National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: November 4, 2011

In reply refer to: M-11-22

Captain Michael R. Watson
President
American 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.

Use of Vessel Name in Radio Communication

During the NTSB's investigation of the *Cosco Busan* accident in San Francisco, California,[2] investigators confirmed that at no point during the underway radio communication between the pilot and vessel traffic service (VTS) was the ship referred to by its name. Instead, the pilot and VTS simply used the pilot's designator, "Romeo," as identification. The *Cosco Busan*'s master and bridge crew were Chinese, and the master later told investigators that he was uncertain as to what ship the radio communication was referring. He said that without hearing his vessel's name during radio communication, it was difficult to discern whether the exchange was "private conversation" as opposed to operational and vessel-specific, and hearing the vessel name would have clarified that the communication pertained to him. During the *Cosco Busan* investigation, the NTSB also confirmed that in most U.S. ports, VTS uses the vessel's name in radio communication, but that in a few ports—including the Port of Oakland, from which the *Cosco Busan* departed—VTS and the pilots used the pilot designator or other terms as identification. As a result of this finding, the NTSB issued Safety Recommendation M-09-2 to the U.S. Coast Guard:

> Revise your vessel traffic service policies to ensure that vessel traffic service communications identify the vessel, not only the pilot, when vessels operate in pilotage waters.

In a July 2009 response, the Coast Guard responded that it concurred with the intent of the recommendation and that it would review VTS's radiotelephone practices to determine whether nationwide communication protocols should be developed. As a result, the NTSB classified Safety Recommendation M-09-2 "Open—Acceptable Response" in November 2009.

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[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.ntsb.gov.

[2] *Allision of Hong Kong-Registered Containership M/V* Cosco Busan *with the Delta Tower of the San Francisco–Oakland Bay Bridge, November 7, 2007*, Marine Accident Report NTSB/MAR-09/01 (Washington, DC: National Transportation Safety Board, 2009), available at http://www.ntsb.gov.

Following the *Eagle Otome* accident, the VTS Port Arthur supervisor confirmed to NTSB investigators that VTS Port Arthur uses the vessel name when communicating by radio. However, the first pilot on board the *Eagle Otome* did not refer to the ship by name in his radio communication with the *Dixie Vengeance* master. According to the Federal Communications Commission's "Bridge-to-Bridge Communication Procedure" at 47 *Code of Federal Regulations* (CFR) 80.331, the vessel name should be used in radio communication that takes place on designated navigational frequencies. The *Dixie Vengeance* master referred to his vessel by name but did not ask the first pilot for the name of the tankship. During the radio communication leading up to the accident, the *Dixie Vengeance* master referred to the *Eagle Otome* only as "inbound ship." This was similar to the way in which the first pilot had referred to the ship in his earlier radio communication with the towboat master ("first of two inbound tankers").

As the Chinese master of the *Cosco Busan* indicated, radio communication in a foreign language may be difficult for a bridge crew to comprehend, especially if the crew is not specifically concentrating on it. Considerable radio exchange can take place during the course of a long transit (between pilot and dispatcher, pilot to pilot, and general vessel-to-vessel communication) and frequently does not pertain to the navigation of that specific vessel at that exact moment. A bridge crew is therefore more likely to heed and take action when its vessel's name is called out. Had the *Eagle Otome* master and bridge crew heard the *Dixie Vengeance* master ask, "*Eagle Otome* lookin' okay?" as opposed to "Inbound ship lookin' okay?" they might have questioned the pilots about the call or answered the towboat master themselves when the pilots did not. The *Eagle Otome* master, an Indian national, did not indicate in postaccident interviews that he was uncertain whether the radio communication pertained to his vessel, nor does evidence indicate that the first pilot's not using the vessel's name was a factor in the accident. Nevertheless, the NTSB concluded that consistent use of a vessel's name in radio communication can help avoid confusion and enhance bridge team coordination.

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

> Advise your members to consistently identify vessels by name in bridge-to-bridge radio communication, as required by the Federal Communications Commission. (M-11-22)

The NTSB also issued safety recommendations to the U.S. Coast Guard, the Sabine Pilots Association, the Jefferson and Orange County Board of Pilot Commissioners, 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-11-22. 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