Log M-252

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 27, 1984

Forwarded to:

Captain W. A. Mayberry
Director
Offshore Marine Services Association
2312 ITM Building
New Orleans, Louisiana 70130

SAFETY RECOMMENDATION(S)

M-84-38 through -40

About 1630, c.s.t., on November 9, 1983, the U.S. offshore supply vessel LAVERNE HEBERT departed the Brown and Root Company dock, Port O'Connor, Texas, with a load of deck cargo bound for an oil drilling rig off the Texas coast. Sometime during the night the LAVERNE HEBERT capsized, and five of its six crewmembers were killed. Damage to the vessel, including salvage costs, has been estimated at $1.2 million. 1/

Based upon the results of the calculations performed by the Coast Guard, and upon the analysis of a hypothetical overloaded condition performed by the Safety Board, the Board concludes that the LAVERNE HEBERT would not have capsized if the master had maintained the watertight integrity of the vessel. The LAVERNE HEBERT met the design stability criteria established for offshore supply vessels when main deck hatches, doors, and vents were secured. The vessel should have been able to withstand the environmental forces that it encountered on the evening of November 9-10, 1983. Seas in the range of 6 to 8 feet in height and winds of 20 to 30 knots are not so severe as to represent an independent cause of this accident. The forces of the wind and seas were within foreseeable limits and were, in fact, predicted. The master of the LAVERNE HEBERT had full knowledge of the weather forecast, and for some reason he chose to proceed to sea in the face of known adverse environmental conditions without insuring the watertight integrity of his vessel. His failure to maintain the watertight envelope of his vessel's hull compromised the design capability of his vessel and precipitated this accident.

The dispatcher, who was under contract to Amoco to dispatch the LAVERNE HEBERT, regularly dispatched seven vessels to service four offshore oil rigs. These seven vessels arrived at and departed from the dock and the various oil rigs at irregular times throughout the day and night and in all conditions of weather and sea. These seven vessels communicated with the dispatcher via a single sideband radio whenever they had a specific reason to do so. There was no regular established communications schedule that a vessel had to maintain while it was away from the dock. One of the dispatchers testified that if a particular vessel did not call to report a problem, he assumed that the vessel was safe. Such presumptions fail to take into consideration that a vessel's radios may be inoperative or that a vessel may suffer a catastrophic casualty wherein the master or mate would not have time to transmit a distress call.

1/ For more detailed information, read Marine Accident Report—"Capsizing of the U.S. Offshore Supply Vessel LAVERNE HEBERT, Gulf of Mexico, November 9-10, 1983" (NTSB/MAR-84/06).

The LAVERNE HEBERT could have capsized at 2130, based on the stopped clock in the pilothouse. When the wreck of the vessel was discovered about 0730 the following morning, a man was clinging to the overturned vessel. The man may have been in the water for 11 hours struggling to support himself in the water while he was beaten and battered by the rough seas. It is possible that more than one crewmember survived the capsizing and clung to the overturned vessel until they succumbed to exhaustion.

Since the WESTERN PASSAGE, which was at anchor only a few miles away from the wreck, heard no distress call on VHF-FM channel 16, and since the dispatcher, who monitored the single sideband radio all night, heard no distress call from the LAVERNE HEBERT, the accident must have occurred before the crew had a chance to call for help. No one knew that the LAVERNE HEBERT was in trouble before 0730 on November 10, 1983. If it had been known earlier that the LAVERNE HEBERT was in distress, a search and rescue operation could have been launched earlier and one, and possibly more than one, additional life might have been saved.

If the LAVERNE HEBERT had been required to maintain a regular schedule of communications with the dispatcher wherein the vessel was required to make regular, periodic reports of its location and status, the dispatcher would have been alerted that something was amiss as soon as the vessel failed to make a scheduled report. The dispatcher then, if he failed to raise the vessel on the radio, could have alerted search and rescue authorities.

The proper loading of deck cargo aboard a vessel like the LAVERNE HEBERT is critical to maintaining adequate stability. Because the design of offshore supply vessels poses stability problems that are particular to this class of vessel, the stability letter issued to the LAVERNE HEBERT was explicit concerning the maximum tons of deck cargo that could be carried on the vessel in relation to the amount of below-deck tonnage that could be carried at the same time. By the master's following the guidelines and by complying with the restrictions set forth in the stability letter, the LAVERNE HEBERT would at all times meet the stability criteria that the Coast Guard established for this vessel class.

The responsibility to ensure vessel stability rests with the vessel's master. The stability letter is issued to assist the master in carrying out this responsibility. However, in order to use the stability letter to insure that a vessel has adequate stability, it is necessary to know the total number of tons of cargo loaded. The alternate master of the LAVERNE HEBERT testified that he was unable to convert the information on the cargo manifest given to the master to the total tons of cargo loaded. Since he could not do this, it is conceivable that the master, who had only a seventh grade education, could not do it either. The alternate master further testified that during his license examination he was not required to perform any type of calculation involving stability. The master of an oceangoing vessel should be able to perform the simple mathematics involved in converting quantities of standard weight items, such as drill pipe, to total tons loaded. If candidates for offshore supply vessel master's licenses were required to perform calculations of this nature during their license examination, they would be familiar with the method and capable of performing the calculations. They then would be competent to use the stability letter (or the simplified loading diagram which is currently provided by the Coast Guard to vessel owners at their option) to insure that their vessels are loaded properly with respect to stability.

The institution of an exercise in cargo weight calculation for use with stability letter information at the time of licensing, however, will not benefit those who already have received master's licenses and who cannot perform the calculations. The Safety Board believes that a similar instructional exercise should be performed by licensed supply vessel masters when they renew their licenses every 5 years. In that way, all licensed supply vessel masters would be required to perform the exercise. In the meantime, to aid the masters of supply vessels in loading their vessels properly, the owners of offshore supply vessels should require that contractors indicate upon the cargo manifest the total tons of cargo to be loaded at any one time.

Therefore, the National Transportation Safety Board recommends that the Offshore Marine Services Association:

> Request member companies to instruct their offshore supply vessel masters of the importance of complying with the restrictions set forth on their vessel's stability letter issued by the Coast Guard, especially restrictions concerning maintaining watertight integrity. (Class II, Priority Action) (M-84-38)
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> Recommend to member companies that they establish a mandatory system of periodic position and status reports to be made by offshore supply vessels whenever they are operating offshore. (Class II, Priority Action) (M-84-39)
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> Recommend to member companies that they require contractors who contract the use of their offshore supply vessels to indicate upon all cargo manifests the total weight of cargo to be loaded. (Class II, Priority Action) (M-84-40)

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. Therefore, we would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in these recommendations. GROSE, Member, did not participate.

By: Jim Burnett
Chairman