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DOCUMENT DESCRIPTION: Memo - Industrial Hygiene Survey of Asbestos Fiber Exposure at Conveyor Loading of Brake Assembly

Ford

Personnel and Organization Staff

Inter Office

1 October 1984

Mr. E. C. Koops, Manager
Sterling Plant

cc R. D. Byrom
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Subject: INDUSTRIAL HYGIENE SURVEY OF ASBESTOS FIBER EXPOSURE AT CONVEYOR LOADING OF BRAKE ASSEMBLY

At the request of R. Byrom, Division Safety Engineer, Industrial Hygiene scheduled a survey to determine employee exposure to airborne asbestos fibers at the brake assembly conveyor loading operation. On the day the survey was to be conducted neither of the plant's two conveyors was operating. Personal breathing zone samples were collected from two employees who were placing the brake assemblies onto the axle directly from their shipping cartons. Analysis of these samples collected to represent the employees' full shift exposure indicated they were exposed to less than 0.01 fibers longer than 5 micrometers per cubic centimeter of air (fibers/cc). This concentration is well below all regulated or proposed limits. Detailed results are presented as Attachment I.

Although air sampling indicates minimal inhalation exposure at the operation, asbestos fibers are present on the cardboard packing separators when the brake shoes contain asbestos. Laboratory analysis of a collection of particulate from these separators from an identical operation in another plant indicated the presence of 23 percent chrysotile asbestos. In light of our present knowledge, the best control of asbestos is its eventual complete removal or absolute containment.

Until a suitable substitute brake assembly which contains no asbestos becomes available, implementing the following suggestions will reduce potential employee asbestos exposure:

1. Check with the brake assembly supplier about the possibility of using "sticky" cardboard for packing asbestos-containing assemblies. The supplier should vacuum assemblies before packaging.

2. Return all cardboard separators to the supplier as soon as possible to prevent their reuse within the plant. Now the cardboard is used for other purposes after the assemblies have been removed. This practice potentially exposes others to asbestos fibers.

3. Clean floor area every day where the assemblies are loaded with a damp mop or a vacuum equipped with a HEPA filter.

4. Immediately clean the guard above the conveyor and the conveyor's fixtures with an approved asbestos vacuum or by wet methods. Repeat the cleaning as necessary to prevent fiber and particulate buildup.

5. Provide respiratory protection for employees if they wish to wear it. Respirators such as 3M's 9920 are adequate based on the results of these air monitoring data. If employees opt to wear respirators, they need to be trained in their use and care and medically evaluated for their fitness to wear them.

6. Provide coveralls to employees performing this operation. The coveralls are to be left at work for laundering each day. The laundry must be notified that the coveralls may contain asbestos fibers. See Attachment II.

The results of this industrial hygiene survey should be shared with employees, supervisors, and the UAW Health and Safety Representative. If you have any questions, contact us on 59-46955.

P. A. Brogan

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Industrial Hygiene Section
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Attachments