

CHEMICALS



INTEROFFICE / LAKE CHARLES

Harwick KRM
Boyle
H. H. H. H. H.
W. H. H. H. H.

TO W. B. Graybill

DATE July 13, 1973

FROM Don Metzger DM

SUBJECT Vinylidene Chloride Peroxide

The potential for formation of polymeric vinylidene chloride peroxide in the Per-Tri vent line to the Incinerator was questioned during the Loss Prevention Review of the Incinerator project. Historically, no peroxide or polymer has been noted in the reactor vent system; however, the effect of increased residence time in the new vent line is unknown. Research by Barborton personnel has confirmed that the peroxide is extremely hazardous due to the destructive power involved and to its sensitivity to friction, shock and temperature. Barborton Research has also indicated that the potential hazard in the new Per-Tri vent line is expected only where liquid can be retained. The peroxide formation reaction is relatively slow even when initiated.

A small test line was installed off the bottom of the existing Per-Tri vent line prior to entering the scrubber. This test line has been in service for about 3 weeks. Liquid has been present only twice in the routine checks during this period. Each time about one pini of liquid was present; this liquid was approximately 50% water. Gas chromatograph analyses of the organic phases showed 0.61 wt. % VDC in one sample, and 1.25% VDC in the other sample. Thus, we are apparently dealing with very small quantities of liquid which is in itself very low in VDC concentration. Analyses indicate that no peroxides are present in the samples.

The vent line from the Per-Tri plant to the Incinerator has been designed when possible to eliminate low spots which could accumulate liquid. The line now contains two spots which could accumulate liquid. A continuous purge will be taken off these two low spots as standard procedure. This procedure will eliminate the hold-up of liquid which could lead to the deposition of peroxides.

The test line will be monitored until the Incinerator is put in operation. The continuous purges from the Incinerator will also be monitored to verify that a significant problem does not exist.

DDM/ar

cc: J. A. Clapperton
D. L. Duncan
T. G. Taylor
Glenn Work ✓
Don Reich/Tom Doran - Barborton

CONFIDENTIAL
NOT TO BE RELEASED
EXCEPT BY AUTHORITY OF
THE U.S. GOVERNMENT
NO. 61-4549

SL 049825