I.H.F. Asbestos 5D

RECEIVED
OCT 17 1973
D. E. D.

Industrial Hygiene Department | Plant: 510 | Distribution:

PRELIMINARY REPORT | Date: 10-2-73 | To: Mr. P. A. Walden/ Mr. A. W. Boyd

CC: See Attached List

To evaluate personnel exposure to asbestos while cleaning up Kaylo-10 insulation that had been torn off a flange on the BOU at Oxide II.

PROCEDURE: Method 38C-29x4-R1a was followed, as prescribed by OSHA regulations. Two samples were collected in the breath zone of Mike Carmona, (Brown & Root), as he cleaned up insulation that had been removed from a flange on the BOU at Oxide II. During the sampling period, an MSA Custom Comfo Respirator was worn, the the area was roped off, and the insulation was placed in polyethylene bags. Warning signs were not posted nor was the insulation wetted. A Bendix C-115 air pump and Millipore Filter Cartridges were used to collect the samples. Slides were prepared and counted using the Nikon Sub P-KT binocular phase contrast microscope.

PLAINTIFF'S EXHIBIT
tabbies
UC-1104

RESULTS:

Sample No.	Date	Location	Operation	Fibers per Cubic Centimeter > 5 Microns
1.	9-28-73	Mike Carmona	Clean up	2.1
2.	9-28-73	Mike Carmona	Clean up	1.5

Data indicates that this operation was within the 5 fibers/cc >5μ in length threshold limit value (TLV) for the eight hour time weighted average (TWA).

RECOMMENDATIONS: Altho data indicates this operation to be within the standard, it is good hygienic practice to wear respiratory protection when handling asbestos materials. A better effort must be made to keep people out of the area during tear-outs and clean-ups by roping it off and posting asbestos warning signs. The air concentration of asbestos dust can be greatly reduced by wetting the insulation.

REMARKS: As of July 1, 1976, TWA concentrations of asbestos fibers longer than five microns will not be allowed to exceed two fibers/cc. (Federal Register, Vol. 37, No. 110, June 7, 1972.)

L. G. McMullen

Surveyed By: L. G. McMullen,

D. E. Deese

Reviewed By: D. E. Deese
Senior Industrial Hygienist
Gulf Coast Area

UCTC 09162

INDUSTRIAL HYGIENE DEPARTMENT

ASBESTOS DUST STUDY

PLANT: 510

Department OXIDE-II MAINTENANCE Bldg. BOU Date 9-28-73 Time 8:49 AM

Sampled By: L.G. McMULLEN Analyzed By: McMULLEN Method: 38C-29X4-R1a

General Conditions: THE SAMPLE WAS COLLECTED IN THE BREATH ZONE OF MIKE CARMONA, B.+R. LABORER, AS HE PICKED UP KAYLO-10 INSULATION THAT HAD BEEN TORN OFF THE BOU. THE AREA WAS ROPED OFF, BUT HAD NO WARNING SIGNS. THE INSULATION WAS NOT WETTED, BUT WAS PLACED INTO POLY BAGS. AN MSA CUSTOM COMFO RESPIRATOR WAS WORN.

FIBER COUNT (Fibers > 5Å in Length) SAMPLE #1

	Slide 1		Slide 2	
1	131	11 036200	1 310	11 210201
2	0402	12 00311	2 200	12 301015
3	031	13 227220	3 112	13 203131
4	072	14 00102	4 200	14 300310
5	000	15 21213	5 110	15 121104
6	102	16 00320	6 213	16 110112
7	110	17 143 00	7 100	17 311121
8	120	18 421 34	8 200	18 120221
9	101	19 01001	9 001	19 220000
10	002	20 10300 2	10 104	20 100000
Total	122	Avg. 1.47	Total 100	Avg. 1.08

CALCULATIONS

SAMPLE VOLUME: 36 Min. @ 2 LPM = 72 LITERS

$$\frac{(\text{Avg.Fiber Count}-\text{Avg.Blank Count})(\text{Total Filter Area})}{(\text{Counting Area})(\text{Vol.Air-Liters})(1000)} = \text{Concentration, Fibers/cc} > 5\text{Å}$$

1. $\frac{(1.47 - 0)(855)}{(0.00731)(72)(1000)} = 2.39$ Fibers/ cc > 5Å

2. $\frac{(1.08 - 0)(855)}{(0.00731)(72)(1000)} = 1.75$ Fibers / cc > 5Å

Special Conditions: _____

UCTC 09163

Remarks: THE JOB WAS STARTED WITHOUT RESPIRATORS, WARNING SIGNS, OR ROPING OFF, AND THE INSULATION WAS NOT WETTED. EDDIE GEORGE, DICK WALTHALL, AND HENRY HOLLAND WERE INFORMED OF THE HAZARD. DURING THE SAMPLING PERIOD, RESPIRATORS WERE WORN, AND THE AREA WAS ROPED OFF. WARNING SIGNS WERE NOT USED AND INSULATION WAS NOT WETTED.

INDUSTRIAL HYGIENE DEPARTMENT

ASBESTOS DUST STUDY

Department OXIDE-II MAINTENANCE Bldg. PLANT: 510 B04 Date 9-28-73 Time 9:28 AM

Sampled By: L.G. McMULLEN Analyzed By: McMULLEN Method: 38C - 29X4 - R1a

General Conditions: THE SAMPLE WAS COLLECTED IN THE BREATH ZONE OF MIKE CARMONA, B.+R. LABORER, AS HE ACKED UP KAYLO-10 INSULATION THAT HAD BEEN TORN OFF THE BOU. THE AREA WAS ROPED OFF, BUT HAD NO WARNING SIGNS. THE INSULATION WAS NOT WETTED, BUT WAS PLACED INTO POLY BAGS. AN MSA CUSTOM COMFO RESPIRATOR WAS WO

FIBER COUNT (Fibers > 5μ in Length) SAMPLE #2

	Slide 1		Slide 2	
1	20 1	11 0 1 0 / 0 / 0	1 0 3 1	11 2 0 1 0 0 0 0
2	0 0 0	12 0 0 1 0 0 / 1	2 1 0 1	12 2 0 0 2 / 0 1
3	0 0 0	13 0 0 0 0 0 2 0	3 0 0 0	13 1 0 1 / 1 0 1 1
4	0 1 0	14 4 1 0 0 / 0 /	4 0 0 0	14 0 0 1 / 1 / 0 0
5	4 0 1	15 1 2 0 0 / 0 1	5 1 1 1	15 0 0 0 0 0 / 0
6	0 0 0	16 0 0 0 3 0 / 1	6 0 1 0	16 1 2 2 2 0 0 /
7	1 1 1	17 1 2 1 0 0 / 2	7 0 1 1	17 5 1 5 / 1 0 2
8	0 2 0	18 1 2 0 0 3 0 2	8 0 0 0	18 6 0 0 3 / 0 4
9	0 0 1	19 0 1 0 / 0 0 2	9 0 0 0	19 0 0 2 / 0 0 0
10	2 0 2	20 2 2 2 0 0 / 0	10 0 0 1	20 0 2 0 0 4 3 0
Total	70	Avg. 0.70	Total 80	Avg. 0.80

CALCULATIONS

SAMPLE VOLUME: 28.5 Min. @ 2 LPM = 57 LITERS

$$\frac{(\text{Avg.Fiber Count} - \text{Avg.Blank Count})(\text{Total Filter Area})}{(\text{Counting Area})(\text{Vol.Air-Liters})(1000)} = \text{Concentration, Fibers/cc} > 5\mu$$

1. $\frac{(0.70 - 0)(855)}{(0.00731)(57)(1000)} = 1.44$ Fibers/ cc > 5μ

2. $\frac{(0.80 - 0)(855)}{(0.00731)(57)(1000)} = 1.64$ Fibers / cc > 5μ

Special Conditions: _____

Remarks: THE JOB WAS STARTED WITHOUT RESPIRATORS, WARNING SIGNS, OR ROPING OFF, AND THE INSULATION WAS NOT WETTED. EDDIE GEORGE, DICK WALTHALL, AND HENRY HOLLAND WERE INFORMED OF THE HAZARD. DURING THE SAMPLING PERIOD, RESPIRATORS WERE WORN, AND THE AREA WAS ROPED OFF. WARNING SIGNS WERE NOT USED AND THE INSULATION WAS NOT WETTED.

UCTC 09164

ASBESTOS DISTRIBUTION LIST

Mr. R. S. Barton	140-2
Mr. A. E. Bransford	2
Mr. J. H. Brewer	322
Mr. K. G. Brink	2229
Mr. D. E. Deese	515 - 1
Mr. C. U. Dernehl	NYO - 4
Dr. D. H. Glenn	515 - 2
Mr. E. K. Godfrey	2
Mr. R. D. Graebert	511
Mr. J. H. Graves	120-E
Mr. D. Hockaday	2229
Mr. H. E. Holland	2229
Mr. J. D. Horn	322
Mr. H. F. Keag	420
Mr. N. H. Ketchum	511 770
Mr. J. H. Sledge	3
Ms. E. Totah	1
Mr. J. L. Warner	1
Mr. C. E. Workman	322

UCTC 09165