



Inter Office

Personnel and
Organization StaffMr. F. A. Kitchie, Manager
Livonia Transmission Plant

April 11, 1979

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O. K. MartinekSubject: 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 employees who operate and supply the clutch stacking machine. Additionally, exposure levels for two assembly line employees on either side of the stacking machine were also determined. Samples were collected to determine the 8-hour time weighted average (TWA) 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 employee's TWA 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 employees exposed 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 employee exposure. However, to comply with the OSHA asbestos standard and to protect employee 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
EMPLOYEE HEALTH SERVICES

LIVONIA TRANSMISSION PLANT

February 2, 1979

Department 90 Clutch Stacking Operation

PERMISSIBLE OCCUPATIONAL EXPOSURE LIMITS TO AIRBORNE CONTAMINANTS:

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

RESULTS

<u>Name</u>	<u>8-Hour Time Weighted Average Exposure Limit</u>	<u>Short Term Exposure Limit</u>
Burke, B. (502-48-5749)	ND ¹	
Brady, H. (502-c8-2846)	0.04 f/cc	
Gutcher, N. (305-04-6786)	ND ¹	
Johnson, N. (305-38-7744)	0.1 f/cc ²	1.1 f/cc ³

Chrysotile

Amosite

4-5%

3%

1. All results 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 employee exposure during a 3 minute cycle in which he loads the stacking machine

Small Area Individual Numbers: SSM-408 through SSM-414

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

Analysis: Cl. J. Environmental Consultants utilizing the fiber counting and phase contrast microscopy

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