

Conoco Chemicals
Continental Oil Company
P.O. Box 91, New Highway 25
Aberdeen, Mississippi 39730

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October 26, 1978

United States Environmental Protection Agency
345 Courtland Street
Atlanta, Georgia 30308

Attention: Mr. Thommie A. Gibbs, Chief
Air Engineering Branch

Dear Sir:

On October 16, 1978, our plant experienced an emergency relief discharge. As required by the National Emission Standards for Hazardous Air Pollutants, Standard For Vinyl Chloride (40 CFR, Chapter 1, Subchapter (§ 61.65 (a)) we are reporting this discharge to your office.

At 5:50 p.m. on October 16, 1978, a rupture disk located between a PVC reactor and a relief valve failed. The rupture disk failure was apparently due to metal fatigue as the reactor pressure was less than the design rupture pressure of the disk. The failure of the rupture disk induced a pressure wave which caused the relief valve to briefly open with a resulting atmospheric release of vinyl chloride.

The emission from the relief valve was observed by a plant shift foreman. He timed the relief duration to be three minutes before the relief valve reseated. The amount of the release was calculated from the relief valve design to be approximately 2400 pounds of vinyl chloride.

The apparent cause of the discharge was metal fatigue of the rupture disk which caused failure at a pressure less than design. This failure caused a pressure wave resulting in the lifting of the relief valve. The reactor pressure was always less than the rupture disk's design rupture pressure and the relief valve's design relieving pressure.

The plant will changeout all reactor rupture disks on a six month (maximum) basis in the future to try to minimize the possibility of fatigue failures. We will also check all relief valves on our reactors to verify relief set pressures.

If there are any questions on this matter or if further information is desired, please contact me at AC 601-369-8111, extension 239.



Douglas Michels
Chief Process Engineer
Conoco Chemicals Company
Aberdeen PVC Plant

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