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National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: July 8, 1986
In reply refer to: M-86-49

Mr. Everett Berry
President
Indian Marine Company, Inc.
P.O. Box 407, River Road
Berwick, Louisiana 70342

About 2330, on May 20, 1985, the posted drilling barge TONKAWA capsized and sank while under tow in Bayou Chene, approximately 6 1/4 miles southeast of Morgan City, Louisiana. The drilling barge had been underway for about 11 hours prior to the capsizing. There were 22 persons aboard the TONKAWA at the time of capsizing; 11 persons survived the casualty and 11 persons lost their lives. The drilling barge capsized in approximately 26 feet of water and came to rest on its starboard side, about 135° from its normal upright position. 1/

On the morning of May 20, 1985, the posted drilling barge TONKAWA was preparing to depart from a drilling site in Turtle Bayou, about 14 miles southeast of Morgan City, Louisiana. The TONKAWA, operated by the Temple Drilling Company (Temple) of Houston, Texas, had completed drilling an 11,290-foot well for the Shell Oil Company and was "rigging down" or preparing to get underway. The rig was typical of the drilling barges used in shallow water operations, ballasted to lay firmly on the bottom of the bayou. Some time after 0700, the deballasting of the rig started. By 1200, jetting of the ballast was complete except for some water left intentionally in the No. 4 port and starboard ballast tanks to give the barge a trim aft. At 1215, the rig broke free of the site and the journey commenced. At 1945, the TONKAWA entered Bayou Penchant, which the tug operators reported to have a depth of approximately 11 feet. According to the observations made by the operator of the tug at the stern (the CHOCTAW), the barge had a freeboard aft of 1 1/2 to 2 feet on the portside and about 4 feet on the starboard side, indicating a port list and a stern draft that exceeded the estimated draft. As the flotilla proceeded through Bayou Penchant, the drilling barge sheared from bank to bank in the deeper water, not an uncommon occurrence according to one of the tug operators. The operator of the SIOUX estimated his speed through Bayou Penchant was about 2 miles per hour.

When the flotilla entered Bayou Penchant, the operator of the tug COMANCHE (the second vessel in the flotilla) alerted the crew of the TONKAWA about the port list by radio. He testified that he did not know to whom he spoke but asked that the list be corrected. He estimated the time to be about 1950. The person aboard the TONKAWA replied that nothing could be done until they reached deeper water and that they couldn't "put water in it at this time in shallow water." Approximately 1 to 1 1/2 hours before

1/ For more detailed information, read Marine Accident Report--"Capsizing and Sinking of the Drilling Barge TONKAWA in Bayou Chene near Morgan City, Louisiana, May 20, 1985" (NTSB/MAR-86/07).

the flotilla entered Bayou Chene, the COMANCHE's operator received a call from the TONKAWA requesting their position and the time the flotilla would get to Bayou Chene. The caller did not identify himself nor did the tug operator recognize the voice. The party aboard the TONKAWA was informed that they would enter Bayou Chene between 2300 and 2330 that evening.

After the flotilla straightened out in Bayou Chene, the relief operator of the CHOCTAW, pushing at the stern of the TONKAWA, noticed a small starboard list on the barge. He informed the operator of the COMANCHE of the list and both agreed that it was a normal list when coming out of shallow water into deeper water. The COMANCHE's operator instructed him "to keep an eye on it and inform him if it [gets] any worse." After about a minute or less, the CHOCTAW's relief operator radioed back to the COMANCHE and informed the operator that the "rig was listing a little bit more." The COMANCHE's operator then contacted the TONKAWA by radio and informed the driller (who was monitoring the portable radio) of the list. The driller replied that he would get someone to check it out and correct the problem. By this time, the list had increased even more. The operator of the COMANCHE said to the operator of the SIOUX (and was overheard by the relief operator of the CHOCTAW), "Let's break off and push her to the bank." At 2325, before the tugs were able to let go, the TONKAWA rolled to starboard and capsized.

On the day of the accident, Indian Marine Company, Inc., furnished three tugs to tow the TONKAWA from Turtle Bayou to West Lake Verret, a journey estimated to take 36 to 40 hours. Arrangements were made by telephone from Temple's drilling superintendent to Indian Marine's dispatcher. The terms of the contract were agreed upon verbally and included an estimate of time and cost, and the horsepower of the towing vessels, which was to be a minimum of 1,200 hp for each tug. When Temple's drilling superintendent arrived about 0700, he called the three towing vessel operators aboard the TONKAWA and discussed the towing preparations with them and instructed them to stand by until the rig was pumped out. The operators agreed that the SIOUX would be the lead tug. At 1030 the three tugs were made fast and started to pull the TONKAWA off location under the direction of Temple's drilling superintendent. The operator of the SIOUX assumed the navigational control of the flotilla, although Indian Marine's dispatcher did not specifically assign him to the task. Of the six employees of Indian Marine aboard the three vessels, i.e. three tug operators and three relief operators, only two were properly licensed by the Coast Guard.

The investigation of the TONKAWA's accident revealed some shortcomings in the towing procedures used in the Louisiana bayous. When the tug operators were assigned to the TONKAWA, one operator should have been designated as the person-in-charge of the flotilla and should have been responsible for keeping in radio contact with the vessel under tow so that decisions affecting the safety of the tow could be made quickly. The first indication of any list or reduction of freeboard should have immediately been made known to the rig personnel without waiting for further evaluation by the tug operators. The tug operator in charge of the tow should have been in direct communication with the rig supervisor. The delay in notifying someone aboard the TONKAWA of the small starboard list that had developed as the rig entered deeper water may not have affected the final outcome, but it should not have been the prerogative of the tug operators to decide when such information should be given to the rig personnel. After the flotilla cleared the shallow area at the Bayou Penchant/Bayou Chene intersection and entered the deeper water, the information should have been immediately passed to the rig personnel for whatever corrective measures they could take for the list. Although the rig and the tugs were radio-equipped, few pertinent communications were exchanged

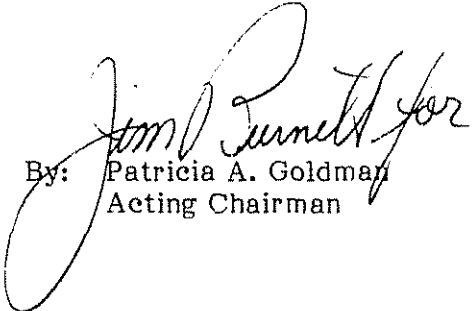
during the tow. During the infrequent communications, the tug operator did not know specifically with whom he was speaking and what actions, if any, were being taken on the rig regarding the list. The estimated time of arrival into the deeper water was requested by the rig personnel at least an hour and a half earlier but was never reconfirmed by the tug operators or again requested by the rig personnel before possibly correcting the port list. The Safety Board believes that the rig personnel and the tug operators should have communicated with greater regularity. In addition, before any attempt was made to correct the port list of the TONKAWA, the person in charge aboard the rig should have ascertained that his vessel was in deep water.

Therefore the National Transportation Safety Board recommends that the Indian Marine Company:

When providing towing services using multiple tugs, designate a tug operator to be in charge of the navigation of the flotilla and maintain communications with the person in charge aboard the tow. (Class II, Priority Action) (M-86-49)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation M-86-49 in your reply.

GOLDMAN, Acting Chairman, and BURNETT, LAUBER, and NALL, Members, concurred in this recommendation.


By: Patricia A. Goldman
Acting Chairman