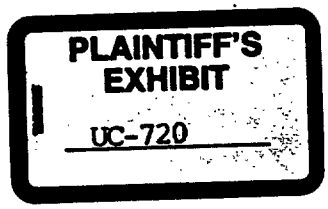
Union Carbide Corporation
Metals Division
Niagara Falls, NY 14302
October 8, 1980



MEMORANDUM

To: B. L. Ingalls
H. B. Rhodes
J. E. Walsh

CC: G. R. Adams
R. E. Byrne, Jr.
W. B. DeAtley
G. L. Dickson
T. P. Norris
F. J. Shortsleeve/R. W. Rebholz
File

From: J. L. Myers

Subject: Summary of Meeting with Montello

The following is a summary of our recent meeting with Montello, our "world-wide" distributor of "Calidria" asbestos products for drilling fluid applications. Please advise if you have any corrections, comments or additions.

Date of Meeting: 9/30/80 Location: Rodeway Inn, St. Louis, MO

Attendees: Montello - K. N. Campbell, H. Wyatt, A. Johnson
UCC - J. L. Myers, J. E. Walsh, B. L. Ingalls, H. B. Rhodes

Discussion Items:

1. Massena Order - This 465-ton order for CSV was apparently destined for 5 different customers in various countries, presumably South America. We received and produced the order in May for shipments to be completed by June 30. The first shipment of 116.25 tons was not made until 9/18/80 and the balance is still in King City (we invoiced Montello for the entire amount $74,400, on 6/30/80). Montello has been trying to force Massena to take the material by "threatening" interest, storage, repackaging and other types of extra charges; but Massena's customers have presumably been unable to correct import license problems. I received a call from Bill Kennedy of Massena confirming their export problems and begging patience. I referred him to our International Distribution people for help but he did not follow up on this. Montello, with my concurrence, decided on 10/6 to cancel the order and bill Massena only for actual out-of-pocket costs. Since we had none we will receive nothing, except having Montello's money since July for material not shipped. Massena has assured Montello that orders will eventually be cleared for shipment, so we should see the business this year. We have excess inventory now but it will be used by Montello for filling regular orders.

2. Montello's major concern is potential liability problems for themselves and their customers. I will check with Sibley on whether or not we can do something to assuage their fears.

3. Jack Walsh reviewed Montello's monthly forecasting vs. actual purchases - a summary is attached showing a deviation for the last four months of only 3% for CSV and 13% for SHURLIFT.

4. Production of silane-treated asbestos by a compounder for Dresser is at a virtual standstill because of poor performance of final product. They have tried JM's Flosal and get better performance but poorer stability. They are evaluating various forms and grades of our products and Montello is working closely with them to avoid losing this market. Dresser claims that our product varies by 50-100% in some physical properties but we, or Montello, have not been able to duplicate their results. We have offered to consult with or visit their plant to render technical assistance. So far they have not accepted our offer, probably fearful that we will "steal" some proprietary information. Dresser reportedly found 4-5% calcite in one lot of CSV. Blair will forward our analysis of the suspect lot which showed nothing unusual.

5. Montello is convinced that UNIVIS is the only product to prevent continued loss of market share to J-M's water-wetted "pelletized" Flosal. The oil-wetted version of UNIVIS now seems impossible to produce at a cost which would permit an acceptable price in the market place. Water-wetted is also not feasible unless we can produce it as a partially-dried pellet, not by us or them re-wetting the dried pellets. They feel that the current UNIVIS (Super Standard Grade mini-pellets) can be successful only if we can preclude the presence of excessive fines (primarily caused by our pellet cooler) and package it in sewn-top bags to prevent fiber from collecting between the paper bag and plastic shrink-film. I completely agree with them, but we are apparently not prepared to offer this; although they are willing to finance the equipment, share the cost, give us guaranteed requirements - or whatever. It was left that they would try to find someone to do the packaging if we can provide bulk mini-pellets at a price low enough for them to do the packaging and come out with a salable price to the field. I offered to share some of the financial cost for promoting and introducing UNIVIS to the markets. If they can find a packager they plan to make a significant promotional effort.

6. They have been asked to prepare an article for publication by the Independent Association of Drilling Contractors (IADC). An article on JM's Flosal has recently been published and IADC will "endorse" Flosal unless Montello can convince them that UNIVIS is just as "safe" to use. We will review all information prior to publication. A copy of the Flosal article is attached.

7. Blair presented a summary (copy attached) of recent UNIVIS dust counts compared with regular CSV and oil-wetted material. As expected, UNIVIS results are basically in between the other two. Regular monitoring on CSV usage has not been done since 1977 because "UNIVIS" has been "coming" since then. It was decided that more frequent monitoring is in order so that customers can be given more up-to-date information. Montello was reminded that none of our dust count reports can be sent to customers without our prior written approval.

8. They will order the remaining 50 tons of UNIVIS from King City and additional performance and monitoring tests will be conducted.

9. Harry Rhodes presented a summary of health and regulatory matters.

10. Montello has established a laboratory and will be able to perform various tests associated with drilling fluid applications. The first order of business will be to develop improved QC procedures - with our assistance and collaboration.

11. Pricing and availability were discussed in light of our increased costs and the unexpected orders by GAF. They were advised that our overall prices were going up 10-15% the first of the year and they would be officially notified at least 60 days before the end of the year, per our contract. Supply of reasonable requirements was essentially assured.

12. Drilling Specialties Co. (DRISCO), a subsidiary of Phillips Petroleum, is the sole distributor for J-M's Flosal and is Montello's only competitor in this application for asbestos. DRISCO has always maintained a low profile on Flosal but have kept a good market share because of Phillips' influence. They have recently shed the low profile image, see attached ad, and the reasons for this were discussed. Apparently Flosal must be a good margin product for them and they are after an increasing share of the approximately 10,000-ton market. Canadian asbestos sales of short fiber are at an all-time low and J-M is probably "pushing " to move all the "waste" fiber they can. Note that the word "asbestos" is not used in their ad.

FOUR MONTH FORECAST SUMMARY

Super Visbestos

Type	MAY Fcst.	MAY Produced/ Shipped	MAY % VARIANCE	JUNE Fcst.	JUNE Produced / Shipped	JUNE % Variance	JULY Fcst.	JULY Produced/ Shipped	JULY %Variance	AUGUST Fcst/	AUGUST Produced/ Shipped	AUGUST %Variance
Shrinkwrapped & Palletized	4000	4370	+9	4000	1680	-58	4200	3360	-20	4200	6240	+15
Loose Loaded	5000	6300	+26	23500	24900	+7	4800	2400	-50	4800	3600	-25
TOTAL	9000	10670	+19	27500	26580	-3	9000	5760	-36	9000	9840	+9

Imco Shurelift

Loose Loaded	5000	2400	-52	4800	4800	0	4800	4800	0	4800	4800	0

TOTAL

	FORECAST	PRODUCED / SHIPPED	% VARIANCE
Super Visbestos			
Palletized	16,400	15,650	-5
Loose	38,100	37,200	-2
TOTAL	54,500	52,850	-3
Imco Shurelift			
Loose Loaded	19,400	16,800	-13

JEW
9/30/80

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AIRBORNE ASBESTOS FIBER EXPOSURE LEVELS FOR DRILLING RIG PERSONNEL

	Highest Ceiling (fibers/cc)	Highest TWA (fibers/cc)
Crushed SVB	>5	>0.1
SVB Mini Pellets	1.294	0.078
Univis Mini Pellets (Oil Wetted)	0.307	0.043

BL1
9/30/80

"UNIVIS"

SVB MINI PELLETS

SUMMARY OF AIR MONITORING FIELD TESTS

(ASBESTOS FIBERS PER CC OF AIR)

Pounds of SBV Dumped	Highest Ceiling During Dump		Highest Ceiling During Day of Dump		TWA Day of Dump	
	Personal	Environmental	Personal	Environmental	Personal	Environmental
200	0.305	0.112	0.305	0.112	0.064	0.033 & 0.044
250	0.151	0.101	0.151	0.101	0.056	0.036 & 0.040
250	1.294	0.345	1.294	0.345	0.078	0.031 & 0.050
250	0.670	0.134	0.670	0.134	0.060	0.029 & 0.031

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CRUSHED SVB

SUMMARY OF AIR MONITORING FIELD TESTS

(ASBESTOS FIBERS PER CC OF AIR)

Date	~~Pounds~~ Bags of SVB Dumped	Personal Ceiling During Dump
6-76	10	>5 f/cc
1-12-77	5	1.7 f/cc
6-9-76	10	0.2 f/cc
7-2-75	8	1.8 f/cc
9-23-77	5	0.3 f/cc
-	5	0 f/cc
3-14-75	3	0.7 f/cc
1-12-77	9	0.3 f/cc
6-8-76	10	0.9 f/cc

No. of Unopened Bags Transported During Warehouse Operations	Personal Ceiling Counts
20	1.7 f/cc
30	1.5 f/cc
20	1.6 f/cc

How To Handle A Drilling Mud Asbestos Additive

THE FOLLOWING recommended work practices are intended as general guides respecting the handling of Flosal® , a Drilling Mud grade Asbestos (hereafter referred to as DMA) produced by Drilling Specialties Company, Technical Services Division.

This article may be helpful to superintendents, and drilling crews in understanding, explaining and using such procedures.

Field tests conducted indicate that the recommended work practices set forth herein should result in an employee's 8-hour Time-Weighted Average (TWA) exposure being below 0.1 fibers per cubic centimeter of air.

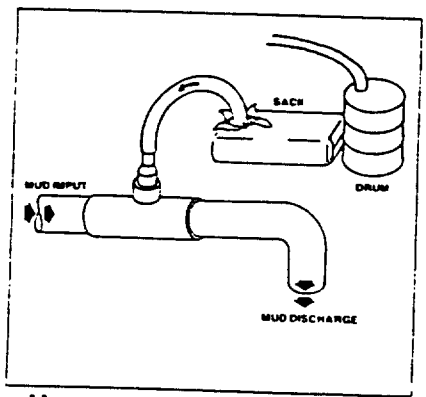
Such exposure would be well below OSHA's currently prescribed limits of two fibers longer than five micrometers per cubic centimeter of air as an 8-hour time-weighted average exposure and 10 fibers longer than 5 micrometers per cubic centimeter of air, as a ceiling concentration.

On October 11, 1978, OSHA issued Program Directive #300-16 which provides uniform inspection and compliance procedures for medical examination requirements of the asbestos standard. The principal actions taken by OSHA in this directive were to clarify the term "exposed to airborne concentrations of asbestos fibers" and to indicate the scope and applicability of medical examination requirements under the asbestos standards as follows:

a. The term "...exposed to airborne concentrations of asbestos fiber..." is administratively interpreted to mean "exposed to a minimum of 0.1 asbestos fibers longer than 5 micrometers per cubic centimeter of air..."

b. Medical examinations will be required for any 7 to 8-hour time-weighted averaged concentration of 0.1 f/cc, or for a greater concentration.

It is felt by the manufacturer that if the following work practices are followed one might reasonably expect 8-hour TWA exposure levels to be below those specified by OSHA Program Directive #300-16. If, however, there is reasonable cause to believe that airborne asbestos concentrations exceed 0.1 f/cc greater than five microns on an 8-hour TWA basis, or have peak levels above 0.5 f/cc greater than five microns based on 15-minute sample periods, then the site should be monitored for airborne asbestos, and appropriate action taken as required by applicable safety or health laws and/or regulations.



Hopper Hose Using Suction

Products and Operations

DMA is furnished in flake form. Operations to which these work practices apply include:
Shipping, Receiving, Handling, Warehousing, and Storage
Additions of DMA to the mud
Handling of empty sacks
Disposing of empty sacks
Disposing of mud

Shipping, Receiving, Handling, Warehousing, And Storage

DMA is furnished in loose or palletized sacks. (With palletized DMA, the pallets are sometimes shrink wrapped). The sealed, unopened sacks should be handled by normal warehouse practices.

Precautions must be taken if a sack is broken, torn or punctured. The sack should be sealed with heavy duty tap or placed in a slip-over sack (over sized, open mouthed bag) to prevent spillage. The slip-over sack should b securely sealed, preferably by a twis wire. Any spillage should be cleaned up with a vacuum sweeper equipped with a disposable bag. Unless additional protection is required under applicable federal or other regulations a certified, reusable or single use air purifying respirator should be worn by the person cleaning up. **Do not blow material with compressed air nor dry sweep.** The material in broken or damaged sacks should be used first In storing DMA it is recommended that it be stacked no more than 10 sacks high.

Additions of DMA to the Mud

DMA should be added to the mud in the same manner as other dry mud additives. The DMA should be added directly to the mud system, preferably by emptying the bag at a uniform rate into the hopper of a cone type jet mixer (eductor system).

Other systems in use are also suitable for the addition of DMA, such as an eductor with suction hose attached to withdraw the DMA directly from the bag, or from a drum into which several bags have been emptied. (Figure 1). Care should be used in pouring the DMA into another container to reduce the amount of "fines" generated when air is displaced from the receiving hopper or drum.

In adding DMA to the mud, it is a recommended practice to position oneself so that any air currents present are moving from the individual's back toward the receiving container, rather than blowing into the face. A light weight streamer or "air sock" above the hopper may be used to determine wind direction.

Disposing of Empty Sacks

Unless an adequate precipitator is attached to the incinerator, onshore burial or incineration is the preferred method of disposing of empty DMA sacks from offshore sites. **Do not burn DMA sacks without a precipitator.** The empty sacks should be accumulated in sealed impermeable bags until a sufficient number is on hand to require burning or burial.

It is preferable to bury empty DMA sacks onshore. An incinerator with an adequate precipitator can be used. **Do not burn DMA sacks without a precipitator.**

Disposing of Mud

When a well is finished, there is usually little or no DMA left in the mud. Any accepted method of storing the mud for reuse or disposing of it can be used.

Circle 42

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TROUBLE.

Clay particles are big trouble when they swell and lodge in rock pores and damage your producing formation. Protect your well with the combination of Flosal® and Drispac® additives in your drilling fluid. The Flosal and Drispac containing fluids inhibit clay swelling, minimize formation blockage, have low water loss, plus excellent carrying capacity to clean cuttings and debris from the hole. These additives mix easily with water of any salinity and are economical and simple. The Flosal and Drispac additives are also outstanding for use in coring your EOR wells. Talk to your mud company engineer or contact: Technical Services Division, Drilling Specialties Company, 309 Short St., Bartlesville, Oklahoma 74004. Phone 918 661-5333.

"We're the Drispac® people."

"Asbestos" not mentioned

DRILLING SPECIALTIES COMPANY

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