

FILE NAME: Montello (MNT)

DATE: 1972 Sept 28

DOC#: MNT022

DOCUMENT DESCRIPTION: Report of Asbestos Dumping and Sampling at
Texas Panhandle Well Location

015568

ASBESTOS FIBER COUNTS OF AIRBORNE SAMPLES COLLECTED

Texas Panhandle Well Location

This report gives the details of
the dumping and sampling
at the location shown above.

September 28, 1972

On-Site Report No. 3

PLAINTIFF'S EXHIBIT

DMA-636

PERSONNEL PRESENT

Montello, Inc.

R. Newman
H. Wyatt

Union Carbide Corporation: E. J. Kleber

UNION CARBIDE CORPORATION
Mining and Metals Division
Niagara Falls, New York

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OBJECTIVE

Monitor airborne asbestos in an actual on site condition inside a mud house.

INTRODUCTION

On September 28, 1972 tests were conducted at a [redacted] drilling site [redacted]. All samples were collected in a mud house approx. 25' x 7' with a Quonset hut roof 7 ft. high at the zenith. Two asbestos products were evaluated; Super-Visbestos, essentially 100% liberated fiber, and New Granular Super-Visbestos, a pelletized form.

TEST METHOD

11:15 - 12:45 - 10 bags Super-Visbestos added to hopper.

12:45 - 2:10 - 10 bags New Granular Super-Visbestos added to hopper.

The first hour of each test was the dumping of asbestos, 1 bag every 6 minutes. The last half hour was monitored as a settling period.

SAMPLER LOCATIONS - (See Figure 1)

The samplers were left in the same spots for each test. They are designated as Position 1, 2, and 3.

Position 1 - 4 ft. from hopper in somewhat of a "dead" air area, 5-1/2 ft. above floor.

Position 2 - At opposite end of mud house, 3 ft. from door, downwind from hopper, 5-1/2 ft. above ground.

Position 3 - Operator dumping bags at the rate of 10/hour.

EQUIPMENT

Sampling and dust counting were carried out in accordance with OSHA Regulation 1910.93a.

Personal air samplers were used to collect personal breathing zone and environmental samples on Millipore Membrane Filters of 0.8 micron porosity.

Air samplers were as follows:

MSA Personal Sampler - Calibrated to draw 2 liters per minute of air. Used in position 3.

Unico Personal Sampler "A" - Draws 1.8 liters per minute. Used in position 1.

Unico Personal Sampler "B" - Draws 1.7 liters per minute. Used in position 2.

Fiber counting was performed on a Leitz Microscope utilizing Phase Contrast Illumination at 400X and a Patterson Globe and Circle Reticle.

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TEST RESULTS - (See Table 1)

Table 1 contains the results of the sample analysis dust counting. The count is reported as fibers greater than 5 microns in length per milliliter of air sampled. A fiber is defined as any material having an aspect ratio greater than 3.

INTERPRETATION

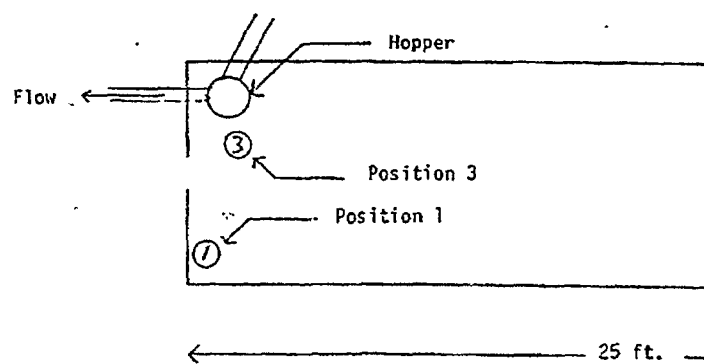
Although the figures speak for themselves, it may be worthwhile to briefly review the Time Weighted Average (TWA) aspect. The Regulations have been established with a limit of 5 fibers per milliliter greater than 5 microns in length on a Time Weighted Average. This means the figures must be arranged to show the employee's average intake of fibers per milliliter on an 8 hour day. For example, a worker dumping asbestos for one hour per day and inhaling 8 fibers per milliliter during that hour would have a TWA of 1 fiber per milliliter and for 2 hours dumping at the 8 fibers per milliliter level would be 2 fibers per milliliter, etc. The highest reading in Table 1 is 1.03 fibers per milliliter and the operator was exposed to this level for 59 minutes. If this were his only exposure during the day, his TWA would be less than 0.2 fiber per milliliter.

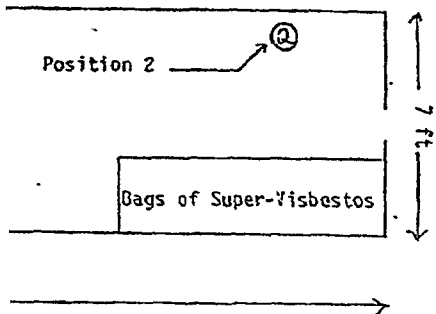
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TABLE I
SUMMARY OF DUST COUNTS

<u>I.B. No.</u>	<u>Field No.</u>	<u>(Minutes)</u>	<u>Position</u>	<u>Description</u>	<u>Fibers/ml</u> <u>> 5 μ</u>
Dumping of 10 bags Super-Visbestos					
929-36-1	33	60	1	Environmental	0.40
-2	41	61	2	Environmental	0.20
-3	47	59	3	Personal	1.03
-4	9	27	1	Env. - After Dump	0.44
-5	34	27	2	Env. - After Dump	0.31
Dumping of 10 bags New Granular Super-Visbestos					
-6	15	59	1	Environmental	0.47
-7	11	60	2	Environmental	0.35
-8	10	59	3	Personal	0.49
-9	42	25	1	Env. - After Dump	0.32
-10	46	25	2	Env. - After Dump	0.16

FIGURE 1
Mud House





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On-Site Report No. 4
South Louisiana Well Location

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SUMMARY

A survey indicated that the asbestos exposure of the employee dumping asbestos (Visbestos, Montello Inc., Tulsa, Oklahoma) into the hopper leading to the tank containing drilling mud [REDACTED] was well below the present OSHA permissible limit.

PURPOSE

At the request of [REDACTED], a survey was made by [REDACTED] of asbestos exposure during the dumping of asbestos into drilling mud at the [REDACTED]. The operation at [REDACTED] is similar to what occurs at a drilling rig except that only 1/3 of the amount of asbestos is used in the latter operation.

Messrs. [REDACTED] were present to observe and discuss the procedure and survey.

SURVEY

Personal samples were collected at the breathing zone of the worker during the dumping of asbestos using 37 millimeter Millipore type (membrane) AA filter in a holder connected to a MSA or Unico pump pulling air through the filter at a constant flow rate. The determination of asbestos concentrations was made by counting asbestos fibers longer than 5 micrometers at 400-450 X magnification (4 millimeters objective) with phase contrast illumination.

DESCRIPTION OF OPERATION

In drilling operations a mud circulates around the drill for cooling and lubrication. The mud is treated for weight, viscosity and gel strength. Asbestos increases the effectiveness of gel, that is, keeps it from setting up like cement. The mud must be left in the annulus of the drill with gel characteristics.

Bags weighing 50 pounds of Super Visbestos, Montello Inc., Tulsa, Oklahoma were dumped into a hopper (15" x 15" opening) over a tank containing 215 barrels of mud (14.5 lbs/gal lignosulfonate). The Montello asbestos, produced by Union Carbide by a wet process, is in a pelletized form. Twenty-one bags of asbestos were dumped over a period of approximately 15 minutes. About 5 minutes was spent in disposing of the empty bags. A slight breeze was blowing dust toward the worker but the dust began to settle before reaching the breathing zone. [REDACTED]

RESULTS

(1) The samples were collected simultaneously during dumping as well as during cleanup and associated operations.

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On June 7, 1972, stringent Federal regulations went into effect on the commercial use of asbestos. The impact of these regulations on the drilling industry has been a source of concern and confusion to suppliers and users, alike.

Because of this, we at Montello determined to ascertain how our unique, wet-refined Super Visbestos would perform, in the context of the OSHA regulations, under the widely varying conditions found on drilling rigs. With the invaluable cooperation and assistance of several companies, four on-site tests and their evaluation have now been completed.

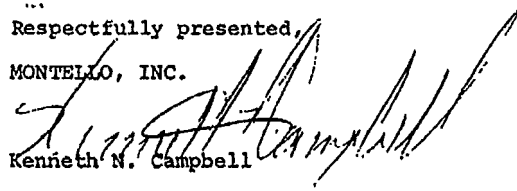
Attached is a copy of an extensive report which gives a detailed interpretation of the results from these four tests. Site selection was based on a desire to evaluate the broadest possible range of dumping environments. Three different forms of our asbestos were checked to determine the effects of fine grinding, coarse grinding (i.e. crushing) and granulating, on air entrained dust levels.

We believe interested readers will find this report informative. On the next page, we've recapped the more important points which it includes. In substance, the results lead us to believe that there is no reasonable expectation of exceeding the limit values imposed by the regulations, when using either Crushed Super Visbestos or the much cleaner New Granular Super Visbestos.

We'll be glad to answer any questions you may have. Just drop us a line or call our Sand Springs office.

Respectfully presented,

MONTELLO, INC.


Kenneth N. Campbell

KNC/jd

Montello

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