



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

*Log M-337*

**Date:** March 14, 1988

**In reply refer to:** M-88-9 through -12

Admiral Paul A. Yost, Jr.  
Commandant  
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Washington, D.C. 20593-0001

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On June 22, 1987, at approximately 1800, two commuter ferries operated by Direct Line Commuter Service, Inc., collided in Lower New York Bay during fog. The JACK W, a 110-foot aluminum ex-crew boat, was southbound from Manhattan to Highlands, New Jersey, with 126 passengers aboard. The JAMEY DOWNEY, a similar 99-foot boat, was northbound with only two passengers aboard. The operators of the vessels established a meeting agreement by VHF radio before they came in sight of each other. When they were about 150 feet apart, the JAMEY DOWNEY was sighted directly in the path of the JACK W. The port bow of the JACK W struck the port bow of the JAMEY DOWNEY. The JAMEY DOWNEY was traveling at an estimated speed of about 10 knots while the JACK W was traveling at an estimated speed of 17 to 18 knots. Each boat was able to proceed to the passenger terminal at Highlands under its own power. Sixteen passengers aboard the JACK W and 1 passenger aboard the JAMEY DOWNEY were injured. <sup>1/</sup>

The circumstances of the accidents and the statements of the operators indicate that neither operator understood or made effective use of all the radar information that was available to operate the vessels safely in the restricted visibility. The operator of the JACK W stated his agreement to a starboard-to-starboard meeting with the JAMEY DOWNEY constituted his "appropriate action." Despite the fact that from his earlier radar observations the other vessel appeared to be on a collision course and therefore a definite risk of collision existed, he believed he would pass clear and took no further action. The Safety Board believes that the operator of the JACK W should have reduced speed and navigated with caution until risk of collision was over. Moreover, he failed to continue to monitor the radar during those last critical moments in which he could have taken decisive action to avoid collision. With two additional persons in the JACK W wheelhouse as lookouts, the JAMEY DOWNEY was sighted as soon as it emerged from the fog. However, the relative speed of the vessels left little time for the JACK W to steer clear of the approaching vessel.

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<sup>1/</sup> For more detailed information, read Marine Accident Report--"Collision of the Commuter Ferries JACK W and JAMEY DOWNEY, Lower New York Bay, June 22, 1987" (NTSB/MAR-88/02).

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With few waves present, the chances that the radar image was obscured in any sea return 2/ were slim. The Safety Board believes that the operator of the JACK W, because of his lack of formal radar training, failed to realize the importance of continuously monitoring the radar as the vessels approached each other and failed to take appropriate action to avoid a close quarters situation that ultimately resulted in a collision.

The operator of the JAMEY DOWNEY, on the other hand, was proceeding northbound on a nearly reciprocal course and had watched the radar image of the JACK W drift to the right across his heading flasher before he looked away from his radar. In his testimony, he stated that he changed his course about 4 degrees to the left to "open the gap." If he did change course to the left, at some point before sighting the JACK W, the heading of the JAMEY DOWNEY must have drifted to the right since the JACK W was sighted slightly on the JAMEY DOWNEY's port bow and the JAMEY DOWNEY was struck on its port bow. This also supports the testimony of the JACK W's operator that he believed that he would pass clear with no avoiding action. Coupled with the operator's testimony, that he did not touch the helm as he pulled back the throttles to full astern, it can be concluded that the JAMEY DOWNEY's heading drifted to the right of its intended course shortly before the vessels came in sight of each other. The testimonies of the lookouts on both vessels support this conclusion.

Currently, under the Coast Guard's manning requirements for passenger-carrying vessels under 100 gross tons, 3/ two licensed operators are required; however, only one licensed operator is required when the vessel is operated less than 12 hours in a 24-hour period. The navigational duties of the one operator while the vessel is underway includes steering, navigating, controlling the engines, checking the gauges periodically, communicating by radio, keeping a lookout, monitoring the fathometer when necessary, watching the radar (particularly during periods of poor visibility), and, as the person in charge of the vessel, supervising the crew. Additional tasks are imposed upon the sole operator of a high-speed vessel during periods of reduced visibility when monitoring radar becomes a high-priority task. Not only does the operator use the radar as a collision avoidance device, he also navigates by radar, particularly when in or near buoyed channels. A second operator in the wheelhouse could enhance the safety of the passengers by allowing one operator to monitor the radar while another performs other operational duties.

Under the current manning regulations, operators of passenger vessels under 300 gross tons are not required to have a radar endorsement on their Coast Guard licenses nor to exhibit proof of any formal radar training. Thus, passenger vessels, including passenger vessels under 100 gross tons, have been designed, built, and are operating that carry upwards of 500 persons without any requirement that the operator be a qualified radar observer (although the vessels may be radar equipped.)

After its investigation of the collision between the fishing vessel GULF QUEEN and the crewboat ALAN MCCALL, 4/ the Safety Board issued Safety recommendation M-86-27 to the Coast Guard. This recommendation addressed a requirement that operators of

2/ Clutter on a vessel's radarscope by radar signals reflected by nearby waves.

3/ U.S. Coast Guard Marine Safety Manual, Vol. III, Chapter 19.

4/ For more detailed information, read Marine Accident Report--"Collision Between the Fishing Vessel GULF QUEEN and the Crewboat M/V ALAN MCCALL in the Gulf of Mexico, March 8, 1985" (NTSB/MAR-86/04).

small radar-equipped passenger-carrying vessels be qualified as radar observers. In its response to the Board's recommendation, the Coast Guard stated that because radar is not required on small passenger vessels, the operators of those vessels need not be qualified in the operation of radar. The Coast Guard asserted, however, that the current regulatory project 46 CFR Subchapter T (CGD 85-080) will consider the need for radar aboard small passenger vessels. Almost all small passenger vessels are voluntarily equipped with radar, yet there is no requirement that they be equipped with radar nor that the operators of those vessels be qualified in radar operation. Passengers aboard these vessels should have the same protection under the regulations that passengers aboard larger vessels have.

Although the Safety Board is pleased that the Coast Guard has indicated that this matter will be given attention in the related regulatory projects, the Board supersedes Safety Recommendation M-86-27 with a recommendation to include a requirement that all operators of radar-equipped passenger vessels under 300 gross tons be qualified as radar observers. The Board will continue to press for action regarding safety recommendations for small passenger vessels pending the outcome of these regulatory initiatives.

Currently, the small passenger vessel industry is expanding throughout the nation's domestic waterways. In addition to ferries serving as intermodal transport links to move passengers and vehicles along the coast, across harbors and rivers, and in commuter networks, there are small passenger vessels that provide daily sightseeing, luncheon and dinner cruises, and charter fishing boats. Depending on the gross tonnage and area of service, the regulations for passenger vessels can vary greatly. The Safety Board urges the Coast Guard to heed the expansion of the small passenger vessel industry, and through the current regulatory project (CGD 85-080) amend the regulations to better conform with the use of the small passenger vessel.

The designers and builders of such small vessels have taken advantage of the admeasurement <sup>5/</sup> regulations and have designed small vessels of less than 100 gross tons that carry upwards of 500 passengers. In so doing, they have taken advantage of lower safety standards for construction, lifesaving equipment, firefighting equipment, and manning and licensing. The Coast Guard has found that a passenger vessel under 100 gross tons but over 79 feet in length and having overnight accommodations for more than 50 passengers, possesses an increased safety risk. As a result, all new passenger vessels within this category are subject to certain additional requirements which, for example, include structural fire protection, stability, and lifesaving equipment among others. The Safety Board not only is opposed to basing safety standards on tonnage measurements alone, but also on the overnight criterion for vessels carrying over 50 passengers. The Board urges the Coast Guard to base the regulations instead on the number of passengers carried at any time.

Currently, radar equipment is not required on any passenger vessel of less than 1600 gross tons. The JACK W and the JAMEY DOWNEY, both admeasuring less than 100 gross tons, were in that category. Although the Coast Guard stated that it will consider the need for radar aboard small passenger vessels during the forthcoming revision of the regulations found in 46 CFR 175-187 (Subchapter T) for passenger vessels under 100 gross tons, the Safety Board urges the Coast Guard to require radar aboard all small inspected passenger vessels that carry 50 or more passengers regardless of the admeasurement tonnage. Using number of passengers rather than a tonnage figure would be more in keeping with the ultimate goal of the regulations: to provide safety for passengers.

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<sup>5/</sup> A measurement of certain enclosed areas of a vessel expressed in units of 100 cubic feet, i.e., gross and net tons.

Moreover, since most owners of small passenger vessels have voluntarily equipped their vessels with radar equipment, such a requirement would not likely be a deterrent to their operations. The Safety Board believes that the safety of passengers aboard Coast Guard-inspected small passenger vessels will be further enhanced by the inclusion of radar in the required equipment and by requiring that operators be trained to use that equipment properly.

The Safety Board is concerned that the JAMEY DOWNEY had only one door for 105 passengers (maximum allowable load) to exit to the open deck. The passengers from the lower passenger compartment have to pass through the main deck compartment to reach the single exit. Unlike the JACK W's, which had three exits for 149 passengers, or a ratio of about 50 persons per door, the DOWNEY's exit ratio was 105 persons per door. In an emergency, the after door in the wheelhouse could be used as a passenger escape route; however, it would require passage through two separate doors. The Coast Guard does not have a standard that specifies the maximum number of persons who can exit through a single door within a certain time period. In its current regulatory project (CGD 85-080) to revise the regulations for small passenger-carrying vessels under 100 gross tons, the Coast Guard should establish a criterion for the number of persons that can safely exit through a single 30-inch-wide door in a given time period.

Therefore, the National Transportation Safety Board supersedes Safety Recommendation M-86-27 made to the Coast Guard on March 4, 1986:

Require that ocean operators of all inspected radar equipped, mechanically propelled passenger vessels under 300 gross tons be qualified as radar observers.

With:

Require that operators of all inspected radar-equipped passenger vessels under 300 gross tons be qualified as radar observers. (Class II, Priority Action) (M-88-9)

Also, the National Transportation Safety Board recommends that the U.S. Coast Guard:

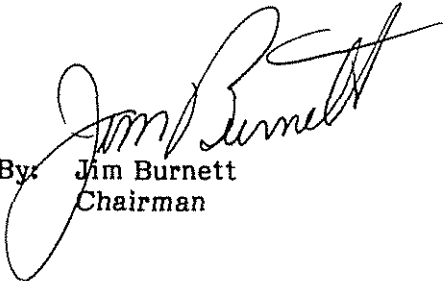
Require, in the current regulatory project (CGD 85-080) concerning small passenger-carrying vessels, that safety standards relative to construction, lifesaving equipment, firefighting equipment, and manning and licensing be based on the number of passengers carried rather than the gross tonnage of the vessel. (Class II, Priority Action) (M-88-10)

Require, in the current regulatory project (CGD 85-080) concerning small passenger-carrying vessels, that all inspected passenger vessels that carry 50 or more passengers be equipped with radar. (Class II, Priority Action) (M-88-11)

Establish, in the current regulatory project (CGD 85-080) concerning small passenger-carrying vessels, a criterion for the number of persons that can safely exit through a standard 30-inch-wide door in a given time period. (Class II, Priority Action) (M-88-12)

Also, the Safety Board issued Safety Recommendations M-88-13 through -16 to Direct Line Commuter Service, Inc., and M-88-17 to the National Association of Passenger Vessel Owners.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and LAUBER, NALL and KOLSTAD, Members, concurred in these recommendations.

  
By: Jim Burnett  
Chairman