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TEXAS DIVISION
FREEPORT, TEXAS 77541

ENVIRONMENTAL HEALTH REPORT

AIRBORNE ASBESTOS SURVEY A-632

FILE NO. A 6-265

DATE January 3, 1974

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CHECKED K. L. Daniel

DATE 1/3/74

Summary

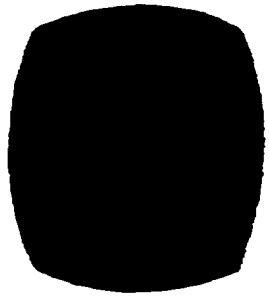
A survey for airborne asbestos was made in the A-632 building. This is the area where dry asbestos is mixed for use throughout Chlorine I. All analysis were below the levels required for the asbestos standard established by the Occupational Safety and Health Act, (OSHA).

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INTRODUCTION

OSHA requires that occupational exposure to airborne asbestos dust be controlled so that no worker shall be 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 15 minutes. This survey evaluated the airborne asbestos during the mixing operation at A-632.

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METHODOLOGY

The operation procedure for mixing asbestos was observed and three points were selected for monitoring, (Fig. 1). Point one is in area where mixing occurs. Point two is where dry asbestos is stored and point three is in the storage area.

Airborne samples were taken using the MSA portable pump (Mine Safety Appliances Co., Pittsburg, Pa., Model 92814). The asbestos was collected by pulling air through a millipore filter. Flow rates for the pump was 2 liters per minute and sample time was fifteen minutes. Each area was monitored for 15 minutes prior to the operation. During the operation the test subject wore a Scott-Acme respirator as a routine safety procedure. He pushed a mixing vat between point 1 and 2. With a hose he sprayed the bag of asbestos before opening. He opened with a knife and again wet the asbestos. The asbestos was then dumped into the vat and more water was added. Total time was about twelve minutes, although the sample time for the pump was fifteen minutes. Samples were again taken for fifteen minutes after the mixing operation. All analysis were done by Lee Martin B-1218.

DISCUSSION

Table I shows the timed weighted averages for asbestos found during the survey. These measurements are all below the OSHA requirements. These measurements are also below the requirements that become effective in July of 1976 which reduces the number of fibers per cubic centimeter from 5 to 2.

CONCLUSIONS

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

RECOMMENDATIONS

Even though the concentrations of asbestos measured were below the TLV, care should always be used in handling the material. This operation should be done in an area where other work is not performed. This area should not be used for storage, and a method of wet cleaning should be established.

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TABLE I

ASBESTOS FIBERS

(Greater than 5.0 mw/cc)

Time Weighted Average of 8 Hours

SAMPLE LOCATION	PRE-WORK PERIOD	WORK PERIOD	POST-WORK PERIOD
(1)	0.04	0.04	0.05
(2)	0.10	0.08	0.04
(3)	0.05	0.04	0.04

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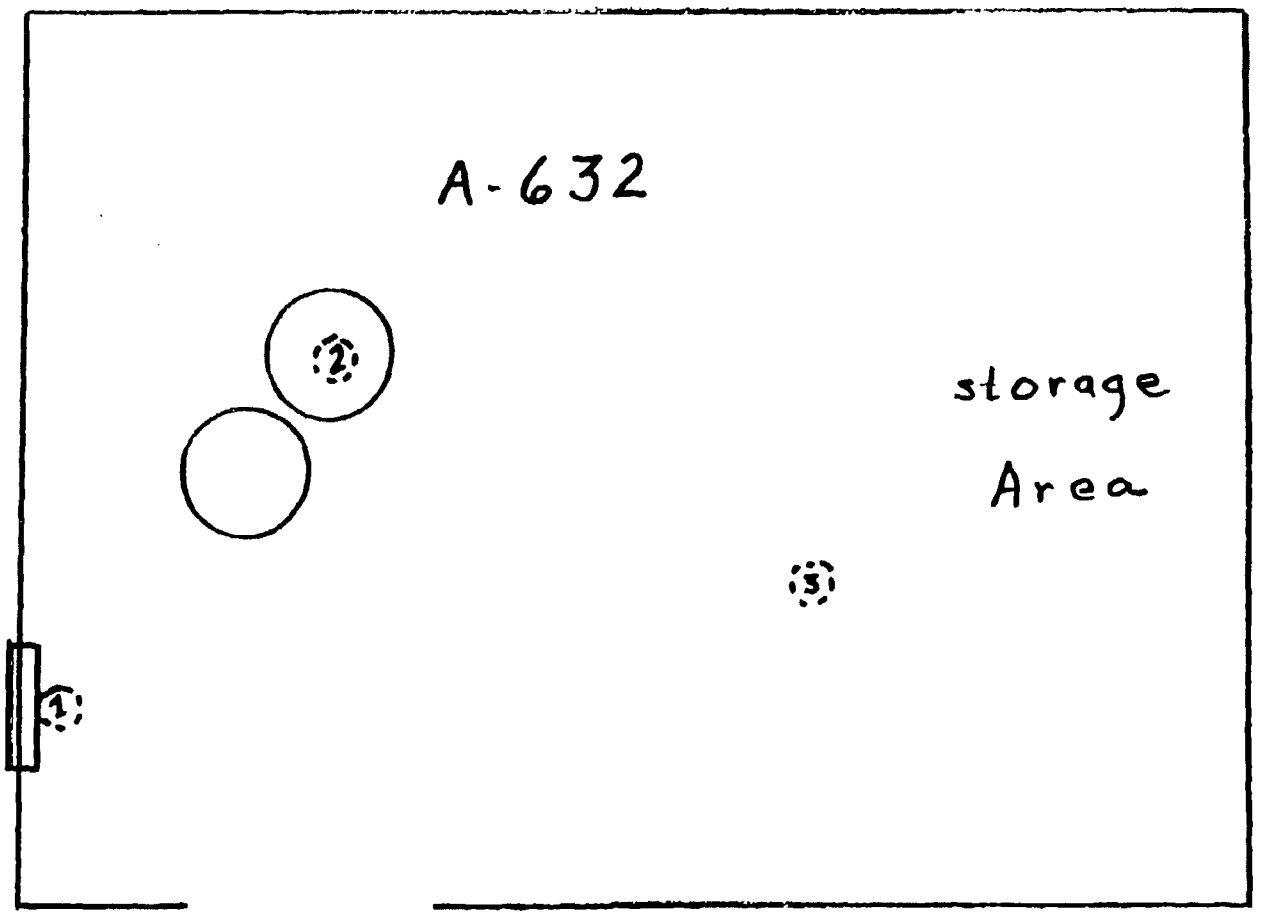


FIG. I

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