Frank Michael — Maritime Chemical Accident

1993, October 10 — North of the island of Gotland in the Baltic Sea

Chemical name: **Monoammonium Phosphate** (Ammonium Dihydrogen Phosphate) which is a non-toxic solid fertilizer; a nutrient for algae and thus a severe oxygen consumer.

Summary: The German dry bulk carrier Frank Michael grounded and obtained severe bottom damage. The cargo of 1,100 tons of fertilizer started to escape and dissolve in the surrounding water.

A discussion started among responsible Swedish agencies regarding the need for actions to salve the cargo. The total yearly emission of similar chemicals into the Baltic Sea amounts to millions of tons, compared to the ship's cargo content of 1,100 tons. Furthermore, the time of the year and the favourable water turnover in the area reduced the risk for the environment. But a general view was that all possible actions should always be taken to reduce the release of oxygen consuming chemicals into the vulnerable Baltic Sea. One of the questions was how much resources were reasonable to devote to a salvage operation. One hint might be a comparison of the cost to take care of this amount of phosphates in a sewage purifying plant. This cost is about 3.5 million USD and the figure was put forward as a proposed target for response endeavours. But the responsible agencies did not judge that response efforts of this size would correspond to the environmental benefit. Thus no response actions were taken to stop the release of phosphate.

The weather got worse and the cargo content of phosphate escaped into the sea during a few weeks after the accident.

Cause of Accident: Grounding due to an navigational error.

Comments on Response: The ship's bunker oil was lightered, but no response actions were taken. to stop the release the cargo of phosphate.

Source of Information: Various memos by involved agencies.
(Abstracted February 5, 1997, by Björn Looström, Swedish Coast Guard H.Q.)