



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** September 27, 2000

**In reply refer to:** P-00-14

Honorable Kelley S. Coyner  
Administrator  
Research and Special Programs Administration  
U.S. Department of Transportation  
400 Seventh Street, S.W.  
Washington, D.C. 20590

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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 *President Casino on the Admiral (Admiral)*, a permanently moored vessel (PMV) 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 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.<sup>1</sup>

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

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<sup>1</sup> 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).

and State authorities, and the U.S. Coast Guard to adequately protect the permanently moored vessel from waterborne and current-related risks.

A natural gas leak resulted when the natural gas supply line to the *Admiral* was severed in the course of the accident. When the line broke, natural gas began escaping. Although the escaping gas did not ignite, one of the first priorities in any situation during which natural gas is released should be to curtail the escape of product.

An emergency repair team was summoned from the Laclede Gas Company (the supplier of natural gas to the PMV) to deal with the situation. The Laclede team could not shut off the natural gas from the regulator pit because, due to high water, the pit had filled with muddy water that prevented them from reaching the shutoff valves. The team was able to clamp off the ruptured natural gas hose, but by then, the leak had continued for about 3 hours.

Federal regulations (49 *Code of Federal Regulations* [CFR] 192.365) require that natural gas service line valves be placed in “a readily accessible location.” Based on the Laclede responders’ inability to reach the valve, the Safety Board concluded that, at the time of the accident, the *Admiral*’s natural gas shutoff service valve was not readily accessible.

Laclede has taken actions to provide the *Admiral* and its other floating facility customers in St. Louis Harbor with improved means of stopping the flow of gas in emergencies. In the case of the *Admiral*, Laclede intends to provide a new service line and meter station with accessible shutoff valves when the *Admiral* relocates to a position north of the Martin Luther King, Jr., Memorial Bridge in 2000. Laclede informed the Safety Board that it selected the new meter station location specifically because it is removed from areas affected by flooding. Laclede has also informed the Safety Board that it has installed valve key guides that allow service valves to be readily accessed and operated, even during periods of high-water conditions, for the *Admiral* (in its current location) and the other floating facilities in St. Louis Harbor.

Natural gas lines serve other PMVs in U.S. ports, so inaccessible shutoff valves may be a safety hazard common to pipelines that supply natural gas to PMVs during high-water conditions. In the case of the *Admiral*, it took about 3 hours to stop the escape of gas from the service line. The delay in this instance did not have serious consequences, but a future incident involving release of gas could have far more unfortunate results. The Safety Board concluded that the flow from the *Admiral*’s ruptured natural gas supply line was not secured in a timely manner, and such a delay could be hazardous should such an incident recur. The Research and Special Programs Administration is the Federal agency with the responsibility for ensuring that local gas companies comply with the requirements of 49 CFR 192.365.

Therefore, the National Transportation Safety Board makes the following safety recommendation to the Research and Special Programs Administration:

Require corrective action as appropriate to ensure that pipeline operators have the means to shut off the flow of natural gas to permanently moored vessels in a timely manner, even during periods of high-water conditions. (P-00-14)

Also, the Safety Board issued safety recommendations to the U.S. Coast Guard, the States of Missouri and Illinois, the cities of St. Louis and East St. Louis, the National League of Cities, the American Association of Port Authorities, the American Gas Association, the American Public Gas Association, President Casinos, Inc., Laclede Gas Company, and American Milling, L.P.

Please refer to Safety Recommendation P-00-14 in your reply. 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