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DOW CHEMICAL U.S.A.

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TEXAS DIVISION
FREEPORT, TEXAS 77541

PLAINTIFF'S EXHIBIT

DOW-650

ENVIRONMENTAL HEALTH REPORT

AIRBORNE ASBESTOS SURVEY
PERSONNEL MONITORING
CELL SERVICES A-1003

FILE NO. A10-799

DATE January 12, 1976

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DATE January 12, 1975

Summary

Forty-four workmen within the Cell Services area were evaluated for potential exposure to airborne asbestos. No workman exceeded the present or proposed levels for a Time Weighted Average (TWA), but those working near the drawing vat have a potential for exceeding the proposed peak value.

It is recommended that the workmen at the drawing vat area be re-evaluated for peak exposure.

It is also recommended that your present personnel protective procedures be continued.

It is further recommended that each workman be informed of the results of this survey, the hazards of overexposure to asbestos, and re-informed on the proper methods of control. This informing should be documented.

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INTRODUCTION

The Occupational Safety and Health Act (OSHA) requires that occupational exposures to airborne asbestos be controlled so that no worker is exposed to more than 5.0 asbestos fiber per cubic centimeter of air based on a count of fibers greater than 5 micrometers in length. These are determined by a Time-Weighted Average (TWA) exposure for an eight hour work day, and no peak concentrations of asbestos more than 10.0 fibers per cubic centimeter as determined by a minimum sampling time of 15 minutes.

In July, 1976, the limit will be lowered to 2.0 fibers per cubic centimeter.

It is now proposed to lower the limit to 0.5 fibers per cubic centimeter with a peak of 5.0 fibers.

This survey was conducted at Cell Services to evaluate the worker exposures by personnel monitoring. The tests were taken from October 14, 1975- November 13, 1975.

METHODOLOGY

Airborne samples were collected using a Bendix Permissible air sampling pump (Bendix Corp., Baltimore, Md.). The fibers were collected by pulling air through a Millipore filter (AAWG 03700) mounted in an open face Millipore disposable cassette. Flow rates for the pumps were calibrated at 1500 cubic centimeters per minute and sampling times were four hours or greater (Table I). All samples were collected by R. F. Brawner of Cell Services.

Samples were analyzed by Lee Martin of Central Laboratory using the following technique:

Four marked squares are cut from a filter about halfway from the edge to the center. This section is then placed on a drop of clearing solution[1] and placed on a microscope slide. The sample is covered with a cover slip and allowed to clear (about 15 min.). The sample count is made on a Reichert Zetopan Optical microscope using Nomaraki interference contrast at 500 magnification. Counts are made for particles greater than 5.0 microns, and reported as fibers per filter square.

RESULTS

Results of the airborne sample analyses are shown in Table I. All levels are below the new proposed standards.

[1] Clearing solution: 0.1 g/ml of clean Millipore filter paper in 1:1 diethyloxalate: dimethylphthalate.

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DISCUSSION

Samples collected during these dates show no levels above the 0.5 fiber , new recommended standard, although several of these workmen do show a potential for overexposure, by possibly exceeding the peak of 5.0 fibers/cc.

If a workman did receive all of the sample that is shown in Table I, in a 15 minute period, and then no other exposure for the rest of the day, then those whose levels are 0.156 (Table I) and above, would be over the 5.0 peak level.

It is worthy to note that all workmen above o.1 fibers/cc work at the drawing vat except one, who works at the DSA Cleaning area. During the time the DSA Cleaning man wore the monitor he was grinding on a wooden form, but no asbestos was in or on the frame, therefore, his level was unexplained.

CONCLUSIONS

Since a dust respirator is required by the workman handling the dry asbestos in the vat area, no workman is likely to be overexposed even to the new standard.

RECOMMENDATIONS

1. It is recommended that the workmen at the drawing vat area be re-evaluated for peak exposures.
2. It is also recommended that your present personnel protective procedures be continued.
3. It is further recommended that each workman be informed of the results of this survey, the hazards of overexposure, and the be reinformed of the proper methods of control. This informing should be documented.

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TABLE I

ATMOSPHERIC ASBESTOS
CELL SERVICES

NAME	MASTER NO.	JOB CLASSIFICATION	SAMPLE TIME	DATE	FIBERS/CC GREATER THAN 5 MICROMETER
J. L. Buckner	135118	Foreman, DSA	240	10-24-75	0.004
R. Hernandez	135127	Foreman, Cathode	225	11-10-75	0.014
E. W. Crews	108569	Mtl. Hndl. Technician, Truck Driver	260	10-22-75	0.008
R. A. Azbell	135928	Class 1 Oper. Drawing vat	250	11-12-75	0.250
S. Edwards, Jr.	135246	Class 1 Oper. DSA Cleaning	245	11-10-75	0.009
J. N. Nelms	112263	Class 1 Oper. Fork Truck	245	10-29-75	0.015
S. B. Pursley	132946	Class 1 Oper. Fork Truck	235	10-22-75	0.010
D. W. Robertson	139262	Class 1 Oper. Stacking Graphite	240	10-15-75	0.014
R. C. Whitaker	116268	Class 1 Oper. Resin Plant	240	10-21-75	0.030
W. A. Williams, Jr.	134395	Class 1 Oper. Drawing vat	240	11-12-75	0.100
G. A. Woodward	137633	Class 1 Oper. Drawing vat	240	10-17-75	0.280
C. L. Bradshaw	134646	Class 2 Oper. Impregnation	240	11-12-75	0.136
L. L. Bookman, Jr.	135107	Class 2 Oper. Cell Cleaning	270	11-6-75	0.038
L. E. Christman, III	135904	Class 2 Oper. Cell Casting	240	10-20-75	0.007
G. Crawford	135860	Class 2 Oper. Cell Cleaning	240	11-7-75	0.002
R. G. Damian	135494	Class 2 Oper. Cell Plating	270	11-6-75	0.025
D. W. Dawson	134952	Class 2 Oper. Cell Plating	240	10-31-75	0.025
L. B. Doskocil	134272	Class 2 Oper. Cathode Rep.	240	10-17-75	0.018
R. Gonzalez	138072	Class 2 Oper. Stacking Graphite	240	10-15-75	0.009
R. M. Hardman	136155	Class 2 Oper. Drawing vat	240	10-14-75	0.390
J. H. Henderson	135144	Class 2 Oper. Cell Casting	240	11-7-75	0.006
J. W. Hopkins	119104	Class 2 Oper. Fork Truck	250	10-22-75	0.016
V. Gonzales	137959	Class 2 Oper. Fork Truck	240	10-16-75	0.003

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TABLE I

ATMOSPHERIC ASBESTOS

CELL SERVICES

NAME	MASTER NO.	JOB CLASSIFICATION	SAMPLE TIME	DATE	FIBERS/CC GREATER THAN 5 MICROMETER
A. H. Humphrey	137932	Class 2 Oper. Cell Plating	245	11-7-75	0.008
R. L. Jordan	134296	Class w Oper. Fork Truck	250	10-29-75	0.009
J. D. Lowrie	134173	Class 2 Oper. DSA Assy.	240	10-24-75	0.012
D. D. Holmes	136459	Clss 2 Oper. DSA Assy.	240	10-24-75	0.003
V. L. Markwardt	132053	Class 2 Oper. Stacking Graphite	240	10-15-75	0.006
R. A. Matejowsky	135913	Class 2 Oper. Cell Plating	240	10-31-75	0.009
J. D. Mikes	138441	Class 2 Oper. Impregnation	240	10-21-75	0.038
G. D. Perkins	135617	Class 2 Oper. Cell Plating	240	10-20-75	0.027
W. B. Potts	134697	Class 2 Oper. Stacking Graphite	235	10-16-75	0.006
J. Price	136208	Class 2 Oper. Cell Plating	240	11-6-75	0.022
R. G. Smith	134478	Class 2 Oper. DRawing Vat	255	10-14-75	0.360
R. Solis	137072	Class 2 Oper. Cell Plating	240	10-20-75	0.028
E. Spears, Sr.	137466	Class 2 Oper. Cell Casting	225	11-10-75	0.013
R. E. Taylor	135125	Class 2 Oper. DSA Cleaning	240	11-12-75	0.400
N. R. Turner	132253	Class 2 Oper. Cell Casting	245	10-31-75	0.023
A. B. Turner	138674	Class 2 Oper. M-82 Rep.	240	10-17-75	0.011
M. J. Walsh	134324	Class 2 Oper. Fork Truck	240	10-29-75	0.013
G. L. Wilson	135844	Class 2 Oper. Impregnation	240	10-21-75	0.006
R. H. Stanley	135796	Class 2 Oper. Fork Truck	240	11-13-75	0.054
R. E. Miller, Jr.	135400	Class 2 Oper. Impregnation	240	11-13-75	0.001
D. D. Stidman	134280	Crane Oper, Cab, Cell Rep.	285	10-16-75	0.020

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