



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: June 12, 2007

In reply refer to: M-07-2

Admiral Thad W. Allen
Commandant
U.S. Coast Guard
Washington, D.C. 20593-0001

At 0420 eastern daylight time on Saturday, April 15, 2006, the Hong Kong–registered container ship *New Delhi Express* was westbound in the Kill Van Kull of New York Harbor in dense fog when it struck a submerged ledge near buoy 14, took on water through a hull breach caused by the impact, and ran aground in the waterway. A master, 21 crewmembers, 3 noncrewmember guests, a Sandy Hook pilot, and a docking pilot were on board. The docking pilot had the conn. Damages to the *New Delhi Express* were estimated at \$1.5 million. Two of the three tugs assisting the vessel were also damaged. No one was injured, and there was no water pollution.¹

The National Transportation Safety Board determined that the probable cause of the grounding of the *New Delhi Express* was the error of the docking pilot in not using all available resources to determine the vessel's position as he navigated the Kill Van Kull waterway. Contributing to the cause of the grounding was the failure of both pilots to practice good bridge resource management.

On April 15, after the accident, the U.S. Coast Guard conducted a position check of the navigation aids in the immediate vicinity of the grounding. All aids were reported to be functioning properly. A review of the data, however, revealed that buoy 14 was positioned in only 28 feet of water, whereas it had been intended to be placed in 50 feet of water, where it would mark the northern limit of the navigable channel. Further review indicated that the position data might be erroneous. Because of that new information, the Coast Guard asked the Safety Board to lead the accident investigation.²

¹ For further information, see National Transportation Safety Board, *Grounding of Hong Kong–Registered Container Ship New Delhi Express, Kill Van Kull Waterway, New York Harbor, April 15, 2006*, Marine Accident Brief NTSB/MAB-07/02 (Washington, DC: NTSB, 2007). The report is available on the Safety Board's website <www.nts.gov>.

² The Coast Guard's request was consistent with its memorandum of understanding with the Safety Board, signed on September 12, 2002.

On April 24 (9 days after the accident), a Safety Board investigator boarded the Coast Guard cutter *Katherine Walker* (WLM 552) to observe another position check of buoy 14. The buoy was found to be positioned at latitude 40° 38' 34.836" and longitude 74° 08' 40.967" (the position to which it had been deployed in December 2004) in approximately 28 feet of water corrected to datum (mean low water). After the position check, buoy 14 was redeployed to a position in 56 feet of water about 26 yards south, to latitude 40° 38' 33.990" and longitude 74° 08' 41.280".

During the recovery of the moorings for buoy 14, the *Katherine Walker* hauled aboard 90 feet of chain. According to Coast Guard personnel on board the *Katherine Walker*, the standard rigging for buoys usually includes 10 to 15 feet of chain beyond what is required by the water depth. Sometimes enough chain is deployed so that it has sufficient slack to be brought on board the buoy tender for maintenance without disturbing the anchor, although that is less of a consideration in modern buoy operations that use precise navigation fixing via satellite and highly maneuverable vessels with exact station-keeping abilities.

When buoy 14 was originally deployed with 90 feet of chain, about 60 feet of chain would have remained on board the tender after the buoy anchor touched bottom at 28 feet. With that much chain remaining to be deployed, command personnel on board the buoy tender should have recognized that something was wrong and should have verified the position information. The Coast Guard's manual for the operation and maintenance of federally controlled aids to navigation states:³

When servicing aids to navigation, the information regarding the aid as published in the [aid record⁴] shall be verified. . . . Errors and omissions should be brought to the attention of the district (oan [Office of Aids to Navigation]) staff.⁵

Deep-draft vessels such as the *New Delhi Express* that navigate around Bergen Point up to Newark Bay can operate only in the navigable ("good") water of the Kill Van Kull. Coast Guard instructions regarding aids to navigation state: "The aid *MUST* mark the depth of water appropriate to the waterway. Ensuring that an aid reasonably marks 'good' water is of more importance than ensuring that the aid marks a precise geographical position." The instructions also state: "A sounding *MUST* be taken each time a buoy is positioned."⁶

To accommodate an ongoing U.S. Army Corps of Engineers dredging project in the Kill Van Kull, buoy 14 had been moved numerous times. Discussions with Coast Guard personnel after the accident suggested that during one of the moves, old data had erroneously

³ U.S. Coast Guard, "Aids to Navigation Manual—Administration," Commandant Instruction M16500.7A (Washington, DC: U.S. Department of Homeland Security, March 2, 2005), p. 8-3.

⁴ The aid record contains the buoy's position data (latitude, longitude, global positioning system coordinates), position history, watch circle, and Federal Information Aid Document (length and type of chain, "sinker" weight, rate of wear on chains and other gear, message traffic on discrepancies, and accidents in the aid's area).

⁵ The Coast Guard district Office of Aids to Navigation has been incorporated into the Waterways Management Division.

⁶ U.S. Coast Guard, "Aids to Navigation Manual, Positioning," Commandant Instruction M16500.1C (Washington, DC: U.S. Department of Transportation, March 26, 1996).

been entered into the Coast Guard's database on aids to navigation, and that the buoy was then deployed by the Coast Guard buoy tender in the wrong position. Subsequent position checks would also have been compromised by the erroneous database.

Although the Safety Board found that the erroneous position of buoy 14 was not causal to the grounding of the *New Delhi Express*, the fact that the buoy was misplaced and that the misplacement was not noted until an accident occurred in its vicinity are matters of concern to the Board. Coast Guard crews who are tasked with the proper and accurate placement of navigational aids should make every effort to ensure that the aids are in their assigned position. Any discrepancy during deployment or subsequent position verification, no matter how small or seemingly inconsequential, should be noted and either corrected on scene or immediately brought to the attention of the Waterways Management Division. The Safety Board therefore recommends that the U.S. Coast Guard take the following action:

Use the circumstances of this accident related to the improper redeployment of buoy 14 in the Kill Van Kull waterway as a "lesson learned" and disseminate the information to appropriate personnel, emphasizing the need to verify all buoy positioning data during routine position checks and during buoy redeployments.
(M-07-2)

As a result of its investigation of the *New Delhi Express* accident, the Safety Board has also issued recommendations to 14 state pilot commissions. The Board would appreciate a response from you within 90 days, addressing actions you have taken or intend to take to implement its recommendation. In your response, please refer to Safety Recommendation M-07-2. For additional information, you may call (202) 314-6174.

Chairman ROSENKER, Vice Chairman SUMWALT, and Members HERSMAN, HIGGINS, and CHEALANDER concurred in this recommendation.

[*Original Signed*]

By: Mark V. Rosenker
Chairman