Log # 364C

National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: October 1, 1990

In reply refer to: M-90-66

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On October 3, 1989, the United States fishing vessel NORTHUMBERLAND struck and ruptured a 16-inch-diameter natural gas transmission pipeline about 1/2 nautical mile offshore in the Gulf of Mexico, and about 5 1/3 nautical miles west of the jetties at the entrance to Sabine Pass, Texas. Natural gas under a pressure of 835 psig was released. An undetermined source on board the vessel ignited the gas, and within seconds, the entire vessel was engulfed in flames. The fire on the vessel burned itself out on October 4. Leaking gas from the pipeline also continued to burn until October 4. Of the 14 crewmembers, 11 died as a result of the accident.[1]

The Safety Board's investigation indicated that most of the crew was in or near the afterdeck house when the explosion occurred. The only fisherman to survive stated that he and two other fishermen were washing at the faucet located on the port side of the forward deckhouse. The master and the pilot, who both survived the accident, were in the pilothouse.

After the explosion, the master went down the ladder to the foredeck, where he observed the mate and one or two other crewmembers jumping overboard. The master then climbed over the port side of the bow and entered the water. He had no flotation device with him because he kept his

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[1] Additional information is given in the accident report. (National Transportation Safety Board. 1990. Fire on board the F/V NORTHUMBERLAND and rupture of a natural gas transmission pipeline in the Gulf of Mexico near Sabine Pass, Texas, October 3, 1989. Pipeline Accident Report NTSB/PAR-90/02. Washington, DC.)

personal life preserver in the chart room aft of the pilothouse and did not have enough time to retrieve it. The master later told investigators that he did not notice if any of the crewmembers who entered the water from the foredeck were wearing flotation devices.

The pilot attempted to leave the pilothouse through the starboard doorway, but was driven back by flames. He ran across the pilothouse to the port doorway and jumped into the water from the bridge. The fisherman who survived and another fisherman also jumped overboard on the port side of the vessel. The surviving fisherman was wearing rubberized bib overalls, rubber boots, and a water skiing flotation belt worn around the waist. Once in the water, he kicked off his boots, took off the overalls, and pulled the flotation belt up under his arms. He later stated these actions aided him somewhat in staying afloat. He also stated that one of the two fishermen who had been with him at the faucet entered the water and was "swimming real good." According to the surviving fisherman, this other fisherman was not wearing a flotation device.

From his position in the water, the master saw the pilot and a crewmember in the water with him. The master later stated that the crewmember appeared to be struggling to keep afloat. The master unsuccessfully attempted to assist the crewmember; however, the crewmember was displaying signs of panic and kept dragging the two of them underwater. The pilot later stated that he saw "several" crewmembers struggling in the water, including the cook and the second engineer. The fisherman who survived saw the master, pilot, mate, cook, and three other fishermen in the water after the explosion. He also stated that all were alive when he first sighted them. According to the surviving fisherman, the mate was burned but was wearing a life preserver. The surviving fisherman saw the mate swimming away from the vessel when the mate appeared to "give up" and drown. The surviving fisherman stated that the cook appeared to be afraid, but did not appear to be burned or otherwise injured. While the surviving fisherman was attempting to reach him, the cook also drowned.

When the first helicopter arrived about 15 minutes after the explosion, the helicopter pilot sighted four survivors and decided to assist the NORTHUMBERLAND's pilot, the survivor who appeared to be in the most distress. The helicopter hovered about 10 feet above the water so that an inflatable liferaft could be dropped to the vessel's pilot. The raft landed about 10 to 20 yards from the pilot who was unable to swim to it. One of the passengers on board the helicopter jumped into the water and helped the pilot into the raft.

By this time a second helicopter arrived on scene; however, only two survivors remained in the water. Because the first helicopter had only one liferaft left, the second helicopter threw a liferaft to each of the two survivors, the master of the NORTHUMBERLAND and a fisherman. They were able to enter the liferafts without assistance. No additional survivors were found.

Search efforts continued with additional sorties by U.S. Coast Guard helicopters and search and rescue vessels. A search by foot of the shoreline was also conducted by Coast Guard personnel and local volunteers. All the remaining victims were found over the next 4 days, including two who were found on the NORTHUMBERLAND.

At the time of the accident, the ambient temperature was about 79 ^{o}F, and seas were 1 to 3 feet. Climatological maps indicate that the water temperatures in the accident area average 78-80 ^{o}F during October.

Although the NORTHUMBERLAND was appropriately outfitted for a vessel of its type and service with lifesaving and emergency equipment, nine crewmembers (without serious injuries from burns) drowned. Despite the rapid ignition and spread of the fireball, the nine crewmembers apparently either had a chance to jump overboard or were blown overboard.

Individual life preservers had been issued to everyone on board. Because the crewmembers typically stowed their life preservers near their bunks and personal possessions, the life preservers were not immediately accessible from the deck area. Even if life preservers had been accessible, the immediacy of the emergency did not offer the crewmembers an opportunity to retrieve personal flotation equipment before they were forced to abandon the vessel. The Safety Board concludes that the inability of crewmembers to retrieve personal flotation equipment and to keep themselves afloat without such equipment contributed to the high loss of life.

The master and surviving fisherman had observed several of the crewmembers trying to swim. A person knowledgeable about water survival techniques, if not incapacitated from being blown overboard, should have been able to survive in the water for the 15 to 30 minutes that it took for rescue personnel to arrive onscene. For those who were not incapacitated, water survival training may have enabled some who drowned to remain afloat until rescued. The Safety Board is concerned that commercial menhaden and shrimp fishermen in the Gulf of Mexico may not be knowledgeable about water survival techniques.

There are several water survival training courses offered nationwide by commercial training schools and by universities operating under the sea grant program administered by the National Marine Fisheries Service of the U.S. Department of Commerce. Historically, commercial fishermen in the Gulf of Mexico have not taken advantage of the water survival training courses. Apparently, these fishermen have not recognized the need for this training. The Safety Board believes that water survival training is important for commercial fishermen and that associations for the gulf coast commercial fishing industries should encourage their members to provide water survival training to the commercial fishermen in their employ.

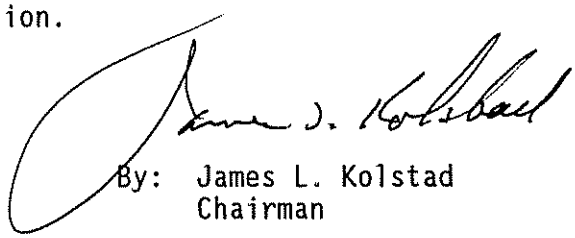
Therefore, as a result of this accident, the National Transportation Safety Board recommends that the National Fish Meal and Oil Association, Louisiana Shrimp Association, and National Council of Fishing Vessel Safety and Insurance:

> Notify member companies of the circumstances of the accident involving the rupture of the natural gas pipeline in the Gulf of Mexico and the fire on board the F/V NORTHUMBERLAND on October 3, 1989, and encourage member companies to provide water survival training to all commercial fishermen in their employ. (Class II, Priority Action) (M-90-66)

Also as a result of its investigation, the Safety Board issued recommendations to the Zapata Haynie Corporation, Natural Gas Pipeline Company of America, U.S. Department of Transportation, Research and Special Programs Administration, U.S. Coast Guard, U.S. Department of the Interior, Minerals Management Service, U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration, Interstate Natural Gas Association of America, American Gas Association, American Public Gas Association, and American Petroleum Institute.

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 930633). 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-90-66 in your reply.

KOLSTAD, Chairman, COUGHLIN, Vice Chairman, LAUBER, BURNETT, and HART, Members, concurred in this recommendation.



By: James L. Kolstad
Chairman