

VINYL CHLORIDE SAFETY ASSOCIATION MEETING REPORT

SEPTEMBER 24 AND 25, 1981

Doug Frey, a Diamond Shamrock PVC Plant Manager, announced that there are now 46 companies in the VCSA. Twenty-one of those companies are located outside the United States. New members this year include Iraq PVC, Solvay, and Tallyrand Chemical.

I. True Confessions/Major Incidents

A. Furan Process Sewer Explosion - J. McCulley

The VCM plant's process sewer drum explosion in the Spring 1978 turnaround was briefly discussed. The process sewer system was installed to collect VCM and EDC containing water streams from equipment clearing, etc. to reduce employee exposures and process area emissions. Furan sewer lines were installed that drained to a below grade Furan drum. Liquid was pumped from there to a smaller above-ground drum, and from there it was pumped to the water stripper. The two process sewer drums were vented to the plant's atmospheric oxy vent stack.

The plant had used this new process sewer system to handle the flush water from two or three light end column washes. The sewer drums were vented through an overflow line to T-2, a nearby water pit, since the oxy vent header tie-in had not been made. The tie-in was completed during the turnaround and the sewer drum system was then vented to the vent stack.

An explosion occurred in the top portion of the above-ground sewer drum during the dump of the light ends column wash water. Although people had been around the sewer drum just prior to the explosion, none were present at the time of the explosion and no one was injured. One large piece was blown 200 feet down the road and another fell through the roof of the maintenance shop. One person reported seeing a flash but this was not confirmed. The board-mounted level indicator on the top sewer drum dropped from a 70-75 percent reading to zero percent suddenly just before the explosion.

An extensive investigation of the incident was made. This included numerous analyses of material left in the sewer system and of the streams draining to it at the time, and plant measurements by SWRI of the potential for static discharge in the Furan headers. Only trace quantities of unstable compounds were found in the sewer system. The SWRI measurements indicated that static discharge in

