



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: April 13, 1994

In Reply Refer To: M-94-7 through -9

Admiral J. William Kime
Commandant
U.S. Coast Guard
Washington, DC. 20593-0001

The National Transportation Safety Board has investigated three rescue efforts conducted by the U.S. Coast Guard during August 1993. The vessels in distress were two pleasure craft and one tugboat. Four persons died, three civilians and one Coast Guardsman. As a result of investigating these accidents, the National Transportation Safety Board determined that some of the Coast Guard personnel involved in each search and rescue (SAR) operation did not properly assess the risks. The Safety Board makes the following findings and recommendations:

The first accident involved a disabled 27-foot sailing vessel near Charleston, South Carolina. At 0058,¹ on August 4, 1993, the operator of the vessel, the RITE OF PASSAGE, used VHF-FM channel 16 to call Coast Guard Group Charleston, South Carolina. He said that he was about a mile east of Breaches Inlet, near Isle of Palms, South Carolina, and that he needed help because his vessel was disabled by engine problems. The Coast Guard communications watchstander questioned the operator and learned that he was the only person on the vessel and that the vessel was not aground but anchored. Believing that the operator was in no immediate danger, the watchstander classified the case as a "non-distress"² one and issued a Marine Assistance Request Broadcast (MARB).³ A local, privately owned commercial towing

¹Eastern daylight time, based on a 24-hour clock.

²A SAR case is classified as a non-distress one if it does not constitute a threat to life or property.

³A message broadcast on VHF/FM channel 16 asking anyone who is interested to help a vessel. Such a message is broadcast only about a vessel in a "non-distress" situation. Responders are supposed to reply on VHF/FM channel 22A.

company responded and offered to help. The watchstander told the operator of the RITE OF PASSAGE that the towing company was coming.⁴

At 0100, the Isle of Palms police department telephoned the Coast Guard to report spotting a sailing vessel in trouble. The watchstander immediately dispatched the CG 41428, a 41-foot utility boat (UTB). Neither the police nor the watchstander realized that the distressed vessel was the RITE OF PASSAGE.

About 0120, a representative of the towing company informed the watchstander that his company did not have sufficient personnel available to assist the RITE OF PASSAGE. At 0125, the watchstander told the operator of the RITE OF PASSAGE that the towing company could not help him, but that the UTB was proceeding to assist a second vessel in distress and would come to his assistance as soon as it was available. The operator replied that the RITE OF PASSAGE was dragging its anchor, had drifted near the beach, and was encountering heavy surf.

The towing company notified the watchstander that it was now able to provide assistance to the RITE OF PASSAGE. The watchstander granted permission for the company to respond. Within minutes, the company vessel was underway. In the meantime, the UTB continued toward what was assumed to be the second vessel in distress but was actually the RITE OF PASSAGE.

As the UTB approached the vessel, the coxswain observed the vessel's operator moving around the deck. The UTB's crew passed a towline to the operator, who secured it to his vessel. The operator then attempted to release his anchor line, apparently in an attempt to facilitate the towing operation. The coxswain, using a loudhailer, instructed him to go to the stern and put on a personal flotation device (PFD). Whether the operator heard the coxswain is unknown.

Shortly thereafter, the UTB took the vessel in tow. The operator was last seen moving toward his vessel's stern, apparently in compliance with the coxswain's instructions. The operator was not wearing a PFD, and the vessel was pitching and rolling violently in the surf.

Meanwhile, about 0240, the boat sent by the towing company arrived on scene. Its operator tried to establish radio contact with the operator of the RITE OF PASSAGE. When his attempts failed, he maneuvered the company vessel alongside the RITE OF PASSAGE and placed a crewman aboard.

Once on board, the crewman discovered that the operator of the RITE OF PASSAGE was no longer aboard. The towing company personnel reported to the Coast Guard that no one was aboard the RITE OF PASSAGE. The coxswain of the UTB released the towline and began searching for the missing operator.

⁴For more detailed information, read Marine Accident Brief No. DCA-93-MM-023 (attached).

At 0550, a local rescue squad recovered the body of the operator from the surf and transported him to a nearby hospital, where he was pronounced dead. The official cause of death was drowning.

The Safety Board believes that both the watchstander and the coxswain made mistakes in handling the case. The watchstander should have classified the incident as a distress case. The coxswain should, when he arrived on scene, have evaluated the situation more thoroughly and accurately than he did.

According to Group Charleston policy, when prosecuting the SAR, the communications watchstander should have used a check-off list with criteria for deciding whether the call for assistance constituted a distress or a non-distress situation. The watchstander should have determined whether anyone on board the vessel had special problems or problems related to age or health and whether the vessel was at anchor or had a drift rate.

The watchstander did not ask the operator of the RITE OF PASSAGE all of the questions on the check-off list. Had he asked the questions, he likely would have determined that the operator was 67 years old, had a heart condition that required medication, and had had a heart attack within the last year. He would then have had a sufficient basis for classifying the case as a distress one and, consequently, for immediately dispatching a SAR vessel.

When the operator of the RITE OF PASSAGE told the watchstander that the vessel was dragging its anchor, was near the beach, and was encountering heavy surf, the watchstander had a second chance to decide the situation was a distress case. He should have immediately changed the status of the case and dispatched a SAR unit. Instead, he gave the towing company permission to handle the situation.

Under Coast Guard policy, as stated in the *National Search and Rescue Manual* (the SAR manual), the safety of people is always more important than the safety of property. Accordingly, the Coast Guard specifically requires its personnel⁵ to assess a situation before making any attempt to take a distressed vessel in tow. By that assessment, personnel should establish and maintain communications with the people on the distressed vessel, ensure that they are wearing PFDs, and evaluate the risks that towing the vessel might pose to either Coast Guard personnel or civilians.

Nevertheless, as soon as the UTB arrived on scene, the coxswain tried to take the RITE OF PASSAGE in tow despite the fact that the vessel's anchor was deployed, the operator was not wearing a PFD, and the operator was moving about on a deck that was pitching and rolling wildly. The coxswain did not pause to determine whether the operator or the vessel was in such immediate danger that he should be removed before any attempt was made to tow the vessel.

⁵All personnel involved in a SAR case.

The second accident involved the sinking of a 25-foot pleasure craft in Coos Bay, Oregon. About 1500,⁶ on Friday, August 20, 1993, the pleasure craft BIG ABALONE, with five persons on board, departed the Charleston Marina, Coos Bay, Oregon, for a day of recreational crabbing in the bay. Three of the people on board were older than 65. After a couple of hours of crabbing, the BIG ABALONE began having engine trouble and became disabled and adrift.⁷

Meanwhile, the charter fishing vessel BETTY KAY was returning to Charleston Harbor. The operator saw someone from the BIG ABALONE waving for attention. When he brought the BETTY KAY alongside the BIG ABALONE, he was told by the boat's operator of the engine problem and was asked to call the Coast Guard. The operator called Coast Guard Station Coos Bay via VHF-FM channel 16 (at 1719), reporting that the BIG ABALONE was disabled in Coos Bay with five persons on board.

At 1721, a four-man crew, consisting of a coxswain, an engineer, and two crewmembers, got underway aboard the CG 44373, a 44-foot motor life boat (MLB). Shortly thereafter, the operator of the BETTY KAY advised the Coast Guard that the BIG ABALONE was slowly taking on water.

The coxswain of the MLB decided en route that the pleasure craft needed to be de-watered and towed. He told the engineer to prepare to board the pleasure craft with a P-5 pump.

The coxswain later stated that because the pleasure craft had not been reported as being in imminent danger of sinking, he had assumed that the flooding was probably minor. Consequently, he had decided before he arrived at the accident scene that there was no need to expose the pleasure boat's passengers to the dangers involved in transferring them to the MLB.

The MLB arrived on scene at 1730. Winds were from the south at 10 knots, seas were 3 to 5 feet and choppy, and visibility on the bay was about 100 to 150 yards. The temperature of the water was 57° F.

At 1732, the engineer boarded the BIG ABALONE and reported that there were about 6 inches of water in the engine casing bilge. He could not determine the source of the leak.

The coxswain noticed the sea conditions were deteriorating rapidly and began maneuvering the MLB so that a towline could be attached to the BIG ABALONE. As the MLB approached the starboard bow of the vessel, an 8- to 10-foot swell broke over the starboard quarter of the BIG ABALONE. Almost immediately, another 8- to 10-foot swell broke over the

⁶Pacific daylight time, based on a 24-hour clock.

⁷For more detailed information, read Marine Accident Brief No. DCA-93-MM-029 (attached).

stern, swamping the pleasure craft. Two of the passengers were trapped on the sunken vessel and could not be rescued. The other three persons on the boat and the MLB engineer were able to jump clear of the vessel and were rescued by the MLB. They were transferred to a 20-foot rigid-hull inflatable boat from Station Coos Bay and transported ashore.

While it is a sound practice for rescuers to make plans before they arrive on scene, the Safety Board believes that the coxswain should have reevaluated the situation when he arrived. The actual sea conditions were much more severe at the bar than indicated in earlier weather reports. In addition, the BIG ABALONE had drifted, and continued to drift, dangerously close to the bar.

Had the coxswain reevaluated the situation, he might have realized that it was much more serious than he had thought and that transferring the engineer would do nothing more than increase the number of people who were about to be endangered by the sinking of the BIG ABALONE and, ultimately, the number of people who would have to be rescued. If after his reevaluation, he still believed that it was too dangerous to remove the passengers from the BIG ABALONE, he could have attempted to tow the vessel into quieter waters. The engineer could have then boarded the BIG ABALONE while the UTB continued towing the vessel back to Coos Bay.

The third accident involved the sinking of a harbor tug on Lake Erie, Ohio. The DUKE LUEDTKE was a typical Great Lakes Harbor tug: 68.7 feet long, 17 feet wide, and 11 feet deep. Three persons were on board, the captain and two deckhands. After getting underway at 1930⁸ on September 20, 1993, en route to Ashtabula, Ohio, the captain had checked the engineroom every hour to ensure that everything was operating properly. At 2300 he noted that there was 3 feet of water in the engineroom, whereas he had observed no water there during his previous check at 2200. He could not determine the source of the flooding.

The wind was coming out of the west at 6 knots, and the seas were 2 to 4 feet. The air temperature was 63° F, the water temperature was 70° F, and visibility was 4 miles.

At 2337 the operator of the tug called Coast Guard Station Cleveland Harbor, Ohio, on VHF/FM channel 16. He said he needed help because the water in the engineroom was about 3 feet deep. He gave his position as approximately 13 miles north of Avon Point on Lake Erie. About 8 minutes later, about 2345, he told the watchstander that the level had increased to about 5 feet.⁹

At 2340, Coast Guard Station Cleveland Harbor dispatched a 41-foot UTB, CG 41487, with a coxswain, an engineer, and three crewmembers. Before the coxswain got underway, the watchstander briefed him, telling him the vessel's identity, type, location, and problem.

⁸Eastern daylight time, based on the 24-hour clock.

⁹For more detailed information, read Marine Accident Brief No. DCA-93-MM-030 (attached).

The UTB arrived on scene at 0323, September 21, 1993, and secured the UTB to the forward port side of the tug. Two of the UTB crewmembers immediately boarded the tug and entered a compartment above the engineroom through a watertight door on the port side, slightly aft of amidships, closing the door behind them. They intended to determine the source of the flooding, stop the flooding, if possible, with repairs, and use a portable pump to evacuate the water.

About 90 seconds after the UTB arrived on scene, the tug suddenly rolled to port and sank, stern first. The two UTB crewmembers were still inside the area above the engineroom. One of them managed to make his way to the wheelhouse through an interior forward bulkhead door leading through the galley and up to the wheelhouse. He then escaped through a window and swam to the surface, where he was rescued by the UTB. The other crewmember was trapped inside the tug. Divers from a civilian salvage company recovered his body the next day. All three crewmembers of the DUKE LUEDTKE survived.

The Safety Board believes that the Coast Guard's response to this incident demonstrated a clear lack of risk assessment, particularly by the watchstander and the coxswain. When the watchstander received the call for assistance, he was supposed to fill in a Search and Rescue Incident Summary form.¹⁰ He did not fill in the part of the form labeled "Initial Severity." He said that he had not sensed any urgency in the voice of the tug captain and that he therefore had not considered the situation to be life threatening. The Safety Board believes that the watchstander should not have based his assessment solely on his perception of the stress in the captain's voice. Because the watchstander misjudged the severity of the situation, he briefed the coxswain inaccurately, telling him that the tug was underway and taking on water, not that it was in danger of sinking.

The coxswain stated that he believed that the case would be routine and could be resolved by putting two of his crewmembers on board to assess the situation, stop the flooding, if possible, and pump out the flooded compartment with a portable pump. He said that when he arrived on scene, the tug was riding smoothly, rolling slowly, and not listing. Therefore, he did not think it was likely to sink.

However, with over 5 feet of water in the engineroom, the tug's stability had reached a critical point: the tug would ride smoothly and roll slowly until it was about to capsize and sink. The Safety Board believes that a properly trained coxswain would have known that the slow rolling of the tug was an indication that it was very unstable and ready to capsize. A properly trained coxswain would also have known that a vessel does not necessarily list before it capsizes or sinks.

According to the surviving Coast Guardsman, when he and the other crewmember boarded the tug, he noticed there was about a foot of water on the after main deck. He said that

¹⁰A form used to record important data and information about the vessel in distress. The form is vital for ensuring that SAR cases are properly assessed and prosecuted.

when they entered the engineroom, the other crewmember closed the door so that the water on deck would not enter the engineroom. The Safety Board believes that the two crewmembers did not understand the severity of the flooding that had taken place before and during the time they were on the vessel. The tug had already sunk to a point where the water level was above the freeing ports¹¹ aft, allowing water to accumulate on the main deck.

The Officer-in-Charge of the Station stated that over 90 percent of all SAR cases handled by his unit involve assisting recreational boats 19 to 25 feet in length. (The DUKE LUEDTKE was about 69 feet long.) Therefore the Station does not train its personnel in on-scene evaluation of a commercial vessel's condition or on the differences between assisting commercial vessels and recreational boats.

The Safety Board believes that the coxswain in this case, lacking such training, was not able to recognize the risks involved in placing his crewmembers aboard the DUKE LUEDTKE or in allowing people to enter a closed space. Nor did he recognize the need to seek advice about the dangers of a flooded engineroom or the need to consult with licensed crew before taking action. Had he done a proper risk assessment, he would have known that everyone should have been removed from the tug immediately and that no one should have been allowed to go inside the deckhouse.

The Safety Board also addressed the issue of risk assessment in its investigation of the January 11, 1991, capsizing and sinking of the fishing vessel SEA KING.¹² As a result of that accident, the Board issued Safety Recommendation M-92-54 on November 17, 1992, asking that the Coast Guard:

Incorporate into the training of search and rescue (SAR) personnel procedures to ensure the gathering and dissemination of pertinent information by all appropriate SAR personnel to facilitate a thorough assessment of the potential risks to persons involved in a SAR mission.

In its June 21, 1993, response the Coast Guard said that it concurred with the intent of the recommendation and planned to revive its on-scene commander's course, which had been discontinued in 1988. The Board consequently classified the safety recommendation "Open--Acceptable Response," pending implementation of the course. In a November 15, 1993, letter, the Safety Board asked the Coast Guard for an update on the status of this project and is awaiting the reply.

¹¹Openings in the side plating of a vessel. The openings are close to the main deck so that if there is any water on deck, it can drain overboard.

¹²Marine Accident Report--*Capsizing and Sinking of the U.S. fishing Vessel SEA KING near Astoria, Oregon, January 11, 1991* (NTSB/MAR-92/05).

The Safety Board is concerned that the Coast Guard's reviving the course will not satisfy the need for risk assessment training at the Group and Station levels. As illustrated in the Board's investigations of the three accidents described in this letter, the communications watchstander in two of the three cases and the boat coxswain in all three cases failed to adequately assess the risks to the lives of the people on the distressed vessels.

The SAR manual explains how SAR missions should be conducted. Chapter 4, "Awareness and initial Action," states:

...the information collected and the initial action taken are critical to SAR success. Information must be gathered and evaluated to determine the nature of the distress...and what action should be taken....[section 400]

The risks inherent in any SAR response must be carefully weighed against the mission's chances for success, that is, the saving of life or, to a lesser extent, property....[section 446]

The Safety Board believes that had the watchstanders and the coxswains involved in these accidents been more aware of the importance of following the guidance in the above sections of the SAR manual and had they done a better job of assessing the risks that the people on the distressed vessels were facing, they would have decided to remove them from the vessels as soon as possible.

Because of its high freeboard, the MLB involved in the BIG ABALONE accident had great difficulty in retrieving one of the survivors. The Safety Board found the same problem in a previous accident, the December 2, 1989, sinking of the small passenger vessel BRONX QUEEN¹³ in Lower New York Bay, New York. As a result of that accident, the Safety Board issued Safety Recommendation M-90-111, asking that the Coast Guard:

Develop new methods and or equipment for use aboard the 44-foot motor life boat to expedite the retrieval of survivors from the water during search and rescue operations.

In its March 22, 1991, response, the Coast Guard agreed with the Safety Board on this matter and said that it would direct the National Motor Lifeboat School and the UTB System Center to investigate alternative methods of recovering people from the water. The Safety Board had asked that the Coast Guard not only investigate, but also develop alternative methods. Pending the Coast Guard's further reply to this recommendation, it was classified "Open--Acceptable Response."

¹³For more information, see page 57 of the Safety Board's Marine Accident Brief NTSB/MAB-92/01, a compilation of accident briefs.

On October 10, 1993, the Coast Guard stated that it had bought and tested four different inflatable "rescue ramp" prototypes and that after it made some minor modifications, the testing would continue. The Coast Guard said that once the design was acceptable, it would seek funds for outfitting selected Coast Guard units with the ramps. The Board continues to hold this safety recommendation in an "Open--Acceptable Response" status.

In view of the BIG ABALONE accident, the Safety Board reiterates Safety Recommendation M-90-111 and asks that the Coast Guard expedite its testing of the rescue ramps and supply them to the Coast Guard's fleet of 44-foot MLBs as soon as practicable. If the Coast Guard determines that the ramps are unsuitable, the Safety Board strongly urges the Coast Guard to provide a suitable alternative.


And lastly, as a consequence of the Board's investigation of the three accidents described in this letter, the Safety Board recommends that the Coast Guard:

Provide risk assessment training to all Coast Guard personnel directly involved in search and rescue missions. (Class II, Priority Action) (M-94-7)

Review search and rescue procedures to ensure that all search and rescue personnel are trained to recognize the differences between assisting commercial vessels and recreational boats. (Class II, Priority Action) (M-94-8)

Publicize the circumstances of these accidents to all Coast Guard search and rescue units. (Class II, Priority Action) (M-94-9)

Chairman VOGT, Vice Chairman COUGHLIN, and Members LAUBER, HAMMERSCHMIDT, and HALL concurred in these recommendations:

By: 
Carl W. Vogt
Chairman

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

Marine Accident Brief No. DCA-93-MM-023

Vessel: 27-Foot-Long Sailing Vessel RITE OF PASSAGE, State
Registration No. NJ629CP
Accident Type: Fall Overboard
Location: Isle of Palms near Charleston, South Carolina
Latitude 34° 59.75' N, Longitude 92° 45.75' W
Date: August 4, 1993
Time: Approximately 0200, Local
Owner: James Jackson
Whiting, New Jersey
Property Damage: None
Injuries: 0
Deaths: 1
Complement: 1

Description of the Accident

At 0058¹ on August 4, 1993, Coast Guard Group Charleston received a call on VHF-FM channel 16 from the operator of the sailing vessel RITE OF PASSAGE. The operator stated that the vessel was disabled with engine problems about 1 mile east of Breaches Inlet near Isle of Palms, South Carolina, and that he needed assistance. He told the Coast Guard communications watchstander that he was the only person on the vessel, that the vessel was not aground but anchored, and that the vessel was a 27-foot white-hulled sloop. Believing that the operator was in no immediate danger, the watchstander classified the incident as a "non-distress" situation and issued a Marine Assistance Request Broadcast (MARB).² A local towing company responded to the MARB and advised the Coast Guard that it would help the RITE OF PASSAGE. The Coast Guard then passed this information to the operator of the RITE OF PASSAGE.

¹All times are Eastern daylight time based on a 24-hour clock.

²A radio broadcast on VHF/FM channel 16 to anyone interested in providing assistance to a vessel in a "non-distress" situation, e.g., out of fuel with no existing threat to life or property. Responders are asked by the Coast Guard to call back on VHF/FM channel 22A.

The communications watchstander, contrary to Group Charleston policy, did not ask the operator all of the questions on the search and rescue (SAR) check-off list. Had he asked the questions he would have learned that the operator was a 67-year-old man with a heart condition that required medication and that he had had a heart attack within the last year. Such information would have allowed the watchstander to classify the case as a distress one and consequently dispatch a SAR unit.

At 0100, the Coast Guard received a telephone call from the Isle of Palms Police Department reporting that a sailing vessel (identity unknown) was aground and listing badly about 100 yards off the beach near the north end of Isle of Palms. About 0106, the Coast Guard dispatched the C 41428, a 41-foot utility boat (UTB), to respond to what was apparently a second vessel in distress.³

About 0120, a representative of the towing company told the watchstander that his company did not have sufficient personnel available to assist the RITE OF PASSAGE. At 0125, the watchstander told the operator of the RITE OF PASSAGE that the towing company was unable to assist him but that a UTB was proceeding to help a second vessel in distress and would come to his assistance as soon as it was available. It was at this time that the operator of the RITE OF PASSAGE reported that his vessel was dragging its anchor, was located near the beach, and was encountering heavy surf. The wind on scene was about 25 knots, and the seas were between 3 and 4 feet in height. Shortly thereafter, the towing company notified the watchstander that it was now able to help the RITE OF PASSAGE. The watchstander granted permission for the company to respond. Within minutes, a privately-owned commercial vessel got underway to render assistance to the RITE OF PASSAGE.

About 0155, the coxswain of the UTB reported that he had spotted a white-hulled sailing vessel in the surf off Isle of Palms and that he was maneuvering the UTB inshore, toward the vessel. He made several attempts to contact the operator of the RITE OF PASSAGE vessel on VHF-FM channels 16 and 22A but was unsuccessful.

As the UTB approached the stricken vessel, the coxswain observed the vessel's operator moving around the deck. The crew of the UTB passed a towline to the operator, who secured it to his vessel. He then attempted to release his anchor line, apparently in an attempt to facilitate the towing operation. The coxswain, using a loudhailer, instructed him to proceed to the stern of the RITE OF PASSAGE and to don a personal flotation device (PFD). It could not be determined whether the operator heard the instructions.

Shortly thereafter, the UTB took the vessel in tow. The operator was last seen moving toward his vessel's stern, apparently in compliance with the coxswain's instructions. He was

³In fact, the vessel that the Isle of Palms Police Department had sighted was the RITE OF PASSAGE, but this was not known at the time.

not wearing a PFD, and the RITE OF PASSAGE was pitching and rolling violently in the surf at this time.

Meanwhile, the boat dispatched by the towing company arrived on scene. Its operator attempted to establish radio contact with the operator of the RITE OF PASSAGE. About 0245, when these attempts proved unsuccessful, the operator of the towing company vessel maneuvered alongside the RITE OF PASSAGE and placed a crewman aboard.

When the crewman got on board, he discovered that the vessel's operator was no longer aboard. The towing company personnel reported to the Coast Guard that no one was aboard the RITE OF PASSAGE. The coxswain of the UTB released the towline and began searching for the missing operator.

At 0550, a local rescue squad recovered the operator's body from the surf and transported it to a nearby hospital, where the operator was pronounced dead. He was not wearing a PFD. The official cause of death was determined to be drowning.

Probable Cause

The National Transportation Safety Board was unable to determine the probable cause for the operator of the RITE OF PASSAGE falling overboard. Contributing to the loss of life was the failure of the Coast Guard communications watchstander and coxswain to properly assess the risk to the operator of the RITE OF PASSAGE and the failure of the coxswain of the CG 41428 to remove the operator before attempting to tow the vessel.

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

Marine Accident Brief No. DCA-93-MM-029

Vessel: BIG ABALONE, a 25-Foot-Long Fiberglass Pleasure Craft,
Registration No. OR176KD
Accident Type: Sinking
Location: Coos Bay, Oregon (Latitude 43°21.16' N, Longitude 124°
21.36' W)
Date: August 20, 1993
Time: Approximately 1734, Local
Owner: Mr. Clair Irwin, Myrtle Creek, Oregon
Property Damage: \$10,000
Injuries: 2 Fatalities
Complement: 5

Description of the Accident

About 1500,¹ on Friday, August 20, 1993, the pleasure craft BIG ABALONE departed the Charleston Marina, Coos Bay, for a day's recreational crabbing in the bay. The vessel had five passengers: the 67-year-old owner/operator of the pleasure craft, his 68-year-old wife, another couple ages 66 and 58, and a 46-year-old woman. The owner had bought the boat in April 1993 and put it in the water in June. He had owned and operated other smaller boats but had never taken courses from any organization in either boat or marine-radio operation. This outing was the fourth or fifth time he had taken this boat away from the pier.

The group baited and set crab traps within the protective jetty entrance at Coos Bay, between buoys G5 and G5A. After the traps were checked for catch, the BIG ABALONE began having engine trouble. Because of the engine trouble, the BIG ABALONE was disabled and adrift in Coos Bay.

Meanwhile, the charter fishing vessel BETTY KAY, which was returning to Charleston Harbor, was proceeding inbound approaching buoy G5A. Its operator saw someone waving for attention from the drifting pleasure craft. When he brought the BETTY KAY alongside of the BIG ABALONE, he was told by that boat's operator of the engine problem. Even though the BIG ABALONE's operator stated that his CB and VHF radios were on and tuned to channel 11 and channel 16, he asked the operator of the BETTY KAY to call the Coast Guard and tell them of his problem.

¹All times in this report are Pacific daylight time based on a 24-hour clock.

At 1719, the operator of the BETTY KAY contacted the communications center at USCG Station Coos Bay, via VHF-FM radio channel 16. He reported that the BIG ABALONE was disabled and adrift in Coos Bay, between buoys G5 and G5A, with five persons on board. The communications watchstander told the operator to instruct all persons on board the BIG ABALONE to don personal floatation devices (PFDs). The BETTY KAY's operator passed on the Coast Guard's instructions, and all persons on board the BIG ABALONE complied.

The BETTY KAY remained within shouting distance of the BIG ABALONE while awaiting the arrival of the Coast Guard. According to the BETTY KAY's operator, after a short while, he noticed that the pleasure craft appeared a little low in the water. He asked the BIG ABALONE's operator whether his vessel was taking on water. The operator of the BIG ABALONE said it was not. The BETTY KAY operator asked a second time, and after checking his boat, the BIG ABALONE operator confirmed that his vessel was slowly taking on water. The BETTY KAY relayed this information to the Coast Guard. He also informed the Coast Guard that all persons on the disabled boat were now wearing PFDs. The Coast Guard instructed the BETTY KAY's operator to switch his VHF radio to channel 22A for all further communications with the Coast Guard.

At 1719, when the BETTY KAY's initial call was received at Station Coos Bay, the watchstander sounded the alarm to activate the duty boat crew. At 1721, a four-man crew, consisting of a coxswain, who was in command, an engineer, and two crewmen, got underway aboard the CG 44373, a 44-foot motor life boat (MLB). Among the MLB's standard equipment were a VHF-FM radio, radar, Loran, towing lines, and a P-5 gas-engine-driven portable pump.

According to the morning (0855) weather report, conditions at Coos Bay Bar were as follows: southerly winds at 10 knots, swells of 3 to 5 feet occasionally running to 6 feet, choppy, with a 2-knot ebbing current. The morning weather report also contained a rough bar warning because of "extremely hazardous bar conditions," which restricted recreational boats less than 20 feet long from crossing the bar at the entrance to Coos Bay. The rough bar warning and restriction were issued by Station Coos Bay and broadcast on the radio regularly by the Coast Guard.

The coxswain stated that, based on the morning weather report and rough bar warning, the position of the BIG ABALONE (inside the jetty), and radio-transmitted information concerning the pleasure craft (disabled, adrift, and taking on water), he decided while he was en route to de-water and tow the pleasure craft to shore. The coxswain further stated that he was aware the pleasure craft was taking on water, but it was his understanding that the boat was not in danger of sinking. To this end, the coxswain told the MLB engineer to prepare to board the pleasure craft with a P-5 de-watering pump.

When the coxswain saw the pleasure craft, he released the BETTY KAY to return to port. As the coxswain brought the MLB close to the BIG ABALONE, he noticed two women in the forward portion of the pleasure craft, outside the small cabin, but protected by a canvas cover. They were sitting on a bench facing forward at the boat's control console. The two

women waved calmly to the crew as the MLB approached the BIG ABALONE. The two male occupants were standing in the stern of the pleasure craft, along with the 46-year-old female. According to the coxswain, the people in the pleasure craft showed no signs of panic or fear. The coxswain stated that because the pleasure craft did not appear to be in imminent danger of sinking, he believed that the reported flooding was probably minor.

He later stated that the conditions on the bar were more severe than the early weather report had indicated. The ebb tide appeared to be about 4 to 5 knots with seas of about 7 to 8 feet. He therefore saw no need to expose the pleasure boat's passengers to possible injury by attempting to transfer them to the MLB in the rough sea.

He observed that the BIG ABALONE was setting seaward toward the bar with the ebbing tidal current. And he believed that the transfer of his engineer and a P-5 pump to the pleasure craft would not endanger the vessel or the people on board. The coxswain maneuvered along the BIG ABALONE's port side, and about 1732, the engineer boarded the pleasure craft. The P-5 pump was then transferred to him. Once on board, the engineer reported to the coxswain about 6 inches of water in the engine casing bilge. He also reported that the water around the engine was calm and flat and that he could not determine the source of the leak.

After transferring the engineer, the coxswain maneuvered the MLB aft along the port side of the pleasure craft, turned around the stern, and proceeded up along the starboard side to position the MLB ahead of the BIG ABALONE to facilitate towing. About 1734, as the MLB neared the starboard bow of the pleasure craft, an 8- to 10-foot swell broke over the stern of the BIG ABALONE. The coxswain yelled, "Get all the people out on deck." But his warning was too late. By then another 8- to 10-foot swell had broken over the stern again, swamping the pleasure craft.

Suddenly, the open stern of the vessel was under water, and the forward half of the pleasure craft pointed up out of the sea at about a 45-degree angle. The coxswain clearly saw the two women sitting on the front bench seat at the boat's control console as the pleasure craft slipped beneath the sea stern first. Only about 2 minutes had passed since the engineer had boarded the pleasure craft. The coxswain yelled to his remaining crew to get a count of all people in the water.

Following the swamping of the BIG ABALONE, the coxswain radioed Station Coos Bay and reported that the pleasure craft had capsized and there were four people visible in the water, including his engineer. All of the BIG ABALONE's occupants still had on their PFDs. By this time, the bow of the pleasure craft was protruding only about 1.5 feet above the surface of the sea.

An MLB crewmember requested permission to enter the water and assist in retrieving the people. The coxswain immediately granted permission, and the crewmember jumped into

the 57° F sea water.² The crewmember (rescue swimmer) assisted the survivor nearest the MLB, the 46-year-old woman, who weighed about 270 pounds. Another crewmember threw the rescue toss line to the rescue swimmer, and together they maneuvered the woman toward the side of the MLB. After numerous attempts, the two MLB crewmen on board the MLB, with the help of the two crewmembers who were in the water, succeeded in getting the woman on board the MLB.

The coxswain threw a life ring to the engineer, who held onto the BIG ABALONE's operator. The boat operator was holding onto the P-5 pump, which was still afloat in its buoyant drum-like container. The engineer and the operator were pulled to the side of the MLB with the life ring retrieving line. The operator held on until the 46-year-old woman was removed from the water. Then the operator was lifted on board the MLB.

The last survivor, a male, was observed clinging to the bow of the pleasure craft. The nearly submerged pleasure craft was drifting toward the MLB, and the survivor was between the two vessels and in danger of being injured between them. The MLB engineer swam to him and pulled him free of the pleasure craft bow. A crewmember reached over the side of the MLB, while the coxswain held onto his belt, and together all four crewmen pulled and pushed the survivor onto the MLB. Then the coxswain and a crewmember lifted their shipmate (rescue swimmer) into the MLB. The engineer pulled himself on board the MLB.

According to the MLB crew, the three survivors appeared to be in various stages of shock. One of the elderly men was dazed and sobbing and very depressed. Another survivor appeared to have a bluish or purplish complexion and was complaining of chest pains, and the third survivor had bruised or broken ribs. At that time the MLB was rolling through an 80-degree arc (40 degrees to each side) when a 20-foot rigid hull inflatable boat (RHIB) from Station Coos Bay came alongside. The coxswain decided to transfer the survivors to the RHIB, while the MLB continued the search for other possible survivors. The survivors were transported ashore to a waiting ambulance. They were taken to local hospitals, where they were treated and released.

During the transfer of the survivors, the MLB crew lost sight of the bow of the BIG ABALONE. Following the transfer, the MLB coxswain returned to the accident site and began a search from that location, accounting for the ebb tide. About 25 minutes later, he was joined by the Station's 30-foot patrol boat. Shortly after that, a helicopter from USCG Air Station North Bend and the 52-foot MLB INTREPID joined in the search. An air and sea search for the two missing women continued for a day and a half with negative results. The bodies of the two victims were never found.

²The estimated survival time in 57° F water is 1 to 6 hours. However, a person may become exhausted or unconscious within 1 to 2 hours as a result of hypothermia and may drown while afloat in a PFD. A person's age is also a factor in his/her ability to survive.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the sinking of the BIG ABALONE was the swamping of the drifting and disabled pleasure craft because of the heavy seas at Coos Bay Bar. Contributing to the loss of life was the failure of the coxswain of the CG 44373 to remove the passengers before attempting to tow the vessel into safer waters.

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C. 20594

Marine Accident Brief No. DCA-93-MM-030

Vessels: U.S. Tug DUKE LUEDTKE, O.N. 216022, 68.7 Feet Long, 73
Gross Tons, Built in 1917, Uninspected
Coast Guard Utility Boat, CG 41487, 41
Feet Long

Accident Type: Sinking

Location: Lake Erie, about 13 Miles North of Avon Point, Cleveland,
Ohio (Latitude 41°43.6' N, Longitude 81°58.6' W)

Date: September 21, 1993

Time: Approximately 0033, Local

Owner: Luedtke Engineering Company, Frankfort, Michigan

Property Damage: In Excess of \$250,000.00 (Total Loss)

Injuries: 3 (Minor)

Deaths: 1

Complement: 3 (Tug), 5 (Coast Guard Boat)

Description of the Accident

At 1930¹ on September 20, 1993, the commercial tug DUKE LUEDTKE departed West Harbor, Ohio, en route to Ashtabula, Ohio. It was a typical Great Lakes harbor tug, steel hulled, and of both riveted and welded construction.

The wind was coming out of the west at 6 knots, and the seas were 2 to 4 feet. The air temperature was 63° F, and the water temperature was 70° F. Visibility was 4 miles.

Three persons were on board, the operator and two deckhands. After getting underway, the operator made routine hourly checks of the engineroom to ensure that everything was operating properly. At 2300 he noted 3 feet of water in the engineroom, whereas he had observed no water during his previous check at 2200. He looked for but could not determine the source of the flooding.

¹All times are Eastern daylight time and are based on the 24-hour clock.

At 2337, the DUKE LUEDTKE was about 13 miles north of Avon Point, Ohio, when the operator transmitted a distress call on VHF/FM channel 16, reporting his vessel was taking on water and required assistance. The distress call was immediately answered by the communications watchstander at Coast Guard Station Cleveland Harbor, Ohio. The tug operator told the watchstander that the water in the engineroom at that time was about 3 feet deep. Later, at 2355, he advised the watchstander that the level had increased to 5 feet.

At 2340, Coast Guard Station Cleveland Harbor dispatched the 41-foot utility boat (UTB) CG 41487 with a crew of five (a coxswain, an engineer, and three crewmembers) to render assistance. Before getting underway, the coxswain reported to the watchstander for a briefing. The watchstander advised him of the vessel's identity, type, and location and that the vessel was taking on water.

The coxswain did not talk to the tug operator while en route, nor did the coxswain talk to the operator when the UTB arrived on scene. The tug operator stated that as soon as the UTB was alongside, it was secured to the forward port side of the tug.

Unknown to the operator, two Coast Guard crewmembers immediately boarded the tug and asked one of the tug's deckhands for directions to the engineroom. The crewmembers entered the compartment above the engineroom through a watertight door on the port side, slightly aft of amidships, closing the door behind them.

About 90 seconds after the UTB came alongside, the tug heeled to port and sank stern first. Both of the crewmembers who had boarded the tug were trapped in the area above the engineroom when the tug sank.

Earlier, the tug operator had instructed his two deckhands to don their survival suits and stay on the main deck. Both were on the port bow of the tug when the UTB came alongside. As the tug started to sink, one of the deckhands jumped from the tug to the bow of the UTB and was helped aboard. The other deckhand jumped into the water and was rescued shortly thereafter by the UTB. The tug operator escaped through a window of the wheelhouse into the water and was rescued by the CG 41391, a UTB from Coast Guard Station Lorain, Ohio, that had also responded to the incident. He was transferred to the Cleveland Harbor UTB and later taken to a Cleveland hospital, where he was admitted and treated for chest pains.

One of the UTB crewmembers who had boarded the tug managed to escape from the engineroom area through a forward bulkhead door leading through the galley and up to the wheelhouse. He escaped by breaking out a window in the wheelhouse and swimming to the surface. He was rescued by the Cleveland Harbor UTB and transported to the Lorain County Hospital by a Coast Guard helicopter from Coast Guard Air Station, Detroit, Michigan. The other Coast Guardsman remained missing. Searches were conducted by various Coast Guard units, civilian helicopters, and civilian agency vessels throughout the night. Additional Coast Guard helicopters joined the search at daybreak and continued the search for him throughout the day with no success. On September 22, 1993, his body was recovered from the tug in the area

above the engineroom by divers from a civilian salvage company. They were helped by divers from the Cleveland and Lorain police departments.

The Cleveland Harbor Station's communications watchstander was responsible for executing a search and rescue (SAR) Incident Summary form² when he received the tug's call for Coast Guard assistance. The form has a case data section that includes information to be obtained and entered under the heading "Initial Severity." The SAR Incident Summary form executed during this case had no entry under "Initial Severity." The watchstander stated that there was no sense of urgency in the voice of the tug operator when he was talking on the radio; therefore, the watchstander did not consider the situation to be life threatening. Consequently, when the coxswain reported to the watchstander for a briefing of the accident, the coxswain was not made aware that the tug was in danger of sinking, only that it was underway and taking on water.

The coxswain stated that he initially believed that he was on a routine case that could be resolved by putting two of his crewmembers on board to assess the situation, stop the flooding if possible, and pump out the flooded compartment with a portable pump.

The coxswain stated that when the UTB arrived on scene, the tug did not appear to him to be in danger of sinking. When questioned about how he made this assessment, he stated that the vessel was riding smoothly and rolling slowly. He further stated that because the vessel was not listing, he did not think it was in danger of sinking.

When the two crewmembers boarded the tug, the surviving crewmember stated, he noticed there was about a foot of water on the after main deck of the tug. He said that when they entered the engineroom, the other crewmember closed the door so that the water on deck would not enter the engineroom. The tug had already sunk to a level above the freeing ports³ aft, allowing water to accumulate on the main deck.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the sinking of the tug boat DUKE LUEDTKE was the flooding of the vessel's engineroom from an unknown source. Contributing to the loss of life was the Coast Guard's failure to provide proper risk assessment training to Station Cleveland Harbor search and rescue personnel.

²A form used to record important data and information about the vessel in distress. The form is vital for ensuring that cases are properly assessed and prosecuted.

³An opening in the side plating of a vessel close to the main deck that allows water washing on deck to run freely overboard.