



Interoffice Communication

FOR: R. E. LEHMKUHL
HOUSTON (6 pages)

To W. B. Carter - Houston
From J. A. DeBernardi
Date June 20, 1977
Subject HCl to Methyl Chloride Plant

With reference to your letter of May 16, 1977 I would have the following comments.

Your first approach of feeding HCl to Methyl Chloride Unit forever on an average would arrive at an "average" yearly production increase of about 20 MM lbs., but not by the method you suggested for calculation. As I see it, in the numbers presented in my letter of May 5, we would expect to increase VCM production between turnarounds by 90-100 MM lbs., and eliminate one plant turnaround completely approximately every 4-5 years. If we assume an 18-day turnaround costs 36 MM lbs. of VCM production, then it can be said that on the "average" extended time between turnarounds will save 9 MM lbs. per year by elimination of one turnaround every four years. This kind of averaging seems dangerous, however, for setting raw material value pricing since the savings is by eliminating a turnaround in a specific year to derive increased production potential when market conditions and potential plant problems other than catalyst life might require a turnaround in the specific year anyway.

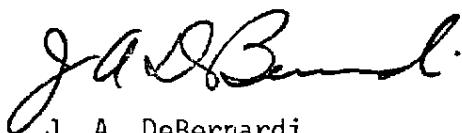
In addition to this, if the numbers presented in the May 5 letter are used, on the average approximately 11.0 MM lbs. of VCM production increase per year can be expected if HCl is transferred to Methyl Chloride on a continuous basis. If therefore we were to add the average yearly savings, 11.0 MM lbs., and the "average" savings related to turnaround elimination (which will occur every 4-5 years), we come up with the same 20 MM lbs. yearly saving on the average. The statement in your letter related to higher stream factor as a result of less catalyst deactivation does not agree with our thinking. It is our opinion that the longer the period between turnaround maintenance in our unit, the greater is the risk of unexpected shutdowns for equipment repair, thereby tending to lower the stream factor rather than improve it.

Your second alternate appears to be based on the assumption that the plant turnaround shown in 1980 on our transfer case will not be taken because a new plant will be on line to take up the slack. In our mind this would only be the case if you are assuming that our sales needs in 1980 will be such that only one plant's production will be necessary to fill them. If this is not the case then a plant turnaround will be required and production loss suffered as shown.

Your breakeven calculation related to HCl value should be slightly modified to reflect turnaround days in the year when HCl will not be available to transfer to the Methyl Chloride Plant. We normally use a 2.05 MM lbs./day VCM rate for months that reflect catalyst deterioration at the end of a run, and 1.90 MM lbs./day VCM rate for new catalyst breakin periods. It is our

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estimate that to get the rates to maximum (2.15 MM lbs./day VCM) during these periods would require 30 T/D of HCl to Methyl Chloride in the first circumstance, and 65 T/D of HCl to Methyl Chloride in the second. Refrigeration limitations during hot months could limit maximum production rates to less than 2.15 MM lbs. per day irregardless of catalyst considerations since all HCl must be processed through the tower before going to Oxy or Methyl Chloride.



J. A. DeBernardi

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CC:
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