August 27, 1975

TO: CHEMICALS AND PLASTICS MANAGEMENT COMMITTEE

REQUEST FOR APPROVAL TO RENEGOTIATE
EXISTING CONTRACT AC 100-59438
WITH THE DOW CHEMICAL COMPANY
FOR VINYL CHLORIDE MONOMER SUPPLY
MAXIMUM ADDITIONAL COMMITMENT - $379MM

INTRODUCTION:

Sales and Purchase Agreement between Dow Chemical Company and Union Carbide Corporation was executed November 28, 1967 for a ten year term of January 1, 1968 through December 31, 1977 for such quantities as Union Carbide orders up to 400MM lbs./year ("Commitment") of vinyl chloride monomer (VCM). Under this contract VCM price was a composite of base price ($.029/lb.), subject to adjustment for labor and Wholesale Price Index, and a facilities charge ("Commitment Fee") of $200,000 per month representing an annual volume of 400 million pounds per year ($.006/lb. of VCM) for a total VCM price of $0.035 per pound. At current indices for labor and Wholesale Price Index the monomer price would be $.0425/lb. See Exhibit A, approved Letter to Operating Committee dated October 5, 1967 which authorized this purchase.

Dow late in 1973 stated that such generalized indices in the contract did not compensate Dow for significant increases in ethylene costs and electric power costs and accordingly requested price relief. Subsequently a proposal was made to Dow to adjust pricing of monomer related to a base Union Carbide bulk market price for suspension homopolymer resin and to make such adjustment up or down at rate of .3¢/lb. for monomer for each 1¢/lb. change in Union Carbide homopolymer market price. This pricing formula of:

VCM price = 4.1¢/lb. + .3 (PVC price - 12¢/lb.)
was valuable to Union Carbide and established our % Margin

$$\left(\frac{\text{PVC price - VCM price}}{\text{VCM price}} \times 100\right)$$ at approximately 200% which increased as polymer price increased. (See Exhibit B attached-curves II and IIA).

Dow agreed and amendment to contract dated January 29, 1974 was executed establishing a VCM base price of $.041/lb. effective as of December 1, 1973 with polymer at $.12/lb. Contract indices if used in the adjustment of price at that time computed to $.03628/lb. of VCM; thus Dow obtained $.00472/lb. of VCM increase or 13%. On March 1, 1974 Union Carbide's polymer price was increased to $0.17/lb. and accordingly Dow was paid $0.056/lb. for monomer or 54% over contract price adjusted to labor and W.P.I. indices. Monomer market price at that time was a minimum of $.06/lb. and industry was moving towards a market price of $.10/lb. in a strong demand and short supply market place.

Current market price for VCM is estimated to range from $.09/lb. for large volume long term contracts to $0.12/lb. spot; average market price is believed to be $.10 - $.105/lb. Monomer price is relatively stable compared to polymer pricing which has been reduced from $.24/lb. to $.20/lb. and in some spot situations polymer has been offered at $.16/lb. As of today Union Carbide's homopolymer market price is $.20/lb. and we pay Dow $.065/lb. for VCM.

Since monomer capacity is not anticipated to be increased in near future and capital costs for new facilities are increasing at approximate rate of 15%/year, Dow is apparently attempting to maximize its income from sales by increasing monomer price to "Dow's market price".

Furthermore, Dow in the past has requested we reduce their "Commitment" quantity under contract below 400 million pounds per year (Dow letter dated July 27, 1973 to Union Carbide). This request was apparently to assure new supply to Shin Tech, a 220 million lb./year PVC satellite facility to Dow's Oyster Creek, Texas VCM plant. Shin Tech is a joint company between Shinetsu Chemical Industry of Japan and Robin-Tech. Shinetsu recently announced (April 1975) that design work has begun for a 50% increase in capacity of this facility (110 million lbs./year) scheduled for completion by fall of 1976, therefore presenting additional opportunity for Dow to move monomer at Oyster Creek.

Apparently opportunities to Dow to market VCM at optimized income compared to Dow's selling price to Union Carbide of $.065/lb. related to $.20/lb. polymer price precipitated a formal request dated July 16, 1975 by Dow to renegotiate price for VCM to following proposed prices:

1. "7.7 cents per pound June 1 through June 30, 1975".

2. "July 1, 1975 price to be $.105 per pound subject to further adjustment if vinyl chloride monomer market price changes by more than $.01/lb. from the July 1 level of $.11 per pound".

3. "January 1, 1976 and thereafter during the term of the contract, Dow's market price for VCM. If 50% of the published price for homopolymer suspension resin is lower than Dow's market price, Dow and Union Carbide will split the difference, i.e., Dow market price is $.11, homopolymer suspension resin price is $.20, then the VCM price would be $.105".

This Dow proposal if accepted would increase VCM price from $.065/lb. to $.105/lb. or 62% and would reduce Union Carbide's % Margin from 208% to 100% (See Exhibit B-curves I and IA). Cost increase to Union Carbide on base of 400 million pounds per year would be $16 million per year or from a total cost of $26 million per year to $42 million per year. Dow's proposal for such price increase was formally rejected as unacceptable by letter dated August 13, 1975.

Since intent of contract executed on November 28, 1967 was to "buy" in lieu of "make" for ten year term minimum; since Union Carbide guaranteed Dow's investment by payment of a facilities charge of $2.4 million per year; and in consideration that Union Carbide's contract price of $.035/lb. as originally negotiated was 85% of the then market price of $.041/lb. it is proposed that Union Carbide counter-propose the following with respect to pricing and contract term:

1. <u>Price</u> - the <u>lower</u> of

   a. $.085 per pound FOB shipping point for VCM related to Union Carbide price for general purpose homopolymer vinyl resin produced by the suspension process at $.20/lb. delivered plus adjustment for VCM price to Dow upward or downward of $.00425 per pound for each $.01 per pound change upward or downward of Union Carbide average domestic sales price of such homopolymer. Such formula of price adjustment, VCM price = 8.5¢/lb. + .425 (PVC price - 20), would reduce Union Carbide's % Margin from 208% to 135% and remain constant for foreseeable range of PVC pricing (See Exhibit B-curves 1 and 1A).

b. 90% of the lowest FOB plant price of Dow for VCM in the U.S.A. to anyone other than Union Carbide.

2. Contract Term:

Extend contract term five years up to November 30, 1982. Union Carbide has right under present contract to extend contract term by five (5) years on formal notice eighteen months in advance by increasing "Commitment" from 400 million to 500 million pounds per year and by increasing "Commitment Fee" from $200,000 per month to $250,000 per month. NOTICE FOR SUCH INCREASE IN "COMMITMENT" MUST BE MADE NO LATER THAN MAY 31, 1976 TO BE EFFECTIVE AS OF DECEMBER 1, 1977 EXTENDING SUPPLY TERM THROUGH NOVEMBER 30, 1982.

Our counter-proposal implies increase in Union Carbide cost for VCM of 30% and dollar expenditure increase from $26 million per year to $34 million per year for "Commitment quantity of 400 million pounds per year. Our current price of $.065/lb., however, is significantly lower than the average industry price of $.105/lb. The proposed counter-offer to Dow is not expected to exceed lowest price available to others for purchases of vinyl chloride monomer on large volume long term contracts.

Endorsement of this request to renegotiate price and extend the term of this contract with The Dow Chemical Company is requested.

1. MATERIAL:

Vinyl Chloride Monomer.

2. MAXIMUM ADDITIONAL AMOUNT:

$379MM estimated for 2,880 million pounds in period of September 1, 1975 through November 30, 1982 at pricing formula in Item 7 hereinbelow and assumed upward escalation of 9.1% per year compounded. (See Exhibit C).

3. SUPPLIER:

The Dow Chemical Company

4. PERIOD OF CONTRACT:

Present contract term is January 1, 1968 through December 31, 1977. Union Carbide has the right on the first day of any month during period of contract to increase the "Commitment" from 400MM lbs. per year to 500MM lbs. per year on eighteen (18) months prior notice and with such increase in "Commitment" is obligated to pay an increased "Commitment Fee" from $200,000 per month to $250,000 per month. If the "Commitment" is exercised no later than May 31, 1976 (effective date December 1 1977) then term of this Agreement will be extended for five (5) years (Article IV - Quantity - Paragraph B, Page 3 of contract) through November 30, 1982.

5. MATERIAL TO BE USED AT:

Chemicals and Plastics at South Charleston, W. Va. and Texas City, Texas; Jennat Corporation at Tucker, Georgia, Somerset, New Jersey and Torrance, California.

6. QUANTITY:

Year	Million Lbs.
1975	61 (4 months - September 1, 1975 - December 31, 1975)
1976	383
1977	388
1978	415
1979	415
1980	415
1981	415
1982	415
TOTAL	2,880

(a) Contract represents 100% of Union Carbide total purchased VCM requirements. (See Paragraph 14).

(b) Contract quantity is approximately 31% of Dow's annual production quantity. (U.S.A. only).

(c) Contract quantity is approximately 8% of domestic industry's annual production.

7. UNIT PRICE - FOB SHIPPING POINT:

Union Carbide's counter-offer to Dow's proposed pricing above is the lower of:

(a) \$.085 per pound FOB shipping point for VCM with Union Carbide price for general purpose homopolymer vinyl resin produced by the suspension process at \$.20 per pound delivered plus adjustment for VCM price upward or downward of \$.00425 per pound for each \$.01 per pound change upward or downward of Union Carbide average domestic sales price of such homopolymer or

(b) 90% of the lowest FOB plant price of Dow for VCM in the U.S.A. to anyone other than Union Carbide.

8. EXISTING CONTRACT AND PRICE:

Existing contract has expiration date of December 31, 1977. Pricing for VCM under contract as amended January 29, 1974 is \$.041 per pound at general purpose homopolymer vinyl resin price of \$0.12 per pound plus adjustment of VCM price upward or downward of \$.003 per pound for each \$.01 per pound change upward or downward of Union Carbide's average domestic sales price for such homopolymer.

Union Carbide's current price for such homopolymer is \$.20 per pound delivered and Dow's VCM price to Union Carbide is accordingly \$.065/lb. FOB shipping point. Union Carbide's price experience under contract with Dow has been as follows:

8. EXISTING CONTRACT AND PRICE (CONTINUED):

Year			Price
1969			$.0365/lb.
1970			$.0360/lb.
1971			$.0350/lb.
1972			$.0356/lb.
1973			$.0362/lb.
1974	January 1	-	$.041/lb. ($.12 polymer)
	March 1	-	$.056/lb. ($.17 polymer)
	July 1	-	$.065/lb. ($.20 polymer)
	September 1	-	$.071/lb. ($.22 polymer)
	November 1	-	$.077/lb. ($.24 polymer)
1975	January 1	-	$.077/lb. ($.24 polymer)
	June 1	-	$.065/lb. ($.20 polymer)

9. TYPE OF CONTRACT:

Commencing December 1, 1977, the Sales-Purchase Agreement would cover such quantities as Union Carbide may wish to purchase but not exceeding 500 million pounds per year; Union Carbide will be obligated to pay a "Commitment Fee" of $250,000 per month through November 30, 1982. Under terms of letter amendment to contract, dated January 29, 1974, "Commitment Fee" so paid will be credited against aggregate purchase price of VCM delivered during the month that the payment of "Commitment Fee" is applicable. This feature would be continued through the life of the extended contract.

10. USAGE HISTORY:

Year	MM Lbs.
1972	369
1973	383
1974	356

The apparently paradoxical lower volume of shipments in 1974 compared to 1972 and 1973 despite the very strong demand in 1974 was caused by allocations by Dow due to "material shortages and plant problems". The 1974 allocation history with Dow was as follows:

10. USAGE HISTORY (CONTINUED):

Allocation - %	Months - 1974	Short Shipment
90	January, April May, November	13.3MM lbs.
85	June	4.8MM lbs.
83.3	July	5.5MM lbs.
80	August, September October	20.0MM lbs.
	TOTAL	43.6MM lbs.

Union Carbide could have profitably used 400MM lbs. of monomer; monomer from other suppliers was not available.

11. IF CONTRACT IN EFFECT MORE THAN 2 YEARS, GIVE REASON:

Union Carbide's monomer requirements represents 57% to 40% of the capacity of modern plant estimated between 700MM lbs. per year to 1,000MM lbs. per year respectively. At this time there is no new VCM capacity coming on stream in near future. Availability of new like volume supply is currently improbable and to safeguard supply assurance contract extension through 1982 is essential.

12. CONTRACT TERMS AND CONDITIONS: (Assuming contract extended through November 30, 1982)

(a) Provision for renewal: After November 30, 1982 - None.

(b) Price Change Provision: As per formula proposed herein.

(c) Price Protection Clause: Yes.

(d) Terms of Payment: Net 30 days after receipt of invoice.

(e) Patent Clause: Standard.

(f) Cancellation Clause: Yes.

(g) Liquidated Damages: Yes, upon cancellation by Union Carbide.

(h) Other Contingent Liability: None.

(i) Special Clauses: None.

13. CAN UCC MAKE COMPETITIVELY:

No.

14. OTHER POSSIBLE SUPPLIERS:

Shell, PPG, Ethyl and Allied are other Major VCM producing marketers, but none has large quantities to sell long term because of contractual commitments. Union Carbide's large volume requirement, therefore is not available economically from others. Union Carbide is not prevented under the existing Dow VCM contract from purchasing from other suppliers but is obligated to pay a "Commitment Fee" representing 400MM lbs., which is subject to reduction under the Price Protection Clause.

15. POSSIBLE SUBSTITUTE MATERIALS:

None.

16. END USE:

For production of suspension, dispersion, solvent, and non-solvent resins.

17. REMARKS:

Except for the pricing formula, none of the contract terms favorable to Union Carbide under the existing VCM supply arrangement with Dow would be altered. We believe this provides for maximum VCM supply security, (Dow supplies to Union Carbide from Oyster Creek, Texas and Plaquemine, Louisiana) at VCM price conditions which we believe would approach the economics of an integrated VCM/PVC producer.

REQUEST PREPARED BY F. S. STANWYCK

Director of Purchases Date:

ENDORSED BY CHEMICALS AND PLASTICS GROUP

Performance Plastics Department
DATE:

ENDORSED ON BEHALF OF
CHEMICALS AND PLASTICS MANAGEMENT
COMMITTEE

DATE: 9/24/75

REVIEWED BY LAW DEPARTMENT

MINUTES OF GROUP I DIVISIONS
OPERATING COMMITTEE MEETING
Monday, October 16, 1967

Members Present: Messrs. D. B. Benedict
W. M. Anderson
C. M. Blair
A. A. Boehm
T. R. Miller
R. S. Wishart, Jr.
H. F. Tomfohrde III, Sec.

1. Purchase of Vinyl Chloride Monomer from Dow, Coatings Intermediates Division — Approved

It is proposed to contract with the Dow Chemical Corporation for the entire Group I vinyl chloride requirements during the period July 1, 1969, through December 31, 1977, and for any requirements above captive production from January 1, 1968, through June 30, 1969. Dow will install major new facilities to handle these requirements, and the existing Group I vinyl chloride plants at South Charleston and at Texas City will be shut down in 1969. The total value of this contract is expected to be about $100 million. However, the credit of the Corporation will not be affected by the transaction because the contract is subject to cancellation under certain prescribed conditions. Supporting investment of about $2.6 million will be needed for distribution and storage facilities, and appropriate major capital budgets will be submitted in January 1968.

Vinyl chloride is required primarily for the manufacture of polyvinyl chloride resin, and lesser quantities are used in the production of DYNEL. The objective of the PVC business is to optimize the financial return through selective marketing of the more profitable products, rather than by maximizing sales volume through commitment of a substantial portion of product at marginal returns. In achieving this objective, it will be necessary to retire the existing Group I monomer plants, which are based on the acetylene process and are no longer competitive with large, new ethylene oxychlorination plants. Several make-versus-buy analyses for monomer plants ranging from 250 to 500 million pounds per year in comparison with the proposed Dow contract indicate an ROI of less than 15 percent. Additional considerations which tend to favor the purchase of vinyl chloride include:

a. Uncertainties regarding captive vinyl chloride load factors.

b. Risks associated with operation of new purchased oxychlorination technology.

c. Availability of critical manpower resources to support such a project effectively.

2. ~~Fursayak~~ Mr. LPM 11/27/67 Date: October 24, 1967

3. APA-file

[Mem]orandum to: Mr. T. R. Miller

[Th]e General Operating Committee has approved the following:

"COATINGS INTERMEDIATES DIVISION APPROVED

Purchase Contract - Vinyl Chloride Monomer

Proposal to enter into a ten-year contract beginning January 1, 1968, with Dow Chemical Company covering the purchase of vinyl chloride monomer. This will require investment in distribution equipment and storage facilities during 1968 and 1969 of approximately $2.6 million, as covered in T. R. Miller's memorandum of October 18, 1967. In addition, a synopsis is to be forwarded to each member of the General Operating Committee covering this contract. The data sent to each member of the Committee should include full coverage of escalation and the "conditions of release by which the purchase can be terminated under prescribed economic terms." "

1) D'Arcy of this to
2) Shanklin 11/28/67
No further information required as of this time
A J D'Arcy

GENERAL OPERATING COMMITTEE

By: J. P. Shanklin
J. P. Shanklin, Secretary

[cc]: Messrs. A. J. D'Arcy (5)
R. L. Kenney
F. E. Schneider
T. A. Wilker

R. B. Johnson

TO: GROUP OPERATING COMMITTEE NO. 1 October 5, 1967

Mr. W. M. Anderson
Mr. D. B. Benedict
Dr. C. M. Blair
Dr. T. R. Miller
Mr. G. L. Pitzer
Mr. H. F. Tomfohrde
Mr. R. S. Wishart

CC: Mr. R. F. Flood

I am attaching a copy of a request for the Group Operating Committee's approval of a contract between Union Carbide Corporation and The Dow Chemical Company covering Vinyl Chloride Monomer for use at South Charleston, West Virginia and Texas City, Texas.

The Management of the Coatings Intermediates Division has examined "Make Versus Buy" alternatives for providing future supplies of vinyl chloride monomer. Based on these studies, the Division's Management has decided that the purchase of monomer under the economic conditions described by the attached contract authorization request is the preferred mode of providing monomer requirements through the next ten years. The "Make Versus Buy" analysis has shown that the "Make" case would develop a 15 percent ROI. It is the judgment of the Division Management that the purchase of monomer is the preferred route, rather than the acceptance of the 15 percent ROI level in considering the risk and capital situations that prevail today.

In a final negotiating session with Dow at Midland on September 29, Dow revised their escalation proposal to meet our requirements. This resulted in a reduction of escalation terms of 60 percent. This level of escalation is considered to be reasonable and in line with other major contracts and manufacturing experience.

As a result of these negotiations and amendments to the Dow offer, they were told that an agreement had been reached between us subject to clarification of details on specifications and on contract language.

If the Committee gives its formal approval of this proposal, we would appreciate being advised and having a signed copy returned to us.

A. J. D'Arcy

A. J. D'Arcy

October 5, 1967
Page 1

TO: GROUP OPERATING COMMITTEE No. 1

REQUEST FOR APPROVAL OF PURCHASE CONTRACT
FOR VINYL CHLORIDE MONOMER IN THE AMOUNT OF $124,300 00

INTRODUCTION

Demand for vinyl chloride monomer in the period from 1968 through 1977 is projected in the annual amounts listed below and will exceed our present production capability as follows:

		MILLION POUNDS			
		PRODUCTION			
YEAR	DEMAND	So.Char	T.City	Total	Deficit
1968	310	125	155	280	30
1969	319	125	155	280	39
1970	331	125	155	280	51
1971	360	125	155	280	80
1972	389	125	155	280	109
1973	406	125	155	280	126
1974	424	125	155	280	144
1975	442	125	155	280	162
1976	461	125	155	280	181
1977	479	125	155	280	199

Consideration was given to these three alternatives:

(a) Produce monomer at total present capacity and buy balance of demand.

(b) Build a new ethylene oxychlorination plant.

(c) Purchase all vinyl chloride monomer requirements.

Continued operation of our high cost plants at South Charleston and Texas City would make UCC less competitive to suppliers operating modern plants based on improved technology.

Detailed "make versus buy" studies indicate that it is economical to "buy" monomer at price schedule proposed herein in lieu of "make" by a modern plant.

This request for Committee approval covers purchase of all of our monomer requirements for the period from July 1, 1969 through December 31, 1977 and such deficit quantities as required over captive production for the period of January 1, 1968 through June 30, 1969.

1. MATERIAL INVOLVED

Vinyl Chloride Monomer

2. MAXIMUM COST OF CONTRACT

$124,300,000

3. MINIMUM COST OF CONTRACT

$19,400,000 based on minimum facilities charge($13.2 million) through 1974, a cancellation charge ($3.6 million) for the three year period of 1975 through 1977, and UCC supporting investment ($2.6 million) for distribution and storage facilities.

4. PROPOSED SUPPLIER

The Dow Chemical Company, Midland, Michigan

5. PERIOD OF CONTRACT

January 1, 1968 through December 31, 1977 (ten years) with UCC option to cancel December 31, 1974 at a cancellation charge.

6. MATERIAL TO BE USED AT

Chemicals and Plastics Operations Division, South Charleston, West Virginia and Texas City, Texas.

7. QUANTITY

Purchased requirements of vinyl chloride monomer are as follows:

YEAR	MILLION POUNDS
1968	30
1969	180 (20 MM for period Jan.1969 - June 1969)
1970	331
1971	360
1972	389
1973	406
1974	424
1975	442
1976	461
1977	479

7. QUANTITY (continued)

A. Proposed contract will cover 100 per cent of our total requirements after July 1, 1969 and 10 per cent of our total requirements for period of January 1, 1968 to June 30, 1969.

B. Proposed contract quantity at maximum rate of purchases is estimated to about equal Dow's present capacity of 450 million pounds per year but will represent about 45 per cent of Dow's total capacity on stream by July 1, 1969.

C. Percentage of proposed contract to current domestic production is 18 per cent. Industry planned addition of 2,050 million pounds by mid-1969 will reduce this percentage from 18 per cent to 12 per cent. Present monomer capacity is reported at 2,770 million pounds per year; planned additions less retirement of older plants will increase total industry capacity by 1969 to an estimated rate of 3,980 million pounds per year.

8. UNIT PRICE - F.O.B. SHIPPING POINT

A. Price of monomer beginning July 1, 1969 is comprised of:

(a) Fixed facilities charge of $200,000 per month for quantities up to 400 million pound per year rate. ($.006 per pound at 400 million pound rate and proportionately higher at lower rates) For quantities in excess of 400 million pounds per year and less than 500 million pounds per year, price is a flat $.0350 per pound and facilities charge is not applicable.

(b) A base processing fee of $.0290 per pound up to 400 million pounds per year.

plus a charge of:

(1) $.0015 per pound for deliveries during period of July 1, 1969 to December 31, 1969 or

(2) $.0010 per pound for deliveries during period of January 1, 1970 to June 30, 1970.

B. $.0425 per pound of monomer for such quantities as UCC may require in excess of captive production during 1968 and first half of 1969.

9. PREVIOUS EXISTING CONTRACT AND PRICE

During various periods in the past four years, vinyl chloride has been obtained from Allied Chemical through conversion of .41 pounds of acetylene and $.02, which was equivalent to a value of $.053 per pound at Moundsville, West Virginia; from Ethyl Corporation through conversion of .49 pounds of ethylene and $.03375, which was equivalent to a value of $.05 per pound at Houston, Texas; and from Dow by exchange for 1.5 pounds of ethylene which is equivalent to prices from $.03375 to $.06 per pound of vinyl chloride at Freeport, Texas, depending on the value placed on ethylene. All of these former agreements have been terminated.

10. TYPE CONTRACT

Sales contract up to 500 million pounds per year subject to fixed facilities charge.

11. USAGE HISTORY

UCC PRODUCTION	MILLION POUNDS
1966	293
1965	246
1964	247
1963	256
1962	251
1961	205
1960	225
1959	205
1958	166
1957	229
1956	207

ESTIMATED UCC PRODUCTION	MILLION POUNDS
1967	261
1968	280

12. IF CONTRACT IN EFFECT MORE THAN TWO YEARS GIVE REASON

In order to achieve the minimum price objective of $.0350 per pound only suppliers with modern plants employing improved technology and capable of producing at a rate of 500 million pounds per year or more can be considered. Dow will have the largest such unit with capacity estimated at 700 million pounds per year. In view of our large requirement Dow insists on a ten year term.

13. CONTRACT TERMS AND CONDITIONS

A. Provision for renewal - UCC option

B. Price change Provision - Reasonable adjustment based on labo
and material factors effective with deliveries in 1971 which
would increase price on an estimated annual rate of $.0002 pe
pound.

C. Price Protection Clause- Dow must meet lower prices offered fo
contract quantity or contract is cancellable on one year's
notice without cancellation charge. In addition, Dow must mee
lower price offered for quantities of 50 million pounds or mo
for a minimum period of one year or such quantity is deductibl
from contract and monthly facilities charge reduced proportion
ately in relation to base of 400 million pounds.

D. Patent Clause - Standard

E. Cancellation - UCC can cancel effective December 31, 1974 or
thereafter on one year's notice and payment of a lump cancella
tion charge of $1,200,000 for each year so cancelled

F. Liquidated Damages - Yes; cancellation by Buyer.

G. Other Contingent Liability - None

H. Special Clauses - Force Majeure, Fair Labor Standards Act,
Assignment.

I. Terms of Payment - Net 30 days

14. CAN UCC MAKE COMPETITIVELY

Not in present facilities. At the present time the plant costs fo monomer at South Charleston and Texas City are $.050 and $.039 per pound respectively. Economic studies indicate a modern plant of 500 million pounds per year capacity can be built for an estimated investment of $32,500,000 to produce monomer at a plant cost of $.0235 per pound with available ethylene at $.017 per pound and chlorine at $.020 per pound ($40 per ton).

15. OTHER POSSIBLE SUPPLIERS

None who are capable to furnish our requirements.

15 OTHER POSSIBLE SUPPLIERS (continued)

A. Allied has offered 100 million pounds per year for a three year period starting late 1968 at $.044 per pound the first year, $.043 per pound the second year and $.042 per pound the third year.

B. Stauffer offered up to 100 million pounds per year starting in 1968 at $.05 per pound.

C. PPG has indicated no interest at a price less than $.05 per pound.

D. Conoco offered up to 100 million pounds per year starting second quarter of 1968 for a two year period at $.0485 per pound.

E. Dow Chemical offered early this year the following quantities on a direct sale basis for a ten year period subject to fee price adjustment:

VOLUME MM Lbs.	MONTHLY CHARGE (Facilities	FEE Per Lb.	TOTAL Per Lb. (FOB)
100	$60,000	$.0355	$.0427
150	70,000	.035	.0406
200	85,000	.034	.0391
250	105,000	.034	.03904

Negotiations were kept current up to this time but no better price was offered by any supplier.

16. POSSIBLE SUBSTITUTE MATERIALS

None

17. END USE

Suspension, Dispersion, Solvent, Non-Solvent Resins and Dynel.

18. REMARKS

A. Supporting investment of 2.6 million dollars will be necessary in addition to the cost of this commitment for distribution equipment and storage facilities. Construction Budget Request will be submitted in January 1968 by the Chemicals and Plastics Operations Division.

B. Curtailment of our vinyl chloride monomer production will reduce our chlorine purchases for monomer at the rate of 300 tons per day (109,500 tons per year).

18. REMARKS (continued)

B. (continued)

Effect of this purchase will reduce our purchased requirements for chlorine in 1970 from an estimated 1,300 tons per day to 1,000 tons per day.

Long range contracts for chlorine have been made with:

SUPPLIER	TERM	QUANTITY
(1)FMC(So.Chas.)	6-24-66 to Feb.1978	300 tons/day
(2)Hooker (Taft)	1966 to Oct. 1976	150 tons/day with option to buy 200 tons/day additional.
(3)PPG (All)	1-1-68 to 12-31-70	30 per cent of Buyer's requirements not to exceed 400 tons.

With Hooker's attractive prices for chlorine, exercising of option would be attractive. Thus our requirement in 1970 of 1,000 tons per day will exceed our commitments with FMC, Hooker and PPG by only 50 tons per day.

At the present time the following other suppliers furnish chlorine at the following rates:

SUPPLIER	TERM	QUANTITY
Diamond Alkali	Expires 12-31-67	200 tons/day
Olin Mathieson	Expires 9-30-68	80 tons/day
Wyandotte Chemical	Evergreen	100 tons/day
Allied Chemical	Evergreen	40 tons/day

It will be necessary then to allow contracts to expire or to cancel contracts with Diamond, Olin, Wyandotte and Allied.

18. REMARKS (continued)

Approval to purchase from The Dow Chemical Company on the basis outlined here is requested.

REQUEST PREPARED BY F. S. STANWYCK

Date: 10-5-67

APPROVED BY COATINGS INTERMEDIATES DIVISION

APPROVED ON BEHALF OF GROUP OPERATING COMMITTEE No. 1

Date:

REVIEWED BY LAW DEPARTMENT

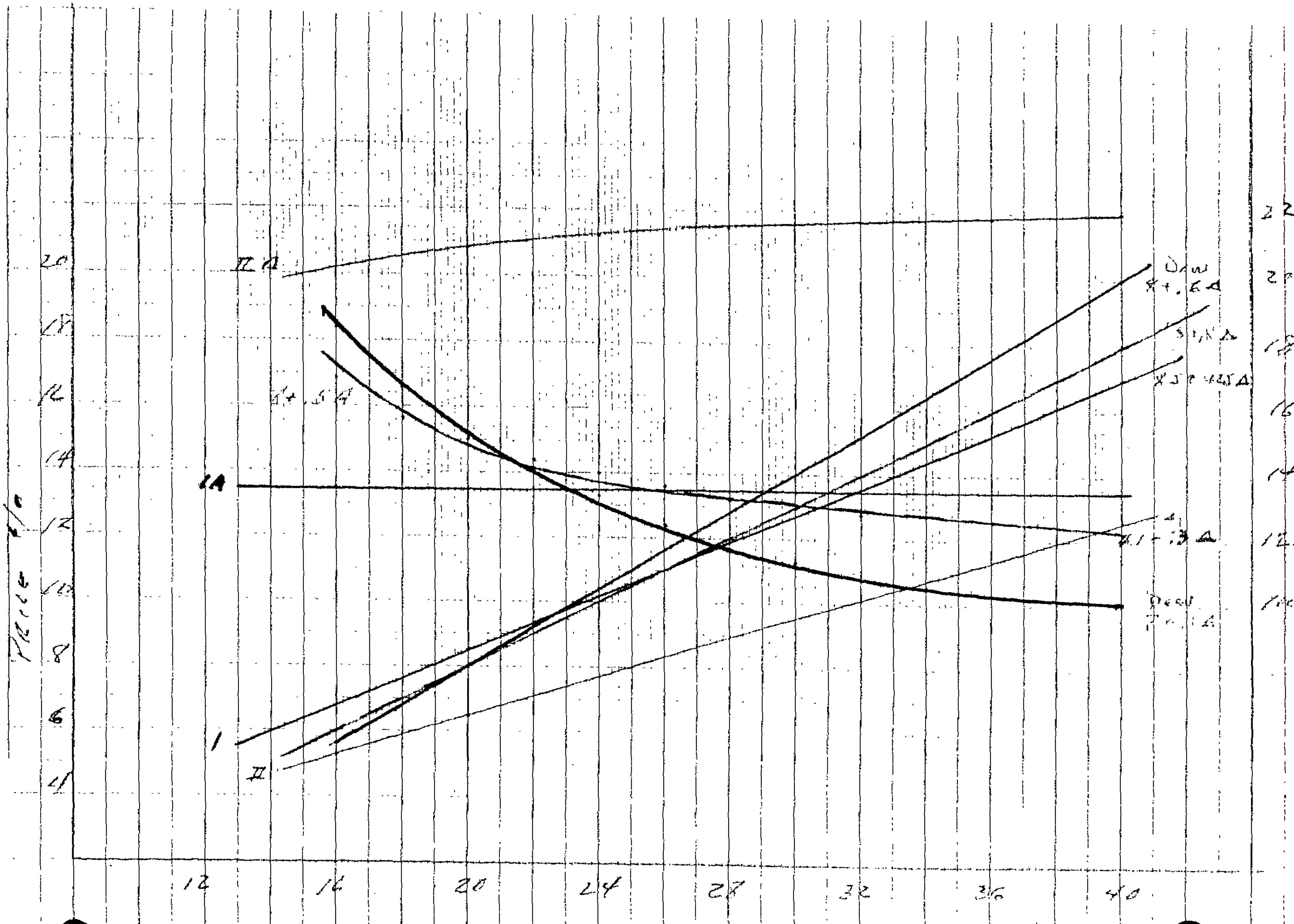
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Exhibit C

VCM - Estimated Annual Purchased Quantity Price, and Annual Expenditure

Year	MM Lbs./Yr.	Price - $/Lb.	Annual Expenditure $ - MM
1975 - 4 months - 9/1/75 - 12/31/75	61	.085	5.2
1976	383	.0935	35.8
1977	388	.1105	42.9
1978	415	.1233	47.8
1979	415	.1360	56.4
1980	415	.1445	60.0
1981	415	.153	63.5
1982	415	.1615	67.0
TOTAL	2,880		379.0