

MONSANTO CHEMICAL COMPANY
Texas City, Texas

November 18, 1963

Call Report

cc: M. J. Auzine
R. T. Clark
A. M. Deck/
J. L. Young
J. N. Flanagan
C. P. Fullerton
R. H. Kittner
F. E. Reese

Tenneco Chemical Company
Houston, Texas

Date of Call: November 12, 1963

Subject: Tenneco Chemical, VCM

Present in Houston:

For Tenneco: Frank L. Padgitt, Vice President
Dave Keck, Plant Manager

For Monsanto: J. N. Flanagan
R. B. Stobaugh

General discussions were held with Tenneco Chemical Company to determine possible areas of mutual interest.

1. Tenneco Chemical are still operating with a skeleton staff with Joe J. King as President and Padgitt and Harry E. O'Connell as Vice-Presidents. The areas of responsibility within Tenneco apparently are not well defined, but O'Connell apparently handles engineering and Padgitt other items. Before being named a vice-president in February, 1961, Padgitt was Director of Project Development; he still handles development and long-range planning.
2. Their VCM plant capacity is 200M pounds per year. They have already run the plant at the rate of 150M pounds per year. The plant is down now, but when it is put back in service they expect it to better the 150M-pound-per-year rate and hope that it will approach the 200M-pound-per-year rate.
3. Cary will take about 150M pounds per year of VCM; Tenneco plan to market their excess VCM. (OPDR on 11/19/62 stated that Cary made about 100M pounds per year of PVC and co-polymers and expected to reach a total PVC capacity of 150M pounds per year by 1964).
4. Tenneco will have excess acetylene and are looking for uses for it (this checks with published reports that Tenneco's acetylene capacity is nominally 100M pounds. About 86M pounds of acetylene will be required for 200M pounds of VCM, thus resulting in a 14M pound/year

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excess on a design basis). One possible acetylene use is manufacture of VAM.

5. They confirm they are buying anhydrous HCl from Dow at Freeport and that it is shipped by tanktruck from Dow to Tenneco's plant on the ship channel (their plant site is just west of Shell). They state it is a two-hour trip by tanktruck from Freeport to their plant. Our previous information indicated that Dow were also shipping some quantities of anhydrous HCl to the Beaumont or Lake Charles area, but Tenneco are not aware of this.
6. Tenneco would consider buying anhydrous HCl from us at \$35 - \$40 per ton delivered. They have an opening for some HCl now. (This compares with \$45 per ton which we believe they are currently paying Dow).
7. They would consider converting our anhydrous HCl to VCM by using their excess acetylene. They are not equipped to handle muriatic acid.
8. If Cary's demands outgrow Tenneco capacity, they would be interested in VCM purchase; however, they doubt this will happen.
9. They do not plan to base any future VCM capacity on ethylene and have no plans to manufacture ethylene.
10. They do not plan to go basic in chlorine but feel that they have a good arrangement in obtaining HCl at what they consider to be less than chlorine value. They stated that Diamond and Ethyl both valued HCl at chlorine value and, thus were not able to sell any to Tenneco. (Conoco have not approached Tenneco about HCl thus tending to confirm that Conoco will have their HCl on the East Coast).
11. They have an ammonia plant under construction. They did not state the capacity and would not comment on possible marketing arrangements except to say that it was a sensitive point with them. (Oil & Gas Journal, 9/2/63, gives their capacity as 125,000 tons per year. Chem Week of 11/2/63 gives their capacity as 53,000 tons per year).
12. They do not have a methanol plant under construction and have no plans for one.
13. Active consideration of a VAM plant has been pushed aside because of the rush of other work, but they may revive consideration in the future to supply Cary. A VAM plant, of course, represents a possible ethylene outlet for us via conversion of ethylene to acetic acid.

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14. Tenneco Oil have a plant on the Channel from which propane, butane and pentane are extracted. This material is available to Tenneco Chemical should they desire to use it in the chemical business.
15. Padgitt expressed some interest in the AN shortage and indicated that they would go the propylene-ammonia route if they entered the business, though they have no plans to do so. He stated they could make propylene from the Tenneco plant propane. (This does not check with his statement that they are not interested in the ethylene business since ethylene would be produced from any propane cracking plant).
16. Padgitt stated that Ethyl Corporation are making ethyl chloride and not EDC from ethane though he says Ethyl would like people to believe that they can make EDC from ethane. (An ethyl process engineer told me in September that they are making EDC from ethane). He said Ethyl also make EDC and ethyl chloride from ethylene.
17. Simon Askin, President of Heyden, Newport, officially reports directly to the President of Tennessee Gas, though in actual practice he reports to Gardiner Symonds, Chairman of Tennessee Gas.
18. Padgitt and Keck did not seem very familiar with the Heyden operation, but expected that it would continue to operate independently of Tenneco Chemical for some time. In addition to Heyden, the Tenneco pipeline operations (government regulated business) and Tenneco Corporation report directly to the parent company, Tennessee Gas. The Tenneco Corporation hold all of the stock in the various Tenneco unregulated businesses, such as Tenneco Oil, Tenneco Chemical, Tenneco Real Estate, Tenneco Life Insurance, Tenneco Bank, etc. Tenneco Chemical represents the Tenneco Corporation in their dealings with Cary and Petro-Tex.

As a matter of interest, rough calculations indicate that Tenneco will have to value their acetylene at 9¢ per pound in order to break even with VCM at 6½¢ per pound and SARE at 5%. Acetylene value is the largest single item in VCM manufacturing cost and a 1¢ change in acetylene price results in a 0.43¢ per pound change in VCM manufacturing cost. Thus, if acetylene value is 2¢ per pound an investment of 20% on the VCM facilities, while 10¢ acetylene would result in a corresponding loss. Natural gas and fuel are the main variable items in acetylene manufacturing cost; 20¢ per million Btu natural gas accounts for about 1½¢ per pound of acetylene (when taking into account by-product fuel credit). Thus, if Tenneco valued natural gas at a lower level they could reduce acetylene cost by ½¢ or more.

Bob

R. B. Stobaugh

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