

GRACE

Construction Products Division

September 27, 1983

NOTATION OF
DOCUMENT
REVIEWER
REDACTED

TO: R. J. Bettacchi

FROM: R. A. Marther/G. T. Anderson

SUBJ: September, 1983 Report - Fireproofing Products

cc: D. M. Hilton
L. S. Shu

A. Major Project Status Report

1. MK-5 SG Introduction

- a. As previously reported, product performance of MK-5 SG (modified) was continuously monitored on two jobs in New York City. Product flow rates were comparable to MK-5 with lower pump pressures (75-100 psi).

At a follow-up meeting with the contractor he agreed to use the modified SG product on the 55 story Equitable Building (his next job). This job will pump through the winter.

With regards "winter time" pumping, we have discussed our concerns over Research data on MK-5 SG "sensitivity". Data seems to indicate that in marginal weather conditions, product performance issues such as multi-pass applications and bond may be adversely affected by slower achievement of strength and penetration resistance. We will monitor this throughout the winter with material coming out of Easthampton and Trenton. No additional plant start-ups in the Eastern and Central Regions are planned at this time.

- b. Dallas produced MK-5 SG (modified) for the Denver market was job site monitored. No product problems were noted. For Denver the problem would seem to be delivery delays caused by the long supply line.
- c. Conversion of the Newark plant from regular SG to modified SG is set for the week of September 25th.

2. U.L. Fire Tests

As previously reported, we witnessed three (3) full scale fire tests of Monokote at U.L. during September. These were:

Metal Deck Inc. (new composite deck profile)
Bowman (new electrified floor system)
Bowman (new deck profile)

I am pleased (and relieved) to report that product performance was excellent in all three tests. All test and approval goals set by the test sponsors were met. While none of the tests involved cellular deck, success in these 3 tests was significant because:

- failure would have been disastrous;
- improvements in certain fire test approvals will be possible;
- we may have an advantage over Cafco in those situations using Bowman's new electrical system deck profiles.

Our next test assembly is the ASC Pacific assembly, a fully electrified construction. Spraying will take place in October. We have not yet determined the need for a bonding agent.

Information on other U.L. fire test work is attached (Table B).

3. SBO Vermiculite

The first Monokote production with SBO vermiculite was completed at the Wilder plant. Field monitoring indicated no yield/pumping differences.

We have agreed to further evaluate SBO vermiculite at the Dallas plant. This plant will be converted in October.

4. Vermiculite-Asbestos

Three reviews were held on the Vermiculite-Asbestos situation in conjunction with Central Region sales training meetings. As a result of these sessions I believe that our position on that subject is solid and that the sales force will be able to effectively deal with this issue. We plan to present this subject at the upcoming Central Region applicators meeting.

The laboratory which reported to Wilkins Insulation that MK contained 5-8% asbestos has admitted their error. We are currently dealing with a similar situation in Los Angeles (Smith Emery Lab - 3% asbestos).

We are currently addressing Florida legislation which states "no asbestos" due to take effect October 1st. We will need legislative or judicial relief from this law. While we cannot hope to do this prior to October 1st, we have no plans to suspend operations.

B. Key Financial Data

Monokote sales for September were 378,400 bags. Sales were 179,000 bags (32.1%) under budget and 193,300 bags (33.8%) under prior year.

YTD Monokote sales of 3,672,200 bags are 1,154,700 bags (23.9%) under budget and 1,174,200 bags (24.2%) under prior year. The seasonally adjusted annual rate, based on yet another under budget month, fell to 5,076,000 bags. To reach this level, sales per month of 468,000 bags would be necessary. This sales level has been reached only twice in 1983. With the continued So. California strike and the onset of cold weather in the East, sales over 5,000,000 bags is unlikely.

In September, the average selling price rose to \$6.308 per bag, up over 8c/bag versus August results. Despite the rise, selling price was 9.7c/bag (1.5%) under budget for the month and up only 33.1c/bag 5.5%, over September, 1982 results.

For the YTD results, the ASP was \$6.280/bag. This was 5.3c/bag (0.8%) under budget, but up 45.8c/bag, 7.9% over YTD 1982 sales results.

For the month, GM was 46.2%, only 0.4% points under budget and 4.1% over prior year results. For the YTD sales GM was 45.7%. This was only 0.5% points under budget, but 4.9% ahead of last year sales.

Sales of other fireproofing products through September were:

<u>Product</u>	<u>Volume</u>	<u>Gross Sales \$</u>	<u>Gross Margin \$</u>
Zonolite 3300	37,667	595,191	279,210
Zonolite 105	20,459	261,436	161,853
Zonolite			
Topkrete	12,176	124,649	86,891
Monokote			
Export	146,549	797,627	277,373
	<u>216,851</u>	<u>1,778,903</u>	<u>805,327</u>

Zonolite 3300 sales through September of 37,667 bags are down (21%) under budget and well behind 1982 by 10,316 bags.

Zonolite 105/Topkrete sales represent nice add on businesses. So far most of the sales have been in the Eastern Region.

Monokote Export sales are well ahead of both budget by 37,400 bags up 34.2% and 49,000 bags, up 50.3%, over last year. Even better they found someone to pay \$7.08/bag in September which gave a good GM% of 45.4%.

C. Market Conditions

The WS Journal (8/25/83) reported a high level of contracting activity in the O&B building sector. This is unusual given the overall glut of space available. While they (and Dodge) report activity at the 1981 record level, this may be a short term burst of activity.

D. Competitive Activity

- Cafco announces a new plant (blending facility) scheduled for January 1st opening in Waco, Texas.
- An analysis of market conditions lead to a recommendation to install a MK mixer in Irondale. This will enable us to secure Bonitz's work in Birmingham (62,000 bags initially on the Alabama Power job) and at least 100,000 bags/year incremental business in the 3 state area this plant would cover.
- Cafco has just held their fourth applicator meeting so far this year. This is by far their most concentrated effort and coupled with "low ball" pricing is causing loss of market share.

The Central Region's applicator meeting is set for October 2-5. Decisions on our own group of applicator sessions will be made following the Central Region meeting.

- In the export area we have been unable to resolve technical problems with analysis of our BS.476 fire test results. Follow-up meetings with the test laboratory has resulted in some thickness reductions. These, however, still leave us with a 30%-40% thickness disadvantage. It will be necessary to re-test to resolve this issue. Failure to do so jeopardizes the growing Far East business.
- Indications are that Tnemec is testing a South African vermiculite and gypsum based fireproofing product at U.L. This can only be for direct competition with Monokote. More information as it becomes available.

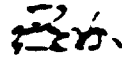
E. Other

1. We have discussed in detail a program with Research to evaluate the quantity and quality of L #3 vermiculite in MK. Manufacturing is set for early October.

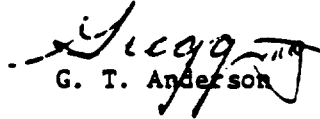
2. The '84 Sweet's catalog was sent to the field sales force.

F. October Activities

1. Central Region Applicators Meeting.
2. AWCI Business Meeting - Salt Lake City.
3. Resolution of BS.476 Fire Testing approval.
4. Fire Testing - ASC Pacific Assembly.



R. A. Merther



G. T. Anderson

RAM/GTA:mg

TABLE A

1983
X OF MK-5 SG OF TOTAL MONOKOTE SHIPPED BY PLANT/BY MONTH

PLANT	January	February	March	April	May	June	July	August	Sept.
Newark	51.3X	83.7X	97.1X	95.7X	95.6X	92.3X	95.7X	98.4X	100X
Portland	66.2X	79.9X	66.6X	NIL	NIL	NIL	NIL	NIL	-
Santa Ana	6.7X	13.8X	NIL	NIL	NIL	NIL	NIL	NIL	-
Phoenix	16.1X	43.3X	50.7X	27.0X	NIL	NIL	NIL	NIL	-
Dallas	19.5X	10.2X	4.5X	NIL	NIL	NIL	NIL	NIL	10X
Denver	100.0X	100.0X	100.0X	100.0X	100.0X	100.0X	100.0X	EXTINCT	-
Trenton	18.5X	20.5X	7.2X	NIL	NIL	NIL	NIL	11.8X	10.9X
Muirkirk	3.4X	NIL	NIL	NIL	NIL	NIL	NIL	NIL	-
Easthampton	10.1X	NIL	38.2X	9.0X	10.6X	7.4X	8.7X	12.9X	15.8X
TOTAL US	19.3X	28.1X	20.1X	12.9X	14.3X	18.8X	14.5X	20.9X	15.6X

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TABLE B

<u>Project</u>	<u>Status</u>	<u>Statement of Business Objective</u>	<u>Estimated Costs</u>
MAC-FAB Fire Test	Deck constructed.	Obtain necessary approval for MK on MAC-FAB deck.	\$24,000
Metal Deck Inc.	Test successfully run on September 1st.	Obtain necessary approvals for MK on MDI deck.	No direct Zonolite costs.
Bowman	2 tests successfully run on September 9th and September 15th.	Obtain necessary approvals for MK on Bowman deck	No direct Zonolite costs.
GRM approval over ZIC roof decks.	4 small scale assemblies built in July; tests scheduled for October.	GRM approval over ZIC roof systems.	\$ 6,000
ASC Pacific	Assembly to be sprayed in October.	A full electrified floor system this will be first test since the last failures.	No direct Zonolite costs.
Zonolite 3 Beam Test	Material ordered for construction.	Test data necessary to provide competitive MK thickness approvals.	\$24,000
Monokote column tests	Project initiated at U.L. Spraying set for October.	Evaluate effect of product density on thickness; thickness reductions possible.	\$15,000

GRACE**Construction Products Division**

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October 7, 1983

TO: R. J. Bettacchi
FROM: G. N. Ciampa
SUBJ: Monthly Report - September 1983

Business Summary

Polycel Products - Total shipments during the month of 69.0M lbs are 15.9% behind budget but are 11.3% ahead of September 1982.

Strong sales in Texas and the Central region in Professional accounted for the majority of the overrun.

Sales through our consumer and industrial reps were strong enough (31.0M lbs.) to offset the aerosol sales underruns in the Central and Eastern regions.

Wall Insulation Products - ZMI sales volume of 212.0M bags were 9.8% ahead of last September and 7.6% ahead of budget. Year to date sales volume of 1643M bags are 3.3% ahead of September 1982 and 5.0% ahead of budget.

Thermo-stud sales of 582 MBF were disappointing after strong sales in July and August; we felt September would be even better. Sales volume for the month were 34.4% behind last September and behind budget by 52.2%. Year to date sales volume is even with last year but behind budget 35.9%.

Attic Insulation - Sales volume of 88.0M bags are for the sixth straight month below 1982 levels. Year to date sales volume is 18.5% below last year.

See product volume summary chart on next page for detailed analysis of monthly and year to date volumes.

Market and CompetitionPolycel Products

In mid-September we launched a major program aimed at regaining business in Texas. We are offering competitive prices and extended payment to twenty-seven target accounts.

We're on the right track - we have sold 4.0M lbs. in a short period of time. Eagle Insulators, Inc. has taken advantage of the program and ordered 1.2M lbs. Their purchases in 1983 prior to this were only 1.2M lbs. versus 13.2M lbs. thru September 1982. We also regained Diversco's business in Dallas. They ordered 1.8M lbs. under the program. When they were a full time customer in 1981, they purchases over 10.0M lbs.

Owens Corning management have approved Polycel One for sale through their sixty-five supply centers. Polycel is the only foam sealant in an aerosol can that they have allowed their supply centers to sell. We have received orders already for 120 cases from the Louisville and Cincinnati centers.

We participated in several dB Plus acoustical sealant seminars put on at the Owens Corning branches in Columbus and Cincinnati. These seminars were a joint effort between Mike Ragan's people and the Owens Corning branch managers. As a result of the effort O.C. is stocking dB Plus. They were successful in securing distribution in Louisville and Cincinnati.

Polycel One is being advertised by Cotter/True Value in October in the following magazines: BETTER HOMES AND GARDENS, FAMILY CIRCLE, MECHANICS ILLUSTRATED, POPULAR SCIENCE, POPULAR MECHANICS, SPORTS ILLUSTRATED, (World Series Preview) and OUTDOOR LIFE. Also the True Value direct mail circular going out in October to 20.3 million homes will also feature Polycel. The advertising we are receiving is an example of co-op advertising at its best. For a fraction of what it would actually cost, our product will be brought before over 100.0 M people in October.

M. Toben has received an order for a new consumer account in the Northwest. T & A has ordered 1400 cans of PC5's and an order is pending from the Angels centers in Southern California.

The industrial business appears to be picking up. We have lowered our price in two areas of the country to keep from losing business. We also introduced a 5% sales increase in PC8's effective 9/15/83. Now that the fall weather has arrived we should expect to see a surge over the next three months.

In September leads received from the JULY BUILDER magazine were sent out to our certified contractors and distributors. Also a copy of the leads and letters sent to our customers was sent out to the Polycel specialists for follow up.

Wall Insulation

Central Regional Management has agreed to change over to the revised T-clip system. New clips and the new channel have already been shipped to the Milwaukee plant.

Two new T-clip jobs were started in September. One job is in Waco, Texas and that is a 2 1/2 inch job and the second, a 2 inch job in Florida.

We signed the Dryvit agreement and have returned it to them. We are waiting at this point for Dryvit's approval and we can begin to actively pursue this business in Phoenix, Arizona and in Southern California. There are currently 100,000 board feet of material aging at the South Gate facility.

Another OCF Supply Center has been added to the Thermostud distributor list. The supply center in Atlanta purchased a half truckload of Thermostud for their warehouse and began marketing the product in September. This is the first OC supply center in the Southern Region to begin marketing Thermostud.

A slide presentation explaining the revised Thermostud T-clip system has been distributed to the regional offices as an aid to helping the sales force introduce the revised system to distributors.

The ZMI incentive program ended in September. We know the program was successful and a detailed analysis will follow.

We continue to get reports that EPS scrap is winning in obtaining acceptance at the contractor level over ZMI. We are developing sales tools to aid in defeating this low price competitor.

The 1984 Sweet's catalogs for the Thermostud system with the new T-clip and channel as well as ZMI have been completed and are printed.

Attic Insulation

Overall, poor insulation sales at the retail level have affected attic insulation. Even the best campaign doesn't seem to be able to compete with 80 and 90 degree temperatures. With many stores carrying last year's inventory and consumers who aren't interested we have a product which is behind last year by 20%.

Research and Development

Polycel Products

In October we will begin the market test of the new improved A-1 catalyst. We are producing one hundred PC60-D's and one PC3600. These will be distributed around the country to specific accounts. We will attempt to observe the operation of as many of the A-1 catalyst tanks in the field as possible.

The private label 9.5 board foot two-component kit continues to elude us. The latest delivery date is October 15th. Since we have been promised this for the last four months, I don't put a lot of faith in this event occurring.

In Texas we experienced several failures of the new refill valve. The problem with the valve has been identified and steps have been taken to correct it. We have also contacted our original European valve supplier. They have sent us pricing and samples of valves which we will evaluate.

We are going to have to identify another source of aerosol cans. Southern Can has to date never met many of their promised ship dates. It is especially important during this season that they do meet those dates.

Wall Insulation

A wall has been constructed for the guarded hot box test on the Thermostud system with the T-clip. We should know in October what the in-place performance is of the Thermostud system with the T-clip. We can compare this to these performance results from our computer model.

As stated earlier we are requesting research help to determine the static charges of ZMI and EPS scrap. If our sales force can show proof that EPS scrap's high static charge prevents it from completely filling blockcores we may be able to deter sales of EPS scrap without lowering ZMI prices. In addition we plan to have some thermographs produced of separate block walls filled with EPS scrap and ZMI. This should graphically reveal that ZMI is a superior product in filling and insulating the cores of a block wall.

G. N. Ciampa

GNC:jmm

PRODUCT VOLUME SUMMARY :SEPTEMBER 1983

PRODUCT/
REGION

SEPTEMBER VOLUME

JAN-SEP VOLUME

NEW

ZMI BAGS(000)	SEPTEMBER VOLUME					JAN-SEP VOLUME					TOTAL 1982
	82A	83A	83B	82A/83A %	83A/83B %	82A	83A	83B	82A/83A %	83A/83B %	
SOUTH	63	75	61	19	23	585	609	452	4	35	789
CENTRAL	52	59	49	13	20	390	389	388	0	0	579
EAST	54	55	60	2	(8)	391	421	446	8	(8)	570
FLORIDA	14	12	9	(14)	33	105	117	79	11	48	140
WEST	10	11	18	10	(39)	118	107	145	(9)	(25)	150
TOT	193	212	197	10	6	1589	1643	1510	3	9	2238

THERMO STUD SYST(MBF)	SEPTEMBER VOLUME					JAN-SEP VOLUME					TOTAL 1982
	82A	83A	83B	82A/83A %	83A/83B %	82A	83A	83B	82A/83A %	83A/83B %	
EAST	268	219	260	(18)	(16)	1610	1970	2020	22	(2)	2299
SOUTH	107	120	155	13	(22)	938	1340	1210	43	11	1260
WEST	172	115	400	(33)	(71)	1378	1111	3500	(19)	(62)	1709
CENTRAL	171	82	280	(52)	(71)	1980	1415	2941	(29)	(52)	3129
FLORIDA	169	45	125	(73)	(64)	1032	1080	1125	5	(4)	1229
TOT	887	582	1220	(34)	(52)	6935	6917	10796	0	(36)	9518

ZAI BAGS(000)	SEPTEMBER VOLUME					JAN-SEP VOLUME					TOTAL 1982
	82A	83A	83B	82A/83A %	83A/83B %	82A	83A	83B	82A/83A %	83A/83B %	
EAST	73	44	60	(40)	(26)	289	228	293	(21)	(22)	547
CENTRAL	41	39	43	(5)	NA	202	167	153	(17)	9	378
WEST	3	4	2	33	100	26	31	21	19	48	35
SOUTH	1	1	0	0	ND	9	5	0	(44)	ND	11
FLORIDA	0	0	0	NA	NA	0	0	0	NA	NA	0
TOT	118	88	105	(25)	(16)	526	431	467	(18)	(8)	971

POLYCEL PROF.LBS(000)	SEPTEMBER VOLUME					JAN-SEP VOLUME					TOTAL 1982
	82A	83A	83B	82A/83A %	83A/83B %	82A	83A	83B	82A/83A %	83A/83B %	
RYALS	9	9	23	5	(61)	125	92	184	(26)	(50)	177
CENTRAL	3	6	4	100	50	25	38	34	52	12	33
EAST	4	4	6	0	(33)	31	35	51	13	(31)	45
SOUTH	2	3	3	50	0	17	32	27	88	19	27
WEST	2	2	5	0	(60)	21	23	38	10	(39)	28
FLORIDA	0	1	1	ND	0	3	6	9	100	(33)	5
OTHER	1	0	0	(100)	ND	3	4	0	26	ND	0
TOT	11	16	19	45	(16)	225	230	343	2	(33)	315

AEROSOL LBS (000)	SEPTEMBER VOLUME					JAN-SEP VOLUME					TOTAL 1982
	82A	83A	83B	82A/83A %	83A/83B %	82A	83A	83B	82A/83A %	83A/83B %	
REPS	3	20	11	567	82	43	98	59	128	66	85
EAST	13	10	13	(23)	(23)	50	36	73	(27)	(51)	91
IND/AUTO	9	11	10	25	6	87	82	106	(6)	(23)	125
CENTRAL	12	8	12	(33)	(33)	47	37	69	(21)	(47)	67
RYALS	5	4	8	(20)	(50)	28	39	42	39	(7)	50
WEST	4	0	3	(100)	(100)	20	10	17	(49)	(38)	35
SOUTH	2	0	4	(96)	(98)	20	11	24	(45)	(53)	23
FLORIDA	1	0	1	(90)	(92)	6	2	7	(63)	(68)	7
MISC.	2	0	0	(100)	ND	2	0	0	(100)	ND	0

Construction Products Division

**SUBJECT: September, 1983
Monthly Report**

- The Wilder plant continues to produce Monokote from SBO treated L-3 concentrate with no manufacturing problems. The average furnace yield improvement for the first twelve carloads is 3.2%.
- August YTD sales to Gypsum customers are \$1,215,144 which is 18.5% over budget and 28.9% over prior year. The strong recovery we saw in the first half is expected to slow down, but should still finish the year well over budget.
- Air samples taken during the Firemate test at Minnkota Power Company indicates there were negligible amounts of tremolite fiber in the air. The combination of surface treating the L-4 concentrate and Dearborn's enclosed handling equipment are responsible for the low fiber levels. The highest TWA measured was 0.03 f/cc in an area where there was a large vermiculite spill.

A. Dearborn Chemical's Firemate Process

1. Minnkota Power Co. completed a three week evaluation of Firemate using high fouling coal containing 9% sodium. They are now planning a three week test of Perlite using DUSCO's injection equipment and burning normal grade coal containing only 4.5% sodium. DUSCO will then have another chance to run Firemate under the same operating conditions and sodium content to compare directly to Perlite. DUSCO estimates that Minnkota will run several more full scale tests before making a decision of which materials to use.
2. The fiber levels measured during the Minnkota Test were extremely low (highest recorded was 0.03 f/cc TWA). Even though we ran one control T/L without SBO treatment, we could not show any correlation between treated and untreated since most areas measured were zero or extremely low and beyond the accuracy of the test methods.

3. DUSCO is discussing another possible trial with the Allegheny Power System in Willow Island, West Virginia. This is a 175 MW unit with a tube fouling problem, which would consume 500,000 lbs./yr. (250 TPY) of vermiculite. DUSCO has requested Enoree concentrate due to landed cost difference with Virginia Vermiculite Co. We have agreed to supply test quantities from Enoree.

B. Tremolite Binder Project

1. Wilder continues to run SBO treated L-3 with no apparent problems. The mine assay yields are averaging 3.2% over untreated, and Wilder is reaching the higher assay yields. Table I shows the data on the first 12 cars. The yield improvement ranges from (1.8%) to +7.2%. The "flake yield" is the assay yield divided by the concentrate grade, which is the calculated yield on a 100% vermiculite basis. The wide fluctuation in yield is suspected to be due to sampling techniques at the mine. Once the oil treatment becomes a standard procedure, it will be easier to establish sampling procedures to get more accurate data.
2. We have targeted Dallas as our next plant to continue scale-up evaluation of SBO L-3. The first C/L should arrive the week of October 10, 1983. Monokote will be made and compared to control material in the field. We will also produce Terra Lite #3 and send to Travelers Rest for growth tests.
3. A split C/L of SBO treated L-4 was made with a control split from the same conveyor and sent to New Orleans. This will be used to check roof deck performance via C-45A tests. ZCA will be produced the week of October 10, 1983 from this test material.

C. Semi-Bulk Packaging

We are continuing to experiment with the return of tote sacks to Enoree. The bags returned from USG's Sweetwater, Texas plant are on their 3rd trip and have little attrition. USG's Canadian plant has returned bags and nearly half are not suitable for reshipment.

We will collect all cost information relative to return of tote sacks and use this to determine if we should accept this as standard policy.

D. Account Status

1. U. S. Gypsum Co. - USG purchasing is working to justify a plant evaluation of our SBO treated L-5 based on the freight savings to western plants (\$115,000) and the lower FOB price (\$157,000)..

USG management is reluctant to purchase from Libby due to the tremolite issue. We hope the new surface treatment and the potential \$272,000 savings will convince USG to run a full scale test.

II. NEW PRODUCT DEVELOPMENT

A. Vermiculite Emulsions

The patent investigation of the ICI patent turned up a prior patent expiring on June 13, 1984 which enables Grace to sell vermiculite emulsions using the ICI process without infringement after this date.

Several companies have been approached by ICI offering to sell the technology to produce a vermiculite emulsion. We have received inquiries from some of these companies such as: Owens Corning, J. P. Stevens and Armstrong World Industries. Also three paper companies are interested in this technology for paper coatings.

We are working with these potential customers to develop a vermiculite emulsion for their specific textile and paper applications.

B. Vermiculite Foam

ICI holds a strong patent position on the production of vermiculite foam. The foams we have made in the lab using their patented method have severe shrinkage problems. Unless these shrinkage problems can be resolved, this foam will be of limited commercial value.

R&D is working on several ideas to solve the foam shrinkage problem. A totally inorganic vermiculite foam would have great market potential as a fire retardant insulation.

C. Athletic Surfaces

We have a video recording of local tennis professionals playing on the experimental ZIC Tennis Court. It was raining most of the day and quite cool, therefore, the cooler playing characteristics were not apparent. Comments from the pro's indicate it is a good medium speed surface, with excellent bounce.

Before continuing with this idea, we will wait until Spring of 1984 to determine the product's resistance to winter freeze/thaw conditions. A preliminary market survey will also be complete by the first quarter of 1984.

III. INDUSTRIAL VERMICULITE (ZONOLITE)A. Texture Coatings

Verlite Corp., Tampa, Florida is now supplying U. S. Gypsum with African expanded vermiculite for acoustical plaster and texture compounds. This business was formerly supplied by Stronglite Products Co. Zonolite has been tested and rejected due to darker color.

USG reports that they are now switching several formulae to polystyrene beads due to lower cost of PS beads vs. vermiculite and Perlite.

B. Plastics Filler

Occidental Petroleum Corp. has found both Zonolite #4 as well as ground vermiculite to be an effective filler for Phenolic resins. The vermiculite also improves the heat resistance of the Phenolic. Tests are still underway. Potential sales volume is not known.



A. N. Crawford

ANC:mg

TABLE I

ACTUAL ASSAY YIELD VARIANCE AT WILDER

CARLOAD SHIPMENT DATE	UNTREATED CONTROL L-3			S80 TREATED L-3			VARIANCE PERCENT (%)		
	ASSAY YLD (BAGS/TN)	\$ ROCK FLAKE YLD (BAGS/TN)	\$ ROCK FLAKE YLD (BAGS/TN)	ASSAY YLD (BAGS/TN)	\$ ROCK FLAKE YLD (BAGS/TN)	\$ ROCK FLAKE YLD (BAGS/TN)	ASSAY YLD (BAGS/TN)	\$ ROCK FLAKE YLD (BAGS/TN)	\$ ROCK FLAKE YLD (BAGS/TN)
7/21/83	75.10	9.70	83.17	80.90	9.00	88.90	7.17	(7.78)	6.45
7/25/83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8/3/83	80.90	7.40	87.37	80.90	7.50	87.46	0.00	1.33	0.11
8/5/83	76.50	8.60	83.70	79.40	8.60	86.87	3.65	0.00	3.65
8/9/83	85.20	4.90	89.59	83.70	6.20	89.23	(1.79)	20.97	(0.40)
8/10/83	86.60	5.40	91.54	86.60	5.40	91.54	0.00	0.00	0.00
8/18/83	83.10	5.10	87.57	88.10	5.70	93.43	5.68	10.53	6.27
8/18/83	83.10	5.10	87.57	85.90	5.00	90.42	3.26	(2.00)	3.16
8/19/83	83.70	6.50	89.52	83.70	6.40	89.42	0.00	(1.56)	(0.11)
8/24/83	80.90	5.30	85.43	85.20	8.20	92.81	5.05	35.37	7.95
8/26/83	80.90	8.10	88.03	85.20	6.20	90.83	5.05	(30.65)	3.08
8/31/83	80.90	7.90	87.84	86.60	6.60	92.72	6.58	(19.70)	5.26
AVERAGE	81.54	6.73	87.42	84.20	6.80	90.34	3.16	1.07	3.24

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Construction Products Division

To: R. J. Bettacchi

Date: September 28, 1983

From: P. E. Korenberg

Subject: Monthly Report
September, 1983

I. International Consolidated

Gross sales for September were \$94,710, 5% favorable to budget but 20% unfavorable to September, 1982. Gross sales YTD are \$1,306,663, 62% favorable to budget and 53% favorable to YTD 1982. Current estimate remains at \$1,752M, however unanticipated sales to PID may increase this to \$2,000M.

II. Zonolite Finished Products

A. Sales

Zonolite sales totaled \$62,941 and were broken down as follows: Monokote to PID \$4,605; Monokote to Saudi Arabia \$32,101; Insulperm to Saudi Arabia \$19,759; Masonry to Saudi Arabia \$5,644; and, Other \$832. The 55,000 bags of Monokote to Korea are still on hold. Singapore, however, has released 41,000 bags for shipment from October-December, 1983.

B. Zonolite Expanding/Blending Facilities

1. Saudi Arabia

The Gosaibi agreement, as drafted by legal, has been returned to Sami Al Gosaibi for final review. We expect the present form to require only slight modification, and expect execution sometime in October. The cost data, supplied by engineering and used in preparation of the quotation to Gosaibi for a D-18 furnace, was found to contain an error of approximately \$45,000. Our original profit on sale of the furnace of \$80.6M will now be reduced to \$35.6M.

2. United Kingdom & Europe

Bettacchi is scheduled to meet with Hawkins (of IMC) in the United Kingdom on October 28th to discuss details of a Zonolite licensee agreement. Hawkins has asked for preliminary numbers regarding ore costs, yields, etc., based upon purchasing Libby concentrate from us.

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C. Mansour Industrial Marine Coatings (Saudi Arabia)

Irvine Rogers reports a major project in Jeddah - Jamjoon Commercial Center, Approximately 130,000 bags - which will require the fireproofing to pass the French Standard fire test (similar to BS476 and UL ASTM E119). I have requested Hawkins to meet with the architect in France to attempt to have USA standards allowed, and will have Irvine in Saudi contact Gosaibi to exercise all possible influence.

D. Mike Rew

Mike has been following up Saudi calls with meetings in New York and Toronto with purchasing agents and architectural firms to try to tie down new work.

E. Technical Service - B.S. 476 Pt. 8

Bob Merther has confirmed that further fire testing will be necessary to obtain competitive ratings with Monokote. Bob is to meet with test lab personnel in early October to draw up the necessary test schedule. Lloyd has further confirmed that these approvals are necessary to protect his projected 250,000 bag Monokote market in Singapore. As these test approvals are not required for either the USA or Saudi market, PID will be required to fund this additional testing effort.

F. W. R. Grace/Hong Kong

Pacific Partitions diverted "Alaska" Monokote to Singapore to avoid the higher PID price. Due to jobsite problems in Singapore, several bags were returned to the USA for testing. The material, then approximately 3 months old, had passed its useful shelf life and had sets in the 17-18 hour range. This reconfirms the necessity for the plastic lined bag for export Monokote. Bill Culver worked closely with Lloyd in Hong Kong to explain to principals of both the USA and Singapore companies the meaning of the test results and how to avoid future reoccurrences.

III. PetersA. Sales

Peters gross sales for September were \$31,769, 73% ahead of budget. Sales in September, 1982 were \$0 - so prior year

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comparison is invalid. YTD Peters sales total \$294,417, 112% favorable to budget and 64% ahead of YTD 1982.

B. Japan

Yamato has obtained a temporary permit from the Japanese Department of Agriculture to import professional Peters into Japan. A permanent license is expected to be granted upon submission of our comparative analysis - Hyponex vs Peters.

C. Brinkman - Holland

A meeting is scheduled with Brinkman for 24 October to discuss various options to increase our European market penetration.

D. General

A Peters sales and market exploration trip has been scheduled for early November and will be combined with Zonolite meetings in Saudi. As scheduled, I will meet with distributors representing 84% of our Peters export business and will explore new opportunities in Singapore and Malaysia. There are recent articles indicating that significant quantities of Orchids and Chrysanthemums are grown in these areas, and our present sales are minimal. Grace/Hong Kong and Grace/Singapore and a new potential distributor are aiding me in making initial contacts.

E. Grace/New Zealand

Neil Burns - Porirua - has submitted a full set (28 pages) of Peters literature masters prepared for the New Zealand market for our review and comment. They have only just arrived, but upon initial review seem excellent both technically and with respect to detailing Peters benefits.

IV. Darex Corrosion Inhibitor

Fahad Mira has, on his own initiative, advised that he has sold 30 drums of DCI to Tradco Vulcan for use on Aramco projects at a price of between SR29 and SR39 (\$8.53-\$11.47) per gallon. Fahad indicates that since taking over DCI administration, the Italians have not mentioned DCI nor are they aware of the sales. While this is no longer our area of administration, it would be regrettable if our initial specification efforts were not followed up to make the best of any available sales opportunities.