

MONSANTO CHEMICAL COMPANY

Texas City, Texas

October 14, 1955

cc: W. E. Alexander/
W. L. Bolles
J. B. Clopton
W. E. Decker/
N. W. Snow
H. K. Eckert
H. E. Morris/
W. H. Lane
J. S. Putnam
F. A. Sherwood

TO THOSE PRESENT:

A. R. Baker
R. T. Clark-Springfield-(part time)
C. L. Gilmore
H. G. Schleicher-(part time)
W. S. Sevier
W. E. Wiese-Springfield
W. P. Yates

Minutes of
Specification Committee Meeting
Vinyl Chloride
October 4, 1955

This meeting was held to discuss (a) whether we should have two grades of VCM, (b) the lowering of the limits of phenol inhibitor, (c) the recent color problem at Firestone, and (d) the dilatometer method for polyrate analysis.

Two Grades of VCM

At the present high rates of production, it is difficult to produce VCM which always has a polyrate of 80 or higher. If Springfield would agree to take VCM routinely with a minimum polyrate of 78 percent, it would greatly simplify this problem. This would not require special handling of VCM. One solution to this problem would be to set up specifications for two grades of VCM, essentially one for Springfield and the other for Firestone and other customers.

With respect to this polyrate problem, C. L. Gilmore made these remarks.

1. Production has no certain method of predicting what polyrate VCM they will produce.
2. At a production rate equivalent to 90 MM pounds per year, about 50% of the VCM will be 80 polyrate or lower.
3. The polyrate of all the VCM could be raised by installing an additional column. However, this installation would cost about \$100,000.

CBY 1110512

RSV0030951

4. Research is actively studying how to remove impurities from the acetylene feed, since low polyrates are apparently the result of impurities from reaction.
5. Production begins to have a quality problem when the production rate exceeds 80% of design. (Rate equivalent to 75 MM pounds per year.)
6. Production has set the third quarter of 1956 as a goal for solving their quality and cracking inhibitor problems.
7. The refrigeration problem has been solved to the extent that refrigeration will not limit production until a rate equivalent to 90 MM pounds per year is reached.
8. Springfield may ask for limits of 78 to 83 on polyrate.

Since Springfield has accepted VCM with a polyrate between 78 and 80, and has indicated that the lower polyrate material may be desirable, the principle problem to lowering the polyrate specification concerns Firestone. Firestone receives certificates of analysis on the VCM shipped to them, and the polyrate is reported on each certificate of analysis. They do not check this polyrate analysis, but they do polymerize a sample to obtain polymer for their viscosity test.

Statistical studies of data they have furnished to us, show that there is no correlation between their viscosity test and our polyrate test. Thus, it is believed that we could ship Firestone VCM with a polyrate between 78 and 80, and they would not question the material if they did not receive certificates of analysis.

Bill Wiese will contact Firestone with this problem. He feels that Firestone will propose that they run one or two tank cars with 78-79 polyrate material, to determine how it will affect their process, and whether they can use it.

Bill Sevier proposed that we approach Springfield officially and propose a 78 minimum polyrate specification. The committee agreed, and Production Coordination will contact Springfield. If at all possible, though, it was agreed by the committee that we should have one grade of VCM.

Phenol

Springfield has expressed a desire to drop the phenol specification to a maximum of 10 ppm. By so doing, they think that they would be able to eliminate their caustic scrubber. Carryover from this caustic scrubber has been giving them considerable trouble.

At Springfield's request, three cars of VCM containing 10 ppm of phenol were shipped to them on October 4. They will evaluate this material. If it is satisfactory, they probably will request a change in the specification.

CBY 1110513

C. L. Gilmore reported that if the specification is changed to a maximum of 10 ppm, changes must be made in the unit to make possible the addition of the smaller amount of phenol. Also, additional study is needed to determine whether VCM containing 10 ppm of phenol can be satisfactorily held in storage for a long period of time. It was agreed by the committee that no further action would be taken on either of these changes until we get word from Springfield.

Firestone Color Complaint

Dick Clark stated that he felt this complaint developed because Firestone received some off-color material from us in June or July of this year. Since they did receive this off-color material, he feels that we should help Firestone in any way that we can to solve their problem.

Bill Wiese previously asked Firestone to send a sample of their recycle stream to Texas City for analysis. This sample has now been received. Bill Yates will analyze this sample completely, particularly for aldehydes, and report the information to Bill Wiese who will pass it on to Firestone. It is suspected that there could be considerable amounts of aldehydes in the recycle material which could cause foaming and carryover in the process.

Bill Wiese reported that Springfield has had no color problem since July, when the caustic scrubber was placed in operation in Texas City.

Dilatometer Method

A statistical comparison of the results of parallel polyrate analyses by the dilatometer and coke bottle methods has been made on VCM rundowns. It shows that the dilatometer method of analysis is significantly more precise than the coke bottle method of analysis. A report on this study, plus copies of the data, will be sent to Springfield, with a recommendation that the dilatometer method of analysis for polyrate be adopted in place of the coke bottle method of analysis. The committee agreed that, if approval is received from Springfield, the method of analysis will be changed.

Meanwhile it was agreed by the specification committee that the present specification will be extended for a period of one year.

J. G. McQuarrie
J. G. McQuarrie

:tb

CBY 1110514