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TEXAS DIVISION
FREEPORT, TEXAS 77541

ENVIRONMENTAL HEALTH REPORT

PERSONNEL MONITORING FOR AIRBORNE ASBESTOS, CHLORINE VI, A-5024, CELL MAINTENANCE

FILE NO. A50-571

DATE April 3, 1975

AUTHOR H. N. Edwards, R.L. Silverthorne

CHECKED R. L. Daniel

DATE April 3, 1975

Summary

Nine Class II operators who work in the Cell Maintenance area and handle asbestos were monitored during January, 1975.

Results indicate that these workmen are not being overly exposed to asbestos.

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Distribution

J. D. Dean A-5024
C. Hill A-5024
O. F. Schumm B-101
W. H. Fletcher B-101
R. E. Flake B-101
J. D. Laman B-1226
File

(2) H. R. Hoyle 1707 Bldg.-Midland
Marlene Swank 1707 Bldg.-Midland
* F. D. Axe - Pittsburg
* C. E. Caldwell - OCD
* C. E. Halphen - Plaquemine
* C. L. Sercu-Cleveland
* R. R. Langner 607 Bldg. Midl[redacted]

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INTRODUCTION

The Occupational Safety and Health Act (OSHA) requires that occupational exposure to airborne asbestos dust be controlled so that no work is exposed to more than 5.0 asbestos fibers 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. This survey was made at Chlorine VI in the Maintenance Area.

METHODOLOGY

Airborne samples were collected near the breathing zone of these workmen using the Micronair permissible air sampling pump (Bendix Environmental Science Division, Baltimore, Maryland). The asbestos was collected by pulling air through a Millipore filter (AAWG 04700). Flow rates for the pumps were calibrated at 1600 cubic centimeters per minute and the sampling times are shown in Table I.

All analyses were done by Sylvia Markman B-1218 using the following procedure:

> 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 minutes). The sample count is made on a Reichert Zetopan optical microscope using Normarski interference contrast at 500 magnification. Counts are made for particles greater than 2.5 microns, fibers 5 microns to 10 microns, and fibers greater than 10 microns. The data is reported as total number of counts in each category per filter square.

RESULTS

The results of analyses are shown in Table I. All samples were below the Threshold Limit Values established for asbestos.

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

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CONCLUSIONS

Class II operators working in this operation are not being overly exposed to asbestos.

RECOMMENDATIONS

1. Even though the levels are below the TLV, care should always be used when handling asbestos.
2. Medical surveillance is required on all personnel handling asbestos.
3. This survey should be repeated in six months.

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TABLE I

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PERSONNEL EXPOSURE TO ASBESTOS
CELL MAINTENANCE CHLORINE VI
CLASS II OPERATORS

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NAME	MASTER #	MINUTES MONITORED	DATE	NO. OF FIBERS/CC GREATER THAN 5 MICROMETERS
Garza, G.	134854	180	1-20-75	.10
Matthews, S.	138945	180	1-20-75	.20
Humphrey, A.	137932	180	1-20-75	.60
Fields, H.	136189	210	1-21-75	.08
Gonzales, F.	135143	210	1-21-75	.13
Ramirez, O.	138449	210	1-21-75	.26
Lowman, H.	111655	240	1-22-75	.06
Grear, G.	139239	240	1-22-75	.82
Roberson, J.	139188	240	1-22-75	.51