FILE NAME: Ford (FD)

DATE: 1980 July 9

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DOCUMENT DESCRIPTION: Memo with Data Report - Industrial Hygiene Study - Asbestos Exposure - Clutch Packaging Operation - Department 250613

file

Inter Office

Personnel and Organization Staff

July 9, 1980

Mr. D. C. Coats, Manager
Detroit Supply and Central Parts Depot – TROY

cc R. Mudloff/TROY TRACTOR J. Stinson EMPLOYE SERVICES
C. Rosenthal L.R./PERS SVCS TROY G.O. S. Via, R.N. TROY TRACTOR G.O.

Subject: Industrial Hygiene Study – Asbestos Exposure – Clutch Packaging Operation – Department 25C613

As requested by R. Mudloff, Division Safety Engineer, Industrial Hygiene Services Section evaluated an employe's asbestos exposure at the clutch packaging operation on June 5, 1980. Two breathing zone samples were obtained during the 43 minutes required to complete this particular packaging run. Packaging of this clutch plate is required approximately once every 10 months.

Air sampling results, as shown on the attached data sheet, indicate this employe was not overexposed to airborne asbestos fibers while packaging clutch plates. The TWA concentration for an eight-hour exposure is well below the OSHA permissible exposure limit (PEL) of 2.0 fibers/cc, greater than 5 microns in length. Although the TWA concentration is above the 0.1 fibers/cc medical monitoring limit*, this operation is reportedly not performed for more than 30 days per year, eliminating the requirement for periodic physical examinations. Respiratory protection would also not be required based on concentrations measured; however, all other portions of the asbestos standard (29 CFR 1910.1001) relative to handling, labeling, and disposal would pertain.

Based on observations of this operation, the following are suggested recommendations for additional reduction of asbestos exposures:

- Previous compositional analysis of the dust in clutchplate cardboard boxes indicated a 14-15% concentration of chrysotile. The supplier should be contacted to: verify that clutch plates are vacuumed prior to packaging, provide appropriate labeling on these cardboard boxes indicating asbestos content, and explore the possibility of spraying these boxes with an adhesive material on inner surfaces to further reduce the quantity of loose, asbestos-laden dust.

- Ford Motor Company's package should also indicate to the user of the product that it contains asbestos. Customers could be employes of Ford Motor Company or members of the general public. In either case, some indication of asbestos content is warranted.

* Reference Dr. Block's letter dated May 2, 1978.

While not mandatory, additional protection from short-term peak exposures may be afforded with a Corporate approved respirator for use in asbestos-containing atmospheres as described in the attached letter. A disposable type respirator would be more than adequate for this particular operation.

If packaging takes place for more than 30 days per year or if any other changes take place which are capable of increasing dust levels, reevaluation of asbestos concentrations will be necessary.

Mark R. Francis

Mark R. Francis, Industrial Hygienist
Industrial Hygiene & Toxicology Department

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Attachments

INDUSTRIAL HYGIENE SERVICES SECTION
INDUSTRIAL HYGIENE & TOXICOLOGY DEPARTMENT
EMPLOYE HEALTH SERVICES

DETROIT SUPPLY AND CENTRAL PARTS DEPOT
Clutch Packaging Operation
June 5, 1980

PERMISSIBLE OCCUPATIONAL EXPOSURE LIMITS TO AIRBORNE CONTAMINANTS (PEL):

Fibers per cc = fibers of asbestos greater than 5 microns in length per cubic centimeter of contaminated breathing zone air.

Contaminant	8-Hour Time-Weighted Average Exposure Limit (TWAE)	Medical Monitoring*
Asbestos	2.0 fibers/cc	0.1 fibers/cc

RESULTS

Employe/Social Security Number	Description	Fibers/cc
J. Piazza, 370-38-5766	Clutch Packaging Operation 43-minute sample	1.01
J. Piazza, 370-38-5766	Clutch Packaging Operation Overall TWAE**	0.11

* Reference Dr. Block's letter dated May 2, 1978.

** TWAE calculated from the following equation:

$$TWAE = \frac{(T_1 \times C_1) + (T_2 \times C_2) \ldots (T_n \times C_n)}{T_{total}}$$

Where C_n = Concentration measured
T^n = Time exposed to concentration C
T^n_{total} = Total amount of time exposed

The average of two blanks was considered to be the asbestos concentration for the remainder of the day in the TWAE calculation.

DATA RETRIEVAL NUMBERS: MRF-879 through MRF-883

EQUIPMENT: Bendix BDX 55 personal sampling pumps; 0.8 μ filters in three-piece, open-faced cassettes.

ANALYSIS: Ford Motor Company Industrial Hygiene Laboratory; Phase-Contrast Microscopy.

ANALYSIS PERFORMED BY: Libardo Latorre, Senior Industrial Hygienist

FORD MOTOR COMPANY
Industrial Hygiene Laboratory
Accredited by the
American Industrial Hygiene Association

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