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Dept Report - Permissible Occupational Exposure to Airborne Contaminants



File

Inter Office

Personnel and Organization Staff

March 18, 1982

Mr. J. D. Whyte, Manager
Kentucky Truck Plant

cc C. E. Allen, Jr., M.D.
 D. Dyer
 J. G. Henry

Subject: Industrial Hygiene Re-Study - Asbestos Fiber Exposures

Reference: Industrial Hygiene Study - Asbestos Fibers, M. J. O'Brian to
 J. D. Whyte, April 9, 1980

Along with first quarter lead monitoring conducted March 2-3, 1982, additional sampling at the request of Mr. D. Dyer, Safety Engineer, was performed of employee exposures to airborne asbestos fibers. The purpose was to re-study asbestos-use areas and quantify exposures of those employees who routinely handle asbestos-containing materials, per OSHA regulation 29 CFR 1910.1001. Only asbestos results are detailed in this report. Lead exposures will be reported at a later date.

FINDINGS

Asbestos fiber exposures at Kentucky Truck Plant are confined to assembly areas where new brake linings and clutch plates are installed. In some instances, the installation of these parts involves an abrading action that can potentially generate airborne fibers. Mainly, employee breathing zones can be contaminated by the release of fibers that have accumulated in the shipping cartons used for part storage. The extent of employee exposure to asbestos is dependent on many factors including personal work practices and the amount of dust in these cartons.

Results from this study, as shown on the attached table, demonstrate the presence of airborne fibers within the employee breathing zones but at airborne concentrations, 1) below the OSHA permissible occupational exposure limit (PEL) of 2 fibers, longer than 5µm, per cubic centimeter of breathing zone air (f/cc) and, 2) below the medical action level of 0.1 f/cc.

RECOMMENDATIONS

Based on the above results, no additional employees require the annual medical examination at this time as specified in Dr. D. L. Block's letter to Divisional Industrial Relations Managers, et.al., (Medical Monitoring - Asbestos Exposures, May 2, 1978). However, those employees who were identified in the April, 1980 Industrial Hygiene study as exposed to asbestos fibers in excess of the medical action level, must continue to receive annual medical examination. This is Company policy when dealing with asbestos, a known carcinogen, in which no safe limit or threshold of exposure is known and an employee exposure exceeds 0.1 f/cc.

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In addition, the following is recommended:

- . Minimize employee exposure with routine vacuuming of shipping cartons and other areas of potential dust build-up of asbestos-containing material.
- . Insist supplier vacuum loose dust and fibers from parts and boxes before sealing and shipment. Request supplier to investigate coating inside of shipping boxes with an adhesive (spray or sticky paper lining) to trap non-adherent asbestos fibers released from parts during shipment. (This was successful for clutch plates at Livonia Transmission Plant. Raybestos was supplier of clutch plates wrapped in sticky paper.)
- . Vacuum operator will require monitoring and prior to monitoring, personal protective equipment during disposal.
- . Proper disposal methods are required such as collecting waste material in impermeable, clearly labeled bags.
- . If any changes in the present operation occur that may impact on employee exposures such as rate increase, etc., additional sampling should be performed.

Alan R. Amberg

Alan R. Amberg
Industrial Hygienist
Industrial Hygiene and Toxicology Dept.
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attachment

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**INDUSTRIAL HYGIENE SERVICES SECTION
INDUSTRIAL HYGIENE AND TOXICOLOGY DEPARTMENT
EMPLOYEE HEALTH SERVICES**

Kentucky Truck Plant
Asbestos Use Areas

March 2-3, 1982

PERMISSIBLE OCCUPATIONAL EXPOSURE LIMIT TO AIRBORNE CONTAMINANTS

(f/cc = fibers per cubic centimeter of breathing zone air)

<u>Contaminants</u>	<u>Action Level</u>	<u>8-Hour Time-Weighted Average Exposure Limit</u>
Asbestos	0.1 f/cc	2 f/cc

RESULTS

<u>Employee Name S.S. Number</u>	<u>Job Position (Column Number)</u>	<u>Date</u>	<u>Airborne Fiber Concentration Time-Weighted Average (f/cc)</u>
<u>Department 62 - Front End Axle</u>			
J. Renfrow 310-46-7144	Brake Tightener (AA-2)	3/2/82	0.02
M. E. Hibbs 407-60-0975	Hub Hanger (AA-2)	3/2/82	N.D.
<u>Department 64 - Rear End Axle</u>			
R. Leffler 311-46-1036	Brake Set-Up (K-7)	3/2/82	0.007
J. Richert 306-56-1773	Brake Tightener (K-6)	3/2/82	0.01
<u>Department 74 - Diesel Engine Line</u>			
H. Robinson, Jr. 315-44-7073	Clutch Plate Assembler (B-4)	3/2/82 3/3/82	0.08 0.02
N.D. = None Detected at 0.004 fibers/cc			

DATA RETRIEVAL NUMBERS: ARA 172-176, 183

INSTRUMENTATION: Bendix BDX-55 sampling pump with 0.8 μ m open-face AA filters

ANALYSIS: Fiber Microscopy performed by L. Latorre, Senior Industrial Hygienist

FORD MOTOR COMPANY
Industrial Hygiene & Toxicology Laboratory
Accredited & Approved by
American Industrial Hygiene Association

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