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Conoco Chemicals Company
Conoco Inc.
P. O. Box 91, New Highway 25
Aberdeen, Mississippi 39730
(601) 369-6111

June 18, 1982

CONFIDENTIAL

Mr. Jerry B. Banks, P.E.
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39205

Dear Mr. Banks:

At approximately 10:45 a.m. on June 10, 1982, our plant experienced a minor emergency relief valve discharge from two relief valves. Pursuant to the National Emission Standard for Vinyl Chloride (40 CFR, Part 61, Subpart G, paragraph 61.55 (a)) we are reporting this incident to your office. This release has also been reported to the National Response Center under the Comprehensive Environmental Response and Liability Act of 1980.

The vessels involved were the East and West Recovered Monomer Condensers in reactor module No. 2. Each condenser is protected by a 1" x 1½" relief valve with a 2 inch diameter rupture disc between it and the condenser. The relief valves were both set to relieve at 150 psig and rupture discs both had a rated burst pressure of 150 psig at 150°F.

At approximately 10:45 a.m. on June 10, 1982, an operator noticed a liquid leak coming from the second floor of the VCM recovery system structure in reactor module No. 2. Upon investigation the operator found that liquid vinyl chloride was coming from the weepholes in the discharge piping of the east and west recovered monomer condenser relief valves. The operator notified his supervisor for help and instructed the panel operator to shut-down the monomer recovery system. The relief valves on the East and West Recovered Monomer Condensers were isolated at approximately 11:00 a.m. There were no vapors observed coming from either of the relief valve stacks. No personnel were overexposed to vinyl chloride.

Reactor module #2 was then shut down to find the source of the overpressure to the condensers that caused the relief valves to discharge liquid vinyl chloride. The line from the discharge of the condensers to the recovered monomer receivers was taken out of service and evacuated. This line was found to be plugged with polyvinylchloride resin, which is believed to be the cause of the overpressure of the condensers. This line was thoroughly cleaned before reactor module #2 was started up again. This is the first time this line has ever plugged with polymer since startup in early 1978.

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The estimated amount of vinyl chloride discharged is approximately 57 pounds. This amount is estimated from the accounts of those who observed the discharge. The accounts ranged from a quart of total liquid discharged to a pint of liquid every 30 seconds. The most conservative account was used to calculate the discharge. Attached are the calculations used to estimate the amount of the discharge. This amount differs from the amount reported to the National Response Center shortly after the incident. The estimated amount reported to the National Response Center was in the low hundreds of pounds.

To minimize the possibility of future discharges of this type, the plant has instituted a procedure to check the pressure drop using pressure gauges between the discharge of the condensers and the recovered monomer receivers during reactor recovery. This check will be made weekly. If an abnormally high pressure drop is experienced between the discharge of the condensers and the recovered monomer receivers, the line will be taken out of service and cleaned. As a long term measure, the plant will install a high pressure alarm on the discharge of the recovery system compressors. Upon high compressor discharge pressure, the source the high pressure will be found and corrected. When the high pressure alarm is installed, the weekly check of the pressure drop between the condensers and the receivers will be discontinued.

The reporting requirements of the Standard pertaining to the relief valve discharge are summarized below:

Source:	East and West Recovered Monomer Condensers, Reactor Module No. 2
Nature:	Discharge through relief systems on the East and West Recovered Monomer Condersers
Cause:	Overpressure of Recovered Monomer Condensers which is believed to be caused by pluggage of the liquid discharge line
Date:	June 10, 1982
Time:	10:45 a.m.
Approximate Discharge:	57 pounds of vinyl chloride
Method of Determining Discharge:	Calculation based on account of personnel who observed the discharge.
Action Taken to Prevent Discharge:	1. Monomer Recovery System shut down. 2. Relief valves isolated. 3. Module No. 2 shut down 4. Liquid line from the discharge of the Recovered Monomer Condensers was evacuated and cleaned.

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Measures Taken To Prevent Future Discharges:

1. Weekly pressure readings will be taken to determine pressure drop between the discharge of the Recovered Monomer Condensers and the Recovered Monomer Receivers. If an abnormally high pressure drop is observed, the discharge line of the condensers will be taken out of service and cleaned.

2. A high pressure alarm will be installed on the compressor discharge. Upon high compressor discharge pressure, the source of the high pressure will be found and corrected.

The weather conditions at 11:00 p.m. on June 10, 1982 were:

Barometric Pressure	29.88 inches of mercury
Wind	From Northwest
Wind Speed	0 - 1 miles per hour
Temperature	83°F
Clear	

If there are any questions concerning this report, please contact me at (601) 369-8111, extension 2331.

Sincerely,

Veldon E. Messick

Veldon E. Messick
Senior Process Engineer

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bcc: JF, CRM, PEM, RAF, DLM, JCL

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RELIEF VALVE DISCHARGE CALCULATION

EAST AND WEST RECOVERED MONOMER RECEIVERS

10:45 A.M. - JUNE 10, 1982

$$\text{Discharge} = \frac{1 \text{ pint}}{30 \text{ seconds}} \times \frac{60 \text{ seconds}}{1 \text{ minute}} \times 15 \text{ minutes} \times 2 \text{ stacks} \times \frac{\text{gallon}}{8 \text{ pints}}$$

$$= 7.5 \text{ gallons} \times \frac{7.6 \text{ pounds}}{\text{gallon}}$$

$$= 57 \text{ pounds of vinyl chloride}$$