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NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

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Forwarded to:

Admiral James S. Gracey  
Commandant  
U.S. Coast Guard  
Washington, D.C. 20593

SAFETY RECOMMENDATION(S)

M-84-24 through -29

At 1653 eastern daylight time, on July 2, 1983, the U.S. passenger vessel M/V YANKEE and the Liberian-flag cargo vessel M/V HARBEL TAPPER collided in dense fog in Rhode Island Sound, 3 miles east of Point Judith, Rhode Island. Two of the YANKEE's 139 passengers were injured. There were no injuries to the crewmembers of either vessel. The HARBEL TAPPER sustained \$25,000 damage but continued in service. The YANKEE sustained \$26,000 damage and temporarily was placed out of service. 1/

The 136.5-foot, 425-gross-ton, passenger vessel YANKEE had departed Old Harbor, Block Island at 1547, and was proceeding at 11.5 knots for Fort Adams, Newport, Rhode Island. The YANKEE had a crew of 11 and was carrying about 139 paying passengers, an undetermined number of children, and persons with passes who were not carried as passengers. Because of fog in the area about Point Judith, the master directed the helmsman to steer a compass course of 040° (029.5° true) to keep the vessel outside of the fog as long as possible. The vessel's course cut across the Narragansett Bay Traffic Separation Scheme (TSS) at an acute angle.

After entering the fog, the master planned to alter course toward Brenton Reef Light, but because he detected a large radar contact, the HARBEL TAPPER, bearing 350° relative at 4 nautical miles, he kept the YANKEE steady on its course. The YANKEE was equipped with two unstabilized radar sets, but only one was operational; both radars were ceiling mounted. The master estimated the HARBEL TAPPER's speed to be about the same as the YANKEE's. He estimated the vessels' relative closing speed at 20 knots, and that the HARBEL TAPPER would pass at least 1/2 nautical mile to port in about 12 minutes.

When the vessels closed to 1 nautical mile and the HARBEL TAPPER's radar relative bearings became constant, the YANKEE's master became alarmed. He sighted the HARBEL TAPPER at a distance of 3/4 nautical mile and thought that it would pass close astern. But subsequently, he saw the HARBEL TAPPER turn to its left, and he realized that a collision was imminent. He ordered full right rudder, put the engine to full astern, sounded three blasts on the whistle, and broadcast on radiotelephone VHF-FM channel 13, "I am backing full." The vessels collided 20 to 30 seconds later, at 1653.

1/ For more detailed information, read Marine Accident Report--"Collision of the U.S. Passenger Vessel M/V YANKEE and the Liberian Freighter M/V HARBELL TAPPER in Rhode Island Sound, July 2, 1983" (NTSB/MAR/84-05).

Before the accident, the HARBEL TAPPER was proceeding about 8.5 knots in heavy fog in the outbound TSS lane. The master was using radar to direct the vessel's movements. The chief mate was on the bridgewatch and was using the second radar set to plot radar navigation fixes on the chart. The third officer was assigned as lookout on the port bridgewing, and the second officer as lookout on the starboard bridgewing. A bow lookout was not stationed because the master believed that a bridge lookout could see and hear better from the higher position. The HARBEL TAPPER's bridge was 328 feet from the bow.

While on a course of 180° true, the master detected two radar contacts, the YANKEE and the yacht VICTORY, respectively, bearing 10° and 20° relative to starboard, both at a radar range of about 1.5 nautical miles. The master used a grease pencil to mark the radar contacts on the radar screen at about 30-second intervals, but he did not indicate the times at the marks, nor did he compute the vessels' courses, speeds, relative closing speeds, or the times and the closest points of approach. He estimated a, "safe passage to starboard," of 2/10 nautical mile with the closer contact and 4.5/10 nautical mile with the farther contact. He observed that the radar contacts' relative bearings were steadily increasing to the right, and that their ranges were steadily decreasing. When the closer contact was at a radar range of 3/10 nautical mile, bearing 18° relative, the master changed the HARBEL TAPPER's course to the left to 165° true, to provide a 2.5/10 nautical mile passing clearance to starboard. The visibility then was about 150 yards. After changing course, the closer contact's relative bearing was 23°. When the closer contact was bearing 35°, it turned to its starboard, according to the master, so he directed the HARBEL TAPPER's rudder hard to port, sounded two blasts on the whistle, and ordered the main engine to stop and then to full astern.

From aboard the YANKEE, the HARBEL TAPPER was seen to break out of the fog bearing 10° to 15° relative on the starboard bow. The HARBEL TAPPER's master estimated that his vessel was moving ahead at 5 knots when the collision occurred, and that the angle of impact between the vessels' headings was about 70°. The YANKEE struck the HARBEL TAPPER's starboard side at No. 1 water ballast tank. The HARBEL TAPPER was heading 115° gyro at the time of the collision. Neither vessel sounded its general alarm when the collision occurred.

The collision occurred at 41° 22' N. latitude and 71° 25.2' W. longitude, in the outbound TSS lane. Although the TSS was suspended, neither the master of the HARBEL TAPPER nor of the YANKEE were aware of it; the operator of the VICTORY did know of the suspension.

The VICTORY was reported to have passed about 150 yards astern of the HARBEL TAPPER about the time of the accident. All three vessels had been sounding fog signals, but none of the persons aboard the YANKEE or the HARBEL TAPPER heard the whistle signals of the other vessels.

Aboard the YANKEE before to the accident, few crewmembers or passengers were aware that a collision was about to occur. After the collision, a passenger suffered a heart attack, and was subsequently transported ashore by a U.S. Coast Guard boat. The passengers were described as in a "state of sheer fright that [they] would be in the water." The lack of a public address system made it necessary for a crewmember to serve as a messenger between the pilothouse and the crew and passengers who were located on decks out of hailing distance from the pilothouse. Meanwhile, the remaining crewmembers were engaged in tending to the operation or inspection of the condition of the vessel. Therefore, few crewmembers were available to tend to the safety of the passengers. The YANKEE was not carrying its full allowance of 500 passengers.

Although the YANKEE had a Watch, Quarter, and Station Bill posted, an abandon ship condition was not included in the Bill. Consequently, there were no crew assignments for this contingency. Currently, there is no provision in the Station Bill regulations for requiring that passengers be informed as to what they should do for their own safety in various emergency circumstances. Because of the few crewmembers aboard the YANKEE, relative to the number of passengers, any last moment attempt by the crew to instruct the passengers as to actions they should take would be difficult if not impossible to accomplish, particularly when the crew likely would be fully occupied with an emergency, or emergencies, as occurred in this instance. There is a need for a more comprehensive Station Bill or for a special passenger safety bill or equivalent instructions aboard vessels, such as the YANKEE, engaged in coastwise, bay, sound, or offshore passenger services.

The YANKEE was equipped with primary lifesaving equipment as prescribed at 46 CFR 75-10-20(a), which accommodated 90 persons. Although the lifefloats were readily accessible, the liferafts which were stowed on top of the pilot's cabin would have been difficult to launch had it become necessary to abandon the vessel. Had the YANKEE sunk, most of the passengers would have found themselves floating individually in the water with visibility obscured by the fog. Whether all of the lifefloats and liferafts could have been deployed by the small crew and effectively used by the uninformed passengers to remain in groups for subsequent rescue is doubtful. The primary lifesaving equipment available was insufficient for an abandon-ship emergency even with the reduced number of passengers on board. Had it become necessary to abandon the YANKEE, search and rescue would have been extremely difficult and dangerous in the fog that existed, even in daylight. Further, the lack of a passenger list or accurate count, including children and nonrevenue passengers, would have complicated a search and rescue effort.

The HARBEL TAPPER was monitoring radiotelephone VHF-FM channel 16. The YANKEE was monitoring channel 16, but was using channel 13 for intership communications. Because of heavy use of channel 16, caused by the numerous local holiday weekend sailors and other vessels attending the America's Cup events, the HARBEL TAPPER and the YANKEE had difficulty in trying to establish communications with each other, and with the Coast Guard Stations at Block Island and at Castle Hill. Had the vessels been able to establish effective communications and done so, a passing agreement could have been made and this accident might have been averted. Prior NTSB Recommendations M-82-57, M-80-54 and M-79-74 are pertinent to this subject.

As a result of its investigation, the National Transportation Safety Board recommends that the U.S. Coast Guard:

Require passenger vessels subject to 46 CFR Subchapter H and small passenger vessels subject to 46 CFR Subchapter T which carry more than 150 passengers, engaged in coastwise, bays, sounds, or offshore service on extended routes, to be equipped with a gyro-stabilized radar suitable for rapid plotting of radar contacts and for navigation. (Class II, Priority Action) (M-84-24)

Require that passenger vessels with more than one passenger deck have installed an adequate loudspeaker system suitable for announcing passenger advisories, instructions, and emergency alerts from the navigation bridge. (Class II, Priority Action) (M-84-25)

Require that passenger vessels subject to 46 CFR Subchapter H incorporate in Station Bills the details of actions to be taken by the crew to prepare the passengers for various shipboard emergency conditions. (Class II, Priority Action) (M-84-26)

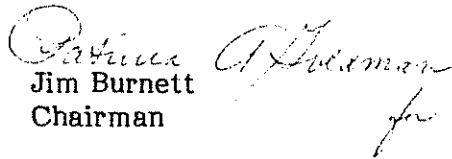
Require that all passenger vessels post conspicuously in passenger spaces passenger safety bills or equivalent instructions for emergencies, written in language understandable to nonmariners. (Class II, Priority Action) (M-84-27)

Require operators of all passenger vessels in coastwise, bays, sounds, or offshore service on extended routes to prepare an accurate list or count of embarked passengers, including non-revenue adults and children, and to have the list or count reported or delivered to a place ashore prior to a vessel's departure. (Class II, Priority Action) (M-84-28)

Reevaluate 46 CFR 75.10-20(a) to determine whether the primary lifesaving equipment required is adequate to safely support the entire crew and maximum embarked passengers in the water pending arrival of search and rescue assistance and amend the regulations, as necessary, to eliminate deficiencies in prescribed primary lifesaving equipment. (Class II, Priority Action) (M-84-29)

BURNETT, Chairman, GOLDMAN, Vice Chairman, BURSLEY and GROSE, Members, concurred in these recommendations.

By: Jim Burnett  
Chairman

  
for