PLAINTIFF'S EXHIBIT K-918

OWENS/CORNING FIBERGLAS

Intra-company correspondence

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subject BLOOMINGTON - DUST COLLECTION

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The internal environmental problems at the Bloomington plant were investigated during a visit to the facility on August 6 and 7, 1970. The two major production items, Unarco board and foam, produce severe dusting problems. The Unarco board problem is far more serious than the foam fabrication line due to the presence of asbestos fibers which are a recognized industrial hygiene hazard. The fabrication of the foam after forming and aging produces a considerable amount of dust which is relatively innocuous but causes a nuisance and housekeeping problem.

UNARCO BOARD LINE

The first operation in the Unarco process consists of an individual manually dumping a burlap sack of raw asbestos fibers into the hopper of a transfer conveyor. The conveyor has virtually no hooding and the dust collection consists of a 4 inch duct attached to the top of the conveyor. Although the mixing operation was not running during the visit due to other equipment malfunctions, the totally inadequate collection in this area and the crude method of handling the raw asbestos fiber makes this area a very serious problem. This opinion is verified by preliminary sampling results which indicate highest fiber concentrations in this area. A complete new hood system is needed in this bag emptying area.

The asbestos fibers are air conveyed from the conveyor through a mill to reduce fiber length into a ribbon type mixer where the remaining Unarco board ingredients are added. The ingredients consist of asbestos fiber, diatomaceous earth, lime, silica, and water. The mixers are vented into large cloth bags which are supposed to catch the fibers and return them to the mixers. This venting method could be adequate if the mixer hatch is closed during the asbestos fiber transfer operation and an attempt is made to wet the fibers immediately upon entering the mixer. The addition of the other ingredients to the mixer is by manual addition of bagged materials. The bagged material is not particularly harmful but will generate nuisance dusts which should be contained by adequate hooding. The dust collector located in the mixing area is totally inadequate for the job due to its small capacity.

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After mixing, the Unarco slurry is pumped to the forming area, then pressed into boards, autoclaved, and oven dried. These operations are dust free and present no problems with fiber fly until the boards are subjected to finishing operations.

The finishing operation consists of sanding and edge trimming. The sanders are "Timesaver" brand belt units. One unit sands the bottom and the other the top of the board. Multiple passes through the sanders are often required to obtain the desired board thickness due to wide variations in pressed board thickness. The hooding on the sanders appears to be factory supplied units which should be adequate if the exhaust capacity of the collection system is properly matched to the hoods. A visual evaluation of the hoods showed minor fiber fly in the vicinity of the sander. The edge trim saws are circular traversing saws. A system to collect the fibers using a hood on the saw and one under the table is now in use. Neither hood does an adequate job and both should be redesigned. The whole edge trim system is slow and extremely difficult to adequately hood. The collectors now used for the sanders and edge trim saws do not have sufficient capacity to handle both operations. The "Aget" collectors purchased in early 1968 have approximately 12000 cfm exhaust capacity which would be adequate for collection at the sanders only. Additional capacity must be provided for the edge trim saws. The two edge trim saws will probably require at least 5000 cfm exhaust capacity.

The cloth tube collectors are manually emptied into "Roura type" hoppers. This dumping operation allows asbestos fibers to float into the general plant environment. The cyclonic separators ahead of the bag collectors discharge through rotary valves into a removable trash bin and this system does not create a problem. If a similar dust tight discharge system was installed on the bag collectors it would help the fiber containment problem, however, the possibility of a bag breaking is always there and it would undoubtedly create an improved environment if the collector system was located outside the building.

One of the most serious fiber fly problems in the whole asbestos operation occurs during the stacking and restacking of the sanded boards. Every time a board is dropped onto another a dust cloud is blown into the face of the individual who dropped his end of the board last. This problem would be practically impossible to contain by hooding and consideration should be given to eliminating some of the handling by using in-line fabrication with a cleaning step and possibly a spray to keep the dust from flying.

FOAM LINE

The foam line forming area does not appear to have serious problems due to fumes from the foam ingredients. The only odor from the foam was obtained by placing the nose approximately 3 or 4 inches from the product immediately after forming and this odor was not particularly strong.

The dust generated from the foam fabrication operation does not appear to present serious hygiene problems but the light nature of the material creates housekeeping problems. The dust collection system now in use in the foam fabrication area suffers from extremely poor duct and hood designs. A complete redesign of the collection system in this area is necessary. The collectors now in use have approximately 25% of the capacity needed in this area. The band saws need completely new hoods.

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The "Fenco" saw may have some useable hoods but certainly the exhaust capacity at the saw is totally inadequate. There are several operations in the foam fabrication area which have no collection facilities.

GENERAL COMMENTS

The spray booth area for application of a coating to retard dust formation creates a problem outside the building. The dust blown off the board is exhausted through the building directly toward an inhabited area.

The location of the dust collectors inside an enclosure specifically for scrap handling would be an ideal situation. However, if it is desired to minimize capital investment but still make progress on containing asbestos fiber it would be possible to obtain a collector for the mixing area and the edge trim saws and locate it in the proposed central location, thus releading the sander collectors for service on the sanders only.

A cost estimate for a collection system for the Unarco line will be completed approximately two weeks after receipt of the final equipment layout. The remainder of the system could be estimated within approximately six weeks of receipt of the final arrangement drawing.

SUMMARY OF RECOMMENDATIONS

Recommendations contained in this report include:

1. Complete redeisgn of hooding and collection system in asbestos dumping area.
2. Study mixer venting to assure that good fiber collection is obtained.
3. Provide hoods for nuisance dusts at mixers.
4. Utilize present "Aget" collectors for sanders only and disconnect edge trim saws.
5. Provide additional collection for edge trim saws.
6. Consider centralized dust collector area outside.
7. Complete redesign of collection system in foam fabrication area.

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