TO: Eric Meyer

~~TGG~~ ~~JCL~~: ERT: ~~MJH~~: ~~AJG~~: RF

XF: VT-40

FROM: J. C. Ledvina
DATE: January 26, 1990

VISTA

Interoffice Communication

SUBJ: PVC TECHNOLOGY

I attended a meeting of the Vinyl Institute's Health, Safety and Environment committee on January 23 and a meeting with Esso Canada on January 24 to discuss Best Available Control Technology (BACT) for PVC plants. Some of the items discussed may be of interest to you and the plants now or in the future. Below are excerpts of my notes from those two meetings.

1. Sealwater on gasholders used in the recovery system account for 50% of Shintech's SARA 313 emissions. Oxy-Pasadena (formerly Tennaco) also uses gasholders in their recovery system. BFG said they do not use gasholders.

2. BFG strips wastewater containing greater than 10 ppm VCM separately from wastewater containing less than 10 ppm at the Calvert City VCM Plant. (This plant is or has been sold to Westlake polymers.) PPG says they similarly segregate. Dow does not.

3. Air Products-Pensacola is being required to gather fenceline concentration data on VCM. They will use Suma canisters (23 liter) to gather 7 day composites at three locations on their fenceline. Shintech is having discussions with the Texas Air Control Board regarding a similar program.

4. The Province of Ontario has set a fenceline VCM standard at 3 ug/m^3-1/2 hr. average and 0.2 ug/m^3-annual average (0.06 ppb). Esso and BFG need to install equipment to meet these levels. Neither plant currently meets the standard despite closed reactor technology and external stripping. These standards are based on work being done by USEPA to determine a one-in-a-million risk level. Future Clean Air act revision will likely result in fenceline standards similar to Ontario's.

5. BFG meets the Ontario ambient standards for point sources alone. However, when fugitive emissions are included, they exceed the standards. Dispersion modelling is used to determine whether the standards are met.

6. PVC Slurry must be stripped to 200 ppm in Canada and 100 ppm in Australia compared to the U. S. requirement of 400 ppm (on a dry resin basis).

7. Shintech has 137 points on its fixed point monitoring system. They use 10 GC's. Samples are pulled into a accumulation

canister for 7 1/2 minutes and then analyzed. That is, they are getting a 7 1/2 minute composite sample. The sample is analyzed and the canister purged to begin a new sample cycle. Any one analysis over 5 ppm is considered a leak. Shintech uses nylon sample lines. They verify the integrity of each sample line quarterly by introducing a standard gas at the sample point. They also have rotometers on the sample point and at the GC to help detect vacuum leaks.

8. BFG does not routinely use vent gas incinerators at their PVC plants. They have incinerators but they are kept as backup (in a cold state) to their primary solvent absorber vent gas system.

9. BFG is having a fouling problem on steam strippers used to treat groundwater. The hardness (calcium) in groundwater is precipitating in their strippers.

10. PPG thinks they are forming chloroform in their EDC/VCM steam strippers. Dow speculates this may be due to the high temperature and acid conditions in PPG's strippers. Dow does not have a problem. PPG is stripping groundwater and reports no fouling problem (possibly due to their acidic water?)

11. Esso says that some (unnamed) companies incinerate blend tank vents.

12. Shintech says they send their blend tank vents back to the recovery system gasholder.

13. Ontario is trying to get Esso to incinerate their drier vents.

Give me a call if you would like to discuss further or if I can clarify any of this.

J C Ledvina

D. C. Ledvina

dlj

cc: R. W. Seymour, R. B. Newton, F. G. Jeanson-Aber
H. D. Garrison, J. Callen, A. Wiles-OKC
R. A. Conrad, D. R. Booth, S. A. Rey-LCVCM
W. L. McClain, D. L. Cohen, H. R. Flammer, R. R. Smith

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