Diamond Shamrock

May 14, 1979

Mr. Richard Miller
Industrial Hygienist
Occupational Safety and Health Administration
1100 Nasa Road 1, Suite 505
Houston, Texas 77058

Dear Mr. Miller:

At 0447 hours on May 9, 1979, a VCM release occurred at our Deer Park Polyvinyl Chloride Plant and seven (7) of our employees were exposed to VCM. The highest level recorded by our monitoring system was 3573 ppm/VCM. All of the employees exposed to VCM were examined by our First Aid Department and no neurological effects were reported. The names of the employees exposed are as follows:

Jerry Pettit
Tom Renfroe
Mike Keener
Hector Arrendondo
Tom McCabe
Martin Stultz
Joe Jones

Although each employee is provided with approved respirator equipment, only one of the exposed employees was wearing respiratory protection.

In reference to your question as to whether these employees would be given liver function tests as a result of their exposure, no special tests will be given at this time. However, the SMA-12 blood tests which includes the liver battery are included in the physical examination given annually to all Plastics employees and semi-annually to employees who have worked ten or more years in Plastics. If these tests indicate a liver problem; then more extensive tests, including a liver scan, are given.

The VCM release amounted to 522 lbs/VCM and lasted for 18 minutes. The details of the release are as follows:

Reactor #44 in the #4 Plant poly room was in the process of heat-up to batch temperature. When the batch pressure reached 102 psig, the follower ring, which holds the baffle packing in place, separated. The three packing rings lifted several inches and a small hole was

Diamond Shamrock Corporation P.O. Box 500, Deer Park, Texas 77536 Phone: 713 476-2000

ripped in the middle ring, allowing VCM vapor to escape to the atmosphere. An operator immediately turned a water hose on the leak and the shift superintendent was notified. The shift superintendent arrived in 45 seconds and instructed two more operators to connect two additional hoses to the charge water manifold and turn them on the leak. He instructed a fourth operator to add the quick-kill solution to the reactor and told a fifth operator to line the reactor up to the emergency high pressure blowdown tank. Five minutes after the release began, the reactor contents were dropped to the emergency blowdown tank. Seven minutes after the release began, the reactor vent valve was manually opened, allowing additional vapors to be vented to the VCM recovery system through the VCM vacuum pump. Nine minutes after the release began, the pressure inside the reactor had dropped to 5 psig and after eighteen minutes, a vacuum had been pulled on the reactor.

The cause of this release was the separation of the baffle packing follower split ring. The ring separated due to the breakage of one of two cast iron fastener clamps. To insure that this does not happen again, we will immediately replace all cast iron fastener clamps with steel clamps and additionally will design and install improved follower rings on all reactors at number 1, 2 and 4 poly rooms. The reactors in number 3 poly room are currently equipped with follower rings of a satisfactory design.

Sincerely,

Douglas E. Frey
Plant Manager
Plastics Division

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