AMERICAN MUTUAL LIABILITY INSURANCE COMPANY

REPORT OF INVESTIGATION

THE FLINTKOTE COMPANY - TILETEX PLANT

McKinley Avenue
Chicago Heights, Illinois



By

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PLAINTIFF'S EXHIBIT

FK-284

ACKNOWLEDGEMENT

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PURPOSE

To evaluate the control of the potentially hazardous dusts, asbestos, tale, and limestone at the floor tile manufacturing operations.

Neither the visit of our representative under the terms of our policy nor the making of this report constitutes an undertaking to determine or varrant that your premises or operations are safe.

CONCLUSIONS

Airborne dust concentrations were excessive in the Scrap Grinding Area and at the No. 7 Dry Mix Feed.

ANALYSIS OF ENVIRONMENTAL DUST

Air samples for dust count were obtained in the Scrap Grinding Area and the Dry Mix Feed hoppers of No. 1, 6, and 7 lines. The results of these dust counts are shown on the attached Air Analysis Table.

The Threshold Limit Value (T.L.V.) of 14.0 million particles per cubic foot (mppcf) is based on the formulation of toxic mineral dusts going into feed mixtures.

Although approximately 3 to 5 bags of pure asbestos are added to each batch at the feed stations, it is of short duration and the batch loadings are intermittently spaced rather than continuous. Some investigators might apply the more stringent T.L.V. of 5.0 mppcf (or the newly proposed 2.0 mppcf). However, it is our opinion that the exposure observed does not warrant such strict interpretation.

Note that the three air samples which did not exceed the T.L.V. of 14.0 mppcf were also close to or below the T.L.V. of 5.0 mppcf used for asbestos alone.

DESCRIPTION OF PROCESS AND DUST EXPOSURE

Dry Mix Feed to Tile Machines

Number 6 and Number 7 Dry Feed Mixers are loaded from raw material paper bags through hinged doors at the top of the mixers. Two-inch slotted hoods at each end of each pair of doors provide 350 feet per minute slot velocity. Thus, the air movement at the front of the feed opening is less than 100 feet per minute and is, therefore, inadequate to provide the required control of dust during dumping.

These slots have been damaged by heavy bags, etc., and are, therefore, restricted at several points.

The Dry Mix Feed for the Chip Manufacturing Line (Specialty Lint) is controlled by a large enclosing hood with duct take off at one end with very low air movement into the duct (200 feet per minute air velocity), therefore, providing practically no air movement for dust control at the feed opening when bags are dumped into the mixer.

Scrap Grinding Area

All reject and waste tile are brought to this area in steel drums for grinding and eventual use in the tile manufacture. The drums are dumped, by mechanical means, into a hopper and belt-conveyed to a grinder after which it is belt-conveyed to bins at one end of the room.

Although some dust collection is provided, it is very inadequate. The drum dumping created a great deal of dust as does the grinder, belt conveyors, belt transfer points, and belt dumping into the bins.

Employees do not wear dust respirators during any of these operations.

RECOMMENDATIONS

1. The exhaust slots at No. 6 & 7 Dry Feed Mixers should be repaired and the exhaust volume provided by the dust collecting system should be Increased.

   One method to provide adequate air velocity control of the dust created at this location is to provide slots at both sides of each feed opening instead of across two feed openings. This method is used at the Tile-Tex plant in New Orleans where air velocities provided at a similar slat-type exhaust hood was much greater than at this location. The door hinged at the rear between the two slots on both sides effectively helps provide an air velocity away from the operator and dumping operation.

   Another effective method of providing adequate air velocity for controlling dust at this dump operation is to exhaust air directly from the mixer whenever the doors are opened. This would provide an inward movement of air which could effectively prevent the dust from rising up to the operator's breathing zone.

2. Although dust counts were not excessive at the Dry Mix Feed dumping operation for the Chip Manufacturing Line, exhaust ventilation at both dump hoods should be improved. This would require an evaluation of the dust collecting system which is not providing adequate air movement and a better hood enclosure. The hood opening should be made snullor so that the inward air movement provided by an improved dust collecting system would be most effective at the source of dust contamination, namely at the feed opening of the mixer.

3. It appears that a new dust collecting system must be provided at the Scrap Grinding Operation. The drum dump hopper must be completely enclosed and ventilated to prevent dust from escaping to the room air. All belts must be enclosed and prwided with exhaust ventilation to prevent dust escape to room air. All belt transfer points must be redesigned to prevent spillage

and exhaust hood enclosures must be used at these points to prevent escape of dust to the room atmosphere. The grinder must be enclosed or provided with exhaust ventilation to prevent atmospheric contamination. The bins must also be ntcd to the dust collecting system.

This dust collecting system should include a cloth bag-type dust collector with automatic shaking device and provisions to return collected dwt to the manufacturing process if so desired. Exhaust air *must* be discharged to the outside,

4. All operators exposed to dust concentrations which exceed the established T.L.V. must wear only respirators approved by U.S. Bureau of Mines for pneumoconiosis dusts. A respirator program, to maintain and keep individual respirators clean. must be instituted.

5. Annual (as well as preemployment) chest X-rays (14" x 17") must be made on all employees working in toxic dusty areas.

6. Housekeeping must be nrinttintd in the Mixer Feed areas as well as the Scrap Grinder Area.

DATE 3-10-69

PLANT Flintkote-Tiletex Plant LOCATION McKinley Ave., Chicago Heights,

AIR ANALYSIS TABLE

Sample No.	Mins.	Location and Events	Asbestos, Talc, Limestone Mixture Concentration (C)
BN-13	10	Breathing Zone Scrap Grinding Area	26.7 *
BN-15	10	General Air Scrap Grinding Area	27.0 ●
BN-14	10	Dry Mix Feed - No. 6	5.3
BN-25	10	Dry Mix Feed No. 7	19.3 *
	10	Manual Shoveling in Calendar No. 1 Line Calendar Roll	2.0
BN-26	10	No. 1 Lint Dry Mixer (Room)	4.0

Threshold Limit Value 14.0 mppcf

A—Milligrams per Cubic Meter

B—Ports per Million

C—Million Particles per Cubic Foot

● = Exceeds T.L.V.