



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: September 27, 2000

In reply refer to: M-00-27

Mr. J. Robert Bray
Chairman
American Association of Port Authorities
1010 Duke Street
Alexandria, Virginia 22314

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendation in this letter. The Safety Board is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

This recommendation addresses the effectiveness of safety measures provided for the permanently moored vessel (PMV) *President Casino on the Admiral (Admiral)* and the adequacy of public safety for PMVs. The recommendation is derived from the Safety Board's investigation of the April 4, 1998, marine accident concerning the ramming of the Eads Bridge by barges in tow of the M/V *Anne Holly* with subsequent ramming and near breakaway of the *Admiral* in St. Louis Harbor, Missouri,¹ and is consistent with the evidence we found and the analysis we performed. As a result of this investigation, the Safety Board has issued 30 safety recommendations, 1 of which is addressed to the American Association of Port Authorities. Information supporting this recommendation is discussed below. The Safety Board would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendation.

About 1950 on April 4, 1998, a tow of the M/V *Anne Holly*, comprising 12 loaded and 2 empty barges, which was traveling northbound on the Mississippi River through the St. Louis Harbor, struck the Missouri-side pier of the center span of the Eads Bridge. Eight barges broke away from the tow and drifted back through the Missouri span. Three of these barges drifted toward the *Admiral*, a permanently moored gaming vessel below the bridge on the Missouri side of the river. The drifting barges struck the moored *Admiral*, causing 8 of its 10 mooring lines to break. The *Admiral* then rotated clockwise downriver, away from the Missouri riverbank. The

¹ For additional information, see forthcoming Marine Accident Report NTSB/MAR-00/01: *Ramming of the Eads Bridge by Barges in Tow of the M/V Anne Holly with Subsequent Ramming and Near Breakaway of the President Casino on the Admiral, St. Louis Harbor, Missouri, April 4, 1998*, (Washington, DC: National Transportation Safety Board, 2000).

captain of the *Anne Holly* disengaged his vessel from the six remaining barges in the tow and placed the *Anne Holly*'s bow against the *Admiral*'s bow to hold it against the bank. About the time the *Anne Holly* began pushing against the *Admiral*, the *Admiral*'s next-to-last mooring line parted. The *Anne Holly* and the single mooring wire that remained attached to the *Admiral*'s stern anchor held the *Admiral* near the Missouri bank. No deaths resulted from the accident; 50 people were examined for minor injuries. Of those examined, 16 were sent to local hospitals for further treatment. Damages were estimated at \$11 million.

The National Transportation Safety Board determined that the probable cause of the ramming of the Eads Bridge in St. Louis Harbor by barges in tow of the *Anne Holly* and the subsequent breakup of the tow was the poor decision-making of the captain of the *Anne Holly* in attempting to transit St. Louis Harbor with a large tow, in darkness, under high current and flood conditions, and the failure of the management of American Milling, L.P., to provide adequate policy and direction to ensure the safe operation of its towboats.

The National Transportation Safety Board also determined that the probable cause of the near breakaway of the *President Casino* on the *Admiral* was the failure of the owner, the local and State authorities, and the U.S. Coast Guard to adequately protect the permanently moored vessel from waterborne and current-related risks.

The Safety Board's investigation showed that local and State jurisdictional authorities for St. Louis Harbor did not provide adequate marine safety oversight of the owners' responsibility to assess and mitigate waterborne and current-related risks to the local PMVs and all people on board them. At the time of the *Admiral* accident, local jurisdictional authorities, such as the city's public safety and fire departments, had immediate oversight responsibility for the PMVs in St. Louis Harbor. The local authorities provided the first level of regulatory oversight for PMV owners and the first safety net under PMV operations. The St. Louis Department of Public Safety believed that it had met its obligation to ensure public safety by reviewing the *Admiral*'s design plans to ensure that the PMV met the applicable building codes for certain aspects of building structures, such as fire safety, electrical, mechanical, and plumbing requirements.

The St. Louis Department of Public Safety also approved the *Admiral*'s design and evacuation plan for compliance with requirements for emergency exits, emergency lighting, and fire sprinklers, as they would apply to buildings. However, the department did not require the equivalent of below-ground structural elements, such as would be required of a land-based structure, or any additional structural elements to protect the *Admiral* from the risk of collision. Buildings, when they are designed for public occupancy, are required to have fixed fire exits with clear access to areas of safety. The city required no added features to ensure the long-term integrity of the *Admiral*'s fire exits. According to its representative, the St. Louis Department of Public Safety was not required to address the siting of the *Admiral* or marine safety aspects, such as the possibility of the PMV's breaking away or sinking, or whether it might require flooding alarms or emergency pumps and generators. Nor did the city consider the need for lifesaving equipment, because such aspects are not considered during the approval processes for buildings.

After the Coast Guard designated the *Admiral* as a PMV, the city of St. Louis assumed responsibility for its safety. In the absence of Coast Guard involvement, the city had general

oversight responsibility for public safety for the entire operation. Yet city authorities did not have a mechanism for regulating the marine safety aspects of the operation of PMVs located in St. Louis Harbor. Local building and safety codes did not address the waterborne and current-related risks and risk reduction measures associated with PMVs in the harbor. The Safety Board therefore concluded that the city of St. Louis did not exercise effective marine safety oversight for the *Admiral* because the city treated the *Admiral* as a commercial building on land.

The State of Missouri Gaming Commission also placed safety requirements on the operation of the *Admiral*. In a July 9, 1998, letter to the Safety Board, the Commission stated that it requires its licensees to meet the minimum standards for safety and environment established by the Coast Guard, the U.S. Army Corps of Engineers, and the Environmental Protection Agency. It also requires that licensed casino PMVs meet Missouri's fire safety standards, the National Fire Protection Association's (NFPA's) fire safety standards for the construction and fire protection of marine structures, and the NFPA Life Safety Code.

In addition, the Commission requires that the vessel comply with all local fire and safety codes. However, because the Coast Guard did not impose any safety requirements beyond "secure and substantial mooring" of the vessel, and because none of the other authorities or standards addressed all the waterborne and current-related risks to which the *Admiral* was exposed, the Commission's actions fell short of its intended purpose.

The Commission also said in the July 1998 letter that it does not employ safety experts but relies on government agencies with safety standard and inspection expertise. The Commission recognized that it does not possess the requisite expertise to establish safety standards or to provide safety oversight of the *Admiral's* operations.

Although the State Gaming Commission required the owner to contract with the American Bureau of Shipping Marine Services to assess the stability of the *Admiral* and to periodically inspect its hull and watertight closures to ensure their integrity, the American Bureau of Shipping Marine Services did not, nor was it requested to, assess the adequacy of the mooring design, fire safety, lifesaving, or any other marine safety systems related to the *Admiral's* operation. The Safety Board therefore concluded that the oversight provided by the State of Missouri, as represented by the State Gaming Commission, did not address marine safety systems, such as the PMV's mooring design, fire safety, and lifesaving capabilities, and did not protect the safety of people on board the *Admiral*.

In the Safety Board's opinion, city and State authorities should recognize their limitations in marine safety expertise. The Coast Guard is the primary recognized marine safety regulatory authority and should regulate the operation of floating casinos exposed to waterborne and current-related risks. The Safety Board therefore recommended that the Coast Guard, the city of St. Louis, and the State of Missouri either require owners of PMVs to protect their vessels from waterborne and current-related risks so that their PMVs are in fact equivalent to buildings or require that the owners obtain Coast Guard certificates of inspection for their PMVs.

Therefore, the National Transportation Safety Board makes the following safety recommendation to the American Association of Port Authorities:

Inform your members of the April 4, 1998, near-breakaway of the permanently moored *President Casino on the Admiral* in St. Louis Harbor and of the waterborne and current-related risks associated with similarly located permanently moored vessels. (M-00-27)

The Safety Board also issued safety recommendations to the U.S. Coast Guard, the Research and Special Programs Administration, the States of Missouri and Illinois, the cities of St. Louis and East St. Louis, the National League of Cities, the American Gas Association, the American Public Gas Association, President Casinos, Inc., Laclede Gas Company, and American Milling, L.P. In your response to the recommendation in this letter, please refer to Safety Recommendation M-00-27. If you need additional information, you may call (202) 314-6170.

Chairman HALL and Members HAMMERSCHMIDT, GOGLIA, BLACK, and CARMODY concurred in this recommendation.

By: Jim Hall
Chairman