



PLAINTIFF'S EXHIBIT

FD-1657

Inter Office

Personnel and Organization Staff

March 13, 1973

Mr. J. M. Blosser, Manager
Industrial Relations Department
Sheldon Road Plant

cc R. P. Carzoli
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Subject: Asbestos in Air Sampling - Sheldon Road Plant

The Department of Labor, under the authority of the Occupational Safety and Health Act of 1970, in Section 1910.93a of the Federal Register dated October 18, 1972 has promulgated occupational health standards in relation to the use of asbestos and asbestos laden materials. As part of the survey conducted of Ford Motor Company operations relevant to the use of asbestos or asbestos laden materials, the Sheldon Road Plant was studied again to determine asbestos in air concentrations and current asbestos control methods. Previous studies in production areas using asbestos and asbestos laden materials have been of representative jobs, but this study represents breathing zone and general air samples of all employees and operations found operating on the second shift during the dates studied. Results of air samples taken and instrumentation used are attached.

Subpart (g), Section 1910.93a "Asbestos" - pp 22142-22144 sets the eight hour time weighted average Threshold Limit Value (TLV) for asbestos in fibers greater than 5 microns in length per milliliter of air. Subparagraph (b) establishes the current TLV at 5 fibers and the ceiling limit at 10 fibers with a reduction in the TLV effective July 1, 1976 to 2 fibers greater than 5 microns. Subparagraph (c) deals with engineering controls and states local exhaust ventilation, isolation, and enclosure (but not limited to) shall be used to control the release of asbestos fibers. Subparagraph (c) further states that all hand and power tools shall be provided with local exhaust ventilation if such tools may generate excessive asbestos dust and bags or containers shall not be opened unless in the presence of local exhaust ventilation or the fibers withdrawn wet. Subparagraph (d), Section 1910.93a specifies personal protective equipment to be used when the TLV is exceeded. This protective equipment varies with the intensity of the exposure. A further provision of this subparagraph is the issue of special clothing, change rooms and lockers with subsequent instructions for the laundering of these special clothes. Subparagraph (g) requires special signs to be posted in areas exceeding the TLV and special labels and closed containers for the disposal of asbestos waste. The provision of subparagraph (i) state that employees shall have access to monitoring records and be notified within five days in writing if they have been exposed to levels exceeding the TLV or Ceiling Value. They must also be "timely notified" of remedies planned to correct the exposure. Medical examinations consisting of pre-employment, annual, and termination, which include posterior-anterior chest and pulmonary function tests, are required and described in subparagraph (j) for exposed employees.

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Asbestos is used at the Sheldon Road Plant as a filler for plastic heater housing. The asbestos is handled at railcar unloading, bag storage, and at mixing operations. Asbestos is added at mixing pneumatically from silos and on occasion manually from bags. Mixing operations are all under local exhaust ventilation. A new vacuum system has been installed in the mix room, but compressed air cleaning is still used along with dry sweeping. After extruding and adding organic solvent binder, the material is molded into the heater housing. Extruding operations are also under local exhaust. The molded heater housing is deflashed by hand power tools and assembly holes drilled on automatic drill fixtures. These operations are also under local exhaust, but problems with keeping the exhaust system clean from deflashing scrape continue. Also, some workers persist in deflashing in areas not provided with local exhaust.

Even though dry sweeping and compressed air cleaning is still evident and the deflashing exhaust requires more maintenance, results of the attached air samples indicate marked improvement in the control of asbestos fiber in the plant.

Three air samples exceeded OSHA standards, however, an important distinction must be made. Two of these were general air samples and may not represent employee breathing zone dust concentrations. The highest breathing zone sample was obtained while the employee was wearing respiratory protection. This employee was not exposed. Respiratory protection is unacceptable if feasible engineering control methods of dust suppression are available. Unless it could be demonstrated that respiratory protection is the only method of worker protection, this dust sample would probably be cited as an OSHA violation.

The highest level of dust found was while the mix room cleaner was cleaning silos and the floor around them. The worker used compressed air and was wearing an approved dust respirator. The purpose of sampling this employee was to ascertain whether the fiber concentration in air was compatible with the respirator used. The type respirator used is acceptable to ten times the TLV and the air sample result of 13.3 fibers greater than five microns per milliliter is within this range.

Based on the air samples taken and observations made, we recommend: (1) That cleaning in the mix room be done by vacuum, not with compressed air or by dry sweeping; (2) That asbestos exposure caution signs be posted per subparagraph (g) of OSHA 1910.93a at the mix room messanines and silos; (3) That asbestos waste be disposed per subparagraph (h)(2) of OSHA 1910.93a; (4) That employee assigned to the mix room be provided with special clothing, lockers and change room per OSHA subparagraph (d), 1910.93a; (5) That deflashing be done only in areas provided with local exhaust; and (6) That local exhaust systems used for deflashing be put on a routine maintenance schedule.

If there are any questions or if further assistance is required, please contact us.

Ernest H. Ick
Industrial Hygienist
Industrial Hygiene Section

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Data Sheet #1

3-13-73

Sheldon Road Plant

Sheldon Road Plant

Concentration of Fibers
Greater than 5 Microns
in Length per
Milliliter of Air

Location

OSHA Asbestos Fiber Threshold Limit Value (TLV) 8-Hr. Time Weighted
Average Exposure

" TLV Effective July 1, 1976

" Ceiling Limit Value

5

2

10

5. Samples Taken December 18, 19, 1972

Lines

1.	101-102	Center deflasher, B. Parvu, SS #4109 (B.Z.)	0.7
2.	101	Drills 1756-1764 Operator A. Wise, SS #6064 (B.Z.)	0.5
3.	102	1st Deflasher B. Parvu, SS #4109 (B.Z.)	1.4
4.	103	1st & 2nd Drills - Operator G. Wells, SS #2919 (B.Z.)	0.3
5.	104	End Deflasher & sander W. Garth, SS #8985 (B.Z.)	1.3
6.	104	" " only - G. Switzer, SS #8502 (B.Z.)	1.1
7.	104	1st Deflasher H. Copeland, SS #9287 (B.Z.)	0.4
8.	104	Drills 1746 - 1745 Operator L. Walfoolk, SS #9888 (B.Z.)	0.2
9.	105-106	End Deflasher L. Sokach, SS #3900 (B.Z.)	0.7
10.	105	1st " L. Walker, SS #3192 (B.Z.)	0.3
11.	106	" " E. Eby, SS #9660 (B.Z.)	0.1
12.	107	End " C. Sander E. Harris, SS #8393 (B.Z.)	0.5
13.	107	1st " W. Blackburn, SS #6039 (B.Z.)	0.2
14.	105	Drill 1739 Operator W. McDonnell, SS #3441 (B.Z.)	0.3
15.	108	End Deflasher E. Sander, S. Vivoda, SS #0328 (B.Z.)	0.3
16.	108	2nd Deflasher R. Emery, SS #8493 (B.Z.)	0.1
17.	106	Drill 1752 Operator E. Schwartz, SS #4533 (B.Z.)	0.5
18.	106	" 1753 " G. Palmer, SS #7567 (B.Z.)	0.2
19.	109	2nd Deflasher G. Styles, SS #3766 (B.Z.)	1.5
20.	110	Drill 1741 Operator D. Brubaker, SS #7358 (B.Z.)	0.2
21.	110	End Deflasher & sander M. Lundy, SS #9406 (B.Z.)	0.7
22.	110	2nd Deflasher J. Kennedy, SS #5665 (B.Z.)	2.0
23.	111	Drills 1768-1769 - D. Jackson, SS #0413 (B.Z.)	0.6

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Shelton Road Plant

Data Sheet #2

Concentration of Fibers
Greater than 5 Microns
in Length per
Milliliter of Air

Location

Area

24.	111	End Deflasher & sender T. Dean, SS #3550 (B.Z.)	0.8
25.	111	1st " L. Piche, SS #7146 (B.Z.)	1.0
26.	112	Drill 1750 - Operator P. Rodman, SS #0070 (B.Z.)	0.2
27.	114	End Deflasher & sender E. Ooyaland, SS #9287 (B.Z.)	0.5
28.	114	1st " J. Kennedy, SS #5665 (B.Z.)	1.3
29.	114	Drill 1790 - Operator C. McFarland, SS #0131 (B.Z.)	0.5
30.	115	End Deflasher & sender M. Lundy, SS #9406 (B.Z.)	1.6
31.	115	Drills 1735-1736 Operator D. Kennedy, SS #1933 (B.Z.)	1.2
32.	115	" at P-15 Bay - left side of line - Operator J. Wilder, SS #9442 (B.Z.)	0.2

II. Samples Taken February 12, 13, 1973

1.	Mix Room - 2nd Floor machine 6072 - Operator H. Etcheson, SS #6995 (B.Z.) (Using silo feed)	2.8
2.	" " " " " 6059 - Operator R. Orvstad, SS #6524 (B.Z.) (Silo feed)	3.0
3.	" " " " " 6080 - Operator U. A. Henderson, SS #4976 (B.Z.) (Using silo feed)	2.1
4.	" " " " " General air at control panel	3.0 - 4.111111111111111
5.	" " 1st " machine #3, #6083 - Operator K. Debord, SS #0569 (B.Z.)	0.9
6.	" " " " " #2, #6082 - " R. Parker, SS #9553 (B.Z.)	0.4
7.	" " " " " #1, #6081 - " G. Wacher, SS #7673 (B.Z.)	0.6
8.	" " " " " mezzanine above machine #1 - general air sample	1.2
9.	" " " " " " " #2 - " " "	5.1
10.	" " " " " " " #3 - " " "	8.6
11.	" " " " " - general air sample center of room	2.2
12.	" " cleaner, cleaning silo, (wearing approved respirator) J. C. Lewis, SS #7546 (B.Z.) (Peak Value) Willson Respirator #560, R4-21B-121	13.3

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Sheldon Road Plant

Data Sheet #3

<u>Location</u>	<u>Concentration of Fibers Greater than 5 Microns in Length per Milliliter of Air</u>
13. Bag storage room next to mix room - general air	0.1 - 40"
14. Railcar unloader for asbestos silo - J. Cornett, SS #0594 (B.Z.)	1.0 - straight
15. Main plant general air, Bay D-8 near scales	0.4
16. " " " " Line 103 at end of line near mix room	0.6
17. " " " " " 106 " " near mix room	0.6
18. " " " " " 111 " " " " silo	1.0
19. " " " " " 116 " " " " "	1.0
20. " " " " " " Bay E-15	0.4
21. " " " " " 112 " E-13	0.2
22. " " " " Bay J-11	0.2
23. " " " " " H-9	0.3

Instrumentation: Model G, MSA Pump with Millipore Type AA membrane filters

Analysis: 430X Phase Microscopy by Environmental Health Laboratories - Farmington, Michigan

Note: (B.Z.) Denotes air samples taken in breathing zones of employees listed.

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