



National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: November 4, 2011

In reply refer to: M-11-18

Captain Duane Bennett
President
Sabine Pilots Association
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The National Transportation Safety Board (NTSB) 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 NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. Information supporting the recommendation is discussed below. The NTSB would appreciate a response from you within 90 days addressing the actions you have taken or intend to take to implement our recommendation.

Background

The recommendation is derived from the NTSB's investigation of the January 23, 2010, accident in which the 810-foot-long oil tankship *Eagle Otome* collided with the 597-foot-long general cargo vessel *Gull Arrow* at the Port of Port Arthur, Texas. A 297-foot-long barge, the *Kirby 30406*, which was being pushed by the towboat *Dixie Vengeance*, subsequently collided with the *Eagle Otome*. The tankship was inbound in the Sabine-Neches Canal with a load of crude oil en route to an ExxonMobil facility in Beaumont, Texas. Two pilots were on board, as called for by local waterway protocol. When the *Eagle Otome* approached the Port of Port Arthur, it experienced several unintended heading diversions culminating in the *Eagle Otome* striking the *Gull Arrow*, which was berthed at the port unloading cargo.

A short distance upriver from the collision site, the *Dixie Vengeance* was outbound with two barges. The towboat master saw the *Eagle Otome* move toward his side of the canal, and he put his engines full astern but could not avoid the subsequent collision. The *Kirby 30406*, which was the forward barge pushed by the *Dixie Vengeance*, collided with the *Eagle Otome* and breached the tankship's starboard ballast tank and the No. 1 center cargo tank a few feet above the waterline. As a result of the breach, 862,344 gallons of oil were released from the cargo tank, and an estimated 462,000 gallons of that amount spilled into the water. The three vessels

remained together in the center of the canal while pollution response procedures were initiated. No crewmember on board any of the three vessels was injured.¹

The National Transportation Safety Board determines that the probable cause of the collision of tankship *Eagle Otome* with cargo vessel *Gull Arrow* and the subsequent collision with the *Dixie Vengeance* tow was the failure of the first pilot, who had navigational control of the *Eagle Otome*, to correct the sheering motions that began as a result of the late initiation of a turn at a mild bend in the waterway. Contributing to the accident was the first pilot's fatigue, caused by his untreated obstructive sleep apnea and his work schedule, which did not permit adequate sleep; his distraction from conducting a radio call, which the second pilot should have conducted in accordance with guidelines; and the lack of effective bridge resource management by both pilots. Also contributing was the lack of oversight by the Jefferson and Orange County Board of Pilot Commissioners.

Division of Piloting Duties

The Sabine Pilots Association had guidelines in place pertaining to pilotage, called "Guidelines Governing Aboard Vessels Requiring Two Pilots When Transiting the Sabine-Neches Waterway" ("piloting guidelines"). The piloting guidelines specified which pilot should have the conn in what area of the waterway as well as the duties and responsibilities of the two pilots during the transit. Specifically, the piloting guidelines stated that while "pilot no. 1" had the conn, "pilot no. 2" should handle the radio and miscellaneous duties so that the conning pilot could fully focus on navigation. The intent of the piloting guidelines seemed to be that the Sabine Pilots Association wanted its pilots to form navigation teams. This intent was commendable; the use of teams in operating complex systems, such as navigating large vessels in narrow waterways, is preferable to using single operators. Given the complexity of the task, the use of teams on the waterway would enable pilots to share navigation-related tasks so that one pilot does not become overloaded. For example, while one pilot focuses on vessel navigation tasks, the other pilot communicates with nearby vessels. Teams also enable pilots to monitor each other's performance to reduce errors and their consequences, something that is also consistent with good bridge resource management.

However, during the accident investigation, it became clear that the Sabine pilots were not consistently following the guidelines. As a result, the first pilot had the conn in the accident area when the second pilot should have. More significantly, when the first pilot should have been focusing on the upcoming turn at Missouri Bend at about 0923, he—not the second pilot, as should have been the case when the first pilot had the conn—was conducting the radio call with the *Dixie Vengeance* master. When the second pilot was needed to assist the first pilot after the radio communication, he was not prepared to do so because he had not been sufficiently engaged in the navigation. The NTSB therefore concluded that the *Eagle Otome* pilots did not follow Sabine Pilots Association guidelines with respect to division of duties while under way. Further, the NTSB concluded that, contrary to pilot association guidelines, the first pilot on the *Eagle Otome*

¹ For more information, see *Collision of Tankship Eagle Otome with Cargo Vessel Gull Arrow and Subsequent Collision with the Dixie Vengeance Tow, Sabine-Neches Canal, Port Arthur, Texas, January 23, 2010*. Marine Accident Report NTSB/MAR-11/04 (Washington, DC: National Transportation Safety Board, 2011), available at <http://www.nts.gov>.

was conducting a radio call at a critical point in the waterway, and the radio call interfered with his ability to fully focus on conning the vessel.

Therefore, as a result of this accident investigation, the National Transportation Safety Board makes the following recommendation to the Sabine Pilots Association:

Take action to ensure that your member pilots follow your guidelines with respect to division of duties and responsibilities of pilots. (M-11-18)

The NTSB also issued safety recommendations to the U.S. Coast Guard, the Jefferson and Orange County Board of Pilot Commissioners, the American Pilots' Association, and governors of states and territories in which state and local pilots operate.

In response to the recommendation in this letter, please refer to Safety Recommendation M-11-18. If you would like to submit your response electronically rather than in hard copy, you may send it to the following e-mail address: correspondence@ntsb.gov. If your response includes attachments that exceed 5 megabytes, please e-mail us asking for instructions on how to use our Tumbleweed secure mailbox. To avoid confusion, please use only one method of submission (that is, do not submit both an electronic copy and a hard copy of the same response letter).

Chairman HERSMAN, Vice Chairman HART, and Members SUMWALT, ROSEKIND, and WEENER concurred in this recommendation.

[Original Signed]

By: Deborah A.P. Hersman
Chairman