

## Styrene Barge

## Maritime Chemical Accident

1992, January 26

Wax Lake Spillway, Louisiana, USA

**Styrene** (Class 3) in barge cargo tanks; flammable liquid, produces irritating vapour, may polymerize if contaminated or subjected to heat

TLV 20 ppm (USA), IDLH 700 ppm (USA); **marine pollutant**

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**Summary:** On January 26, 1992, two barges **collided** on the Intracoastal waterway close to Wax Lake in Louisiana. One of the barges was in tow by the tug De Lasalle and the other by the tug Scaup. The barge towed by De Lasalle carried a cargo tank with 340,000 litres of styrene. The collision caused a breach in the tank and **styrene** started **leaking**. The barge was released from the tug and sank below the water level, causing more styrene to leak out. The styrene spread very quickly and within minutes it had begun moving downcurrent. The waterway was closed a few kilometers from the spill and booms were deployed to stop the spreading of styrene. As styrene is a clear and colourless liquid it was only the strong odour that showed where it spread. Later however it was found out that the styrene was easily monitored with the help of a **forward-looking infrared imager** (FLIR). The styrene reached the soil on the south embankment and contaminated it. Some of it also polymerized and formed clumps with silt and other solids, causing it to sink. Later on this sunken polymer was washed ashore by waves. It was first attempted to pick up the styrene with the help of a belt skimmer with an oleophilic belt. However, the belt was dissolved by the styrene and it was found out that in order to use the belt it was necessary to first put peat moss on the styrene. Instead, the main part of the spill was therefore recovered by **vacuum trucks** placed on barges. The operation lasted for almost a month and were finished by the end of February.

**Cause of Accident:** A collision between two barges, each in tow by a tug.

**Comments on Response:** It took three days to establish an area monitoring plan and by this time much of the spill had already reached the shores. Floating styrene slicks on the water surface could be picked up by belt skimmers, which worked best if the slicks were pretreated with peat moss. The use of FLIR to detect the styrene proved to be successful.

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**Source of Information:** Report from the National Oceanic and Atmospheric Administration, USA.

(Abstracted July 2002 by Edvard Molitor, Swedish Coast Guard H.Q.)