PLAINTIFF'S EXHIBIT
DOW-817

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# DOW CHEMICAL U.S.A.

TEXAS DIVISION
FREEPORT, TEXAS 77541

## ENVIRONMENTAL HEALTH REPORT

FILE NO. A10-1672

DATE October 31, 1978

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CHECKED R. L. Colwell

DATE November 13, 1978

AIRBORNE ASBESTOS
A-702, A-1022
CELL SERVICES
A-1003

Summary

The only area where asbestos levels were above the prescribed limit is in the dry bag opening area. This area requires personal protection and therefore, employees should not be overexposed if the equipment is worn properly.

It is recommended that each employee be informed of the results of the study and this informing should be documented.

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bbs

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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 2.0 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 8 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.

It is now proposed to lower the limit to 0.5 fibers per cubic centimeter with a peak of 5.0 fibers. This proposal has not been promulgated.

This survey was conducted at Cell Services to evaluate the asbestos levels in A-702 and A-1022. This survey was conducted in October, 1978.

## METHODOLOGY

Airborne samples were collected using a Bendix Micronair 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 are shown in Table I.

All samples were collected by employees of Cell Services and Environmental Health, and analyzed by Central Laboratory using the following technique:

> Four marked squares are cut from a filter about half-way 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 Normaraki interference contrast at 500 magnification. Counts are made for particles greater than 5.0 microns, and reported as fibers per filter square.

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1 Clearing solution: 0.1 g/ml clean Millipore filter paper in a 1:1 diethyloxalate: dimethylphathalate.

RESULTS

The only area where asbestos exceed the limits is within the dry asbestos handling area. This is an area that requires personal protective equipment. (Figure #2 Area 6.) All samples collected within this area were high. One had too many fibers to evaluate but this was to be expected from an eight-hour sample. The remainder of the samples are well below the prescribed limits.

CONCLUSIONS

There is a potential for exposure to asbestos in the dry asbestos opening area, but other areas were relatively free from asbestos.

RECOMMENDATIONS

It is recommended that the dry asbestos area be evaluated again in dry weather ; also all employees who work within this area should be informed to wear proper protective clothing. All employees should be informed of the results of this study and the informing should be documented.

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File A10-1672

TABLE I
AIRBORNE ASBESTOS
A-702 AND A]1022
FIBER/CC > 5 uM

| LOCATION | DATE | TIME SAMPLED | FIBER/CC >5 uM |
|---|---|---|---|
| Fig. 1 #1 | 10-20-78 | 20 min. | < 0.1 |
| #2 | 10-20-78 | 20 min. | < 0.1 |
| #3 | 10-20-78 | 20 min. | < 0.1 |
| #4 | 10-20-78 | 20 min. | < 0.1 |
| #5 | 10-20-78 | 20 min. | 0.2 |
| #6 | 10-20-78 | 20 min | < 0.1 |
| #7 | 10-20-78 | 20 min. | < 0.1 |
| #8 | 10-20-78 | 20 min. | 0.2 |
| #9 | 10-20-78 | 20 min. | < 0.1 |
| #10 | 10-20-78 | 20 min. | < 0.1 |
| Fig. 2 #1 | 8-14-78 | 480 min. | < 0.1 |
| #1 | 8-20-78 | 25 min. | < 0.1 |
| #1 | 8-24-78 | 300 min. | < 0.1 |
| #2 | 8-14-78 | 480 min. | < 0.1 |
| #2 | 8-20-78 | 25 min. | < 0.1 |
| #2 | 8-24-78+ | 300 min. | < 0.1 |
| #3 | 8-20-78 | 25 min. | < 0.1 |
| #4 | 8-20-78 | 25 min. | 0.2 |
| #4 | 8-24-78 | 300 min | < 0.1 |
| #5 | 8-20-78 | 25 min. | < 0.1 |
| #6 | 8-14-78 | 480 min. | ** |
| #6 | 8-20-78 | 25 min. | 2.6 |
| #6 | 8-24-78* | 300 min. | 1.2 |
| #7 | 8-14-78 | 480 min. | < 0.1 |
| #7 | 8-20-78 | 25 min. | < 0.1 |
| #8 | 8-20-78 | 25 min. | < 0.1 |
| #9 | 8-20-78 | 25 min. | < 0.1 |
| #10 | 8-20-78 | 25 min. | < 0.1 |
| #11 | 8-20-78 | 25 min. | < 0.1 |
| #12 | 8-20-78 | 25 min. | < 0.1 |

* Mr. Ronnie Hardman in asbestos room
** Too many fibers to evaluate
\+ Mr. Bradshaw in control room

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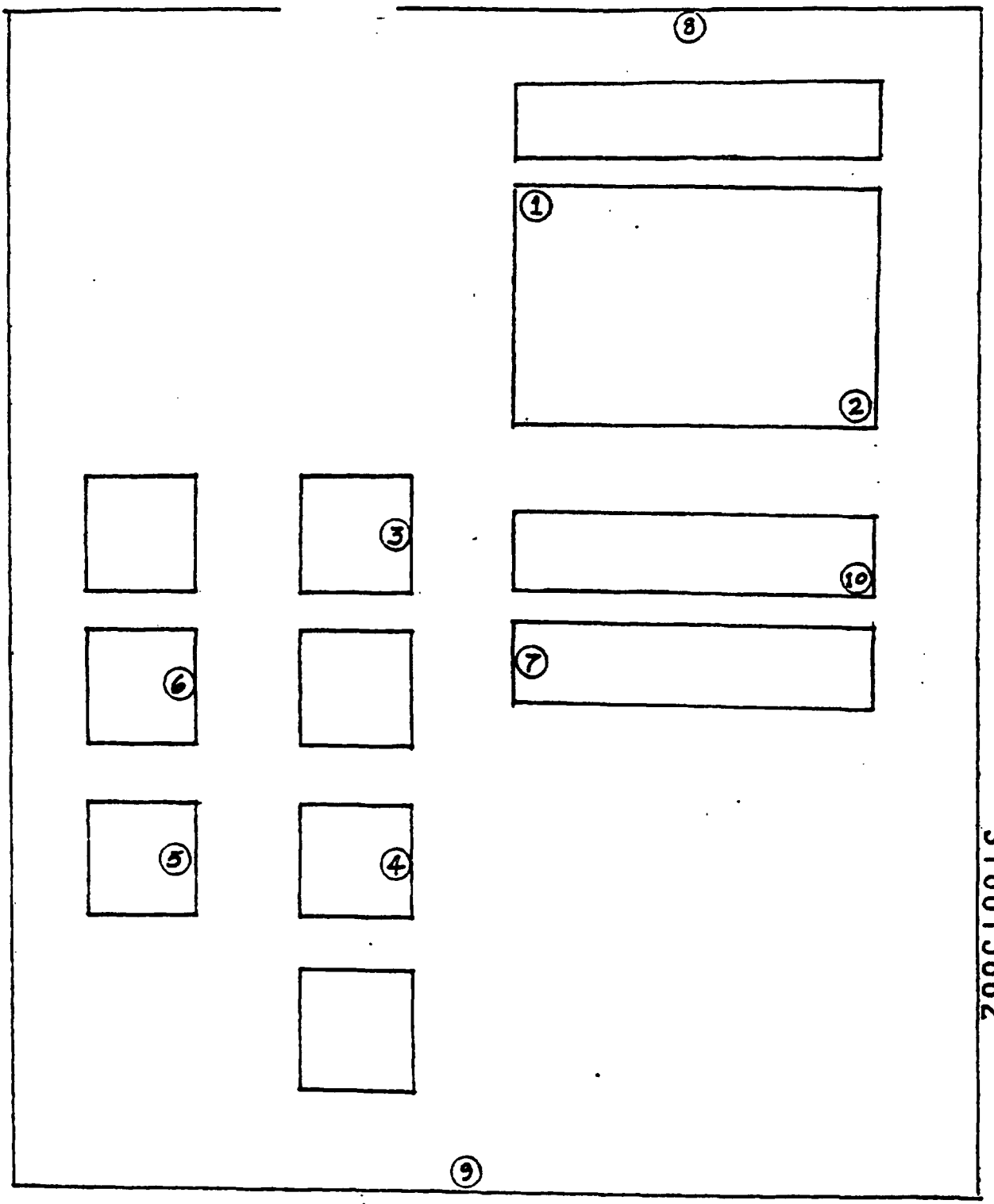


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Fig. 1 - Asbestos A-1022

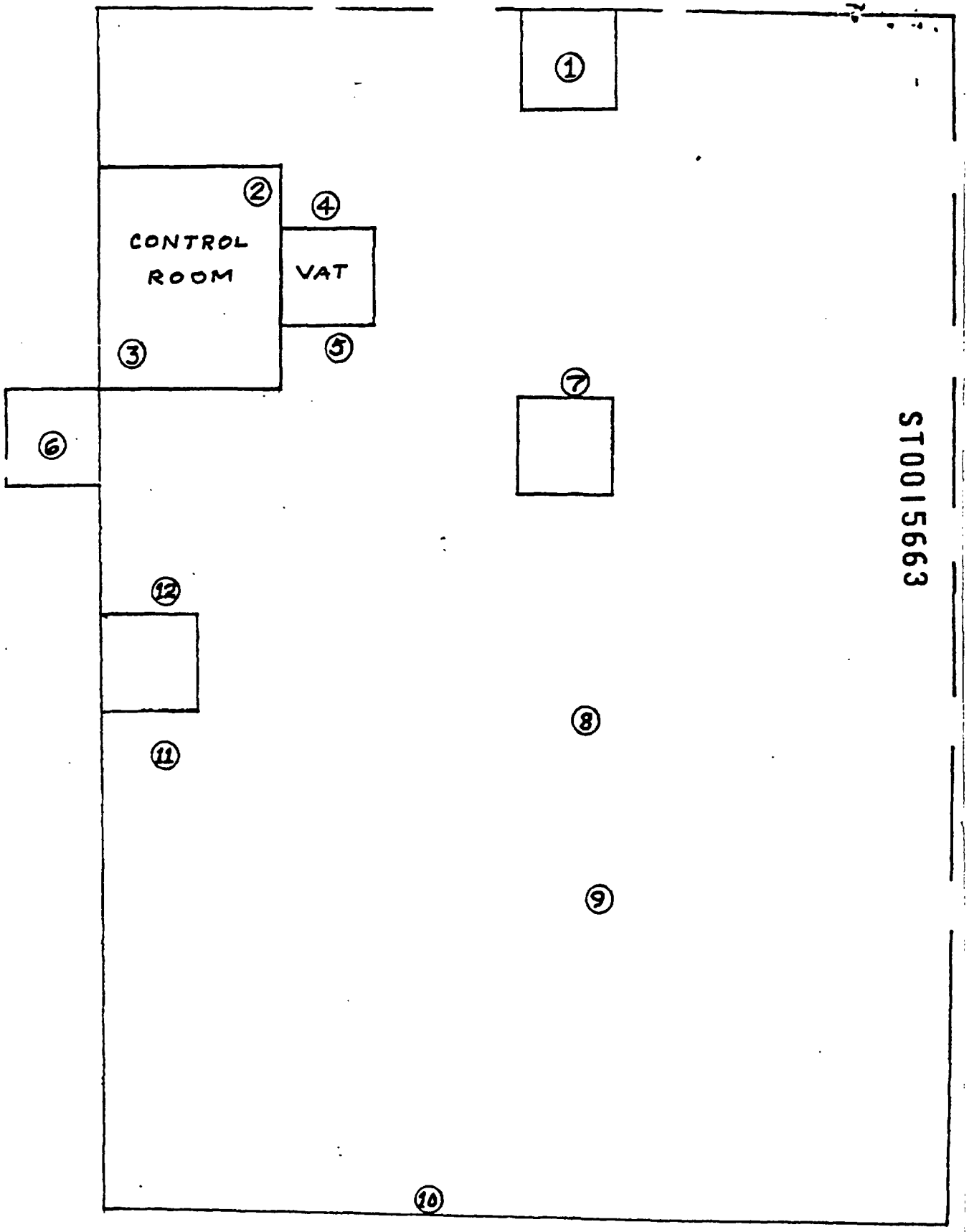


Fig. 2 - Asbestos A-702