



DOW CHEMICAL U.S.A.

PLAINTIFF'S EXHIBIT

DOW-2668

TEXAS DIVISION
FREEPORT, TEXAS 77541

ENVIRONMENTAL HEALTH REPORT

AIRBORNE ASBESTOS SURVEY
CHLOR-ALKALI A-107

FILE NO. A1-381

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CHECKED R. L. Daniel

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Summary

A re-evaluation of airborne asbestos was made in the dry storage area A-107. All samples were well below the Threshold Limit Values (TLV) established by the Occupational Safety and Health Act (OSHA). You are to be commended on the prompt action taken in the reduction of these levels.

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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 worker 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.

Because levels were high on the first survey in the Bulk Storage Area, a re-evaluation was made after curtains had been installed and the area cleaned of loose asbestos.

METHODOLOGY

Stationary monitors were placed in six locations shown in Fig. 1. These are the approximate areas where monitors were located during the first survey. Airborne samples were collected 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 2000 cubic centimeters per minute and the sampling times for the stationary pumps were fifteen minutes.

After the first six samples were collected, the asbestos area behind the curtain, (Fig. 1, Area 5 and 6) was recleaned with a vacuum and then resampled.

All analyses were done by Lee Martin, 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 solution¹ 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.

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

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RESULTS

Results of the airborne sample analyses are shown in Table I. All levels are well below the Threshold Limit Values (TLV).

CONCLUSIONS

The re-evaluation of the dry storage area shows much improvement. The addition of the drop curtains and use of the vacuum will certainly help to reduce the levels and keep them within the desired limits. You are to be commended on the prompt action taken in reducing the high levels of asbestos.

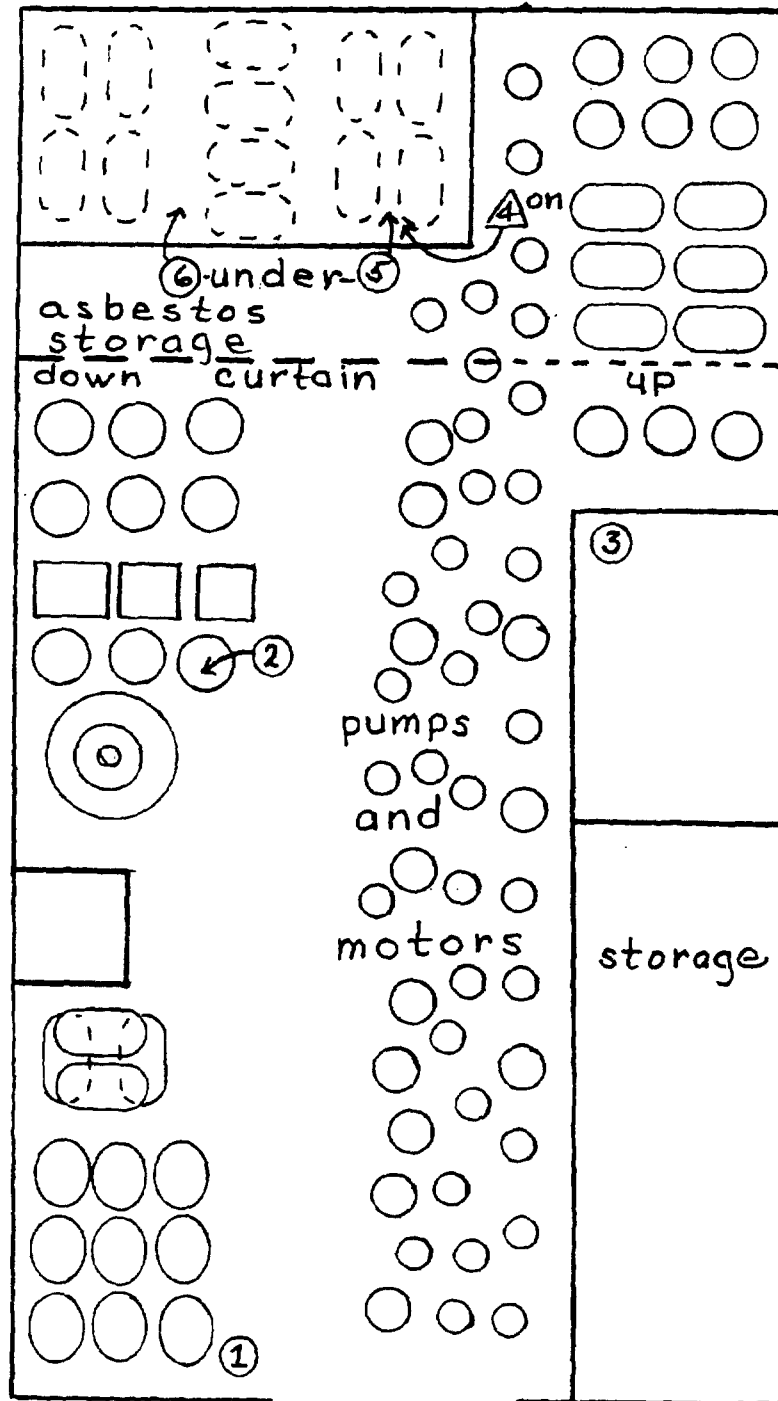
RECOMMENDATIONS

- (1) This area should be re-evaluated in six months.

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Fig 1 A/07

TABLE I

AIRBORNE ASBESTOSA-107 STORAGE

Fibers greater than 5.0 micrometers per cubic centimeter

<u>LOCATION</u>	<u>NO. OF FIBERS/CC</u>
(1) Fig. 1	0.00
(2) Fig. 1	0.05
(3) Fig. 1	0.02
(4) Fig. 1	0.40
(5) Fig. 1	0.50
(6) Fig. 1	0.40
(5) Fig. 1 *	0.06
(6) Fig. 1 *	0.04

* After the area was recleaned with vacuum.

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