



Technical Service Report

Conoco Inc.
Research and Development Department
Analytical Research Section
Ponca City, Oklahoma

Report No. 471-80-848-1

To Richard A. Frohreich

From Jana L. Florea

Date December 1, 1980

Subject EPA VARIANCE REQUEST: THE EFFECT OF SAMPLE STORAGE TIME ON
RESIDUAL VCM CONTENT OF PVC SLURRY

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Object To conduct a study to determine if PVC wetcake samples can be stored for longer than 24 hours without a statistically significant loss of VCM.

Conclusion

Analysis of the data showed no statistical evidence that residual VCM was lost when PVC wetcake was stored for five days.

Discussion

The samples were collected and prepared at the Aberdeen Chemical Plant September 22, 1980. Twenty-three 8-oz bottles of PVC slurry were collected in rapid succession during a reactor dump. The bottles were taken to the laboratory where five were randomly chosen from the set and placed in the refrigerator at 40°F to cool to room temperature. When the bottles had cooled sufficiently, the laboratory personnel prepared five wetcake samples from each of the five bottles according to EPA Method 107. The vials were stored in the refrigerator and a set of five vials, one from each of the five bottles, was analyzed each day for five days using the F-42 Headspace Analyzing Chromatograph according to EPA Method 107. The residual VCM concentrations obtained over the five-day period are shown, in wppm on a dry resin basis, in Table I.

The Spearman's rank coefficient for the data in Table I is 0.1. This is not statistically significant; a coefficient less than -0.9 would indicate a significant VCM loss.

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BW
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