



Inter Office

Personnel and Organization Staff

May 12, 1980

Mr. M. R. Craig, Manager
Livonia Transmission Plant

cc M. Souza, M.D. J. Mason
 R. Byrom L. Walker
 O. Martinek

Subject: Industrial Hygiene Study - Asbestos Exposures at
 Automatic Overdrive (AOD) Transmission Operations

Requested by: O. Martinek, Sr. Safety Engineer

Purpose: Evaluate employee exposures to airborne asbestos fibers during assembly
 of clutch components on AOD transmissions pursuant to regulatory
 compliance, at management request

Study and Results:

Breathing-zone samples were collected from employees engaged in assembly of
clutch components of AOD transmissions at the following positions:

- . Forward clutch plate assembly
- . Reverse clutch plate assembly
- . Direct clutch plate assembly
- . Clutch plate installation
- . Clutch stacker machine setter

These samples were taken to quantify exposures to airborne asbestos fibers
generated from movement and use of clutch plates, to comply with initial
monitoring requirements of OSHA regulation CFR 1910.1001. Samples were
collected by means of personal sampling pumps and open-face membrane filters
to facilitate even fiber distribution on the filter face. As shown on the
attached data sheet, all measured levels of asbestos fibers were below the
permissible exposure limit of two fibers per cubic centimeter of air sampled
(F/cc), as well as below the level required for routine medical monitoring
(0.1 F/cc).

It was reported that settled asbestos-containing particulate on work areas is
routinely swept up with rags or hand brooms. Such cleanup operations should
be done by vacuuming and disposal in appropriate containers to prevent additional
exposure potential.

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Conclusion and recommendations:

Based on observations and the data shown,

- . No apparent health hazard exists in the studied AOD areas resulting from employee exposures to airborne asbestos fibers.
- . Concentrations of asbestos forms do not warrant routine monitoring procedures at this time.
- . Cleanup of settled dust in these areas should be performed by vacuuming instead of sweeping.
- . No additional controls need be considered at this time. However, should changes in processes, materials or production occur, additional evaluation may be required.

Should you have any questions concerning this report, please contact the writer.


Harry T. Dryer, Industrial Hygienist
Industrial Hygiene & Toxicology Department
Employee Health Services

Attachments

jb

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

LIVONIA TRANSMISSION PLANT

April 3, 1980

Automatic Overdrive (AOD) Transmission Department

PERMISSIBLE EXPOSURE LIMITS TO AIRBORNE CONTAMINANTS

<u>Contaminant</u>	<u>8-Hour Time-Weighted Average Exposure Limit</u>
Asbestos	2.0 Fibers/cc

RESULTS

<u>Employee</u>	<u>Soc Sec No</u>	<u>Position</u>	<u>Asbestos</u>
S. Polulak	379-52-6206	Forward clutch plate assembly- east	ND (1)
G. Batke	371-24-5865	Reverse clutch plate assembly- west	ND
J. Liogghio	363-48-0866	Direct clutch plate assembly- east	0.015 fibers/cc
J. Davis	018-48-5981	Direct clutch plate assembly- west	ND
L. King	362-52-9489	Clutch plate installation	0.025 fibers/cc
J. Wimmer	363-62-9603	Clutch stacker machine setter	0.018 fibers/cc

(1) Not detectable at less than 0.011 fibers/cc

Data Retrieval Numbers: HTD 760-765

Equipment Used: Personal Sampling Pump (BDX), Membrane Filter (Open Face)

Analysis: Ford Industrial Hygiene Laboratory; Phase Contrast Microscopy

Analysis performed by: L. Latorre

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