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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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SUBJECT: Show Cause Conference held in Atlanta on 4/11/79 with Representatives of Conoco, Aberdeen, Mississippi

FROM: Leon Folsom

TO: Jesse Baskerville

SUMMARY

On April 11, 1979, a show-cause conference was held with representatives of Conoco's polyvinyl chloride plant located in Aberdeen, Mississippi at the Region IV offices in Atlanta. The list of participants is attached. The purpose of this meeting was to discuss whether relief valve discharges at the Conoco plant were emergencies. Three such relief valve discharges had been reported to EPA as required in 40 CFR 61.65 (a).

Mr. Baskerville opened the meeting with a brief introduction of the reasons and an outline of the format of the discussions. He indicated that following the initial statements a period of general discussion would be available for all parties to participate in a fact-finding session.

Mr. Folsom outlined the three incidents which had been reported to EPA. These were the relief valve discharges of December 9, 1978, February 2, 1979, and February 10, 1979. Time and amounts of the discharges were stated.

Ms. Newsom outlined the administrative and judicial remedies which are available to EPA relating to the possible violations of regulations.

Following this presentation by EPA, Mr. Miller, Plant Manager of the Conoco Plant in Aberdeen presented a prepared statement relating to the incidents reported. Following this presentation Mr. Wilburn stated that EPA could not accept a simplified explanation for the incidents but that a detailed examination of the events would have to be made before EPA could determine that the **discharges** were in fact emergencies. Ms. Fisher indicated that certain aspects of the presentation were confidential and that Conoco requested that they be held confidential and not made available to their competitors.

Mr. Kieschnick, Operations Superintendent at the Aberdeen Plant, described the relief valve discharges in detail. He presented the scenario of the event of December 9, 1978, first. Since this discharge had not been investigated previously, considerable detail was presented. He indicated that the cause of the discharge was overfilling of a storage tank with vinyl chloride monomer (VCM) prior to its introduction into a reactor vessel. The tank had a level sensor which is normally used to indicate the level of liquid contained in the tank, but water,

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which had accumulated in the area of the pressure transducer, froze and prevented the sensor from accurately transmitting the level of liquid in the tank. Prior to this event the company personnel had not anticipated the accumulation of water near this transducer and thus had not foreseen the possibility that subfreezing temperatures could immobilize the pressure transducer. Subsequent to the discharge the company is proceeding to install an additional pressure transmission monitor as a back-up to the unit which failed.

Discussions of this event disclosed that the plant personnel rapidly noted the discharge from the relief valve and proceeded to stop the pumps delivering VCM to the tank and subsequently the discharge. Questions were raised about whether this might be the case in future discharges, particularly ones which might occur at night and during subfreezing weather. The company stated that operations were carefully monitored by plant personnel which would disclose discharges or other problems which might occur.

Mr. Kieschnick then presented a description of the relief valve discharge of February 2, 1979. This event had been investigated by Leon Folsom during a visit to the plant on February 21, 1979. Subsequently the NESHAPS Emission - Report dated March 23, 1979, and an additional company submittal dated March 5, 1979 have been added to the file reporting on this incident. Documentation of this event is, therefore, extensive and will not be reiterated in detail.

The question and answer session which followed the detailed presentation of chronology for this discharge produced some additional information related to the event. The rupture disc on the reactor at the time of the discharge was rated at 185 psi but failed at approximately 181 psig. This falls within the expected 3-5% variation in rupture values of the discs. although the pressure relief valve did not reseal when the pressure fell below its rated pressure, testing the valve following the incident showed that the valve did reseal properly. This erratic behavior was not explained.

Following the lunch break Mr. Kieschnick gave details of the relief valve discharge of February 10, 1979. The event is described in detail in the company submittal of March 5, 1979, which is in the file. Additional comments produced other information. This event was precipitated by premature rupture disc failure. The company stated that premature rupture disc failure occurs on an interval of approximately 3-4 months. They did not state that there were any indications of premature rupture disc failure. It was noted by the company, however, that the requirement of rupture discs in addition to relief valves probably led to this discharge. It was felt that the valve would not have relieved had not the pressure wave associated with the rupture disc failure caused the valve to open.

General discussion led to the conclusion that the use of a holding tank might have prevented the latter two discharges of relief valves. The company was hesitant to agree with this conclusion and expressed the reservation that there might be some safety reservations to the incorporation of a holding tank. Considerable expense to the company would result if a holding tank were installed, and the competitive disadvantage of this expenditure was mentioned.

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