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William R. Bradley and Associates.

ENVIRONMENTAL HEALTH CONSULTANTS

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201 622-4246

September 21, 1967

Mr. Frank M. Stumpf
Vice President - Research
United States Mineral Products Co.
Stanhope
New Jersey 07874

Re: ENVIRONMENTAL HEALTH INVESTIGATION

Dear Mr. Stumpf:

On July 26, 1967 a series of simultaneous air samples were collected during the spray application of CAFCO BLAZE-SHIELD, mineral fiber. The air sampling was conducted while an operator was spraying the product on a wall- and ceiling-test application in a partially enclosed, one-story building involving a large, open space. CAFCO BLAZE-SHIELD product was applied at a ratio of 10 pounds fiber to 10 pounds of water. A 12-hole, spray nozzle was used.

An environmental health study was conducted in order to determine if spray operators or nearby persons would be exposed to the inhalation of asbestos fibers at a concentration that might result in illness or damage to lung tissue. The test represented actual spray-application conditions that do exist in the average application. Air samples were collected at head level at the station where the spray operator was located, and then in a line perpendicular to the surface being sprayed at distances of 10 feet, 20 feet and 40 feet behind the operator. Prior to the collection of air samples, the operator had been spraying for a period of 20 minutes which again establishes testing under actual spray application conditions.

Stumpf 60 ga



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The collected air samples were analyzed for the presence of respirable-size, asbestos fibers.

Air samples were collected for 10-minute periods using the approved, Greenberg-Smith-impinger technique using triple-distilled water with three percent ethanol to prevent flocculation of dust fibers in the collected sample. A dust count was conducted in the approved manner using a Whipple disc in a 15X microscope, eye piece and with a 10X objective. Dust counts were made using a Dunn cell.

Results of Dust Counts

<u>Millions of Particles Per Cubic Foot of Air</u>				
<u>Product</u>	<u>At Source</u>	<u>10 Feet</u>	<u>20 Feet</u>	<u>40 Feet</u>
Cafco	4.4	3.3	2.7	2.1
Blaze-Shield				

Summary

The results of this investigation show that the threshold level of five million particles per cubic foot of air was not exceeded at the spray operator's breathing zone or at distances of 10 feet, 20 feet or 40 feet from the operator. The threshold level for the inhalation of asbestos fibers may be tolerated for eight-hour days, day in and day out, without danger of producing changes in lung tissue. The results of tests show that no health hazard exists from the inhalation of asbestos fibers under the conditions of these tests as above outlined.

Very truly yours,

Wm R Bradley
William R. Bradley

WRB/bg