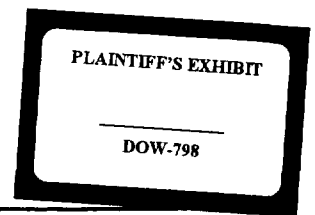




DOW CHEMICAL U.S.A.



TEXAS DIVISION
FREEPORT, TEXAS 77541

ENVIRONMENTAL HEALTH REPORT

ASBESTOS SAMPLING DURING
INSULATION STRIPPING
POLYGLYCOL
B-1320

FILE NO. B13-1219

DATE August 12, 1977

AUTHOR J. A. Daniel

CHECKED R. L. Daniel

DATE August 23, 1977

Summary

As required by OSHA, monitoring was carried out during stripping of insulation which contained asbestos. Fifteen hundred feet of line was to be stripped; this particular monitoring covered 30 feet of this line.

Results of the monitoring were well below the OSHA standard of 2 fibers greater than 5 micrometers per cubic centimeter of air.

ST0015132

Distribution

R. E. Edmonson B-1322
S. I. Vera B-3501
M. D. Weinfield B-3501
R. C. Walker B-108
M. G. Trevino B-108
File

August 12, 1977

INTRODUCTION

Contractors handle most of the demolition work of existing tanks, vessels, or other equipment which has been insulated with asbestos. Periodic monitoring of the stripping procedure is done by Environmental Health Services to determine personnel exposure to airborne asbestos and to observe the methods of removal.

This particular monitoring involved Styrothane employees, who were monitored on June 30, 1977, during the stripping of a 30 foot section of fifteen hundred foot line.

INSULATION STRIPPING PROCEDURE

As required by the OSHA Standard, part 1910.1001 Title 29 of the Code of Federal Regulations, the area was first marked off and the proper signs were posted. The employees involved wore special clothing and were provided with appropriate respiratory equipment. The line was thoroughly wetted before any insulation was stripped. One worker was stationed on a ladder removing the insulation material. The other worker hosed down material as it was stripped from the line and after it reached the ground. After the section had been fully stripped, the wetted material was packed in large bags and hauled off for burial.

S10015133

METHODOLOGY

Two personnel samples and one area sample were collected using membrane filters of 0.8 microns porosity mounted in an open-face filter holder. The sample pumps used to pull air through the filters at a flow rate of 1.5 to 1.7 liters per minute were Micronair II permissible air sampling pumps. All samples were collected at breathing zone height.

Fiber counting was performed by Lee Martin from Central Lab, B-1225, using the following procedure:

Four marked squares were cut from a filter about half way from the edge of the center. This section was then placed on a drop of clearing solution and placed on a microscope slide. The sample was covered with a cover slip and allowed to clear. The sample count was made on a Reichert Zetopan optical microscope using Normarski interference contrast at 500 magnification. The data is reported as total number of counts per filter square.

August 12, 1977

RESULTS

All samples contained less than 0.1 fibers per cubic centimeters of air. Results are shown in Table I.

RECOMMENDATIONS

Employees working with asbestos should be informed as to the consequences of overexposure to asbestos. Additionally, they should be informed of the results of this survey which help substantiate the fact that proper procedure for handling asbestos greatly decreases exposure to the fibers.

ST0015134

EHS
JAD/bbs
8-12-77

TABLE I

ASBESTOS MONITORING RESULTS
PERSONNEL MONITORING

<u>SAMPLE</u>	<u>EMPLOYEE</u>	<u>JOB</u>	<u>LENGTH OF SAMPLING</u>	<u>FIBERS/CC</u>
1	Styrothane Man # 498	Stripping insulation	35 minutes	0.08
2	Styrothane Man #579	Wetting material	40 minutes	<0.01

AREA MONITORING

<u>SAMPLE LOCATION</u>	<u>LENGTH OF SAMPLING</u>	<u>FIBERS/CC</u>
In general area of job	150 minutes	< 0.01

58151001S

DATE 7-5-77
FILE NO 4115
BY R. Martin

ST0015136