

INTEROFFICE
MEMORANDUM

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Date November 20, 1974

Subject Reduction of VCM in PVC
NOV 21 1974

To T. L. Carey

R. E. JONES

(Location, Organization, or Department)

From J. T. Barr

(Location, Organization, or Department)

cc: A. R. Adams
W. R. Byrnes
D. Franke
~~R. E. Jones~~
~~J. D. Kramer~~

D. V. Lowe
G. J. Mantell
M. T. McHale
A. K. McMillan
E. A. Primeau

F. L. Riddle
G. B. H. Speed
R. R. Spiegelhalter
M. H. Stermon

As requested, this memo will summarize those actions which the plants are undertaking to reduce the residual vinyl chloride in their products with existing facilities.

1. Stripping Temperature. Raising the stripping temperature to 170°F has helped reduce the residual monomer. Further increases in temperature will be made in 5°F increments on approximately one batch out of ten, with proper monitoring of the resin quality, to determine if this temperature can be raised further without harm to the product. The maximum permissible temperature will then be used on each product.
2. Centrifuge Feed Temperature. The temperature of the slurry fed to the centrifuge will also be increased. Tests have shown that this can improve drying rates, but monomer levels were not investigated at that time.
3. Drier Temperatures. Pace is able to achieve higher drier outlet temperatures than Calvert because of higher available steam pressure. A study will be made to see if this is related to the difference in residual concentrations at the plants, and if a further increase will be helpful.
4. Blend Tank Sparging. Small scale tests show that passing air through the slurry increases the rate of loss of monomer, especially if the temperature is elevated. This will be tried in the blend tanks at the plants.
5. Silo Aeration. Similarly, aeration of resin increases the monomer loss. Neither plant can do this at the moment. Calvert has signatory authority to refurbish the silo air slides, and Pace is incorporating this feature in their new silos.

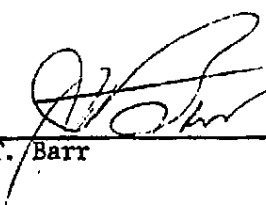
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6. Better Stripper Control. Both plants are to improve instrumentation of the strippers and communication between third floor and second floor operators. Pace is in the process of estimating a sequence control system for their stripper. The goal is to obtain optimum and reproducible stripping of each batch without delaying production. Each plant has been asked to estimate the effect on productivity of sufficient stripping time to meet the present product specifications.
7. Sampling. Both plants have been asked to install in-line samplers to assure that a representative sample is obtained from bulk containers. Recent developments in analytical equipment for monomer analysis is being reviewed by both groups in an effort to reduce the manpower now being devoted to this program.
8. Compounds. Calvert is expanding its program of finished pellet analyses, both FDA and non-FDA grades, to provide more information on the monomer content of compounds as related to resin feed and processing conditions.

In addition, there are several joint programs with R&D which are active. These include methods to obtain faster evacuation rates and to generate more surface area. These will be reported in more detail in the minutes of the Stripping Task Force meeting held November 15 in Pensacola.



J. T. Barr

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