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DOCUMENT DESCRIPTION: Memo with Data Report - Asbestos Exposure Transmission Clutch Stacking Operation - Livonia Plant

Inter Office

Personnel and
Organization Staff

Mr. F. A. Ritchie, Manager
Livonia Transmission Plant

April 11, 1979

cc M. A. Bouza, M.D.
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Subject: Asbestos Exposure Transmission Clutch Stacking Operation - Livonia Transmission Plant

As requested by Otto Martinek, Senior Safety Engineer, the Industrial Hygiene Services Section performed an asbestos exposure determination at the clutch stacking operation of Department 90. This survey was performed on February 2, 1979 and was in response to a union request for a reevaluation of the area following a change in the stacking mechanism.

Breathing zone air samples were obtained from employes who operate and supply the clutch stacking machine. Additionally, exposure levels for two assembly line employes on either side of the stacking machine were also determined. Samples were collected to determine the 8-hour time weighted average (TWAE) as well as the ceiling concentration. A bulk sample, obtained from the surface of the stacking machine was used to determine the asbestos concentration.

Results, as shown on the attached data sheet, indicate no violation of permissible occupational exposure limits (PEL). However, one employe's TWAE was calculated to be 0.1 fibers longer than 5 micrometers per cubic centimeter of air (f/cc). Based on OSHA Program Directive #300-16 employes exposured at or above 0.1 f/cc, require medical examinations. Levels determined in this area at this time are similar to previous surveys of this area. In most cases concentrations were below the PEL but above the 0.1 f/cc level.

Based on these results, no additional engineering modifications are necessary to reduce employe exposure. However, to comply with the OSHA asbestos standard and to protect employe health to the greatest extent possible, medical examinations are required for those individuals that have exposures at or above 0.1 f/cc.

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

LIVONIA TRANSMISSION PLANT

February 2, 1979

Department 90 Clutch Stacking Operation

PERMISSIBLE OCCUPATIONAL EXPOSURE LIMITS TO AIRBORNE CONTAMINANTS:

Contaminant	8-Hour Time Weighted Average Exposure Limit	Ceiling Concentration
Asbestos	2.0 fibers/cc	10 fibers/cc

RESULTS

Name	8-Hour Time Weighted Average Exposure Limit	Short Term Exposure Limit
Burleson, B. (362-48-5749	ND[1]	
Irizary, M. (582-68-2846)	0.04 f/cc	
Gatscher, R. (385-64-6786)	ND[1]	
Delorenzo, A. (363-38-7744)	0.1 f/cc[2]	1.1 f/cc[3]

	Chrysotile	Amosite
Bulk Sample	4-5%	3%

1. Not detected at less than 3000 fibers per filter
2. Calculated exposure level based on a minimum of 14 repeated short term exposures per day
3. Short term exposure level representing the employes exposure during a 3 minute cycle in which he loads the stacking machine

SAMPLE DATA RETRIEVAL NUMBERS: SSM-408 through SSM-414

Equipment and Instruments: Bendix personal air sampling pumps; 37 mm membrane filters in plastic cassettes.

Analysis: Clayton Environmental Consultants utilizing the fiber counting method and phase contrast microscopy