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October 4, 1978

Mr. Eric Cohen
Chief, Air Compliance Section
Region V, U.S. EPA
230 South Dearborn St.
Chicago, Illinois 60604

Dear Mr. Cohen:

The General Tire and Rubber Company, in compliance with the National Emission Standard for vinyl chloride, Section 61.64, is reporting an emergency manual vent valve discharge.

On September 25, 1978 at 3:45 p.m. Reactor 315 was manually vented to the atmosphere to prevent the relief valve from unseating. The high pressure resulted from the reactor overheating which may have been caused by an excess of initiator being charged to the reactor, or the reactor walls may have had polymer build-up that reduced the heat transfer capacity of the reactor. The estimated loss of vinyl chloride to the atmosphere was 163 pounds. This loss was estimated by measuring the amount of vinyl chloride vented to the gasholder, the difference in level of the batch in the stripper compared to other batches, and the conversion of the batch at the time the reactor was manually vented to the atmosphere:

a. Vinyl chloride charged to reactor	10,500 lbs.
b. Polyvinyl chloride formed at the time the reactor was vented	
 x 9800 lbs./batch	6,462 lbs.
 chloride vented to gasholder (1000 ft. ³ x 0.1875 lb./ft. ³)	2,411 lbs.
d. Pounds vinyl chloride in reactor when vented to atmosphere	1,627 lbs.
e. Difference in level	10%
f. Pounds vinyl chloride lost to atmosphere	163 lbs.

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When the pressure recorder for Reactor 315 indicated a pressure of 165 psig, the polymer operator went to investigate and found the pressure gauge on Reactor 315 reading over 200 psig. He immediately began to vent the reactor to the gasholder and continued to vent it until the gasholder was full. No decrease in pressure was observed, so the reactor was vented to the atmosphere to prevent the relief valve from opening.

The polymer operators involved have been re-instructed as to the most probable causes of reactor over-pressurization leading to emergency discharges, how to recognize conditions leading to these discharges, and what corrective action must be taken to avoid them.

Very truly yours,

G. E. Brumbaugh
Technical Superintendent

GKB:sm

cc: A. D. Jeffrey
R. W. Landrie

