



# National Transportation Safety Board

Washington, D. C. 20594

## Safety Recommendation

---

**Date:** May 20, 1991

**In Reply Refer To:** M-91-15 through -18

Mr. Avis Bourg, Jr.  
President  
Avis Bourg & Company, Inc.  
Post Office Box 280  
Folsom, Louisiana 70437

---

On Sunday, July 30, 1989, the liftboat M/V AVCO V was in the raised position in about 60 feet of water at Ship Shoal, Block 154, in the Gulf of Mexico with 3 crewmembers and 11 offshore workers aboard. Because of deteriorating weather and sea conditions caused by the development of hurricane Chantal in the gulf, the Chevron dispatcher at Leesville, Louisiana, recommended that the master bring the AVCO V into Leesville. About 0100 on Monday, July 31, the master had all persons on board assemble on deck wearing their life preservers while he lowered the liftboat. About 0230 the master headed the AVCO V northward toward the west end of Ship Shoal, intending to proceed around the west end and then eastward along the north side of the shoal to Leesville. While en route, except for the master and a deckhand, most on board slept.

While proceeding northward, the wind and the seas coming toward the vessel's starboard quarter increased in velocity and height, respectively. The vessel began taking water on deck in sufficient quantity to cause equipment stowed on the main deck to shift. About 0505 the AVCO V listed, capsized to port, and sank near the west end of Ship Shoal.<sup>1</sup>

The AVCO V did not have an operating manual on board to provide information about the vessel's characteristics and operational limitations, nor was such a manual required. According to the owner, he was in the process of writing a manual. The master of the AVCO V had no training or other guidance in liftboat stability. Consequently, the master was unable to determine the limitations of the vessel under normal conditions, much less while operating in severe weather. Had the master been provided with specific guidelines on the vessel's operating limits under various shipboard and environmental conditions, he would have been better

---

<sup>1</sup>For more detailed information, read Marine Accident Report--"Capsizing and Sinking of the U.S. Liftboat M/V AVCO V, Gulf of Mexico, July 31, 1989" (NTSB/MAR-91/02).

informed of the risks involved when deciding whether to lower the vessel and proceed to Leeville.

This accident also reveals a need for a severe weather action plan on board liftboats that addresses the environmental operating limitations of the vessel. Had such a plan been aboard the AVCO V, the master would have been better informed and could have made a more supportable decision about whether to proceed into port under the prevailing and predicted weather conditions. Lacking such information for guidance, he relied on his experience and the information from the Leeville base dispatcher to make his decision. Although the master had reservations about proceeding to Leeville, he felt pressured to do so by those involved with the AVCO V's operations. The National Transportation Safety Board believes that liftboats should have on board a severe weather action plan tailored to the operating characteristics and limitations of the individual vessel that will provide guidance to the master when making a determination whether to operate in predicted severe weather conditions.

The AVCO V had a main deck cargo capacity of 125,000 pounds. While preparing the AVCO V postaccident stability study, it was determined from the information available that the AVCO V was carrying about 22,600 pounds of equipment on the main deck at the time of the accident. Therefore, the AVCO V was not carrying an excessive weight on the main deck.

After the AVCO V was waterborne for Leeville, the diver tender had observed that water on deck had moved the 8,000 pound dive chamber about 1 foot aft and to starboard. According to the relief master, the vessel carried one 40-foot and one 60-foot length of chain, but this was insufficient to properly secure all the cargo. Furthermore, padeyes for securing cargo were at the sides of the deck, but not at the center of the vessel. Consequently, it would have been difficult to adequately secure equipment or other items on deck so they would not shift when the vessel rolled or took water on deck. Therefore, because the deck-stowed equipment was not adequately secured, the Safety Board believes that the equipment probably shifted to port and accelerated the capsizing of the AVCO V. The Safety Board has addressed the need to provide adequate lashing points for deck cargo and contractor equipment on liftboats in its response to the U.S. Coast Guard's notice of proposed rulemaking (NPRM) (CGD 82-004 and CGD 86-074) for liftboats.

The AVCO V could have remained and probably would have survived the storm at its location; however, it was unknown whether the tropical depression would develop into a hurricane, or what path the hurricane would take as it moved northward in the gulf. Because the Chevron employees were already concerned during the afternoon of July 30 that the tropical depression would develop into a hurricane, earlier action could have been taken by the Leeville base to have support vessels or helicopters remove the offshore workers and the crew from the AVCO V, as had been accomplished for two other liftboats. If the hurricane did not develop, the persons removed could readily have been returned. The Safety Board in its comments on the Coast Guard NPRM concerning liftboats has expressed its opposition to the transporting of offshore workers on liftboats, except for the minimum number of such workers required to maintain contractor equipment on board. In this instance, had the number of offshore workers transported on the AVCO V been reduced, fewer persons would have perished in this accident.

Therefore, the National Transportation Safety Board recommends that Avis Bourg & Company, Inc.:

Provide your liftboats with an operating manual containing pertinent vessel operating characteristics and operating instructions in language readily understood by liftboat masters. (Class II, Priority Action) (M-91-15)

Provide your liftboats with a severe weather action plan that is tailored to the operating characteristics and limitations of each vessel. (Class II, Priority Action) (M-91-16)

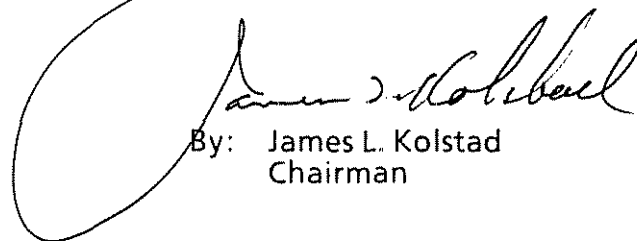
Equip your liftboats with adequate securing devices for cargo and equipment on deck to be safely secured during severe weather conditions. (Class II, Priority Action) (M-91-17)

Limit the number of offshore workers transported on your liftboats between United States continental ports and offshore work sites to the minimum number required to maintain the contractor equipment carried on the vessel. (Class II, Priority Action) (M-91-18)

Also, as a result of its investigation, the Safety Board issued Safety Recommendations M-91-12 to the U.S. Department of Transportation; M-91-13 and -14 to the U.S. Coast Guard; and M-91-19 through -21 to Chevron, USA. In addition, the Safety Board reiterated Safety Recommendations M-90-87 through -89, -91 through -93, -95, -97, and -98 to the U.S. Coast Guard.

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 action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter. Please refer to Safety Recommendations M-91-15 through -18 in your reply.

KOLSTAD, Chairman, COUGHLIN, Vice Chairman, and BURNETT, LAUBER, and HART, Members, concurred in these recommendations.



By: James L. Kolstad  
Chairman