

MEMORANDUM

DATE: February 20, 1975
SUBJECT: SOCIETY OF PLASTICS INDUSTRIES (SPI) VCM/EPA
SUBCOMMITTEE MEETING — FEBRUARY 11, 1975

TO: J. M. Quinn, Director
ICD, Mfg., DAB-2

FROM: ~~Dr. B. B. Smura~~

The subject meeting was held at SPI Headquarters in New York City and attended by Dr. B. B. Smura of STC. The primary purpose of the meeting was to discuss the agenda submitted by the EPA for a meeting on 2/25/75. Dr. Smura's comments on the meeting follow:

1. Overall plant material balance is not a practical means of determining total VCM emission; point source measurements total is the most feasible technique.
2. Much of the PVC resin already contains less than the 400 ppm VCM maximum limit stated in the agenda. Dispersion resins, which account for 10-15% of total industry production, contain from 0.5-5% VCM. Technology for reducing VCM content of dispersion resins has not been developed but could be available within 5 years.
3. Installation of strippers should be completed two years after requirement made mandatory.
4. Drier exhaust level of 10 ppm VCM is not a meaningful emission value with volume rate undefined. Present typical drier exhaust contains 16 ppm VCM and is emitted at a rate of about 8.7 lbs air per pound of product.
5. No practical technology exists for removing VCM from drier exhaust or other dilute VCM containing gas.
6. Air feed to driers cannot be reduced and recycling of exhaust air is impractical.
7. Fugitive emissions can and have been eliminated through programs including surveillance, maintenance and employee re-training.
8. Industry practice has always been to purge process vessels containing VCM to a recovery system.

BFG61846

ASI 00006441

February 20, 1975

Other comments made during the meeting believed worthy of noting were as follows:

- a. Leslie Evans of EPA implied to one of the meeting attendees that the EPA objective is to restrict VCM emission to 0.5-1.0 pounds per 100 pounds of VCM product.
- b. EPA is monitoring VCM emissions at three PVC plants; fence-line values have only been as high as 0.3 ppm VCM and ambient values are at least an order of magnitude lower.
- c. B. F. Goodrich has a Corps of Engineers issued effluent permit with a VCM specification of 10 ppm maximum.
- d. One company has erected a duct system leading from the polymerization reactor relief valve to an incinerator.
- e. General Tire vents high VCM concentration releases to a gas holder but gas holders are impractical for newer plants containing large reactors.
- f. None of the newer plants with large reactors have experienced uncontrolled reaction and subsequent venting through the pressure relief valve.
- g. In a recent meeting with EPA one of the attendees at the SPI meeting obtained a four-stage "Proposed EPA Compliance Program". A copy is attached.
- h. Since the VCM exposure hazard was discovered about a year ago, plastics industries have reduced their VCM emissions by 1 or 2 orders of magnitude.

By way of further comment, I should add relative to Point 6., that it is my personal belief that closed drier systems employing recycle are practical and will be employed in new PVC plants. In regard to Point a., the VCM "Emission" of 0.5-1.0 pounds/100 pounds product refers to the total VCM which cannot be accounted for as polymer.

The minutes of the subject meeting are attached, along with a proposed agenda for the up-coming meeting with the EPA and a proposed EPA compliance program.

Original Signed


B. E. Kurtz, Manager
Technology Development
(Chlorine/Chlorocarbons)
Syracuse Technical Center

BEK:pts
Attachments

BFG61847

ASI 00006442

20010579

AGENDA

**EPA and SPI Meeting - The Control of
Vinyl Chloride Emissions from Polyvinyl Chloride Plants**

**February 25, 1975
Durham, North Carolina**

- | | |
|--|-----|
| 1. PVC Regulation Work Schedule | EPA |
| 2. PVC Ambient Monitoring Program | EPA |
| 3. Recognizing that source sampling to monitor total emissions from PVC plants is difficult to impossible - Discuss techniques of using plant material balances to determine emissions. (Sampling techniques, manpower requirements, accuracy, etc.) - | SPI |
| 4. Current Status of PVC regulation. | EPA |
| 5. Technical feasibility of reducing the vinyl chloride content of the PVC resin from the stripper to 400 ppm dry basis. | SPI |
| 6. Compliance schedules for installation of stripping systems at existing plants. Use of incineration, solvent absorption, and/or carbon adsorption to reduce the vinyl chloride concentration of the dryer exhaust to less than 10 ppm. (Cost, capability.) | SPI |
| 7. Quantify the reduction in dryer exhaust gas volume that can be achieved by using fluidized bed dryers, flash dryers, and/or by recycling the dryer exhaust after removing the water and vinyl chloride. Discuss the factors that would control the rate at which these techniques can be installed. | SPI |
| 8. Source sampling and analytical procedures for PVC. | EPA |
| 9. Preliminary cost estimates of controlling PVC plant emissions. | EPA |
| 10. Environmental impact of PVC plant regulation. | EPA |
| 11. Status of installation of control equipment to restrict fugitive emissions in response to OSHA regulations. | SPI |
| 12. Use of canned pumps, or double mechanical seals on pump, agitator, and compressor seals to reduce fugitive emissions. | SPI |

ASI 00006447

BFG61848

25619641