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Inter Company Correspond

July 21, 1977

To—Name & Department		Division	Plant or Office
B. J. Ludwig	Chief Engineer	Engineering Office	Chelsea Prov Grounds
From—Name & Department		**Division**	**Plant or Office**
D. P. Glazier	Industrial Hygiene	Employee & Indus. Relat.	Chrysler Center

Subject: INDUSTRIAL HYGIENE SURVEY

On June 10, 1977, Messrs. D. N. James, F. Havrilla, and the writer investigated employee exposure to airborne asbestos fibers in Department 7640. The results of this investigation are listed on the attached data sheet opposite the corresponding job description. Note that both the peak exposure levels and the eight hour time-weighted average exposure levels were found to be well below their respective OSHA limits.

At the time of this investigation, the use of the small belt sander in the Brake Laboratory for grinding and finishing asbestos-based friction materials was brought to our attention Industrial Hygiene recommends that this belt sander be equippe with local exhaust ventilation. A flex duct serviced by the existing dust collector should provide adequate control of any asbestos fibers generated at this work station.

In regard to medical examinations, 29CFR 1910.1000 (j)(3) states, 'every employer shall provide or make available compre hensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers.' Although the regulation does not define exposure, recent court decisions have defined exposure in terms of the lower detection limit, i.e., 0.1 fibers per cubic centimeter of air. Since the eight hour time-weighted average asbestos exposure of mechanics removing brake drums has not been shown to exceed 0.1 fibers/cc, we can conclude that annual examinations are not required for Department 7640 mechanics. However Industrial Hygiene recommends that the plant continue to provi annual medical examinations to all employees assigned to asbes grinding operations. In addition, we recommend that a single asbestos medical examination be offered to the employees who were stationed in Department 7640 in 1973 (see attachment A). This recommendation is based on the fact that our records indicate that elevated airborne asbestos levels were associated with a Brake Laboratory dust collector used in 1973. A medical examination including a chest roentgenogram and pulmon function testing should help to identify any health impairment caused by the malfunctioning dust collection equipment, which was used until April, 1973.

DC 4927

D. P. Glazier
Industrial Hygienist

Subject: Industrial Hygiene Survey

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ATTACHMENT A

Names of Employees in Department 7640 in 1973

Name	Block No.
M. Poertner, Foreman	9311
I. Alder	3369
D. Bauer	0557
I. Cowan	6171
D. Ebersole	6079
C. Ernst	8120
W. Exelby	4958
J. Geer	8401
C. Glover	5101
D. Hamilton	4359
J. Knapp	4967
R. Lockhart	9213
W. Minix	3031
E. Nowak	9054
R. Parker	8104
H. Pearson	9660
D. Reynolds	3044
W. Rooke	4890
C. Roumell	4590
L. Stark	4047
M. Updike	3427
R. Wolfe	9026
R. Urgaites	6125
W. Zincke	3390

Data Sheet
Chelsea Proving Grounds

ASBESTOS

Location	Concentration (fibers per cubic centime of air)
OSHA Permissible Exposure Limit (eight hour time-weighted average)	2.0
OSHA Ceiling Concentration (not to be exceeded at any time)	10.0
1) Personal air sample, D. Bauer 0557, grinding L-car linings on Ammco grinder in Brake Lab	< 0.1
eight hour time-weighted average	< 0.1
2) Personal air sample, L. Stark 4047, removing brake shoes to reset thermocouple	0.4
eight hour time-weighted average	< 0.1

* $E = \frac{C_aT_a + C_bT_b + \ldots + C_nT_n}{\text{Total Time}}$

E = equivalent exposure for the working shift, i.e., eight hour time-weighted average

C = concentration during any period of time T

T = is the duration of the exposure at the concentration C

$$\frac{(0.4)(30) + (0)(450)}{480} = \frac{12}{480} = 0.025$$

All determinations of airborne asbestos fiber concentratic were made by the Industrial Hygiene Laboratory using the membra filter method at a magnification of 430X with phase contrast illumination.

DC 4930

Inter Company Correspon

To—Name & Department		Division	Plant/Office
D. P. Glazier	Industrial Hygiene		Chrysler Center
From—Name & Department		**Division**	**Plant/Office**
B. J. Ludwig	Chief Engineer		Proving Grounds

Subject:

INDUSTRIAL HYGIENE SURVEY

This is in response to your letter of July 21, 1977 concerning the investigation conducted on employee exposure to airborne asbestos fiber in Department 7640.

You recommended that the belt sander be equipped with local exhaust ventilation. This was accomplished during the week of August 15, 1977.

Medical examinations have been scheduled for all employees who were assigned to department 7640 during 1973. Examinations will be completed by mid-September 1977 and the results will be forwarded to your office. All employees engaged in grinding operations will be scheduled for annual physical examinations.

B. J. Ludwig

WPM:mml

DC 4931