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TEXAS DIVISION
FREEPORT, TEXAS 77541

ENVIRONMENTAL HEALTH REPORT

AIRBORNE ASBESTOS SURVEY CHLOR ALKALI UNIT II, OYSTER CREEK DIVISION

FILE NO. OCD-331

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CHECKED R. T. Daniel

DATE 4/15/74

Summary

A survey for airborne asbestos was made at the Chlor Alkali Unit of the Oyster Creek Division. All analyses were below the levels required for the asbestos standard established by the Occupational Safety and Health Act (OSHA).

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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 as 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 fifteen minutes. This survey evaluated the airborne asbestos at the Chlor Alkali Unit of Oyster Creek Division.

METHODOLOGY:

The bulk storage of asbestos is located in a storeroom several hundred yards from the Chlorine Cells (Fig. 1). Each day enough asbestos is transported from the bulk storage to a temporary storage located between the cell blocks and on the cells (Fig. 2). As the asbestos is required it is carried onto the top of the cells, mixed in a large container, and used in that area (Fig. 3). Air samples were taken in each of these areas and a personnel monitor was worn by the Technician while mixing and using the material.

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. Flow rates for the pumps were calibrated at 2000 cubic centimeters per minute and the sampling times for the stationary pumps were fifteen minutes, while the personnel monitor was worn for thirty minutes. All analyses were done by Lee Martin B-1218.

RESULTS:

There were no asbestos levels that exceeded the limits established by OSHA, (Table I). The highest level obtained was in the bulk storage area. In this area there was considerable loose dry asbestos.

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CONCLUSIONS:

Airborne asbestos measured during this survey was well below the current Threshold Limit Value (TLV).

RECOMMENDATIONS:

(1) Even though the concentrations of asbestos are below the TLV, care should always be used when handling the material.

(2) The bulk storage area should be used only for asbestos.

(3) The bulk storage area should be free of loose asbestos.

(4) There was some loose asbestos along side the cells. This should be removed.

(5) All clean up of asbestos should be performed by vacuum cleaners or wet cleaning method. No dry sweeping should be performed.

(6) Asbestos waste and scrap should be collected and disposed of in sealed bags or other containers.

(7) Medical surviellance is required on all personnel handling asbestos.

(8) Monitoring of this area should be done annually, and more frequently if work procedures change.

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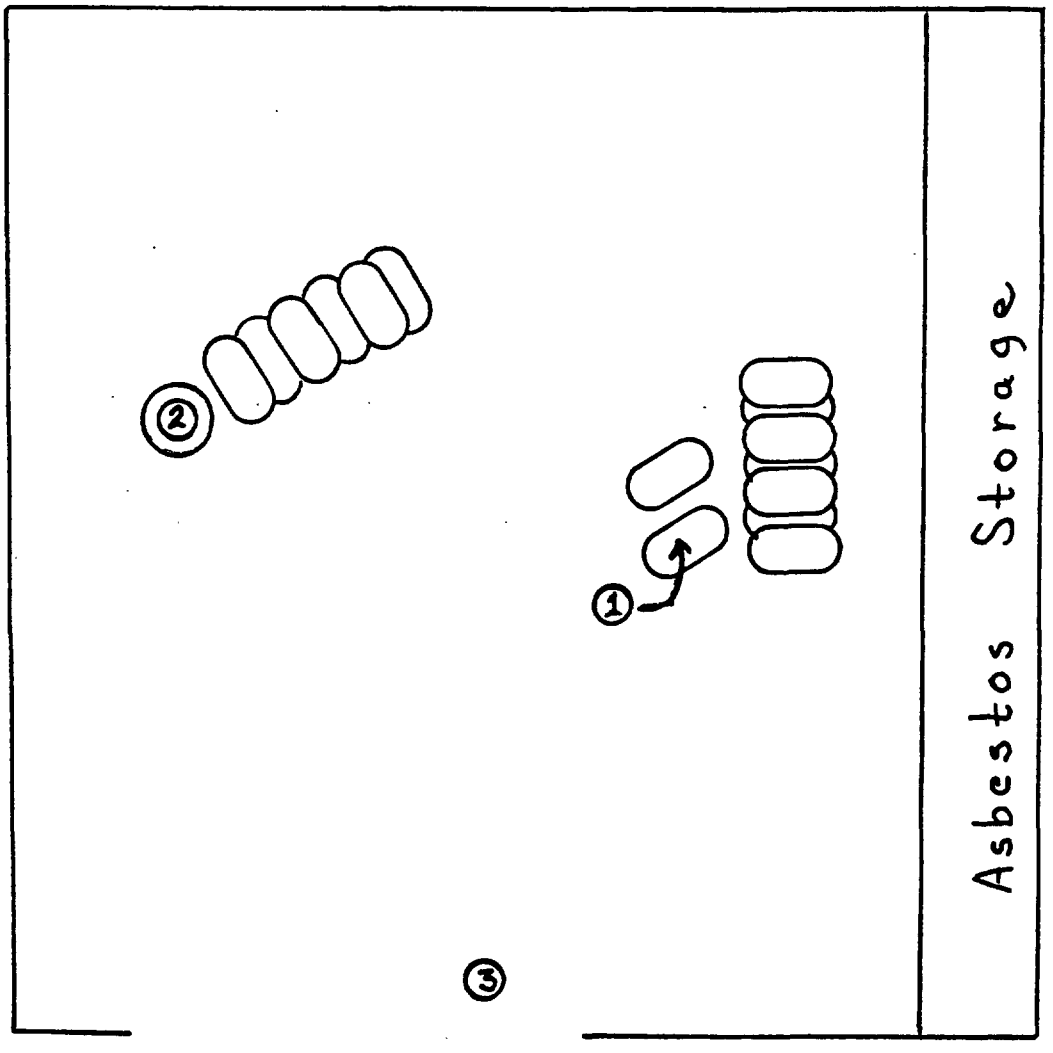
TABLE I

AIRBORNE ASBESTOS

Fibers greater than 5.0 micrometers per cubic centimeter

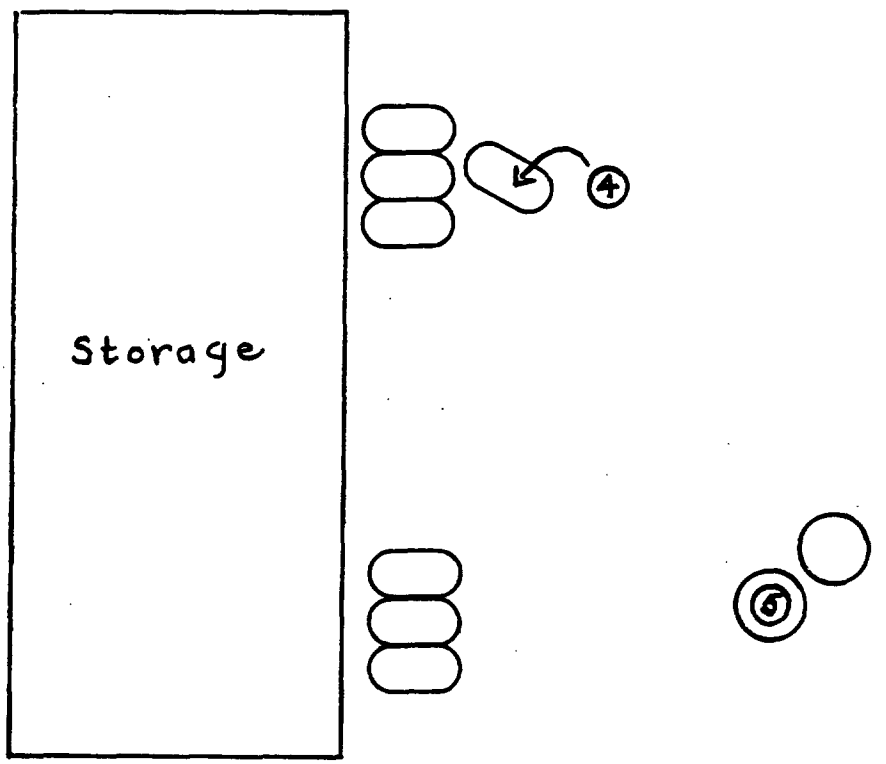
LOCATION	NO. OF FIBERS
(1) (Fig.1) Bulk storage area----------	1.97
(2) (Fig. 1) Bulk storage area----------	0.80
(3) (Fig. 1) Bulk storage area----------	0.14
(4) (Fig. 2) Temporary storage----------	0.10
(5) (Fig. 2) Temporary storage----------	0.01
(6) (Fig. 3) Downwind of asbestos work---------	0.25
(7) (Fig. 3) Downwind of asbestos mixing-------	0.32
(8) Personnel monitor----------	0.22

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Fig. 1 Asbestos Storage



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Fig. 2 On-job asbestos storage

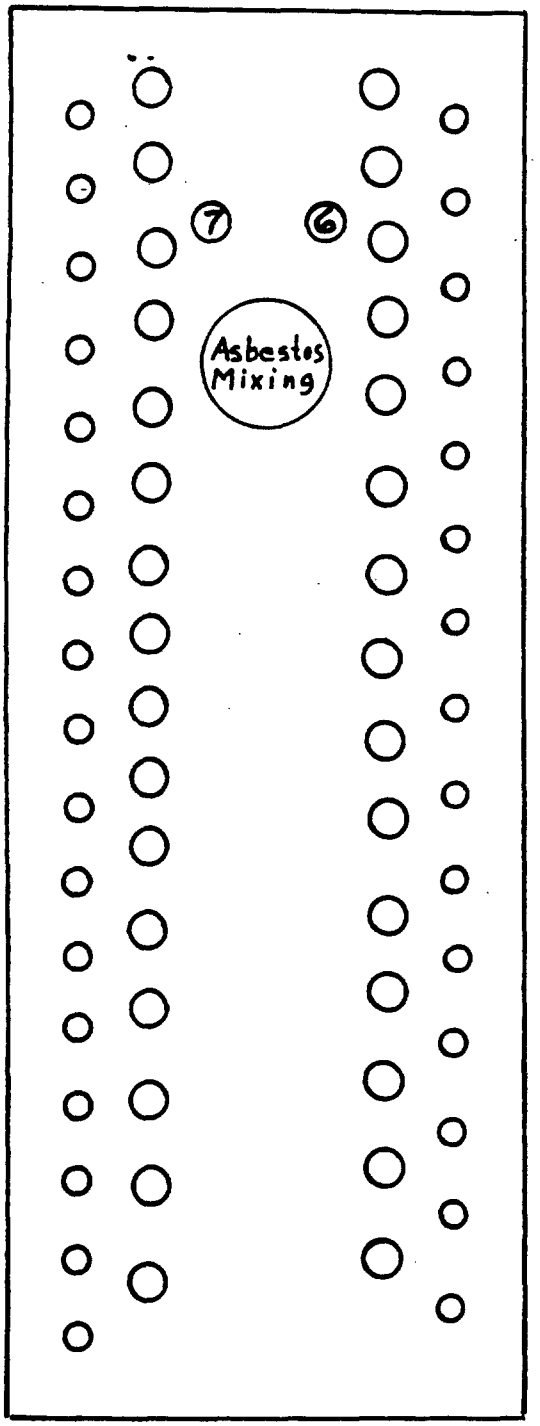


Fig 3. Cell area

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