



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: February 6, 1998

In reply refer to: M-98-9 through -12

Mr. J. Ron Brinson
President and Chief Executive Officer
Board of Commissioners of the Port of New Orleans
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Shortly after 1400 on December 14, 1996, the fully loaded Liberian bulk carrier *Bright Field* temporarily lost propulsion power as the vessel was navigating outbound in the Lower Mississippi River at New Orleans, Louisiana. The vessel struck a wharf adjacent to a populated commercial area that included a shopping mall, a condominium parking garage, and a hotel. No fatalities resulted from the accident, and no one aboard the *Bright Field* was injured; however, 4 serious injuries and 58 minor injuries were sustained during evacuations of shore facilities, a gaming vessel, and an excursion vessel located near the impact area. Total property damages to the *Bright Field* and to shoreside facilities were estimated at about \$20 million.¹

The National Transportation Safety Board determined that the probable cause of this accident was the failure of Clearsky Shipping Company to adequately manage and oversee the maintenance of the engineering plant aboard the *Bright Field*, with the result that the vessel temporarily lost power while navigating a high-risk area of the Mississippi River. Contributing to the amount of property damage and the number and types of injuries sustained during the accident was the failure of the U.S. Coast Guard, the Board of Commissioners of the Port of New Orleans, and International RiverCenter, Inc., to adequately assess, manage, or mitigate the risks associated with locating unprotected commercial enterprises in areas vulnerable to vessel strikes.

Under River Front Alert Network procedures established after this accident, individual riverfront commercial properties were to make their own determinations about the proper actions to be taken after receiving notification of an emergency involving a vessel on the river. According to evacuation plans that were initially in effect for property tenants, a lengthy procedural chain of command was in place that could delay a decision to evacuate. In the view of the Safety Board, such a potential for delay could endanger the employees and patrons of

¹For more detailed information, read *Marine Accident Report—Allision of the Liberian Freighter Bright Field with the Poydras Street Wharf, Riverwalk Marketplace, and New Orleans Hilton Hotel in New Orleans, Louisiana, December 14, 1996*. (NTSB/MAR-98/01).

riverfront properties. Therefore, on September 5, 1997, the Safety Board issued the following safety recommendation to the New Orleans Dock Board:

Develop, as part of the River Front Alert Network, an emergency evacuation announcement for broadcast by the harbor police department dispatcher using a public address system linked to river front properties that provides for a timely and efficient evacuation in the event of an impending collision or other emergency. (M-97-60)

Documentation received by the Safety Board on November 3, 1997, outlining the actions to be taken in the event of the activation of the River Front Alert Network appears to address the Safety Board concerns that prompted the issuance of Safety Recommendation M-97-60. Under the specific evacuation protocols developed for responding to the activation of the River Front Alert Network, the procedural chains of command within each property's evacuation plans have been eliminated, and property security officers have been given authority to initiate an evacuation immediately upon hearing a River Front Alert Network broadcast and assessing the danger. Because these revised evacuation plans meet the intent of the safety recommendation, the Safety Board classifies Safety Recommendation M-97-60 "Closed--Acceptable Action."

The River Front Alert Network system did not require that vessels docked or moored in its vicinity monitor the alert broadcast from the Coast Guard traffic light operator to the harbor police dispatcher indicating a vessel irregularity or loss of steering in the vicinity of the riverfront properties. The Safety Board was concerned that, unless these vessels monitored the network for emergency broadcasts, vessel occupants would be subject to delays in notification similar to those that occurred in this accident and that contributed to the disorderly evacuation and numerous injuries. Therefore, on September 5, 1997, the Safety Board issued the following safety recommendation to the New Orleans Dock Board:

Require all vessels which dock or moor in the area encompassed by the River Front Alert Network to monitor the River Front Alert Network radio for any emergency broadcast to provide maximum advance notice of an emergency. (M-97-61)

In a September 15, 1997, reply to the Safety Board, the Dock Board said that the intent of this safety recommendation should be met by the postaccident COTP order requiring that all large passenger vessels docked in the area have a manned pilothouse and that they monitor all emergency and working marine channels. While agreeing that monitoring working and emergency radio channels should give moored passenger vessels advance warning of potentially hazardous situations on the river, the Safety Board notes that the COTP order requiring such monitoring was an interim, and possibly temporary, measure. The Coast Guard has since published an interim rule that, when issued as a final rule, will make permanent the COTP order. In anticipation that the interim rule regarding manned pilothouses and radio monitoring will become permanent as 33 CFR 165.810(e), the Safety Board classifies Safety Recommendation M-97-61 "Closed--No Longer Applicable."

This accident demonstrates that the many and diverse stakeholders in the area of the Port of New Orleans, including the Coast Guard, the State of Louisiana, the Dock Board, the pilot organizations, and the owners and operators of riverfront properties and nearby moored passenger ships, did not adequately prepare for or mitigate the risk of a marine casualty affecting people and property within the Port of New Orleans. Some of the stakeholders, most notably the Dock Board, had commissioned partial risk assessment studies at various times for the assets in the harbor area. Despite their limitations (in either geography or scope), these studies did provide adequate information for the stakeholders to recognize the possibility of an accident similar to the one involving the *Bright Field*.

For example, risk assessment projects predicted an increase in accidents involving collisions, rammings, and groundings due to increased river traffic. The Louisiana State University risk assessment project, in 1994, concluded that no sections of the Port of New Orleans waterfront were free of ship allisions, including the area where the high-capacity passenger vessels, gaming vessels, and riverfront properties were located. Analysis of accident data for the Port of New Orleans from 1983 through 1993 (a total of 166 rammings along the left descending bank between miles 91 and 101 AHP) identified a mooring area for gaming vessels that had seen the fewest "historical allisions on the left bank." The study acknowledged, however, that no area of the left descending bank of the river had been completely free of vessel strikes during the 11-year period studied.

Despite this history of sensitivity to risk within the port area, the Riverwalk complex, including the condominium garage and the Hilton Hotel Riverside, were constructed on old warehouse piers on the river side of the levee. This location offered no "crush zone" that could absorb the impact of a marine ramming, and despite the fact that the piers themselves were not built to withstand being struck by a heavy vessel, no physical barriers were constructed outboard of the new buildings to offer them protection.

In contrast, the 1987 Audubon Institute-sponsored risk assessment similarly determined that there had been few allisions at the Bienville Street wharf and that because it is high up in the bend, it faced low risk of being struck by an outbound vessel. Nonetheless, recognizing low incidence, but a potential for high consequences, the Audubon Institute placed the Aquarium of the Americas behind the levee with a 100-foot buffer zone to protect the shoreside structure. No similar safety feature was considered or constructed for the Hilton Hotel or the Riverwalk Marketplace.

The International RiverCenter (IRC) obtained construction permits for the riverside expansion of the hotel from the city of New Orleans, the Corps of Engineers, and the Orleans Levee Board. In addition, the construction plans were approved by the Dock Board. According to the Dock Board, it may make recommendations to the IRC or other stakeholders in the area to widen the wharf, to allow silt to accumulate, or to further increase the robustness of construction in the area immediately outbound of their structures; however, it has no authority to compel such action. Currently, the damaged portions of the Riverwalk Marketplace mall, the parking deck, and the Hilton Hotel are being rebuilt in the same location. No physical barriers have been

included in the rebuilding of these facilities. As with the initial construction, all permits were granted, and all plans were approved.

Given the hazardous operating environment in the Port of New Orleans and the number of instances of loss of propulsion and steering, any number of which could have resulted in similar accidents or far more serious ones, the Safety Board does not understand the property owners' reluctance to provide adequate barriers to protect their assets in the port area. Although the River Front Alert Network is a commendable effort to alert the harbor police and security officers in the event of a need to evacuate the area, such efforts are unlikely to result in a complete evacuation under even slightly different circumstances. For example, the *Bright Field* rammed the Hilton Hotel during daylight hours when, fortunately, few guests were occupying rooms and no cleaning personnel were in the immediate area. Had this accident occurred during the evening, at night, or in the morning hours, most of the rooms would probably have been occupied. It is unlikely that even the River Front Alert Network would have been able to awaken the sleeping guests, alert them to the danger, and evacuate them in time to prevent serious injury or possible death.

The Safety Board is concerned that, despite the historical record of marine incidents and accidents in that section of the Mississippi River, the Dock Board permitted the placement of a commercial facility within about 20 feet of an unprotected wharf. More than 13,500 people a day visit the Riverwalk Marketplace. Those visitors have a reasonable expectation that the Port of New Orleans will assert its responsibility to protect their safety by exercising the power to disapprove a building plan that does not adequately account for a known risk. The Safety Board concluded that the IRC and the Dock Board did not conduct adequate risk assessment nor perform adequate safety management oversight to protect their properties and the people that use them from an allision such as that involving the *Bright Field*.

While the construction of a shopping mall and a hotel in such a high-risk area was ill-advised, the Safety Board recognizes that economy and practicality argue against attempting to correct the error by relocating those facilities. Nonetheless, the *Bright Field* accident highlights the risk to shoreside structures within the Port of New Orleans and the need to consider that risk in the approval process for future construction there.

Several passenger vessels, including gaming, tour and cruise vessels, were allowed to dock along the left descending bank of the river, the side of the river at highest risk. Had the *Bright Field* lost power some time later and the same accident scenario evolved, the ship would likely have rammed the gambling vessel, resulting in substantial loss of life. The cruise vessels, which had even less warning time, would quite likely also have sustained serious passenger injuries or loss of life.

While silting around the vessels' docking areas may offer some protection from ramming by deep-draft vessels at average river stages, the silt layer did not reduce water depth sufficiently to retard a runaway ship when the river was high, as it was on the day of the *Bright Field* accident. Additionally, no tugboats were used either as escorts or as a "barrier" to prevent a runaway ship from ramming the shore or colliding with another marine asset. And no

environmental controls, such as the Corps of Engineers' opening of the Bonnet Carré Spillway, were put in place to reduce river flow or current.

The property owners and other stakeholders within the Port of New Orleans clearly had the responsibility to establish and maintain a reasonable level of safety in the port area. The Safety Board concluded, however, that the stakeholders within the Port of New Orleans, including Federal, State, and local agencies; private commercial entities; shipowners, and pilot associations have not determined the overall level of risk associated with the full range of activities within the port area and have not provided adequate protection for persons and property in that area.

Among the factors that must be considered are risks associated with relatively high-speed navigation of the river, high river stage and rapid river current, railroad and highway bridges spanning the waterway, and the carriage of cargoes such as bulk oil or other hazardous materials or chemicals that can cause pollution, fire, or explosion. The Safety Board notes that many of the risk factors associated with river commerce within the port area have already been identified in previous risk-assessment studies and, further, that these factors may be amenable to known risk-reduction or risk-mitigation initiatives. Such initiatives might include reducing vessel speed, opening the Bonnet Carré Spillway on a more regular basis, using tugboats either as escorts or as a "barrier" to protect marine assets, adequately assessing the protection afforded by silting-in of vulnerable areas, and moving the passenger vessels to a safer location.

As a result of its investigation of the *Bright Field* accident, the National Transportation Safety Board makes the following safety recommendations to the Board of Commissioners of the Port of New Orleans:

As part of the permit-approval process for new commercial and residential development along the wharves within your jurisdiction, require that any new construction of occupied space be sited behind a buffer zone sufficient to protect persons and property by safely absorbing the impact should a vessel strike the wharf. (M-98-9)

In cooperation with the U.S. Coast Guard, reassess the risk of locating passenger vessels along the left descending bank of the Mississippi River and determine whether to remove the vessels to a less vulnerable location or put in place procedural, operational, or physical barriers that will protect these vessels from ramming by riverborne traffic. (M-98-10)

Participate with the U.S. Coast Guard and other stakeholders in a comprehensive risk assessment that considers all activities, marine and shoreside, within the Port of New Orleans. (M-98-11)

In cooperation with the U.S. Coast Guard and other stakeholders, including Federal, State, and local agencies; private commercial entities; shipowners; and pilot associations, implement risk-management and risk-mitigation initiatives that

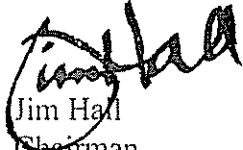
will ensure the safety of people and property within the Port of New Orleans.
(M-98-12)

Also, the Safety Board issued Safety Recommendations M-98-1 through -4 to the U.S. Coast Guard; M-98-5 and -6 to the U.S. Army Corps of Engineers; M-98-7 and -8 to the State of Louisiana; M-98-13 through -15 to International RiverCenter; M-98-16 through -18 to Clearsky Shipping Company; M-98-19 through -23 to New Orleans Paddlewheels, Inc.; M-98-24 through -26 to the New Orleans Baton Rouge Steamship Pilots Association; M-98-27 and -28 to the Crescent River Port Pilots Association; and M-98-29 and -30 to the Associated Federal Pilots and Docking Masters of Louisiana, Inc.

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 recommendations in this letter. Please refer to Safety Recommendations M-98-9 through -12 in your reply. If you need additional information, you may call (202) 314-6450.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.

By:


Jim Hall
Chairman