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ENVIRONMENTAL HEALTH CONSULTANTS
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August 11, 1967

Sprayed Mineral Fiber Manufacturers Association, Inc.
Suite 2300
One Wall Street
New York, New York 10005

Re: ENVIRONMENTAL HEALTH INVESTIGATION

A series of simultaneous air samples were collected during a ten-minute, mineral fiber, spray application using the products of four manufacturers. The samples were collected at head level at the spray operator's station, and then in a line perpendicular to the surface being sprayed at distances of ten feet, twenty feet and forty feet behind the operator. Prior to the collection of air samples, the operator had sprayed a wall and a ceiling for a period of twenty minutes.

Air samples were analyzed for the presence of respirable-size asbestos fibers. The testing was conducted July 26, 1967 at the Smith and Kanzler Company plant in

Linden, New Jersey. Manufactured products A, C, D and B were tested in that order at a spray concentration of ten pounds fiber to ten pounds water. A twelve-hole spray nozzle was used.

Following the spraying of the first three products, and after a one-hour lunch break, product B was sprayed at the 10-pound fiber to 10-pound water ratio. Then, using the twenty-minute, spray period and ten-minute, sampling period, product B was sprayed at a ratio of 10 pounds fiber to 7.5 pounds water and again at a ratio of 10 pounds fiber and 5 pounds water.

Spraying and Testing Schedule

Time	Test Data
10:50 a.m.	Began spraying Product A.
11:10 a.m.	Continued spraying Product A. Began air sampling.
11:20 a.m.	End of air sampling.
11:30 a.m.	Began spraying Product C.
11:50 a.m.	Continued spraying Product C. Began air sampling.
12:00 noon	End of air sampling.

Spraying and Testing Schedule - Cont'd

Time	Test Data
12:03 p.m.	Began spraying Product D.
12:23 p.m.	Continued spraying Product D. Began air sampling.
12:33 p.m.	End of air sampling.
1:37 p.m.	Began spraying Product B.
1:57 p.m.	Continued spraying Product B. Began air sampling.
2:07 p.m.	End of air sampling.
2:08 p.m.	Began spraying Product B at 10 to 7.5 ratio.
2:28 p.m.	Continued spraying Product B. Began air sampling.
2:38 p.m.	End of air sampling.
2:41 p.m.	Began spraying Product B at 10 to 5 ratio.
3:01 p.m.	Continued spraying Product B. Began air sampling.
3:11 p.m.	End of air sampling.

Results of Dust Counts

Product	Millions of Particles Per Cubic Foot of Air			
	Source	10 Feet	20 Feet	40 Feet
A	4.1	3.2	2.6	2.0
C	4.4	3.3	2.7	2.1
D	4.6	3.3	2.6	1.9
B	5.3	4.6	3.1	2.5
B (10 to 7.5)	5.9	5.2	3.3	2.7
B (10 to 5)	6.2	5.5	3.4	2.8

Identification of Products

A - Asbestospray
B - Pyrospray — Keene
C - Cafco
D - Spraycraft

Summary

Product B with lower water ratios produces more respirable asbestos fibers as well as clays when sprayed. Products A, B, C and D did not present a respirable, asbestos-dust, inhalation hazard when sprayed at a 1 to 1 ratio under the conditions of the test. Product B was borderline, however.

It is advisable that spray operators wear respiratory protection while at work as the conditions of spraying in confined quarters may be encountered.

It is advisable that spray operators wear respiratory protection when spraying Product B at the lower fiber to water ratios, (10 to 7.5 and 10 to 5).

No respirable dust protection is considered necessary for workmen located ten feet or more away from sprayed, mineral, fiber applications that use asbestos fibers when conducted in semi-open areas.

William R. Bradley

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