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UNION CARBIDE
THE DISCOVERY COMPANY

November 21, 1974

PLAINTIFF'S EXHIBIT
UC-574

Mr. R. Favero
Georgia-Pacific Corporation
1466 White Circle
Marietta, GA 30060

Dear Mr. Favero:

Enclosed is the report of our findings for the asbestos fiber count conducted October 28, 1974 at your plant. We believe the report to be self-explanatory, but if you have any questions, please do not hesitate to call on Jack Walsh at our Atlanta sales office or me directly.

Very truly yours,

E. J. Kleber
Customer Service Representative

EJK:cjb
Enclosure

CC: Mr. J. E. Walsh

AIRBORNE FIBER COUNTS

for

Georgia-Pacific Corporation
Marietta, Georgia

November 20, 1974

Samples Collected And Analyzed By:

E. J. Kleber
Union Carbide Corporation

Union Carbide Corporation
Mining and Metals Division
Niagara Falls, New York

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OBJECTIVES

Monitor airborne asbestos fiber at Georgia-Pacific Corporation, Marietta, Georgia, a manufacturer of tape joint compounds.

OPERATION MONITORED

Air samples were collected October 28, 1974 during the manufacture of ready-mix tape joint compound. Personal breathing zone samples were collected from the operator who actually made the additions to the mixer. Environmental samples were taken near the site of asbestos addition and in the raw materials storage area.

EQUIPMENT AND PROCEDURE

Sampling and dust counting were carried out in accordance with OSHA Regulation 1910.93a, using the Bayer, Zummalde 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 Vicker's phase contrast microscope at 400X utilizing a Porton reticle for sizing and field definition.

TEST RESULTS

Reported as fibers greater than 5 microns in length per cubic centimeter of air sampled. A fiber is defined as a material having an aspect ratio greater than 3:1.

INTERPRETATION

The OSHA regulations have been established with a limit of 5 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 time-weighted average where C = fiber count in fibers/cc and T = time. In this situation, a time-wighted average could be calculated for the operator using personal breathing zone samples 0-20, 0-3, 0-6, 0-24, 0-36, 0-7, and 0-27 as follows:

$$\frac{(3.9)(6) + (7.1)(4) + (2.5)(14) + (3.3)(13) + (0.4)(17) + (3.0)(13) + (0.6)(22)}{6 + 4 + 14 + 13 + 17 + 13 + 22}$$

= 2.1 fibers/cc time-weighted average.

This time-weighted average is, of course, for this day only and day-to-day variations could change these numbers considerably.

Since this calculation only covers 89 minutes out of the 480-minute (8-hour) day, the 8-hour, time-weighted average is open to broad interpretation. for example, if the operator only handled asbestos for 89 minutes a day and if it was assumed that sample 0-27 represented his exposure for the rest of the day, an estimated 8-hour, time-weighted average could be set up as follows:

$$\frac{(3.9)(6) + (7.1)(4) + (2.5)(14) + (3.3)(13) + (0.4)(17) + (3.0)(13) + (0.6)(413)}{6 + 4 + 14 + 13 + 17 + 13 + 413}$$

$$= \frac{423.3}{480} = 0.88 \text{ fibers/cc TWA.}$$

- In either case, all figures are well within the OSHA limits.

SUMMARY OF FIBER COUNTS

Sample No.	Sampling Time	Description	Fibers/cc >5μ
0-29 -	13 min.	Environmental - Located in dry blending area, 2 ft. from hopper, 3-1/2 ft. off floor. During lunch break, no activity in the area.	1.9
0-20	6 min.	Personal - Operator (Larry James) weighing out 212.5 lbs. 7RF9 and 87.5 lbs. SG-210. Includes adding these products to mixer.	3.9
0-3	4 min.	Personal - Operator (Larry James) adding other dry ingredients to mixer and disposing of all bags in baler.	7.1
0-15	10 min.	Environmental - Same location as 0-29 during addition of dry ingredients.	3.6
0-6	14 min.	Personal - Operator (Larry James) between batches attending to other duties. (Helping packaging, marking cans, etc.) Generally not in dry blending area.	2.5
0-9	14 min.	Environmental - Same location as 0-29 between batches.	2.3
0-24	13 min.	Personal - Operator (Larry James) preparing new batch of TJC. Includes addition of all raw materials and bag disposal.	2.3
0-23	29 min.	Environmental - Same location as 0-29 during make up of batch of TJC. Includes time between batches.	1.2
0-36	17 min.	Personal - Operator (Larry James) between batches.	0.4
0-7	13 min.	Personal - Operator (Larry James) preparing new batch of TJC. Includes bag disposal.	3.0
0-27	22 min.	Personal - Operator (Larry James) after completion of duties at dry blending area.	0.6
0-26	15 min.	Environmental - Located in raw materials storage area approximately 50 ft. from dry blending area. No asbestos within 20 ft.	0.2