

11.12.01

August 1, 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 61.65, is reporting an emergency relief valve discharge.

On July 28, 1978 at 10:00 a.m., the rupture disc blew and the relief valve opened on Reactor 301. The cause was poor temperature control due to a polymer buildup on the temperature probe and operator failure to realize the rupture disc was ready to blow while there was still time to take corrective action. The estimated loss of vinyl chloride to the atmosphere was 2,774 pounds. This loss was estimated by measuring the amount of vinyl chloride recovered in the gasholder, the change in level in the Reactor, and the conversion of the batch at the time the relief valve opened:

- | | |
|--|-------------|
| a. Vinyl chloride charged to the reactor | 10,500 lbs. |
| b. Polyvinyl chloride formed at the time the relief valve opened | |
| $\frac{(2.25 \text{ hrs.} \times 8900 \text{ lbs./batch})}{(8 \text{ hrs./batch})}$ | 2,503 lbs. |
| c. Pounds vinyl chloride in reactor when relief valve opened (lbs. charged - lbs. reacted) | 7,997 lbs. |
| d. Change in level in the reactor as a result of relief valve discharge and venting to gasholder | 50% |
| e. Pounds vinyl chloride vented to gasholder and atmosphere (0.50 x 7997 lb.) | 3,998 lbs. |

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- f. Pounds vinyl chloride vented to gasholder
(6600 ft.³ x 0.1855 lb./ft.³) 1,224 lbs.
- g. Pounds vinyl chloride lost to atmosphere
(3998 lb. - 1224 lb.) 2,774 lbs.

A polymer operator was attempting to add a chemical shortstop to the reactor when the relief valve opened. Immediately after the relief valve opened the reactor was vented to the gasholder in an effort to reduce the emission of vinyl chloride.

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

Very truly yours,

ORIGINAL SIGNED BY

G. E. Brumbaugh
Technical Superintendent

GEB:sm

cc: A. D. Jeffray
R. W. Laundrie

December 27, 1977

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

Dear Mr. Hurt,

Attached is a copy of our procedure for unloading vinyl chloride tank cars and our calculations for vinyl chloride emitted to the atmosphere from the opening of the unloading lines. The calculations are based on opening to the atmosphere five (5) feet of two (2) inch Schedule 40 pipe that has been vented to the gasholder to less than one (1) pound pressure. This procedure emits less than the .14 cubic feet of vinyl chloride vapors at standard conditions. We have assumed the temperature of the vinyl chloride to be at 32° F while in most cases the temperature would be closer to 70° F.

This completes the requirements for Waiver Number 17 to furnish the procedure and calculations for unloading lines.

Yours very truly,

ORIGINAL SIGNED BY

G. E. Brumbaugh
Technical Superintendent

GEB:sm
attach.

cc: R. W. Laundrie ✓
A. D. Jeffrey

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