fiber having an aspect ratio ≥3 and a length ≥5μ that is in the operator's judgement chrysotile. In the event of doubt and in the absence of further information, any fiber having the above physical dimensions will also be counted as chrysotile.

2. Possible Amphibole Asbestos - Any fiber having an aspect ratio ≥3 and a length ≥5μ that is not obvious to be material other than asbestos. This includes all amphiboles and material similar in appearance.

COMMENTS

The OSHA regulations permit a maximum limit of 2 fibers greater than 5 microns in length per cubic centimeter of air sampled on an 8-hour, time-weighted average (TWA). The formula $\frac{C_1T_1 + C_2T_2 + C_nT_n}{\Sigma T}$ describes the TWA where C = fiber count in fibers/cc and T = time.

The regulations also stipulate a ceiling concentration of 10 fibers/cc greater than 5 microns which is not to be exceeded at any time.

TEST RESULTS

The details of sample collection and resultant fiber counts are listed in the attached table(s).

OBJECTIVE

To monitor airborne asbestos concentrations at the subject company's production facilities during the use of "Calidria" HPO asbestos.

DESCRIPTION OF OPERATION

Production operation involved the blending of 32 bags $CaCo_3$ (16000 pounds) and 16 bags HPO (640 pounds) into 500 gallon tank containing asphalt. Product manufactured was sewer joint compound. The $CaCo_3$ had been dumped prior to monitoring.

Personal samples were obtained during the use of asbestos. Area samples were collected at three locations (designated Area 1, Area 2 and Area 3) prior to and during the use of asbestos. Refer to diagram below:

Level 2

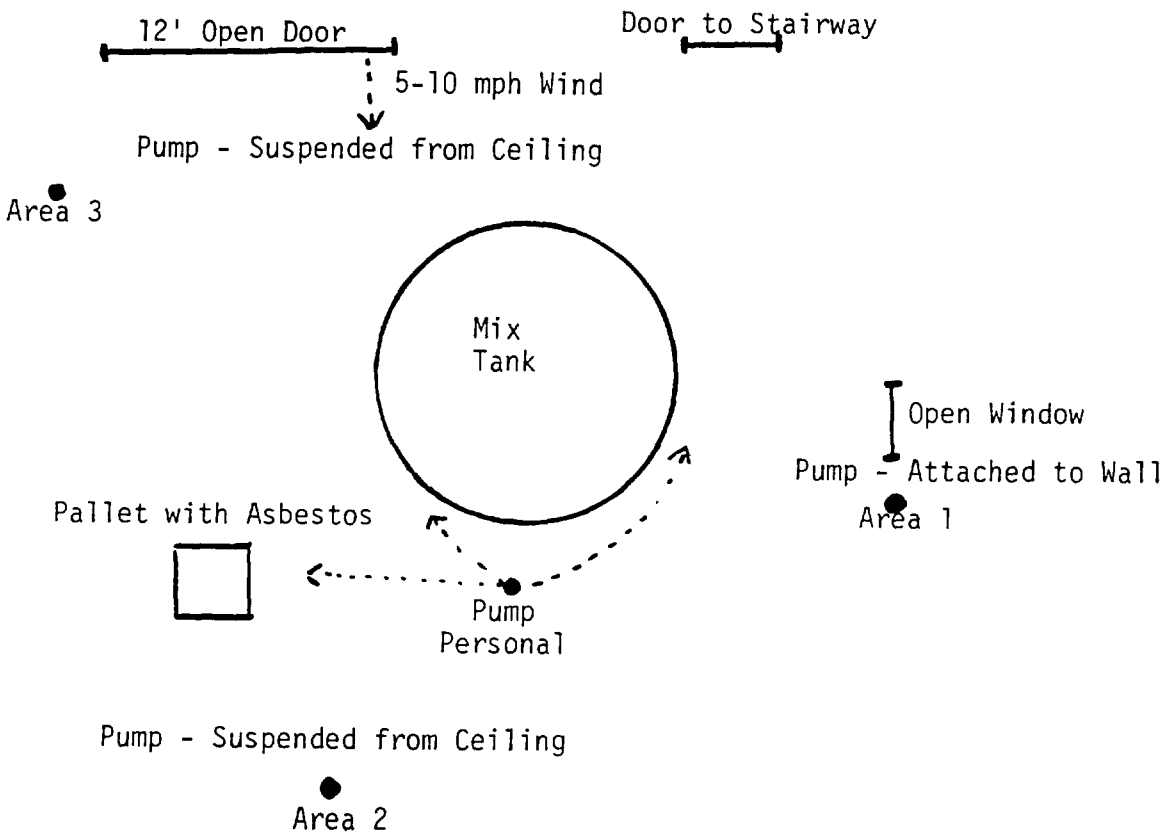


FIGURE 1 - Location of Sampling Pumps

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ACL Doc 16543 · Page 5 of 8
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SUMMARY OF FIBER COUNTS

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Airborne Fiber Count (fibers/cc >5μ) Possible Amphibole Asbestos	Comments
S-30	On: 9:36A Off: 9:47	11	Personal - Charlie Wallen, dump operator, during the use of HPO asbestos.	1.2	0	Heavily loaded with non-asbestos chunky particulate.
G-27	On: 9:47 Off: 9:59	12	Personal - Charlie Wallen, during the use of HPO asbestos.	1.3	0	Heavily loaded with non-asbestos chunky particulate.
S-73	On: 9:59 Off: 10:12	13	Personal - Charlie Wallen, during the use of HPO asbestos.	0.2	0	
H-2	On: 10:12 Off: 10:24	12	Personal - Charlie Wallen, during the use of HPO asbestos.	2.8	0	Heavily loaded with non-asbestos chunky particulate.
H-31	On: 10:24 Off: 10:34	10	Personal - Charlie Wallen, during the use of HPO asbestos.	4.1	0	Moderately loaded with non-asbestos chunky particulate.
G-26	On: 9:01A Off: 9:31	30	Area 1 - Prior to the use of Asbestos. Located ∿15 feet from point of dump ∿5 feet above floor, adjacent to open window.	0.4	0	
H-4	On: 9:31 Off: 9:48	17	Area 1 - During the use of asbestos.	2.9	0	Moderately loaded with non-asbestos chunky particulate.
G-20	On: 9:48 Off: 10:00	12	Area 1 - During the use of asbestos.	5.6	0	
G-45	On: 10:00 Off: 10:13	13	Area 1 - During the use of asbestos	2.4	0	Moderately loaded with non-asbestos chunky particulate.

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ACL Doc 16543 · Page 6 of 8
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SUMMARY OF FIBER COUNTS

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Airborne Fiber Count (fibers/cc >5μ) Possible Amphibole Asbestos	Comments
H-28	On: 10:13 Off: 10:26	13	Area 1 - During the use of asbestos.	1.6	0	
S-27	On: 10:26 Off: 10:46	20	Area 1 - During the use of asbestos.	1.5	0	
H-24	On: 9:04 Off: 9:33	29	Area 2 - Prior to the use of asbestos. Located ∿6 feet behind point of dump, ∿4-1/2 feet above floor suspended from ceiling.	0.3	0	
G-16	On: 9:33 Off: 9:50	17	Area 2 - During the use of asbestos.	1.7	0	
H-14	On: 9:50 Off: 10:02	12	Area 2 - During the use of asbestos.	1.6	0	
S-74	On: 10:02 Off: 10:14	12	Area 2 - During the use of asbestos.	1.6	0	Moderately loaded with non-asbestos chunky particulate.
B-53	On: 10:14 Off: 10:28	14	Area 2 - During the use of asbestos.	0.5	0	Light loading with non-asbestos chunky particulate.
H-23	On: 10:28 Off: 10:46	18	Area 2 - During the use of asbestos.	0.04	0	
B-79	On: 9:08 Off: 9:35	27	Area 3 - Prior to the use of asbestos. Located ∿6 feet from point of dump, ∿5-1/2 feet from floor and ∿10 feet from open door.	0.2	0	
G-21	On: 9:35 Off: 9:49	14	Area 3 - During the use of asbestos.	0.9	0	

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ACL Doc 16543 · Page 7 of 8

SUMMARY OF FIBER COUNTS

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Possible Amphibole Asbestos	Comments
B-57	On: 9:49 Off: 10:01	12	Area 3 - During the use of asbestos.	1.8	0	
G-47	On: 10:01 Off: 10:14	13	Area 3 - During the use of asbestos.	1.5	0	
H-1	On: 10:14 Off 10:27	13	Area 3 - During the use of asbestos.	0.6	0	
G-12	On: 10:27 Off: 10:46	19	Area 3 - During the use of asbestos.	0.5	0	

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[redacted]

Allied Construction
Dallas, Texas

DUST COUNT
11/9/78

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