M. W. Williams | Piscataway | January 31, 1969

H. B. Carr | Burlington | P. F. Albanese, E. Farber, J. C. Fisher, E. L. Kanyok, File

MVC - Status Report

Reference: Memo - "MVC Status Report", from H. B. Carr to M. W. Williams, dated 1/2/69

In the referenced status report, monomer quality trends were reviewed for the period 8/7 to 12/23/68. In that report it was stated that monomer quality was in a steady decline from 11/15/68 to the issue date of the report, 1/2/69. This trend has since changed and from 1/10/69, only methyl acetylene of the light end unsaturates has exceeded our tentative specifications. The tank car data from 12/23/68 to 1/27/69 is summarized in the attachment.

Per a telephone conversation with Derold Cleckly on 1/30/69, it is now apparent that the improvement in monomer quality is related to a clean-out of the light ends column during a three day shutdown in the first week of January. Since the improved monomer started arriving only two weeks ago, we do not have sufficient data to evaluate plant performance for this period, with the exception of copolymer light absorbance, which has improved. However, data is being kept up-to-date and trends will be watched.

Other points covered in the telephone conversation with D. Cleckly were:

1. Houston is installing a semi-automated in-process gas chromatograph which will monitor monomer impurities on a once per hour schedule. Once correlative data is established they will request that this data be utilized to replace the tank car analyses that we currently receive.
2. The Houston Operations Group does not have an explanation for the fact that only methyl acetylene is now exceeding our specifications. They have been unable, thus far, to relate corrective plant parameters to this impurity.

Other developments and planned action in our coordinated monomer program with R & D are:

1. Polymerization Research has demonstrated that 1000 ppm of either allene or methyl acetylene will completely retard a Parr reactor emulsion polymerization (ref.: E. Farber's January, 1969 Monthly Report). Per a conversation with E. Farber, additional hardware is on order to study the effects of lower ppm levels of these impurities.
2. A large tank car (42,000 gals.) of Allied monomer is scheduled for delivery to Burlington 2/6/69. Since this monomer is from an oxychlorination process, close attention will be given, as follows:
   a. The monomer will be unloaded into the less critical Homopolymer storage tanks. Sampling will be witnessed by Quality Control.
   b. Burlington will analyze both virgin and recovered Allied monomer on its G.C. A sample of both virgin and recovered monomer will be sent to Houston for analysis. Since the Allied G.C. data will be available, we will, in effect, have a round robin for quantitative G.C. correlation with Houston and Allied. Also, since heavy end impurities apparently are more pronounced in the Allied Process (see attached spec.), Houston will be requested to determine heavy ends content by mass spectroscopy.
   c. Samples of virgin and recovered Allied monomer will be sent to Polymerization Research for both the Dow Test and suspension polymerization testing.
   d. Process Engineering will follow plant performance closely during the 2-1/2 days running on Allied monomer.
   e. Quality Control will compare Quality Control test data on the produced resin for this period with test data for resin produced immediately prior to this run. Further, the Heat Stability (Light Absorbance Test), presently under development, will be utilized to determine differences.

H. B. Carr

HBC/rjl

Attachment (4)

HOUSTON TANK CAR SUMMARY

		Range			
(20)	Propylene	22-28	From 12/23/68 to 1/27/69	3 of 75 cars out of spec.	
(60)	Propadiene	64-126	From 12/23/68 to 1/27/69	48 of 75 cars out of spec.	(From 1/14/69 Last 28 in spec. Except for 4 cars Range has been 13-73)
(4)	Butene-1	5-6	From 12/23/68 to 1/27/69	18 of 75 cars out of spec.	(From 1/10/69 Last 35 in spec. Except for 5 cars Range has been 0.8-6)
(4)	Methyl Acetylene	5-7.4	From 12/23/68 to 1/27/69	75 of 75 cars out of spec.	(From 1/10/69 the average has decreased 6 ppm)
(1.5)	1,3 Butadiene	1.6-11	From 12/23/68 to 1/27/69	39 of 75 cars out of spec.	(From 1/20/69 Last 15 in spec. Except for 1 car Range has been 0.4-4)