PROCEEDINGS
OF THE MARINE SAFETY COUNCIL

DEPARTMENT OF TRANSPORTATION UNITED STATES COAST GUARD

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PROCEEDINGS

OF THE MARINE SAFETY COUNCIL

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COVER

Pictured on our cover is Admiral John Briggs Hayes, the newly-appointed 16th Commandant of the United States Coast Guard. A brief biographical history of the Commandant is presented on page 59.

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Proceedings Undergoes Editorial Change

Following resignation of editor Angus McDonald on June 2, 1978, production of the Proceedings of the Marine Safety Council temporarily ceased. I assumed the Proceedings' editorial post on July 10, 1978. The job is proving to be most interesting and informative, and I am very pleased to have been selected to fill the position.

My hometown of Pensacola is in the Florida "Panhandle" on the Gulf of Mexico. After completing Escambia High School, I attended Florida State University and in 1974 received a B.A. degree in commercial art. Upon graduation, my employment with the State of Florida led to production of various printed materials and audio-visual aids created for public distribution.

In 1976 I moved to Washington, DC and began work with the federal government. Prior to my present position I spent a year and a half in the Veterans Administration Office of Audit.

The Proceedings is an important tool in educating the interested public in matters of marine safety. As such, it will remain dedicated to informing readers of Coast Gnard regulatory actions which affect maritime industry: not merely reviewing existing regulations, but investigating the cause and logic behind their development.

Forthcoming issues should reestablish a regular, timely schedule for the Proceedings. Input from readers--suggestions, information, comments--is encouraged. Your response is our most effective measure of this magazine's adequacy in meeting reader needs and interests.

Glad to be aboard,

BABS BELIECH EASON

NEW COMMANDANT TAKES THE HELM OF THE COAST GUARD

Admiral John Briggs Hayes was appointed by the President to the post of Commandant, United States Coast Guard on June 1, 1978. He succeeded retiring Admiral Owen W. Siler as the 16th Commandant of the Coast Guard, thereby assuming command of approximately 44,000 military and civilian personnel.

After more than 32 years of service, Admiral Hayes is the only active duty four star Admiral in the Coast Guard. His military career began with graduation from the Coast Guard Academy, New London, Connecticut in 1946. Early assignments included sea duty on board Coast Guard vessels such as the cutter COMANCHE and patrol vessel CHINCOTEAGUE, both of Norfolk, Virginia; the tender MISTLETOE of Portsmouth, Virginia; and the cutter AURORA of Savannah, Georgia.

Following assignment in the Far East as Commanding Officer of the LORAN Transmitting Station, Matsumae, he returned to the United States to assume command of the Coast Guard Base at Key West, Florida. From there he transferred to San Juan, Puerto Rico, as commanding officer of the tender SAGEBRUSH.

Upon completing courses at the Naval War College in 1960, he was assigned to Coast Guard Headquarters, Washington, DC. During that tour of duty his long-range plan fur replacement of outdated vessels won the Secretary of Treasnry Commendation Award Medal.

In 1964 he received an M.A. degree in International Affairs from George Washington University. That July, then-Commander Hayes was assigned to the Resident Inspector's Office at Todd Shipyards in Houston, Texas as prospective Commanding Officer of the new cutter VIGILANT. After commanding VIGILANT, he was appointed Commander of Division II, Squadron One in South Vietnam. This latter post led to the Legion of Merit Award with combat "V" ribbon for his part in the prevention of infiltration of supplies and men to enemy forces. Two unit awards and two personal awards were bestowed from the Republic of Viet Nam.

A return to Headquarters brought two consecutive assignments. As Chief of Planning and Evaluation Staff in the Office of Boating Safety, he received the Coast Guard Commendation Medal in 1968. While serving as Commandant of Cadets at the Coast Guard Academy in 1973, he received appointment to the rank of Rear Admiral. Later, as Comptroller of the Coast Guard, he earned the Meritorions Service Medal. Before assuming his present post, Admiral Hayes was Commander of the 17th Coast Guard District, Juneau, Alaska.

A native of Jamestown, New York, Admiral Hayes is married to the former Elizabeth C. Bogert of Englewood, New Jersey. They have four children: Christie Margaret, John B. II, William B., and Virginia B. The family resides in the Coast Guard Commandant's Quarters in snburban Washington, DC.

The overturned ferry GEORGE PRINCE. The great number of lives lost was a result of the ferry's rapid capsizing on top of passengers and vehicles.

COLLISION! SS FROSTA - MV GEORGE PRINCE

The collision between the passenger ferry GEORGE PRINCE and the Norwegian chemical carrier SS FROSTA on October 20, 1976 claimed more lives than any other recent incident in U.S. waters. Seventy-seven persons, including the entire crew of the GEORGE PRINCE, died as a result of this tragedy.

BACKGROUND

The GEORGE PRINCE, a catamaran hulled, twin screw, passenger/vehicle ferry, was owned and operated by the State of Louisiana Department of Highways. The diesel powered motor vessel measured 128.5 feet long and 58.5 feet in width, with a hull depth of 7 feet. Until July 2, 1969, the GEORGE PRINCE had been operated by a joiut parish agency on behalf of the State of Louisiana and was iuspected and certificated by the Coast Guard to carry passengers for hire. However, on that date the State of Louisiana took over its operation and removed the vessel from mandatory Coast Guard inspection by making it a free service of the State. From that time on the ferry received only such inspections as were considered necessary by the State.

The crew aboard the GEORGE PRINCE the morning of the casualty consisted of: the pilot, licensed by the Coast Guard as a first class pilot of steam and motor ferry vessels, and endorsed as a radar observer; the engineer; and three deckhands. The pilot was overall in charge of the vessel.

The midnight to 0800 shift aboard the GEORGE PRINCE progressed routinely. Weather conditions in the area were clear and crisp and without fog, haze, or other local environmental impairment to visibility. The wind was from the northwest at approximately 13 knots with gusts up to 20. The current flow was estimated at around one knot.

At 0515 the crew of a second, smaller ferry, OLLIE K. WILDS, arrived to put that vessel in operation for the morning rush hours. Neither ferry maintained a set schedule, but followed the other in succession according to traffic demands. By 0600 both ferries had completed one round-trip; the GEORGE PRINCE was loading on the east bank and the WILDS on the west.

The GEORGE PRINCE was moored starboard side to the landing, bow upriver, loading vehicles through the starboard loading gate. Twenty cars, eight trucks, six motorcycles, and an unknown number of pedestrians were on board. There were approximately 20 pas-

sengers crowded into the passenger waiting room, probably attempting to avoid the pre-dawn chill. The GEORGE PRINCE departed the east bank landing, made a short run upriver, and then turned to port and headed directly across the river toward the west bank landing.

The SS FROSTA, a 664-foot Norwegian-owned and operated chemical tankship, was in ballast making a routine upriver passage. The vessel had departed Rotterdam, the Netherlands on October 4, 1976 bound for Baton Rouge, Louisiana. The voyage was uneventful and without port of call prior to arrival at the lower Mississippi River. In the vicinity of Chalmette Slip, mile 90.5, a New Orleans-Baton Rouge Steamship Pilot Association pilot boarded at approximately 0335. At that time the master, chief mate, and a helmsman were on the bridge. The pilot brought aboard a hand-held portable VHF transceiver, equipped with chaunels 13, 16, 12 and 6. Channel 13 was used for navigation and 16 for marine emergency or distress. The pilot requested that the vessel continue upriver at approximately 11 knots. The vessel proceeded on various courses and speeds and the pilot used channel 13 to establish verbal passing agreements. Whistle signals were exchanged in confirmation. All instructions from the pilot to the master and bridge watch were made in English and understood. At 0600 the watch was relieved by a mate and helmsman and the master went below to his cabin. The mate on watch, besides relaying the pilot's instructions to the helmsman, was responsible for calling the master should circumstances warrant.

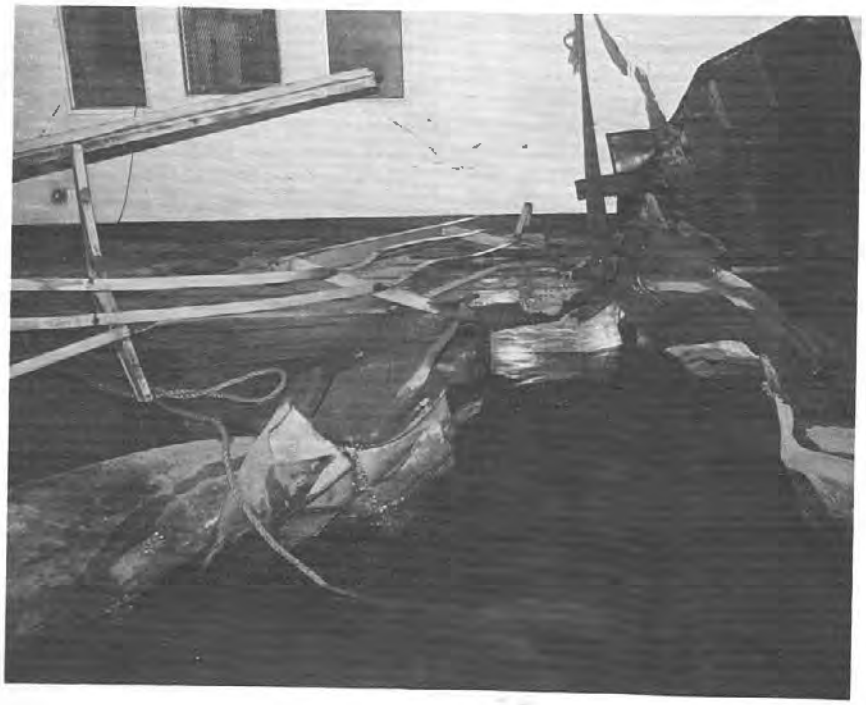
ACCOUNT OF EVENTS

When the SS FROSTA was about a mile downriver from the Luling-Destrehan Ferry Crossing, the pilot observed the WILDS crossing from the west to the east bank. No crossing agreement or signals were considered necessary. Two large vessels were moored alongside the grain loading piers on the east bank, below the ferry landing. The size of the vessel moored closest to the east bank landing concealed the landing from upbound vessels until it was approximately 45 degrees off the starboard bow. Vessels such as the FROSTA tried to favor the west bank side of the river on the upbound voyage, due to bridge construction one mile further upriver. Under these conditions the earliest the east bank landing would be visible was when the FROSTA was one-fourth mile downriver from the landing.

Upon sighting the departing ferry GEORGE PRINCE, the pilot twice called the "Luling Ferry" on channel 13, pausing about 15 seconds between calls to listen for a response. Receiving no answer, he then initiated a 2-whistle signal, indicating his desire to pass ahead of the ferry. This signal is understood between pilots in the area to mean leaving one another to starboard, or for the ferry to give way and pass under the FROSTA's stern. A 2-blast signal in this situation has no standing or meaning in the Western Rivers Rules of the Road. The ferry was then about one-fourth mile away, having made a turn to port, and was proceeding across the river toward the west bank landing showing its red sidelight.

The master was in his cabin one deck below the bridge. Upon hearing the first whistle signal, he looked out his cabin port and saw the ferry emerging from behind the bow of the large vessel moored at the grain terminal. After waiting a short while, the pilot again repeated his radio call on channel 13 followed immediately by a second 2-blast whistle signal. No response by either radio or whistle communication was heard from the ferry. The GEORGE PRINCE was equipped with an amber whistle light which operated simultaneously with the whistle, but no one on the bridge of the FROSTA observed any light indicating a whistle signal. When the pilot blew the second whistle signal the master became concerned and headed directly to the bridge.

The pilot thought he saw a slight course change initiated by the GEORGE PRINCE to starboard, but then the ferry almost immediately returned to the original heading. He then began continuous radio calls, sounded the danger signal, and followed with repeated blasts of the whistle in an attempt to gain the ferry pilot's attention. He also ordered the FROSTA's engine full astern. To this point no attempt was made to avoid the collision, other than backing full. The pilot expected to the last that the ferry would turn and pass under the FROSTA's stern.



The master arrived on the bridge when the GEORGE PRINCE was 500 to 600 feet away and on a constant bearing just slightly off the starboard bow. Shortly thereafter the ferry passed out of sight under the bow. A slight bump was felt as the vessels collided, and vibration developed as the propeller reached 60 RPM astern. The FROSTA had slowed to about 7 knots at the time of the collision while the speed of the GEORGE PRINCE appeared to remain constant.

The collision occurred at mile 120.8, approximately 275 yards from the west bank. As the GEORGE PRINCE came into view along the port side it was nearly capsized, with its bow up, and the bottom facing the ship. Upon sighting the capsized ferry the master and pilot, acting independently, called for help and advised the Coast Guard of the collision. The FROSTA anchored upriver at 0635 and immediately launched two lifeboats to search for survivors. Unfortunately, no one was seen.

SEARCH AND RESCUE

The WILDS, after passing well ahead of the FROSTA, was in the final stages of maneuvering at the east bank landing when the collision occurred. After mooring and commencing offloading, an awaiting passenger advised the crew that he had seen the collision. The pilot immediately cast off to search for survivors. A policeman, who had ridden over in the pilothouse from the west bank, used one of the ferry's portable radios to report the collision to the Hahnville police and request police and medical assistance on the west bank.

As the WILDS slowly approached the overturned ferry, lifejackets were thrown overboard in hopes of aiding anyone in the water. The passengers and crew used two benches to bridge the gap between the survivors perched on the overturned hull and the WILDS' vehicle deck. Sixteen survivors were rescued in this manner. At the same time the WILDS' rescue boat was launched aud one survivor was recovered from the water.

The tugboat ALMA S. was making preparations to assist the large vessel at the grain loading facility nearest the east bank landing in getting underway. The pilot of the ALMA S. heard the channel 13 radio broadcast from the pilot of the FROSTA before and immediately after the collison. The tugboat proceeded to the scene and looked for survivors. When approximately 15 yards from the GEORGE PRINCE, a cry for help was heard. Crew members of the ALMA S. were able to get a life ring to the person and, after about five minutes, got him aboard. The survivor was very near shock, so the ALMA S. proceeded to the WILDS to transfer him. The WILDS then backed away from the overturned GEORGE PRINCE and took all the survivors to the west bank where emergency equipment was standing by to deliver them to the hospital.

A Coast Guard diving team arrived ou scene at 0725 and checked the hull for survivors. By 0830 the divers reported that there were no signs of life and that other divers would be needed to search the inside of the ferry. The next group of divers, equipped with airline masks, were able to locate all 18 bodies of the people trapped in the hull.

SALVAGE

The coordination and responsibility for the salvage of the GEORGE PRINCE and search for vehicles was assumed by the Director of Administration for the State of Louisiana by 1440 the same day. Later that afternoon and throughout the night preliminary work was completed for the raising of the ferry. On October 21, 1976 the crane barge AVON SENIOR began salvage operations by lifting steel cable slings, which had been placed about the overturned hull. At approximately 1730 the vessel was pulled free from the bottom of the river. The pilothouse became visible above the surface of the water at 2000, and progress continued until 2200 when the vessel had been lifted enough to start dewatering.

After 30 minutes of dewatering, officers from the New Orleans Marine Inapection Office were able to board the ferry. They proceeded directly to the pilothouse to examine the condition of navigating equipment and controls and gather log books and other

documents. The investigators noted the vessel's magnetic compass was on a heading of 078 degrees, the rudder angle indicator displayed a reading of 4 degrees right rudder, aud all switches in the running light panel were in the "on" positiou. One of the Raytheon Mariner Pathfinder radar sets had the power switch in the "on" position. The power switch for the Harris RS 440 VHF radio transceiver was also in the "on" position with the selector switch set on channel 13. The two independent sets of engine controls, one on each side of the pilothouse, were examined. The throttles in the starboard set were in the "full ahead" position, the port set of controls had the starboard engine throttle in "neutral" and the port engine throttle at "full astern." It was not possible to determine which set of controls was in use at the time of the casualty, however, the normal operating position of the pilot utilized the starboard set.

The vessel's log books and other documents were found in a small plywood box on the floor of the wheelhouse. A few other documents, found in various places in the pilothouse, were placed with the box and then removed from the vessel by an officer of the New Orleans Marine Inspection

Office. Examination of the contents of the box produced a nearly empty half pint whiskey bottle wrapped in a paper bag.

On October 27, 1976 the forensic laboratory of the Orleans' Parish Coroner's Office released results of the blood alcohol and toxicology examinations conducted in conjunction with the autopsy performed on the pilot. The pilot's blood was found to contain 0.09 percent alcohol with no other drugs present. The coroner concluded that at the time of the collision the pilot had been drinking, was at the end of a full watch, and was experiencing some degree of impairment.

Salvage operations were completed by the morning of October 22, 1976. The ferry was taken to the Louisiana Department of Highways' repair yard at Plaquemiue, Louisiana. Examination of the hull indicated that the point of contact between the two vessels was a V-shaped notch, 16 feet wide and 8 feet deep, on the port side, approximately 38 feet from the after end of the vessel. The damage extended into the No. 4 compartment of the port pontoon, leaving the outboard portion of the No. 4 compartment open to the river. The inboard half, which housed the port main engine, was protected from initial flooding by a longitudinal bulkhead along the centerline of the pontoon. The starboard pontoon was damaged in the No. 5 compartment, and the bottom plating aft of the transverse bulkhead between compartments 4 and 5 along the rise of the rake was indented approximately 12 inches. The hull plating on the inboard or port side of the pontoon was holed near the bulkhead as a result of this upward movement of the bottom plating.

CONCLUSIONS

The Marine Board concluded that the GEORGE PRINCE was being operated by the pilot when she departed the east bank ferry landing at about 0613 on October 20, 1976. Although the specific actions of the pilot during the crossing cannot be determined, they may be deduced from observations of the vessel. Upon departure the pilot almost immediately turned for the west bank because the current was slow in the river and the volume of commuter traffic made it attractive to make the crossing as rapidly as possible. The ferry proceeded mutely and without significant change of course or speed into the collision. The departure of the ferry directly into a river crossing, in the presence of stream traffic, created a situation wherein risk of collision existed and was governed by Rule 25 of the Rules of the Road for Western Rivers. Had the pilot announced his departure with the 3-blast signal required by Rule 24(c) and, upon encountering the FROSTA, signaled his intention to proceed ahead by a 1-blast signal as provided in Rule 19(a), the situation would have been an impolite but acceptable crossing situation governed by Rule 19.

Complacency, fatigue, and/or the effects of alcohol consumption resulted in the pilot's failure to detect the approaching SS FROSTA until seconds before the collision. He probably became aware of the FROSTA when the two vessels were approximately 500 to 700 feet apart. At this point the collision was inevitable. The ferry's momentum, in combination with a strong starboard quarter wind and a beam current, had been taken beyond the point of human remedy.

The pilot of the FROSTA also shared the responsibility for the cause of this casualty. He promptly and correctly assessed the ferry's presence as a situation involving risk of collision, and sought agreement for a safe passage through his radio calls and whistle signals. He viewed the situation as one covered by a local custom wherein small vessels give way to large vessels in stream traffic. This custom recognizes the relative maneuverability of small versus large vessels but does not, and cannot, supersede the requirements of burden provided in the Rules of the Road without a mutual agreement to the contrary. The proximity of the two vessels in a sudden encounter dictated a situation covered by Rule 25 where the FROSTA had a shared burden to avoid collision and the pilot was obligated to act accordingly. Had he not held that the situation was extraordinary under Rule 25, he would have had the sole burden to keep clear of the ferry under Rule 19 as "the vessel which had the other to starboard." In the face of this burden, the pilot chose to adhere to custom and sought twice, by unanswered whistle signals and numerous radio calls, to shift the total burden of avoidance over to the GEORGE PRINCE. The collision could have been avoided if he had decisively slowed the FROSTA when his first 2-blast whistle signal went unanswered. Had the early slowing of the FROSTA not prevented the collision, it would have at least extended the time for alternative action by both vessels, thereby lessening the impact of collision in the absence of other actions. The Board concluded that the FROSTA proceeded into extremis at an imprudent speed and that such action contributed to the cause of the casualty and its severity.

The force of the collision was so great that the ferry became impaled on the bow of the FROSTA and was driven upstream until the starboard deck edge submerged and she capsized. Although the ferry was taking on water, she capsized because of the FROSTA's momentum and not as the result of any progressive flooding. The severity

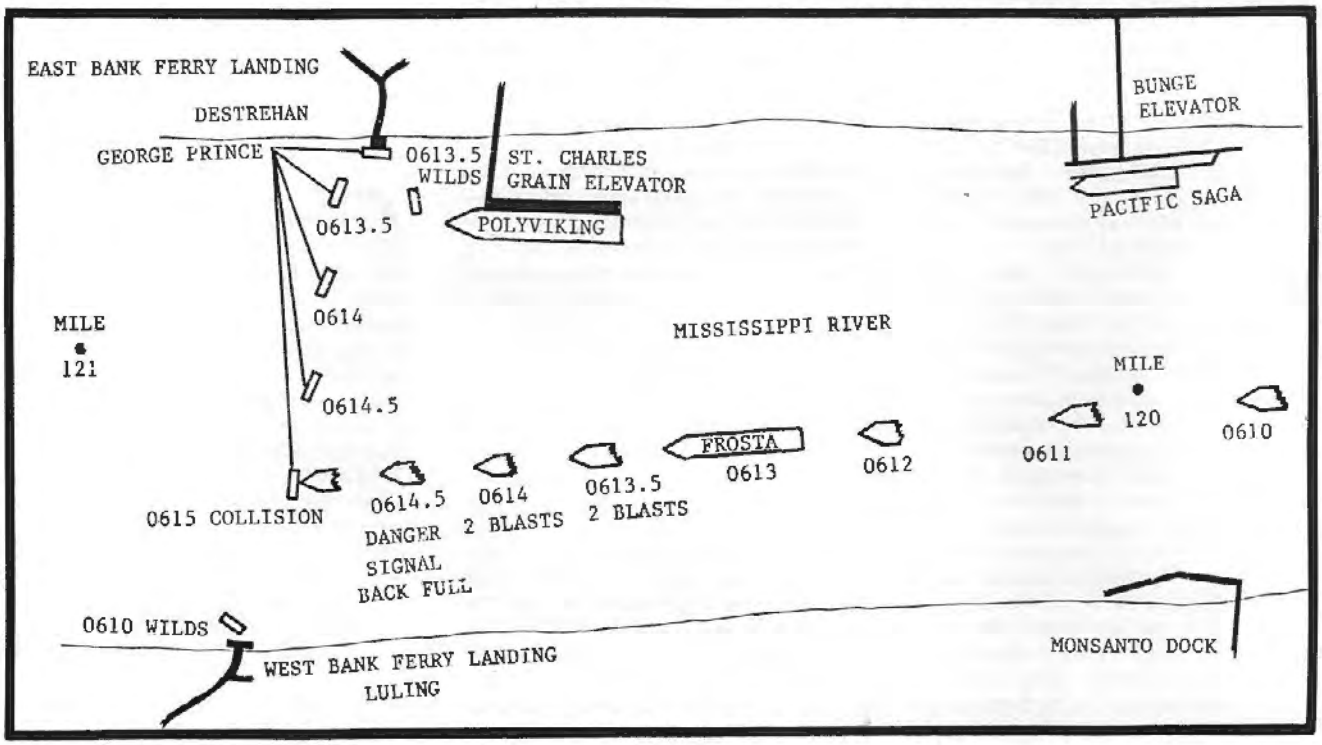
of this casualty, in terms of human life, was a direct result of the ferry's rapid capsizing on top of her load of vehicles and passengers. Any positive action on the part of either vessel which would have substantially changed the point of impact or the momentum of collision would have greatly enhanced passenger survivability.

Even though some of the passengers on board the ferry were aware of the FROSTA's presence, there was no general panic until after the danger signal from the FROSTA was heard. Awareness of the danger was a cascading affair wherein the flight of one passenger away from the FROSTA and toward the lifejacket lockers alerted those he passed and their flight, in turn, alerted others. Since the only survivors were those who were in the fore part of the ferry, the degree of awareness of those alongside and aft of the superstructure is not known. Eighteen people never escaped from the interior spaces of the ferry. None of the spaces available to the passengers and crew were capable of air entrapment to any significant degree. Most of those who died were trapped under the overturned hull or in their vehicles and could not find a clear path to the surface before their breath was expended. An undetermined number may have surfaced and, because of injury or the inability to swim, did not survive.

COMMANDANT'S ACTION

The Commandant concurred with the Marine Board's determination that this collision was one involving special circumstances which were governed by Rule 25 of the Western Rivers Rules of the Road. Although the courses that the vessels pursued until collision were physically crossing, certain circumstances of the case made application of the crossing rule (Rule 19) impossible. When the GEORGE PRINCE entered into the stream it was already in a close quarters situation with the FROSTA. At this point the ferry was turning and presenting a changing aspect to the FROSTA. There was obviously doubt as to its ultimate intention because of the common practice of ferry vessels to keep clear of large upbound and downbound vessels. Additionally, the suddenness of the encounter provided inadequate time for either pilot to properly evaluate the situation. Under Rule 25, the doubt as to the GEORGE PRINCE's further movements left the pilot aboard the FROSTA with only one option--to immediately stop and sound the danger signal. The pilot of the FROSTA recognized that the situation required some action on the part of at least one of the vessels in order to avoid a dangerous situation. He chose to continue on his course and speed and proposed that the ferry maneuver to keep out of the way, but the GEORGE PRINCE did not acknowledge this proposal. The close proximity of the vessels required that, at the least, the pilot aboard the FROSTA take emergency evasive action immediately after his proposal went unanswered. He compounded the error by continuing on course without taking any action to check the advance of the vessel. From the outset, the pilot's only prudent action in this situation would have been to sound the danger signal and stop the FROSTA, and then

Time-lapse diagram of the casualty.



proceed only after a passing agreement had been made between the vessels. The ferry proceeded, apparently oblivious to the approaching FROSTA and, for reasons unknown, failed to answer any of the FROSTA's signals. It is most reasonable to assume that the pilot never saw the FROSTA. Even considering that the pilot was aware of the FROSTA's presence, he had no right to proceed into collision without taking any evasive action. This total disregard for the dangers of collision and lack of prudent seamanship is inexcusable.

Although it is not possible to determine exactly to what degree the pilot was impaired by a .09 percent blood alcohol content, the effects of the alcohol have to be considered a major contributing factor in this casualty. Three areas where the effects of alcohol are well pronounced at a blood alcohol content of less than .10 are: (1) steadiness, orientation and balance; (2) attention, memory, and information processing; and (3) peripheral vision and visual field. Additionally, it is widely accepted that the effects of alcohol are magnified if the person is fatigued. It is imperative that the deck watch of any vessel be in complete control of their faculties; taking into account the slow reaction of most vessels (compared to motor vehicles) there is little room for error in judgement in close quarter situations.

The evidence adduced in this casualty investigation indicates that the pilot aboard the GEORGE PRINCE was not in full control of his faculties.

The Marine Board made 10 recommendations based on their findings of fact and conclusions. Of these, four were directly related to violations of law or regulation with comments regarding further action under the suspension and revocation proceedings or civil and criminal penalty procedures. The Board further recommended that the Commandant seek legislation amending the Rules of the Road to give the right of way to stream traffic over crossing traffic. Legislative action has already been initiated to update the Western River Rules, including this particular recommendation. The Board also recommended that the Commandant seek legislation amending the Bridge-to-Bridge Radiotelephone Act, 33 USC 1201-1208, to require its application to all passenger-carrying ferry vessels whether or not such passengers are carried for hire. The Port Safety and Law Enforcement Division at Coast Guard Headquarters will initiate action looking toward amending legislation.

A recommendation was made that the Commandant also seek legislation amending the Rules of the Road for Western Rivers, Rule 25, 33 USC 350 to contain a warning concerning communications by inserting the phrase "particularly failure to communicate with one another" immediately after the words "special circumstances." The Commandant did not concur with this recommendation. The failure to communicate would not necessitate a departure from the rules in all cases. It was determined that Rules 21 and 24 of the Western Rivers Rules provide adequate guidance for the proper action to be taken in the event one vessel failed to communicate it desires or intentions to another.

It was recommended that the Coast Guard intensify and extend its boarding program of uninspected vessels to include surveillance of operation, particularly for free ferries such as the GEORGE PRINCE. Such surveillance should emphasize Rule 24(c), the departure signal of the Western Rivers Rules of the Road and its counterpart in other rules. The Merchant Vessel Inspection Division at Coast Guard Headquarters is developing a boarding program for the inspection of safety equipment aboard uninspected commercial vessels. This recommendation will be given consideration with respect to the application of a surveillance program in conjunction with the boarding program. The Marine Board felt that consideration should be given to requiring active and positive participation by all ferry vessels in the planned vessel traffic services for the lower Mississippi River, particularly where such vessels are operating in response to commuter traffic in lieu of maintaining a fixed, advertised schedule. The Commandant responded to this recommendation by stating that when proposed regulations are issued for mandatory participation in the New Orleans VTS system, a requirement will be included that ferry vessels participate. In the interim, letters will be sent to all ferry vessel operators in the New Orleans VTS area urging their participation in the existing voluntary VTS system.

Finally, the Board recommended that the Commandant have authority to regulate and approve federal pilotage licenses. Legislation relating to this problem is presently in Congress. The entire subject of jurisdiction relating to federal pilot licenses is currently under review at Coast Guard Headquarters.

SUMMARY

Upon removal to the Louisiana Department of Highways' shipyard, the GEORGE PRINCE was inspected for damage and subsequently declared beyond economical repair. SS FROSTA suffered superficial damage to stem and propeller, but there were no injuries or deaths aboard her as a result of the tragedy. She resumed her voyage on October 23, 1976, three days after the incident, departing Baton Rouge for Houston, Texas.

The primary cause of the casualty was the operation of the two vessels without due caution. Both were burdened by Rules 21 and 25 of the Western Rivers Rules to avoid collision. There is no evidence that equipment or material failure on either SS FROSTA or GEORGE PRINCE caused or contributed to the occurrence. The resultant tragedy serves as a vivid reminder that keeping a proper lookout is the first rule of seamanship.

* * * * * * * * * * * * *

A copy of the complete official marine casualty report of the collision between the SS FROSTA and the GEORGE PRINCE may be obtained free of charge by writing to the Commandant (G-MMI), U.S. Coast Guard, Washington, DC, 20590.

Marine Safety Council Membership

RADM Winford W. Barrow, USCG, assumed his present post of Chief, Office of Marine Environment and Systems on July 12, 1978.

W. W. Barrow was born in Schoolfield, Virginia and completed his early education at Reidsville, North Carolina High School. Outstanding athletic abilities enabled him to win a 4-year scholarship to North Carolina State University, where he studied during 1941-42. Throughout this time he served as President of the Freshman class, was a member of the wrestling, track and football teams, and was one of 12 chosen from his class for induction into the National Engineering Honor Society.

In 1945 he graduated from the Coast Guard Academy with a B.S. degree in Engineering and a commission of Ensign. He served his first assignment on board the destroyer escort USS POOLE in the Pacific, participating in the post-World War II occupation of Japan. Sea duty continued with increasing responsibilities aboard Coast Guard cutters BIBB (out of Boston, Massachusetts), CHEROKEE (of Norfolk, Virginia), MISTLETOE (Portsmouth, Virginia) and WINNEBAGO (also of Norfolk).

In January of 1949 he transferred to the 5th Coast Guard District Office at Norfolk, where he served as Assistant Chief, Search and Rescue Section. Subsequent assignment to the Marine Inspection Office kept him in Baltimore, Maryland for over four years. Beginning June 1955 he spent two years aboard the cutter SPENCER before taking on two assignments in Florida. There he served at the Marine Inspection Offices in Jacksonville and Tampa.

Returning to sea, he was Executive Officer and then Commanding Officer of USCGC DUANE out of Boston. His following tours of duty were at Coast Guard Headquarters, Washington, DC.

For outstanding achievement in the post of Chief, Merchant Vessel Inspection Division, he was awarded the Coast Guard Commendation Medal, and was cited for his work in passenger ship fire safety development.

Returning to Baltimore in 1971, he was called upon to play a triple role as Coast Guard Group Commander, Commanding Officer of the Coast Guard Station, and Captain-of-the-Port. In a second tour of duty at Portsmouth, then-Captain Barrow assumed the duties of Chief, Operations Division. While in that position he received appointment to the rank of Rear Admiral.

Before moving into his present office in Headquarters, RADM Barrow was Commander of the Gulf States area, 8th Coast Guard District, New Orleans, Louisiana. He was called to that post to relieve RADM Ellis L. Perry, who had just been appointed Vice Commandant of the Coast Guard. For his exceptional achievements as District Commander, RADM Barrow was presented with the Legion of Merit Award on June 8, 1978.

RADM Barrow has been an annual contributor of papers for the National Safety Congress. He is a former Chairman of the U.S. Delegation, Safety of Navigation Committee to the International Maritime Consultative Organization (IMCO), and was a U.S. Representative to IMCO Adhoc Committee on the revision of SIMLA rules. He and Mrs. Barrow (Elizabeth Perkins of Reidsville, North Carolina) have three daughters.

MERCHANT MARINE SAFETY PUBLICATIONS

The following publications may be obtained from the nearest marine safety office or marine inspection office of U.S. Coast Guard. Because changes to the rules and regulations are made from time to time, these publications can be kept current between revisions only by referring to the Federal Register. (Official changes to all federal regulations are published in the Federal Register, printed daily except Saturday, Sunday, and holidays.) Following the title of each publication in the table below are the date of the most recent edition and the dates of the Federal Registers affecting each.

The Federal Register may be obtained by subscription ($5 per month or $50 per year) or by individual copy (75 cents each) from SupDocs, U.S. Government Printing Office, Washington D.C. 20402.

CG No.	TITLE OF PUBLICATION
101-1	Specimen Examinations for Merchant Marine Deck Officers (2d and 3d Mate) (4-1-77).
101-2	Specimen Examinations for Merchant Marine Deck Officers (Master and Chief Mate) (4-1-76).
108	Rules and Regulations for Military Explosives and Hazardous Munitions (4-1-72). F.R. 7-21-72, 12-1-72, 6-18-75.
*115	Marine Engineering Regulations (8-1-77). F.R. 9-26-77.
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