

UNION CARBIDE CORPORATION

Performance Chemicals & Polymers Division
Business Development Department

270 Park Avenue, New York, N. Y.

CONFIDENTIAL

STRICTLY FOR INTERNAL USE
NEW BUSINESS DEVELOPMENT DEPT.

DATE: February 21, 1979

TO: R. W. Rebholz
F. J. Shortsleeve

FFR 22 1979

CC: R. J. Blake
D. F. Braun
G. M. Bryant
J. F. Higgins
G. T. Kwaitowski
T. P. Leyden
T. W. Longmire
F. J. McCarthy
J. L. Meyer
G. A. Skoler
D. W. Urban

SUBJECT: Silane Treated Astestos

Attached please find pertinent details regarding the above subject matter and understandings between Dresser Industries and UCC. This background data (more is available dating back to 1970) should be useful in preparation for a proposed meeting with Dresser people in New York tentatively set for the week of March 12.

The proposed prime purpose of the meeting should be to clarify matters related to;

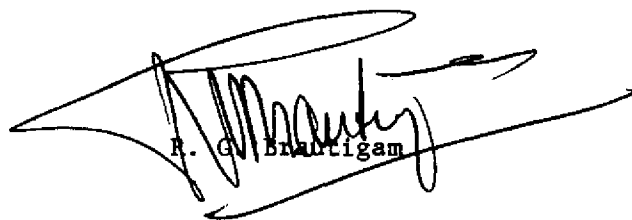
- 1) Determination whether past reasons for justification of this project still apply. That is, what are the effects of changes in UCC/Dresser personnel, changes in the market place and EPA/OSHA requirements, and changes in alternative products (viscosifiers with high temperature stability etc.), and changes in product economics?
- 2) To reestablish the potential demand for silane treated asbestos in Oil Field Products and Servicing Industries. That is, in drilling, completion (packer fluids) markets in oil based and water based systems etc.
- 3) To reestablish extent of UCC commitment(s), if any, to finalize this project.

Dresser recently has been granted U.S. Patent 4.137.367. This patent has not been studied by the Law Department. A copy of this patent has been ordered, and will be reviewed. It is expected that UCC's position will be staked out vis a vis this patent before we meet the Dresser people.

The proposed Dresser meeting should discuss the business/marketing (volume, price, agreements, OSHA/EPA), future aspects of this project rather than the product specifications or end-use requirements. The latter are secondary issues because they are known to our R&D staffs -- both in the Metals as well as Chemicals & Plastics Division.

I hope that the above notes will be useful in the preparation of an agenda for the proposed meeting with the Dresser people.

RGB:ms
Encls.



R. G. Bantigan

Pertinent Documents on UCC-Dresser Relationships related to Silane
Treated Asbestos and Inhouse Data:

- 1) The Dresser Industry-UCC Agreement; June 19, 1978.
- 2) "Silane Treated Asbestos in Oil Base Drilling Muds" -- Memo;
October 5, 1977.
- 3) Preliminary Price Suggestions for Finished Product -- Memo;
June 13, 1978.
- 4) Speculative Operating Cost Estimate for Silane Treated Asbestos --
Dresser Process Memo; March 28, 1978.



UNION CARBIDE CORPORATION
CHEMICALS AND PLASTICS

2710 STEMMONS FREEWAY, SUITE 700, DALLAS, TEXAS 75207 • 214 631-0010
WATS 800 527-4083

May 3, 1978

Mr. James McCaskill
Dresser Industries
10201 Westheimer
Houston, Texas 77036

Dear Mr. McCaskill:

Per our conversation of May 2, I am forwarding two copies of a proposed agreement between our two companies on Silane Treated Asbestos. I will call you next week to set up an appointment.

If you have any questions in the interim please contact me.

Sincerely,

UNION CARBIDE CORPORATION
Chemicals and Plastics

Dean F. Braun
Account Representative

DFB:sb
enclosure

bcc: D. F. Baumert - Dallas
M. E. Elling - Ny 30 ✓
J. F. Higgins - NY 30



INTERNAL CORRESPONDENCE

CHEMICALS AND PLASTICS

2710 STEMMONS FREEWAY, SUITE 700, DALLAS, TEXAS 75207 214-631-0010

To (Name) M. E. Elling
Division
Location New York 30

Date June 16, 1978

Originating Dept.

Answering letter date

Copy to D. F. Baumert - Dallas
J. F. Higgins - New York 30
T. W. Longmire - New York 30

Subject Silane Treated Calidria Asbestos (SSX)
Dresser Industries, Inc.

Dear Mike:

Attached is the signed copy of the secrecy agreement from Dresser. Please initiate the 50 pound sample of pelletized silane treated asbestos to Dresser ASAP. Again, I recommend that Rusty Raines evaluate it first before sending to Dresser, particularly in regard to the dispersibility and the temperature stability of commercially produced product.

The ball is in our court now. Please advise when sample is sent.

Dean F. Braun

DFB:sb
enclosure

CC to Bill Turner
6/26/78
Dr. W. Longmire

Received and
to Higgins
7-12-78



UNION CARBIDE CORPORATION
PERFORMANCE CHEMICALS AND POLYMERS DIVISION
270 PARK AVENUE, NEW YORK, N. Y. 10017

April 29, 1978

Dresser Industries, Inc.
P. O. Box 1407
Houston, Texas. 77001

Subject: Silane Treated Calidria Asbestos (SSX)

Gentlemen:

It is understood that you wish to evaluate our experimental Silane Treated Calidria Asbestos (SSX). We are willing to send you experimental quantities of this material and to work with you in developing an oil field market application on the following terms and conditions:

- (1) You will use the material for evaluation purposes only and will promptly inform us in writing of the results of your evaluation.
- (2) You will maintain the results of your evaluation secret and confidential for a period of two (2) years from our receipt of such experimental information except, (i) when after and to the extent such information was previously known to you as evidenced by your prior written records, (ii) is or becomes generally available to the public, or (iii) is disclosed to you on a non-confidential basis by a third party.
- (3) Union Carbide will provide a 50 pound sample of this material during June 1978. Within six months from this first delivery date, you will evaluate this material in your laboratory. If your evaluation confirms the value of the material, you will purchase a minimum of 10,000 lbs. for field evaluations during this 6 month period.
- (4) If after the six month evaluation period, you wish to test this material further, Union Carbide agrees not to offer this material to others for drilling application for the period of one year, provided that Dresser Industries agrees to purchase a minimum of 200,000 pounds of this material during this one year period. After this one year period, Union Carbide will offer to sell this material to all customers equally.

Dresser Industries, Inc.
Silane Treated Calidria Asbestos (SSX)

April 29, 1978

- (5) If during the time periods of this agreement, any OSHA or EPA regulations should detrimentally affect Dresser's ability to carry out the minimum purchase terms of this agreement, paragraphs 3 and 4 of this agreement will be suspended.

If you are in agreement with the foregoing, kindly sign and return the duplicate copy of this letter.

Very truly yours,

UNION CARBIDE CORPORATION

Agreed to this 8 day
of June 1978.

DRESSER INDUSTRIES, INC.

By James G. McCarroll
Title V.P. - R&E.

By T. T. Szabo
T. T. Szabo
Vice President and
General Manager

Performance Chemicals &
Polymers Division

OIL PRODUCTION CHEMICALS

SILANE TREATED ASBESTOS IN OIL BASE DRILLING MUDS



AUTHORS T. R. Malone
R. H. Raines

DATE: October 5, 1977

PROJECT NO.: 126C05

SUPERVISOR: G. M. Bryant

FILE NO.: 24193

SUMMARY Silane modified asbestos based on UCC RG-244 is a more efficient thickener for oil base drilling fluids than the reference silane asbestos product from Dresser Industries. Thermal stability of the UCC material after heating 80 hours at 300°F is equivalent to the Dresser product when compared at equal apparent viscosity. The UCC experimental product can be prepared in existing facilities and avoids the troublesome acid leaching pretreatment of the asbestos, thus it should have significantly lower manufacturing cost than the Dresser product. It is recommended that additional samples be prepared in a pelletized form to overcome OSHA/EPA restrictions which might impede the commercialization of the improved product in its present form.

INTRODUCTION Following an inquiry from Dresser Industries several years ago, work to develop a silane modified asbestos for use as an oil based drilling additive was initiated in the laboratories of the Mining and Metals Division at Niagara Falls and Chemicals and Plastics/Silicones at Tarrytown. Products from this study have been submitted to this laboratory periodically for evaluation. Recently two samples based on silane treatment of UCC RG-244 (a silica modified asbestos) prepared by Dr. S. Ramachandran of M and M were transmitted for evaluation (1). The process by which these products was made reportedly eliminates the acid leach pre-treatment of the asbestos, which is necessary to make the silane treated asbestos presently being touted by Dresser. Results of our evaluation of these two samples, Lots 2190-75-1 and 2190-75-2, as thickeners for oil-based drilling muds are the subject of this Memorandum.

RESULTS AND DISCUSSION Both samples were evaluated at 3, 5 and 7 lbs/bbl in the standard oil base drilling mud system of 332.5 ml #2 diesel oil and 17.5 ml fresh water as the discontinuous phase. The oil and water were mixed at high speed on a Waring blender for two minutes prior to the addition of the asbestos sample. Stirring was then continued for 10 minutes

RESEARCH AND DEVELOPMENT DEPARTMENT
CHEMICALS AND PLASTICS
UNION CARBIDE CORPORATION
SOUTH CHARLESTON, WEST VIRGINIA

also at high speed, after which time the sample was removed to a Fann viscometer, cooled to 115°F and the viscosities and gel strengths determined. The aging was done in a standard Baroid high pressure cell in a Baroid roller oven at 300°F for 80 hours. Each sample was then stirred for two minutes at high speed on the Waring blender, transferred to the Fann, heated to 115°F, and the same parameters were redetermined. The apparent viscosity (AV) values shown in Table I are steady state values, having been taken after about 20 minutes at 115°F.

The tests at 3 and 5 lbs/bbl concentrations presented no handling problems with either sample. However, both samples were difficult to mix at 7 lbs/bbl, where the liquid mixture turned to mush about a minute after addition of the asbestos. The higher efficiency of the M and M samples recommends their use at lower concentrations than needed for the Dresser Industries product, and at 7 lbs/bbl the M and M samples are too thick to handle properly in the laboratory blender. After 80 hours at 300°F all samples were a mobile liquid and uniform in appearance.

All measurements on the M and M products and the Dresser material are presented in Table I and shown graphically in Figures 1 and 2. The data points for Dresser are plotted on Figure 1, while only the line through these points is shown in Figure 2. At the lower concentrations the apparent viscosity of the M and M asbestos is equal to or greater than Dresser's product in all cases; only at 7 lbs/bbl concentration was there appreciable loss of viscosity after the heat treatment. As pointed out, this may be attributable to the poor mixing of the M and M samples during its initial preparation at the high concentration.

A very disconcerting note on this project is sounded in the ROC (2) by D. F. Braun concerning the asbestos fiber concentration in the atmosphere. OSHA/EPA has set 0.5 as the maximum allowable limit. This means some effort must be expended towards reducing the dusting of the present product. The addition of a binder to the asbestos may alter the rheological properties and any pelletized or other modified product should be re-submitted to this laboratory for evaluation prior to external sampling.

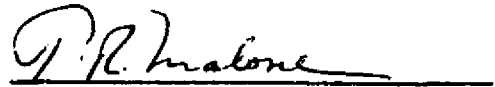
CONCLUSION AND RECOMMENDATIONS

Of the two lots of M and M silane asbestos, Lot 2190-75-1 is superior. However, both of M and M samples have significantly higher thickening efficiency in the diesel oil base fluid than the reference product from Dresser Industries. Furthermore, the thermal stability after heating 80 hours at 300°F is as good for the two M and M samples as for the Dresser product when compared at the same apparent viscosity. Because of OSHA/EPA restrictions affecting the handling of fibrous asbestos, it is recommended that a

pelletized or other suitable non-fibrillating form of the product be developed by M and M, evaluated internally, and samples for evaluation at Dresser as soon as steps can be taken to assure UCC protection.

REFERENCES

1. Ramachandran, S., Letter to R. Raines, "Silane Treated RG-244", June 28, 1977.
2. Braun, D. F., ROC, Dresser Ind., July 6, 1977.



TRM:sm

Attachments:

- 1 Table
- 2 Figures

Manuscript date: September 22, 1977
Date Typed: September 28, 1977

TABLE I

SILANE TREATED ASBESTOS FROM M AND M
IN OIL BASE DRILLING MUDS
THERMAL STABILITY STUDIES AT 300°F FOR 80 HOURS

Sample No.	Concentration lbs/bbl	ORIGINAL VALUES					AFTER HEAT TREATING					Visc. Loss, Percent
		AV	PV	YP	Gel Strength 10 sec. 10 min.	AV	PV	YP	Gel Strength 10 sec. 10 min.	YP	Visc.	
2190-75-1	3	8.5	3	11	6	7	11.5	4.8	13.5	18	24	0.0
	3	12.5	3	19	10	9	14	6	16	7	7	0.0
	5	24	3	42	17	15	23.5	8.5	30	14	15	2.1
	5	25.5	5	41	17	15	26.5	5	43	14	13	0.0
	7	62.5	10	105	17	27	44	12	64	21	19	29.6
	7	77.5	11	133	53	40	47.5	10	75	20	19	38.7
	7											
2190-75-2	3	9	3	12	5	6	8.5	4	9	14	16	5.5
	3	8	4	8	5	5	10	4	12	5	6	0.0
	5	17.5	5	25	10	10	14.75	5.5	19.5	23	24	15.7
	5	19.5	4	31	10	11	16	5	22	9	9	17.9
	7	67.5	6	123	27	24	37	8	58	17	18	45.2
	7	52	3	98	19	19	30	10	40	13	14	42.3
	7											
Dresser	2	5.75	3.5	4.5	3	5	6.5	4	5	5	4	0.0
	2	5.75	3.5	4.5	3.5	4	6	3.5	5	3.5	3.5	0.0
	4	10.75	5	11.5	8	7	10.25	4.5	11.5	7	7	4.7
	4	11.25	4.5	13.5	7	7	11	5	12	8	8	2.2
	6	15.75	4.5	22.5	13.5	14	15.25	4.5	21.5	12	11.5	3.2
	6	17.5	6	23	12	13	15	4.5	21	12	12	14.3
	7	18.5	4	29	10	9	17.5	4.5	26	11	9	5.4
	7	20	3	34	10	10	16.75	4.5	24.5	11	8	16.3
	7											
	7											

FIGURE 1

APPARENT VISCOSITY, cps

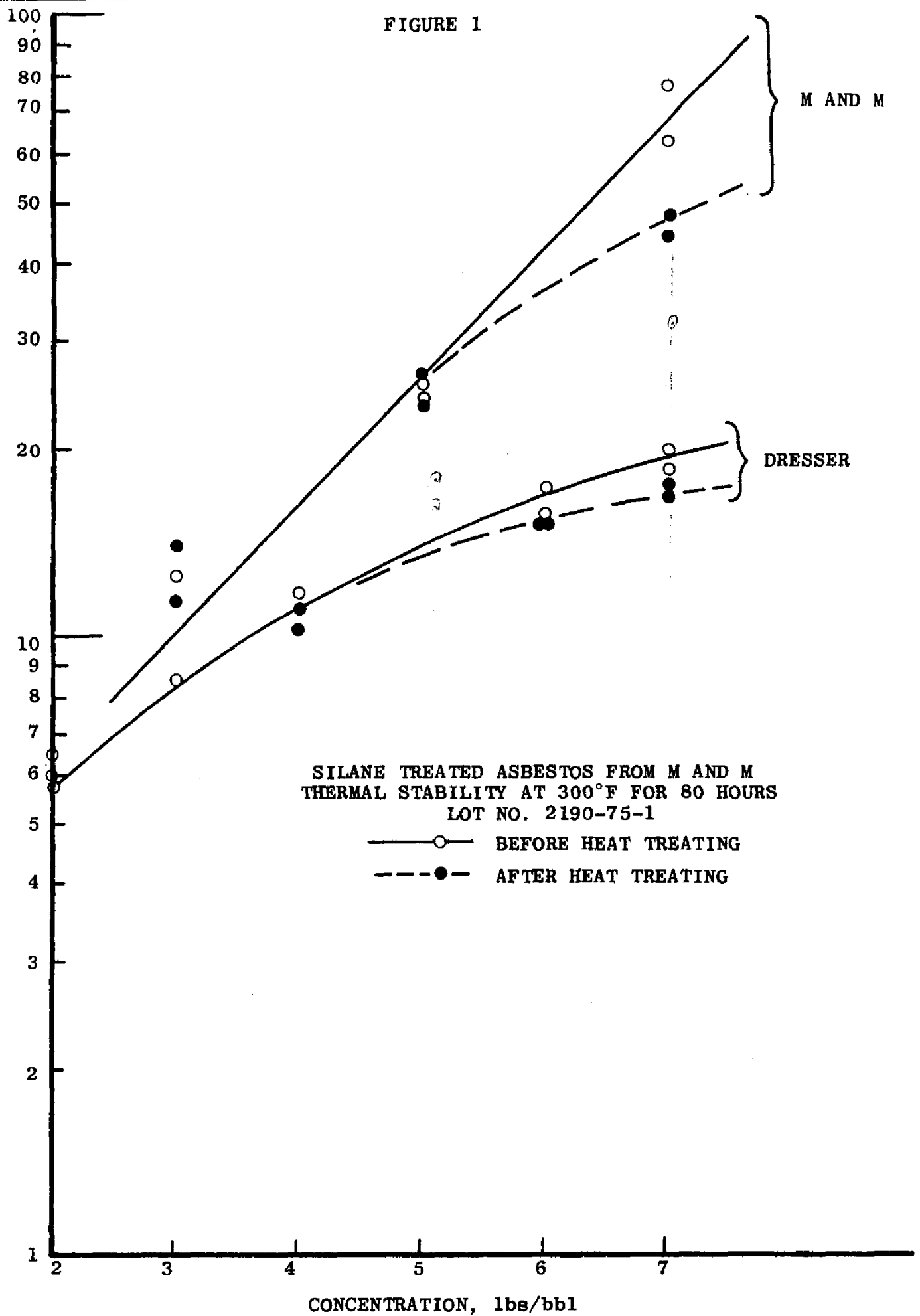
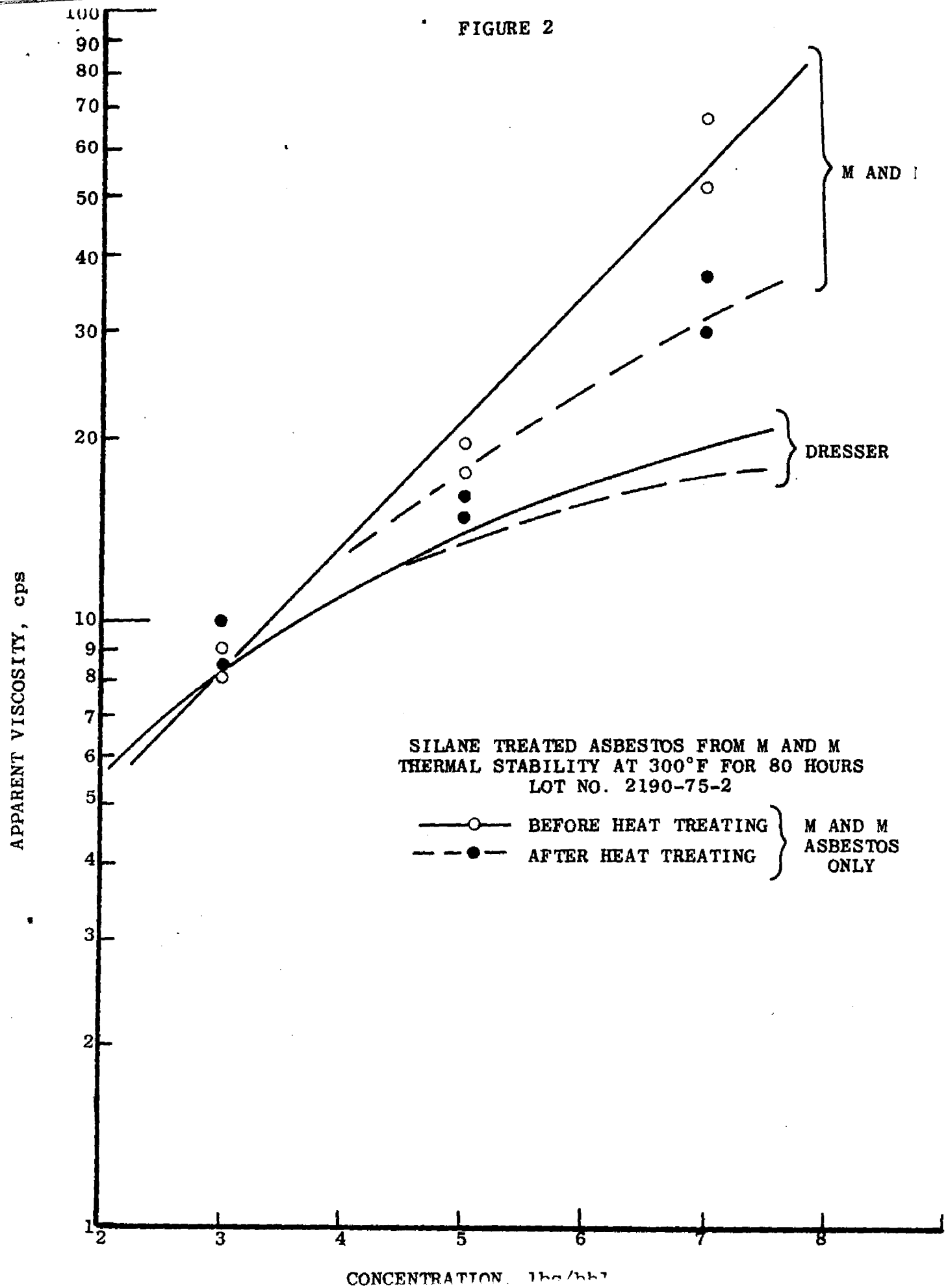


FIGURE 2



UNION CARBIDE CORPORATION
270 Park Avenue, New York, NY 10017

Performance Chemicals and Polymers Division

RECEIVED

JUN 13 1978

M. E. ELLING

TO: Mr. M. E. Elling'

DATE: June 13, 1978

CC: Mr. T. W. Longmire
Dr. N. J. McCarthy
Mr. G. W. Yule

6/14
CC sent to
Bill Thumber for
comments
luc

Dear Mike:

I have arranged for product code 17425 to be assigned to CALIDRIA Silatherm Pellets - the silane treated asbestos you plan to purchase from Metals Division and resell to Dresser and others in the oil patch -- and will reside in profit center 190.

Based on your suggested \$1.50 truckload price and assuming the material is packaged in 50 pound bags, I would suggest the following schedule, all prices to be FOB King City, California, freight for account of buyer:

30,000 lbs. and over	\$1.50/lb.
12,000 - 29,000 lbs.	1.52/lb.
6,000 - 11,999 lbs.	1.56/lb.
500 - 1,999 lbs.	1.62/lb.
100 - 499 lbs.	1.74/lb.
50 lbs.	2.34/lb.

Please let me know if this price schedule is acceptable to all involved and I will implement it.

Very truly yours,

Marty
M. F. Cohen

MFC:kr

UCC 001681



INTERNAL CORRESPONDENCE

xc Mike Elling

METALS DIVISION

To (Name) Mr. W. C. Thurber
 Division Metals Division
 Location Union Carbide Corp.
 270 Park Ave.
 New York, NY 10017

Copy to

P.O. BOX 578 - 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 14302

Date March 28, 1978
 Originating Dept. Mineral Products Technology
 Answering letter date
 Subject Speculative Operating Cost Estimate
 Silane Treated Asbestos
 Dresser Process

Dear Bill:

I have estimated that the operating cost to produce a silane-treated leached asbestos product by a competitor would be in the \$0.70 per pound order of magnitude. This cost does not include the price of the silane.

I made several assumptions in arriving at this figure which includes a production rate of 1000 lb. product per shift. I assumed three shifts per day and five days per week or a nominal capacity of 750,000 lb. product per year. It also assumes that the manufacturing would be associated with another facility rather than a "gross roots" operation. I have also neglected any allocated expenses or corporate overhead.

These costs are summarized as follows:

<u>Item</u>	<u>Cost - \$/lb. Product</u>
Direct Labor	0.373
Indirect Labor	0.056
Direct Materials (Ex. silane)	0.2175
Indirect Materials	<u>0.0435</u>
Total Operating Cost (Ex. silane)	0.69

Very truly yours,

R. G. Woolery
 R. G. Woolery

RGW/bsn
 Attach.

SPECULATIVE OPERATING COST ESTIMATE

SILANE-TREATED ASBESTOS

DRESSER PROCEDURE

<u>Item</u>	<u>Price</u>	<u>Quantity</u>	<u>Cost \$/ton Product</u>
A. <u>Direct Material</u>			
1. Asbestos	\$120/ton		
Shipping	<u>70/ton</u>		
	\$190/ton	1.2	\$ 228.00
2. H ₂ SO ₄	53/ton		
Shipping	<u>15/ton</u>		
	\$68/ton	0.44	30.00
3. NaOH	\$380/ton	0.30	114.00
4. Methanol			30.00
5. Fuel			20.00
6. Bags + Pallets			13.00
7. Silane			<u>Not included</u>
Total Direct Materials (Exc. silane)			\$435.00
B. <u>Indirect Materials</u> including utilities @ 20% of A			87.00
C. <u>Direct Labor</u>			
	<u>Per shift</u>	<u>Per day</u>	<u>@</u>
1. Operators - Dryer/Bagger	1	3	\$9.00/hr. 144.00
Leach Circuit	1	3	9.00/hr. 144.00
Filter	1	3	9.00/hr. 144.00
Foreman	1	1	10.00/hr. 160.00
Maint.	1	<u>1</u>	9.50/hr. <u>152.00</u>
		11	\$746.00
D. Indirect Labor @ 15% of Direct			\$112.00
Total cost per ton of silane product (Exc. silane)			\$1,380/ton \$.69/lb.

METALS DIVISION - "CALIDRIA" ASBESTOS

FJS/RWR Don
3/8

CUSTOMER CALL REPORT

copy to LONGMIRA 3/2/79

CUSTOMER & LOCATION Dresser Industries-Houston, TX INDUSTRY Oilfield Products Div. CLASSIFICATION Drilling Fluids
SALESMAN John L. Myers,
J. E. Walsh REGION DATE OF CALL 3/1/79
& D. F. Braun (Ch. & Pl)

ASBESTOS HEALTH & REGULATORY DOCUMENTS PROVIDED:

☒ Other, specify below

PERSONS INTERVIEWED: Paul Wells - Mgr. Research & Engineering (Magcobar)
Dr. Tom Sample - Technical Advisor
Ray McGlothlin - Technical Advisor
Rob Moseley - Mgr. Environmental Engineering

CALL OBJECTIVE: Determine Dresser's interest in RG-600.

RESULTS OF CALL: Accepted P.O. #29087P for about 20,000 lbs. RG-600 (entire NF inventory) at 30¢/lb. to be shipped ASAP. OK to ship via rail if labor situation prevents truck shipment. (Can't ship until picket line down.)

I explained our asbestos plant situation - that we do not have a major chemical treatment facility and that we prefer to sell raw asbestos fiber unless a significant market is available for a treated product. Also, that it would be very difficult to justify a major financial investment at this time.

For health/regulatory reasons, they have removed asbestos from PC-OTA, their additive for oil-base mud systems. They are currently using VG-69, an amine-treated bentonite, which performs the function of asbestos (suspending barite) at lower temperatures but is "no good" at the elevated temperatures associated with deeper wells. They must have an asbestos-like product for anticipated PC-OTA sales by the second quarter 1979 and until they can find someone to produce "silanized mineral fiber."

Based on chemical analysis and electron microscopy, they are convinced that the product covered by their composition of matter patent (U.S. No. 4,137,367) will not be classed as asbestos and will not be subject to asbestos regulations. We discussed our silane-treated RG-244, and it was concluded that our product, because of less leaching, would still be classed as asbestos. They, therefore, are not asking us to produce silane-treated RG-244. They plan to run animal and other toxicity tests on their product to prove their contention that it is not asbestos. They have been in touch with OSHA and have written encouragement from Eulah Bingham to proceed. They are working diligently to find a producer. They have the facilities for production, but the plant is located in "downtown Houston" and they do not want to get involved with EPA, etc. Their long-range goal is to provide the "world" with an asbestos-like product which is not classed as asbestos.

(over)

They evaluated a bag sample of RG-600 and are willing to use it as a stop-gap until they can get silane-treated. I explained that we must sell it to them as asbestos, but they plan to blend it with the other PC-OTA components and package it without marking the bags as containing asbestos. They will interpret the OSHA regulations that the asbestos is bound or coated in such a way that it is not covered. Assuming their field trials with the 20,000 lbs. of RG-600 are successful, they will need about 185 tons during the second and third quarters of this year. Their annual requirements for the PC-OTA product are 400 tons and they expect 10% growth per year. I advised that we could handle this from Niagara Falls, but that the price would be 90¢ to \$1 per pound based on new cost estimates. I told them we would need 8 weeks notice to provide a truckload. I promised that I would get back to them in a few days as to whether or not we would provide a continuing supply of RG-600 at a rate of 400 TPY until they could obtain the silane-treated product covered by their patent.

They will get a sample of Oil Wet Super Visbestos (OWSV) from Montello to evaluate in PC-OTA. If this proves to be a "safe" product for them, I told them the cost should be considerably less than \$1/lb. and would probably be much more readily available. I told them we may be able to ship this product without the OSHA label, but that it would still be asbestos.

I mentioned the RG-244 animal tests we had run at Mellon and they would like to see the report if possible.

They have evaluated J-M and other asbestos but have decided that ours, Super Visbestos, is what they need for their product. They had a sub-contractor treat about 10,000 lbs. of Super Visbestos but they did not use U C silane and the performance was not quite up to their standards. They blame this on the silane and the sub-contractor and do not think he can make their continuing requirements. I stood firm that they must obtain Super Visbestos through Montello (and Dean insisted they must obtain their silane from him). Unless some major friction develops, it seemed clear that they will use UCC raw materials in their final product.

It was concluded that there was no need for a meeting in NY on 3/19/79. I will be in NY on 3/6 and could elaborate on this report to any interested parties.

FOLLOW-UP ACTION REQUIRED:

1. Get 20,000 # RG-600 shipped ASAP.
2. Develop sales accounting for RG-600 produced at NF.
3. Get Mellon report and transmit it to Rob Moseley if possible.
4. Determine whether or not OWSV must be OSHA-labelled.
5. Determine Montello's position short- & long-term.
6. Determine if Dresser patent covers our product and whether or not we want to oppose the Dresser patent.
7. If we are interested in producing silane-treated asbestos according to their patent, determine where it could be done and in what time frame.
8. Decide if we will provide RG-600 as required by Dresser and what the price will be.
9. Rob Moseley would like to get together with Harry Rhodes at some convenient time.

COPIES TO:

D.F. Braun, R. Brantigan, GRA, FJS/RWR, RGW, JRL, HER, TPN, JEW, KC-FILE, NF-FILE

JIM:dal 3/5/79

METALS DIVISION - "CALIDRIA" ASBESTOS

FJS/RWR Done
3/8

CUSTOMER CALL REPORT

copy to LONGMIRE 3/8/79

CUSTOMER & LOCATION Dresser Industries-Houston, TX INDUSTRY Oilfield Products Div. CLASSIFICATION Drilling FluidsSALESMAN John L. Myers,
J. E. Walsh REGION DATE OF CALL 3/1/79
& D. F. Braun (Ch. & Pl)

ASBESTOS HEALTH & REGULATORY DOCUMENTS PROVIDED:

☒ Other, specify belowPERSONS INTERVIEWED: Paul Wells - Mgr. Research & Engineering (Magcobar)
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FOLLOW-UP ACTION REQUIRED:

1. Get 20,000 # RG-600 shipped ASAP.
2. Develop sales accounting for RG-600 produced at NF.
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4. Determine whether or not OWSV must be OSHA-labelled.
5. Determine Montello's position short- & long-term.
6. Determine if Dresser patent covers our product and whether or not we want to oppose the Dresser patent.
7. If we are interested in producing silane-treated asbestos according to their patent, determine where it could be done and in what time frame.
8. Decide if we will provide RG-600 as required by Dresser and what the price will be.
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COPIES TO:

D.F. Braun, R. Brantigam, GRA, FJS/RWR, RGW, JRL, HBR, TPN, JEW, KC-FILE, NF-FILE

JIM:dal 3/5/79

METALS DIVISION - "CALIDRIA" ASBESTOS

FJS/RWR Done
3/8

CUSTOMER CALL REPORT

copy to LOUENIR2 3/8/79

CUSTOMER & LOCATION Dresser Industries-Houston, TX INDUSTRY Oilfield Products Div. CLASSIFICATION Drilling FluidsSALESMAN John L. Myers,
J. E. Walsh REGION _____ DATE OF CALL 3/1/79
& D. F. Braun (Ch. & Pl)

ASBESTOS HEALTH & REGULATORY DOCUMENTS PROVIDED:

☒ Other, specify belowPERSONS INTERVIEWED: Paul Wells - Mgr. Research & Engineering (Magcobar)
Dr. Tom Sample - Technical Advisor
Ray McGlothlin - Technical Advisor
Rob Moseley - Mgr. Environmental Engineering

CALL OBJECTIVE: Determine Dresser's interest in RG-600.

RESULTS OF CALL: Accepted P.O. #29087P for about 20,000 lbs. RG-600 (entire NF inventory) at 30¢/lb. to be shipped ASAP. OK to ship via rail if labor situation prevents truck shipment. (Can't ship until picket line down.)

I explained our asbestos plant situation - that we do not have a major chemical treatment facility and that we prefer to sell raw asbestos fiber unless a significant market is available for a treated product. Also, that it would be very difficult to justify a major financial investment at this time.

For health/regulatory reasons, they have removed asbestos from PC-OTA, their additive for oil-base mud systems. They are currently using VG-69, an amine-treated bentonite, which performs the function of asbestos (suspending barite) at lower temperatures but is "no good" at the elevated temperatures associated with deeper wells. They must have an asbestos-like product for anticipated PC-OTA sales by the second quarter 1979 and until they can find someone to produce "silanized mineral fiber."

Based on chemical analysis and electron microscopy, they are convinced that the product covered by their composition of matter patent (U.S. No. 4,137,367) will not be classed as asbestos and will not be subject to asbestos regulations. We discussed our silane-treated RG-244, and it was concluded that our product, because of less leaching, would still be classed as asbestos. They, therefore, are not asking us to produce silane-treated RG-244. They plan to run animal and other toxicity tests on their product to prove their contention that it is not asbestos. They have been in touch with OSHA and have written encouragement from Eulah Bingham to proceed. They are working diligently to find a producer. They have the facilities for production, but the plant is located in "downtown Houston" and they do not want to get involved with EPA, etc. Their long-range goal is to provide the "world" with an asbestos-like product which is not classed as asbestos.

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JIM:dal 3/5/79

METALS DIVISION - "CALIDRIA" ASBESTOS

FJS/REAR Done
3/8

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copy to KOUNEMIR 3/11/79

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JLM:dal 3/5/79

file Silane asbestos

March 2, 1979

RECEIVED
MAR 2 1979
F. L. SMOOTSLER

TO: FJS
FROM: RWR

John Myers visited Dresser Industries on Feb. 27 and learned the following about silane asbestos:

1. Dresser believes that the product of their invention is not asbestos because it has been leached and coated. Government agencies have given them encouragement in this belief.
2. Dresser believes that our invention is different but may be included in their patent. Ours, they feel, would still be asbestos. The comparison they make is that ours is a silane covered asbestos whereas theirs is a silane coated silicate.
3. John sold our inventory of about 20,000 pounds of RG 600 which was produced at Niagara in a pilot plant. Price 30¢ per lb. Future quantities would be priced at \$.90 - \$1.00 (he so informed Dresser).
4. RG 600 is produced by Woolery at the rate of about 3 tons per day.
5. Dresser requirement for RG 600 will be 185 tons over the balance of the year (I am not certain about the period) but $\frac{185}{3} \approx 62$ days or 12⁺ weeks.
6. Dresser estimates that they can move about 400 tons of silane treated product in their first year and anticipate a 10% growth rate from that base.
7. Dresser does not see anything to be gained by a meeting with UCC because they do not want our product.

I am not sure what commitment, if any, John has made to Dresser regarding RG 600. We should analyze this but it looks interesting. If they do establish their product as non-asbestos it is the type of application we are looking for. We certainly would not want to commit to producing any large quantity of product in our laboratory; therefore, a pertinent question is what type of facility would be needed and what would it cost.

C&P will probably raise the question of product performance. RG 244 apparently offers the prospect of better temperature stability. If this is proven to be the case would the product be more attractive than the Dresser product. Price would be a consideration and the RG 244 process should be low cost -- and if we market the material without Dresser or C&P participating we could presumably maintain an edge. If our product is classified as asbestos and theirs is not, would this be a significant factor weighing against ours?

It is time to regroup. My own opinion is that this would be a good point to break away from C&P and pursue our own evaluation of the situation. I believe we should also put a restraint on John (if he has not already committed us) with regard to the Dresser route while we sort things out. Dresser apparently regards the matter of a non-asbestos product as very important to the extent that they ignore the facts that the UCC product may be superior and lower cost. I wonder if this argument will stand close inspection. One might also postulate that a chrysotile fiber coated with silane is not asbestos.

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Fluor