COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF HEALTH
P. O. Box 90
HARRISBURG 17120

August 25, 1964

Pittsburgh Corning Corporation
Box 39
Port Allegany, Pennsylvania

Attention: Mr. H. J. Baker
Personnel Manager

Gentlemen:

A survey was conducted on June 9 and 10, 1964 to evaluate employees' exposure to asbestos and silica dusts. In view of our findings, the following recommendations are made. Recommendations Nos. 1, 2 and 5 should be effected upon the receipt of this report; No. 4 within 60 days; and No. 3 within 30 days.

1. Establish a housekeeping program to remove settled dust from the asbestos insulation manufacturing area. (Vacuum methods are preferred.)

2. Establish a weekly maintenance program to insure that exhaust and material handling systems are kept free of leaks and are operated at maximum efficiencies.

3. Enclose the storage bin and exhaust air to the outside in such a manner that there will not be an air pollution problem.

4. Lower the hoods at the building machines, at the feeding machines, and at the storage bin to a position closer to the source of contamination.

5. Provide operators with respirators, approved by the U. S. Bureau of Mines for protection against pneumoconiosis-producing dusts, to be worn while sawing 24-inch pipe insulation.

6. Establish a program of annual chest X-ray examinations for all employees exposed to asbestos and silica dusts.

PLAINTIFF'S EXHIBIT tabbies 04209.00

PLAINTIFF'S EXHIBIT tabbies WV-009619

We enclose our Hygienic Information Guide entitled "Asbestos," our booklet entitled "Dust," Article 432 as amended, and the report of survey.

Sincerely yours,

Jan Lieben, M.D., Director
Division of Occupational Health

Enclosures (4)

Copy: Dr. Grant 11/3/64
LEG 11/3/64

Commonwealth of Pennsylvania
Department of Health

DIVISION OF OCCUPATIONAL HEALTH

Report of Survey

Pittsburgh Corning Corporation
P.O. Box 39
Port Allegany, Pennsylvania

Following a plant inspection, a survey was conducted June 9 and 10, 1964, to evaluate employees' exposure to asbestos and silica dusts. The survey was conducted with the cooperation of Mr. Howard J. Baker, personnel manager.

DETAILED FINDINGS

This plant manufactures glass, polyurethane foam and asbestos products. The survey was limited to the manufacture of asbestos pipe insulation.

Asbestos fiber and ground scrap are metered into a belt conveyor system which transfers the mixture to a pneumatic conveying system. Asbestos delivered to the building machines by the pneumatic system is removed from the air stream by cyclones. The mixture is deposited on belt conveyors within the building machine enclosures and the conveying air is returned into the pneumatic system. While moving on the conveyors asbestos is automatically sprayed with sodium silicate. As the asbestos emerges from the building machine enclosure it is rolled onto steel cylinders until the desired thickness is obtained. The outside surface is then rolled in a clay dip, the steel cylinder removed, and the piece transferred to a drying oven.

Dried pieces are placed on a conveyor, cut to the proper length and then halved lengthwise by vertical band saws. The finished insulation is inspected at the take-off end of the conveyor system, automatically tied and packaged.

Scrap (pieces of asbestos insulation that had been cut-off and pieces that have been rejected) is transferred by a belt conveyor to a grinding machine located adjacent to the sawing device. A high-pressure stream of air directed perpendicularly into a paddle wheel fan entrains the ground scrap and pneumatically conveys

it to a storage bin. Since the storage bin is under positive pressure from the pneumatic conveying system, filter bags have been installed at the roof of the bin to relieve pressure and reduce dustiness. Small ducts also connect the storage bin to dust collecting apparatus located outside the plant. These small ducts are not designed to convey air introduced into the bin at the present ventilation rate. This is evidenced by the billowing of the filter material.

Hoods at the conveyor exits of the building machines, above the feeding machines and above the unloading doors of the storage bin, are located too far from the source of contamination to be effective.

Dispersions of dust could be reduced by redesigning the hoods using the principles of enclosure where possible and exhaust slots where feasible. The hoods should be placed as close as possible to the points of dust generation.

Atmospheric samples for dust were collected at operators' breathing levels at various locations through the working area. Impingers containing distilled water and alcohol were used to collect samples. Settled dust samples were collected and analyzed chemically for free silica. The silica dust hazard associated with this operation should be adequately controlled when the asbestos contamination is reduced through completion of recommendations made.

Dust concentrations, while shoveling scrap into carts from the storage bin, numerically exceeded the threshold limit value thirty times. The operator is protected from this exposure by an approved respirator. However, dust from this operation contributes significantly to over-all plant dustiness. The airborne dust, after settling, is easily redispersed into the atmosphere by vibrating equipment and foot and tow-truck traffic. Control of dust at the source, as suggested previously in this report, will eliminate dispersal and facilitate housekeeping.

The building machine operators are also exposed to dust in excess of the threshold limit value. The general air in this area was found to contain 6.3 million particles of dust per cubic foot of air.

Sawing operations in the finishing and packaging areas are exhaust ventilated. However, sawing 24-inch pipe insulation presents a problem because the system was not designed to handle such large pieces. Until a new saw that will accomodate the larger pieces is placed in use, the operators should be required to wear U. S. Bureau of Mines approved respirators.

Relief of positive pressure through filters at the storage bins constitutes recirculation of air into the work area. Asbestos dust causes lung disease and is also suspected of causing cancer. For these reasons, it is recommended that the filtered air be confined and removed to the outside. This could be accomplished by enclosing the area above the filters and directing air to the outside, in such a manner that it will not create a community air pollution problem. Air recirculation systems must be approved by the Pennsylvania Department of Health.

Tables of dust concentrations and free silica content of dust follow.

Commonwealth of Pennsylvania
Department of Health
DIVISION OF OCCUPATIONAL HEALTH

Table 1

Pittsburgh Corning Corporation
P. O. Box 39
Port Allegany, Pennsylvania

Location	Dust concentration* (Millions of particles per cubic foot of air)	Remarks
Asbestos pipe insulation department	1.5 11.7	Feeding conveyor system, supplying asbestos from burlap bags and from carts
	119.0 169.5	Shoveling ground scraps from the storage bin into carts
	8.3 12.4	Operator's exposure at the building machine
	6.3	General air, main aisle between building machines and office
	22.5	Removing end piece cut from 24 inch pipe insulation
	4.5 8.0	Operator's exposure at double saw
	3.2	Take off end of conveyor, tying and inspecting 3 inch pipe insulation
	2.7	Cutting 9 inch pipe insulation
	4.9	Take off end of conveyor, inspecting and tying 9 inch pipe insulation
	2.8	General air near 9 inch pipe insulation take off end of conveyor
	1.0	Saw operator's exposure, 24 inch pipe insulation

*Threshold limit value for dust containing asbestos based on an 8 hour daily exposure: Five million particles per cubic foot of air.

Commonwealth of Pennsylvania
Department of Health
DIVISION OF OCCUPATIONAL HEALTH

Table 2

Pittsburgh Corning Corporation
P. O. Box 30
Fort Allegany, Pennsylvania

Location	Free Silica (per cent)
Sawing area	7
Storage bin	4

Survey by:

Paul Gronka
Regional Industrial Hygienist

John Masaitis
Sheldon Manning
Industrial Hygienists