

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: May 3, 1979

Forwarded to:

Admiral T. B. Hayward
Chief of Naval Operations
The Pentagon
Washington, D.C. 20350

SAFETY RECOMMENDATION(S)

M-79-54

About 0927 c.s.t., on February 22, 1978, the USS L.Y. SPEAR (AS-36), upbound on the lower Mississippi River, collided with the upbound Liberian motor tankship ZEPHYROS at mile 19.2 above Head of Passes (AHP), Louisiana. Both vessels were moderately damaged and continued to their upriver destinations without further incident. No one on board the ZEPHYROS was injured; nine persons in the L.Y. SPEAR received minor injuries. 1/

The ZEPHYROS was proceeding at a speed of 11 mph over the ground on a steady course near and parallel to the right ascending bank of the river. The L.Y. SPEAR was proceeding at 19 mph near the middle of the river on a parallel course and was overtaking the ZEPHYROS. When the bow of the L.Y. SPEAR was about 500 to 600 feet abeam to the port quarter of the ZEPHYROS, the pilot ordered 10° right rudder and the L.Y. SPEAR turned to starboard toward the ZEPHYROS. The pilot of the ZEPHYROS, via VHF radio, and the Commanding Officer (CO) of the L.Y. SPEAR questioned the pilot about the maneuver about the time the bow of the L.Y. SPEAR was headed toward the midships section of the ZEPHYROS. Almost immediately, the L.Y. SPEAR began to turn to port as its stern swung to starboard, and the starboard quarter of the L.Y. SPEAR glanced off the port quarter of the ZEPHYROS. The heading of the L.Y. SPEAR was 10° to 15° to the left of the 294° heading of the ZEPHYROS at the time of the collision.

The pilot of the L.Y. SPEAR ordered 10° rudder with the intent to change heading only slightly to starboard. Either the rudder was kept on too long, some other hydrodynamic force acted on the vessel, or both, which resulted in the L.Y. SPEAR's turning until it was headed toward the ZEPHYROS amidships. The Safety Board believes that the right rudder was the main force which affected the turn.

1/ For more detailed information, read "Marine Accident Report -- USS L.Y. SPEAR (AS-36) Collision with Liberian Motor Tankship ZEPHYROS, Lower Mississippi River, February 22, 1978" (NTSB-MAR-79-6).

The L.Y. SPEAR's speed upriver was determined to have been 18 mph during a portion of the transit before the collision. With a downriver current of 2.9 mph, the speed through the water could have been almost 21 mph. Regardless of the exact speed, with separation distance abeam of 500 to 600 feet, there was little time available to compensate for steering errors or sudden shears from the intended course.

There was no special need for the transit to be made at any particular speed. Therefore, the CO was at liberty to select speeds commensurate with maximum safety. Although not required, the CO of the L.Y. SPEAR was prudent to employ the pilot, and he expected the pilot to improve the safety of the transit.

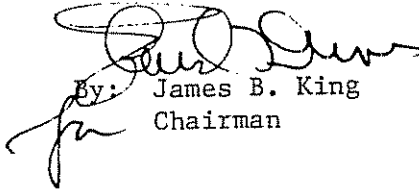
The CO had made thorough plans for the river transit. He had studied all pertinent operations and navigation publications, and had a detailed planning meeting the day before with all personnel to be involved in the navigation of the vessel. He had discussed the transit with an officer at Fleet Training Group, Guantanamo Bay, Cuba, who had previously made a voyage in a Navy vessel to New Orleans. He reviewed the Fleet Guide which highly recommended the use of a local pilot. In summary, the Navy personnel were well prepared for the transit to New Orleans. The CO planned for the trip to take as long as 10 hours, but was also aware that pilots preferred relatively high speeds. The officer at Guantanamo Bay, with whom he discussed the matter, said that during his river transit the pilot had used a speed of 27 knots most of the way.

If the CO had had more experience in working with pilots and in transiting the Mississippi River, he may not have authorized the overtaking maneuver in that location while approaching a bend and meeting a downbound tow. Also, he might have ordered a lower speed. In the circumstances, he was relying on the best advice available to him. However, he authorized the pilot to use near the maximum speed possible and that speed was much too fast for the circumstances.

The collision in this case resulted in only minor injuries and vessel damages. In slightly different circumstances, it could have resulted in a catastrophe. In view of the risks involved and other factors discussed in detail in our accident report, the National Transportation Safety Board recommends that the U.S. Navy:

Review and revise as necessary appropriate U.S. Navy directives and doctrine applicable to navigation on restricted waterways to ensure that Commanding Officers of vessels are provided adequate information and guidance regarding safe speeds and command relationships with commercial pilots. (Class II, Priority Action)
(M-79-54)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members,
concurred in this recommendation.



By: James B. King
Chairman