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App#18

ROUTE TO:

SQUARE D COMPANY **INTER-OFFICE**

TO **DM** ✓ FROM **WM**

ATTENTION **G. W. Denny III** BY **F. J. Hitchcock** DATE **April 5, 1973**

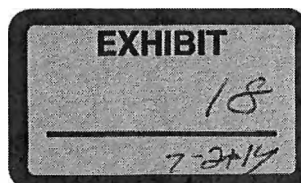
SUBJECT **Molding Area Atmosphere** C.C. **D. P. Ferguson - ER
M. H. Garlick - SE
W. H. Woito - PS**

RE: **Review By: Frank J. Angelos
Industrial Hygiene Services
Johns-Manville Corporation
Waukegan, Illinois**

Mr. Frank Angelos reviewed our molding operation this morning, April 4, 1973, for the purposes of recommending any additional testing of our atmosphere and action to be taken to improve this atmosphere. A summary of this review is presented below:

Mr. Angelos was presented our problem and informed of the action we had taken to date. He reviewed the list of molding powders we use containing asbestos fibers, the clean up program we had undertaken during the past week, the results of the atmosphere samples American Mutual had taken, and the list of atmosphere samples we had taken on Monday and Tuesday of this week and submitted for analysis. His general comments concerning the presence of asbestos and fiberglass were:

1. If we use any asbestos at all, regardless of the particle level in the atmosphere, we must conform to OSHA's physical examination procedures for employees. He estimated this cost at \$30 per employee tested. He thought our nurse could conduct the pulmonary tests reducing this cost. ✓
2. If the atmosphere contains more than five fibers per cubic centimeter on a time weighted average we must also conform to the OSHA clothing procedures.
3. If we exceed the ten fiber per cubic centimeter tolerance limit we must take corrective action to bring the atmosphere within tolerance limits and install a temporary program of using respirators, etc. until such action is completed.
4. The time weighted average procedure can be based on a forty-hour work week rather than just the eight-hour work day in order to conform to the stated limits.
5. He commended us on the clean up action we had taken and stated OSHA was impressed by a clean location. In examining areas such as our molding operation OSHA first looks at the cleanliness. If the OSHA inspector feels a problem exists he will then call in an Industrial Hygiene specialist to conduct tests. Therefore, it is important for us to maintain a clean work area.



6. He commented that fiberglass is not injurious to health, but that dermatitis does result from its presence. He suggested that personal cleanliness is of paramount importance and people washing up should use cold water first in order to prevent the skin pores from opening permitting the fibers to enter them. The cold wash can then be followed with a normal warm water wash. ✓

A tour of the molding area was made following the above general discussion. Mr. Angelos' comments on the area are:

1. In general he could see no reason why we couldn't maintain our atmosphere within the OSHA limits for asbestos providing we maintained the area housekeeping at the level we now have it. He saw no need for additional tests by Johns-Manville.
2. His comments regarding the preformers were:
 - a. Additional dust collector hoses should be brought to underneath the exit slides of the Baldwin-Defiance preformers to pull the loose dust dropping off the preforms downward rather than upward past the operator as the present system does. ✓
 - b. Similar action should be taken on the Bipel preformer and the feed hopper lid should be tightened down to prevent dust from escaping there. (We are already working on the Bipel hopper cover).
3. Preform grinder CA-586 -- the exhaust system on this grinder is well placed and does the job of pulling off the dust. By necessity it pulls the dust up past the operators face. He suggested an extension be put out from the grinder feed entrance to place the operator out of the path of the dust flow.
4. Sander FE-353-1 -- relocate exhaust system to give better draw off of dust.
5. Sanding board for FA single pole bases -- put vacuum draw off at edge of sanding board.
6. Feed tubes to automatic presses -- these are all OK. It is important to keep them in good functioning order and insure all leaks are kept closed.
7. Dumping bags of material into hoppers -- there is nothing wrong with this practice since the dust settles quite rapidly and it is not a continuous operation. If practical, the placement of an exhaust hose at the edge of the barrel would help the temporary dusting condition.

8. All equipment should be vacuumed daily in order to pick up loose dust conditions at the operator body level. Also, this presents a good picture in the case of an OSHA inspection.
9. The following cleaning schedule for the total area is recommended:
 - a. Floor and low work areas -- clean good each six months.
 - b. Complete room including beams, piping, etc. -- clean well annually.
10. A test should be made for phenol fumes. Allowable amount is 5ppm. Testing equipment for this type of thing is available from Mine Safety Appliances Company.

Mr. Angelos recommended two general approaches to maintaining the total area in a clean and comfortable condition from an atmosphere standpoint and from an operator comfort standpoint.

1. Installation of a bag type central dust collection system with hoses leading to each individual press to draw off dust being generated by each press. At the manual molding presses, this hose can be of sufficient length and flexibility for the operators to use it as a vacuum cleaner to clean off their work place and press area at the end of each work shift, or more often if needed. This practice is used in all of Johns-Manville plants.
2. In the manual molding area, install a common duct work with feeder ducts leading to above the work place of each operator. The feeder ducts would be equiped with an adjustable damper. Feeding into the duct work would be chilled air from a central chilling unit.
3. We should make plans to eliminate the exhaust fans in the roof, since in the near future the Environmental Protection Agency will be specifying minimum exhausting limits of dusts and vapors into the atmosphere. There is no good way at this time to measure what is going into the atmosphere, therefore it is best to plan for an inside filtration system of some type.

We will take immediate action on the above recommendations by Mr. Angelos where they are within our capability. I would recommend we have Mr. Angelos' group present engineering plans to us for a central dust collection system and a central operator cooling system. Mr. Angelos will try and send me some cost range for accomplishing this.



F. J. Hitchcock

FJH/cd

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