PLAINTIFF'S EXHIBIT
UC-4120

AIRBORNE DUST COUNTS

for

Welco Manufacturing Company
Dallas, Texas

December 28, 1972

Personnel Present: A. H. Golladay
Welco Mfg. Company

K. Laszlow
Welco Mfg. Company

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Union Carbide Corporation

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Niagara Falls, New York

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DESCRIPTION OF PLANT AND TESTS

Tests were conducted October 20, 1972 at Welco Manufacturing Company, Dallas, Texas, manufacturers of tape joint compounds.

Samples were collected from work areas which appeared to be the most likely sources of airborne asbestos. Heavy traffic areas were also monitored.

Three main areas of the plant were monitored:

1) Bagging of dry mix
2) Make-up of all purpose tape joint compound
3) Make-up of ready-mix

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 Leitz microscope utilizing phase contrast illumination at 400X and a Patterson Globe and Circle reticle.

Total dust was determined by light field microscopy at 100X.

TEST RESULTS

Two figures have been reported for each sample. They are:

1) Total Fiber - Any material 5 microns of longer having an aspect ratio of 3 or greater. Reported as fibers per milliliter.
2) Total Dust - Any fiber or particle present. Reported as million particles per cubic foot.

INTERPRETATION

The regulations have been established with the 5 fiber limit on a time-weighted average. This essentially means the figures must be arranged to show an employee's average intake of fibers per milliliter on an 8-hour day. For example, the highest reading in the test was 6.7 fibers/ml. If this was the only contact with asbestos that day, the 29-minute sample would be extrapolated to 8 hours, giving a time-weighted average of less than 0.5 fibers/ml.

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SUMMARY OF DUST COUNTS

N.B. No.	Description	Asbestos Count Fibers/ml > 5μ	Total Dust mppcf
1929-60-1	Environmental (11 min.) - 1 ft. from general process bagger operator, Duo-Cote product. 5-1/2 ft. above floor.	3.4	5.4
1929-60-2	Environmental (14 min.) - Background next to "A" powder blender prior to dump. 4 ft. from blender to electrical panel, 5-1/2 ft. above floor. Note: Rather high fiber count probably due to activity in area, such as bagging and other powder blenders being used.	3.6	8.9
1929-60-3	Environmental (29 min.) - Same position as above, during dump.	6.7	7.2
1929-60-4	Personal (26 min.) - Operator making-up all purpose tape joint compound. Dumping $CaCO_3$, Canadian 7TF8 asbestos, starch, cellulose, preservative and mica	4.5	6.8
1929-60-5	Environmental (12 min.) - 6 ft. from "C" ready mix charge hole on ready mix tank, during dump.	4.3	9.1
1929-60-6	Personal (12 min.) - Operator dumping $CaCO_3$, SG-210, Methocel and mica into "C" ready mix machine.	5.0	9.7

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