

log# 307B

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C. 20594



Safety Recommendation

Date: January 21, 1994

In Reply Refer To: M-93-46

Mr. Thomas A. Allegretti
President
American Waterway Operators, Inc.
1600 Wilson Blvd, Suite 1000
Arlington, Virginia 22209

On December 21, 1992, the St. Vincent and the Grenadines-registered containership JURAJ DALMATINAC collided with the tank barge DUVAL 2, which was being pushed by the U.S. towboat FREMONT, in the Houston Ship Channel (HSC), Galveston Bay. The bow of the JURAJ DALMATINAC penetrated the side and bottom hull of the barge, which buckled and sank. Both cargo tanks were breached, and the barge's cargo of molten sulphur spilled into the waterway.¹

The National Transportation Safety Board determines that the probable cause of the collision between the JURAJ DALMATINAC and the FREMONT tow was the failure by the ship's pilots and master to effectively use all available equipment and personnel to evaluate the developing situation so that they could take timely action to avoid the collision. Contributing to the cause of the collision was the FREMONT's lack of a compass, which could have afforded the tow operator the capability to maintain his tow on station outside the navigation channel.

On the evening of the accident, the FREMONT operator intentionally stopped his tow outside the outbound starboard side of the HSC when he encountered shut-out fog. The Safety Board believes that while attempting to maintain station near buoy 51 in the dense fog, the FREMONT operator allowed his tow to become misaligned and to swing into the channel where it was struck by the passing JURAJ DALMATINAC.

¹For more detailed information, read Marine Accident Report-- Collision of the Towboat FREMONT and Tow with the St. Vincent and the Grenadines-Registered Containership JURAJ DALMATINAC, Houston Ship Channel, December 21, 1992 (NTSB/MAR-93/02).

The Safety Board found that several factors adversely affected the operator's ability to keep his tow aligned with the channel, the most important of which was the lack of a compass. Because fog was so dense, the FREMONT operator only had one visual reference, buoy 51, with which he could try to determine his location and keep his tow aligned to the channel. Visual reference to a single floating object was not sufficient to establish alignment. The towboat could pivot completely around the buoy to any heading and still keep the same relative position to the buoy. The operator needed at least one additional point of reference, such as another visual object, a radar reference, or a compass bearing in order to determine his alignment.

Had the FREMONT been equipped with a suitable magnetic compass, the operator would have been able to determine at a glance what his heading was and whether it had changed. If he had determined that the tow was misaligned, he could have used the compass to return it to its proper heading without having to rely on visual cues. The Safety Board concludes that if the FREMONT had been equipped with a properly functioning compass that the operator could have used to monitor the heading of the tow, this accident probably would have been avoided.

The Coast Guard does not currently require towboats and tugs less than 1,600 gross tons to have a compass. In 1974, the Coast Guard published an Advanced Notice of Proposed Rulemaking proposing that all U.S. and foreign vessels more than 150 gross tons be required to be outfitted with a magnetic compass. In the resulting Notice of Proposed Rulemaking, which was published in 1976, the Coast Guard deleted the compass requirement, terming it to be "overly burdensome and unrealistic for small vessels." The Coast Guard stated that further study was needed to determine appropriate navigation equipment requirements for smaller vessels. To date, these further studies have not been conducted. The Safety Board does not consider the comparatively small cost of a marine magnetic compass overly burdensome and unrealistic for small vessels, and believes that the safety benefits accrued by such vessels having compasses is more than justified.

The Safety Board believes that tugs and towboats, especially those operating in open waters, such as Galveston Bay, should be required to carry a magnetic compass. These tugs and towboats move barges carrying thousands of barrels of chemicals and petroleum products, which if spilled, can seriously threaten life and property. Such spills are usually caused by collisions and groundings. The Safety Board believes that the acquisition and use of a magnetic compass by towboat operators would reduce the threat of such accidents.

Therefore, the National Transportation Safety Board recommends that the American Waterway Operators, Inc.:

Recommend that member companies operating tugs and towboats on the navigable waters of the United States equip their vessels with suitable compasses. (Class II, Priority Action) (M-93-46)

Also, the Safety Board issued Safety Recommendations M-93-41 through -44 to the U.S. Coast Guard; M-93-45 to Gantt Marine Services, Inc; M-93-47 and -48 to the Harris County Board of Pilot Commissioners; and M-93-49 to the American Pilots' Association. If you need additional information, you may call (202) 382-6860.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation M-93-46 in your reply.

Chairman, VOGT, Vice Chairman, COUGHLIN, Members, LAUBER, HAMMERSCHMIDT and HALL concurred in this recommendation.

By: 
Carl W. Vogt
Chairman