Inter-Office Memo

TENNECO CHEMICALS, INC.

To C. W. Johnston At Flemington Date August 5, 1969

From H. B. Carr At Burlington Copy to J. C. Fisher
F. W. Kanzler
M. C. Spalding
M. W. Williams

Subject D.M. Water Testing

Reference: Memo: C. W. Johnston to H. B. Carr, dated 7/29/69, titled, "June Monthly Report"

Project No.: 70-001

In the referenced memo, you raised some interesting questions pertaining to the program initiated by Quality Control to monitor the demineralized water system in Burlington. A detailed report is being prepared by Quality Control that will define test methods, sampling points and sampling frequency. However, in answer to your particular questions, Quality Control is doing the following:

1. For iron testing, two separate tests are employed. In the first, all iron is reduced to ferrous for color development and determination (total iron). In the other test, ferrous is determined directly. Ferric is determined by difference. It is agreed that ferrous iron is more important as far as the polymerization is concerned. However, ferric is also important in its effect on heat stability; probably through a Friedal-Craft mechanism as you suggest. The rule utilized, at present, is that for an iron content greater than one part per million (ppm) both tests are run. Thus far, the iron level has been in the 0.2 to 0.7 ppm range.
2. A solids content test for the D.M. water will be run. The main source of solids at the D.M. water circulating pumps would be resin slurry that has backed-up into the Service Loop through faulty check valves.

H. B. Carr

HBC/rjl