Alessandro Primo Maritime Chemical Accident

1991, February 1

Adriatic Sea, 16 n.m. north-east of Molfetta, Italy

Acrylonitrile (Class 3, 6) in ship cargo tanks; flammable liquid, toxic to both human and marine life, TLV 2 ppm (USA), IDLH 85 ppm (USA); marine pollutant Ethylene dichloride (Class 3) in ship cargo tanks; oily liquid, flammable and toxic, marine pollutant

Summary: On February 1, 1991, the chemical carrier Alessandro Primo sank at a depth of 110 m in the Adriatic Sea 16 miles off the coast of Italy. The ship had a cargo of 550 tonnes of acrylonitrile and 3,000 tonnes of ethylene dichloride. An exclusion **zone** of ten mile radius was set up around the wreck. During the following days water samples were taken around the wreck at various depths. Four days after the incident a trace of acrylonitrile was found 500 m from the wreck's position. Surveillance of the wreck with the aid of a ROV also showed evidence of an acrylonitrile leak. It was considered to be impossible to recover the entire ship which had been severely damaged when hitting the bottom. Diving at this depth also posed great difficulty. Three companies specialised in the area was hired to recover the cargo which threatened to pollute the area. The first step was to block the leaking of acrylonitrile and this was done by February 21. By the beginning of April the recovery operations started. With the aid of a large pontoon and a depot ship, the tanks of Allesandro Primo were emptied within less than a month. Many precautionary actions were taken during the hazardous operation, such as a helicopter standing by and emergency personnel present. Despite the difficulties and the great risks no injuries were encountered. All of the remaining cargo was taken care of, although most acrylonitrile had leaked out before the recovery operation started.

Cause of Accident: Not available.

Comments on Response: The incident was complicated due to different circumstances, such as great depth and very dangerous chemicals. The handling of the situation was successful and very professionally done. The environmental impact of the incident was very small in spite of the vulnerability of the chemicals involved.

Source of Information: 1) Report on the Alessandro Primo accident from REMPEC by G. Tosco. 2) Report from EniChem, Milano, 1996. 3) Project documentation from Smit Tak, Rotterdam.

(Abstracted July 2001 by Edvard Molitor, Swedish Coast Guard HQ)