

## Interoffice Communication

To G. J. Fryar  
From J. A. DeBernardi  
Date September 6, 1977  
Subject Budget Scope - VCM Project Development

Following are the VCM Plant comments as requested in your letter of August 23 on the subject. Comments are numbered in the same manner as was the case in your letter.

- 1) No comments.
- 2) No problems here with the following exceptions: Acid wash tank (T-103) is an installed vessel at the VCM Plant and is brick lined. Removal from structure would present a considerable delay and maintenance effort at the VCM Plant. Movement of the bricked vessel could result in damage to the brick work and render the vessel unusable at either location. Would suggest a spare, in the field vessel be included at new plant.

The direct chlorinator cooler (H-101) will represent a special problem for shipping as it must be done by rail and a heavy duty crane used to load on and remove from the car because of its weight. It should be recognized that a considerable delay, perhaps 1-2 weeks, to move this equipment from Lake Charles to Baytown can likely be expected. Coordination of routine changeout of H-101 and retubing will be critical to assure that a spare is available when needed for each location for normal changeout needs.

Piping arrangements, footing heights, nozzle configuration, bolt hole alignment, etc., must be exactly matched at the new plant with that of Lake Charles to assure the equipment will be usable at the new plant, if needed. Use of these common spares may dictate process equipment to be used even though another process might specify different arrangements or size also changes in equipment size to eliminate known problems in the present plant would be eliminated by this approach. Example would be increasing the size of oxy primary separator (S-309) to eliminate entrainment of liquid.

- 3) EDC purchase and sales is a business area decision. Although some flexibility is lost related to short or long supplies of raw materials affecting production, plant operation is normally not dependent on EDC purchases or sales.

Light ends equipment is strictly related to end use of light ends. If all are assumed to be incinerated, all equipment related to sales can be eliminated. Nozzle corrosion related to light ends burning as wet material has been advanced as a reason for drying, plus the addition of excess water to product acid by using wet material thereby affecting resultant acid strength.

HCl recovery is presently being abandoned at Lake Charles. However, Reagent Chemical is now asking for 31.5% muriatic acid as minimum strength which means an additional absorber and anhydrous HCl supply will be necessary at the Baytown site.

Cutting of spare capacity in steam production could have a devastating affect on plant output since it is the heart of the plant. Also all boiler inspection and cleaning work would need to be done during the plant turnaround between the time steam is no longer needed after shutdown and washing of equipment and the time parts of the plant are ready for dry out if turnaround time is to be kept to minimum. In addition, if a Stauffer oxy is used steam will be required from some source to keep reactors hot during catalyst recharging operations. It is our opinion that spare boiler capacity should be provided.

- 4) Requirements for storage capacity for VCM should include at least three storage spheres and three check tanks. Sizing at seven days for storage (not including check tanks) is considered a minimum. If a minimum investment in incremental size will get extra time it should be taken.

In both light ends and tars storage capacity consideration must be given to problems expected and incinerators to be provided for burning. Three days seems very tight unless a spare incinerator is to be provided for liquid burning or some other alterante for disposal is available.

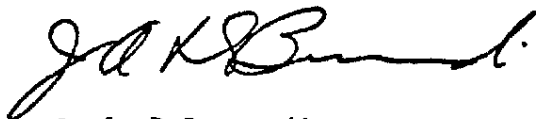
- 5) Chlorine storage and tank car unloading facilities reduction is alright as long as it is recognized that one unloading spot will allow a maximum instantaneous unloading rate of liquid of 180 T/D and the remainder is supplied by pipeline. We would suggest that railcar storage on the rails be provided for 8-10 T/C's rather than the five suggested.

Financing of the gaseous chlorine pipeline is a Business Area consideration.

- 6) No comment, other than assuring adequate storage and tank car unloading facilities are provided and that these are not common to VCM loading spots etc.
- 7) Reagent Chemicals now will require 31.5% muriatic acid as mentioned in #3. Recent conversations with them indicate they would be considering two T/T loading spots and 300,000 gallons of storage to be adequate for a yearly 40 MM lbs. of anhydrous production. This is very preliminary however.
- 8) No comments.
- 9) Motor driven propylene system should provide for a spare motor in the warehouse. Again this is another heart of the plant, with considerable downtime being suffered for motor repair.

- 10) No problem with this. R-101 will operate on complete gaseous supply.
- 11) No comment, assuming adjoining plant is agreeable and has the proper equipment for use in a VCM/EDC plant.
- 12) Have no experience with coal fired boilers. However, we question that the 100,000 lbs/hr. steam production will operate the plant at 700 MM lbs/yr VCM rate. Lake Charles uses 130 - 135 M lbs/hr steam at full rate. We find it difficult to understand the drop in usage unless steam is being generated from incinerators or purchased, or perhaps recycle EDC is assumed to need no purification.

We believe the ideas expressed in your letter are good related to capital reduction however, the secret to good plant operation is keeping it on line with a minimum of outages. The more frequent the outages the poorer is the operability of the plant as each shutdown brings with it additional problems particularly in the vinyl and oxy sections. The capital reduction philosophy tends to reduce areas of flexibility which will lead to more frequent outages of longer durations which will affect production and project payout. Since I believe the need is for a plant to produce 700 MM lbs/yr of VCM not work up to that in 5-10 years, I find it hard to understand the removal of capital items that tend to increase plant reliability from the project.



J. A. DeBernardi

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cc:

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