cc: W. E. Alexander
R. T. Clark, Springfield
S. L. Hunter
H. M. Keating
C. T. Massey
L. A. Schroeder, Spgfld.
J. C. Wrobleski
Central Files

MONSANTO CHEMICAL COMPANY
TEXAS CITY, TEXAS

July 29, 1960

To: A. F. Pond

At: Texas City

Subject: Evaluation of Ethyl Corporation's Vinyl Monomer (VCM) Plant at Baton Rouge

We have evaluated Ethyl Corporation's plant for vinyl chloride monomer (VCM) at Baton Rouge. The capital was estimated for the plant as built in 1958, and the manufacturing costs were made for 130 M lbs/yr of VCM at prices for 1963. This will give you figures to compare with the evaluation of our Texas City plant as expanded to 200 M lbs/yr.

Ethyl makes VCM by the ethylene route, using a process identical to our process at Texas City; but all of the HCl made from 1,2 dichloroethane cracking is used in their ethyl chloride plants. Reports say their plant, designed for 90 M lbs/yr of VCM, has a capacity near 130 M lbs/yr. Their major equipment, we believe, would bottleneck at about 160 M lbs/yr.

The manufacturing capital of their plant is estimated at $6.8 M (±30%). The manufacturing cost was $6.438/100 lbs of VCM. Comparative figures for Monsanto's plant at 200 M lbs/yr of VCM were $10.1 M of capital and $7.244/100 lbs of VCM for manufacturing cost. Table I shows a summary of comparative cost.

For the evaluation we assumed:

(1) That the asset value of the plant will be the same in 1963 as it was in 1958. Capital was figured on manufacturing facilities only -- battery limits and product storage.

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(2) That the plant's capacity will still be at 130 M lbs/yr of VCM. If the capacity were near 160 M lbs/yr, the unit price would change little. However, for any investment returns you may work up for comparison the difference could be sizable.

(3) That their yields and conversion costs were the same as for our plant. Inventory standards were used for yields, and the predicted prices for 1963 were used for conversion. Yields were: EDC from ethylene, 94.0%; EDC from chlorine, 95.0%; VCM from EDC, 95.0%; HCl from EDC, 96.0%.

(4) That their raw material and by-product costs would be the same as we predicted for 1963 and used in the evaluation of our plant. Prices were: ethylene, 5.2¢/lb; chlorine, 2.6¢/lb; HCl credit, 2.6¢/lb.

(5) That all HCl was credited to the VCM plant at 2.6¢/lb.

A breakdown of the manufacturing cost for EDC and VCM is shown in Tables II and III, respectively.

L B Bullock

hl L. B. Bullock

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## TABLE I

### Estimated Cost Comparison for 1963

| | Monsanto Texas City | Ethyl Corp. Baton Rouge |
|---|---|---|
| Capacity, $\bar{M}$ lbs/yr | 200 | 130 |
| EDC, Unit Cost $/100 lbs | 3.822 | 3.816 |
| VCM, Unit Cost $/100 lbs | 7.244 | 6.438 |
| Capital, Total | $10,054,536 | $ 6,800,000 |
| For EDC | 2,567,271 | 1,700,000 |
| For VCM | 7,487,265 | 5,100,000 |

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