MARINE CASUALTY REPORT

COLLISION INVOLVING SS UNION FAITH AND M/V WARREN J. DOUCET AND TOW IN MISSISSIPPI RIVER ON APRIL 6, 1969

U.S. COAST GUARD
MARINE BOARD of INVESTIGATION REPORT and COMMANDANT'S ACTION

ACTION BY
NATIONAL TRANSPORTATION SAFETY BOARD

DEPARTMENT OF TRANSPORTATION
WASHINGTON D.C. 20591

RELEASED 22, DEC 1970

SS UNION FAITH (TAIWAN) AND TUG WARREN J. DOUCET AND TOW
COLLISION IN THE MISSISSIPPI RIVER WITH LOSS OF LIFE
ON 6 APRIL 1969

TABLE OF CONTENTS

	Page
ACTION BY NATIONAL TRANSPORTATION SAFETY BOARD	
Summary of Facts	1
Analysis	3
Probable Cause	8
Recommendations	9
ACTION BY COMMANDANT - U. S. COAST GUARD	
Synopsis of Findings of Marine Board of Investigation	11
Remarks	12
MARINE BOARD OF INVESTIGATION	
Findings of Fact	14
Conclusions	22
Recommendations	24

NATIONAL TRANSPORTATION SAFETY BOARD
DEPARTMENT OF TRANSPORTATION
WASHINGTON, D.C. 20591

SS UNION FAITH (TAIWAN) AND TUG WARREN J. DOUCET WITH TOW
COLLISION IN MISSISSIPPI RIVER
April 6, 1969

ACTION BY THE NATIONAL TRANSPORTATION SAFETY BOARD

This casualty was investigated by a U. S. Coast Guard Marine Board of Investigation convened at New Orleans, Louisiana, on April 10, 1969. A representative of the National Transportation Safety Board attended the proceedings as an observer. The National Transportation Safety Board has considered only those facts in the investigative record which are pertinent to the Board's statutory responsibility to determine the cause or probable cause of the casualty and to make recommendations.

SUMMARY OF FACTS

About 1915 on April 6, 1969, the upbound freight vessel UNION FAITH collided with barge I.O.C. No. 7 being pushed by the towing vessel WARREN J. DOUCET, downbound in the Mississippi River at New Orleans, Louisiana. I.O.C. No. 7 was the lead barge of a tandem tow of three tank barges, each loaded with approximately 9,000 barrels of crude oil. The total length of this tow was about 570 feet. The tug CAT & MITCH was made up to the port quarter of the face barge with her engines operating at about one-quarter speed. The WARREN J. DOUCET engines were operating at about one-half speed. The tow was proceeding about 3.8 knots, favoring the bends. This vessel was uninspected, and her pilot was not licensed.

The UNION FAITH was bound for a berth about 3 miles upstream from the Greater New Orleans Bridge, on the New Orleans side of the river. She proceeded from anchorage off Algiers Point, favored this point, and was making good about 10 knots as she cleared the point and headed upstream. Her anchors were on the brake, ready to let go. This Taiwanese freighter was being navigated by a licensed pilot.

Voice radio equipment on board the WARREN J. DOUCET and that used by the pilot of the UNION FAITH were not compatible as to operating frequency. The DOUCET was equipped with voice radio operating on 2738 kHz at the time of the casualty, but not 156.65 MHz (Channel 13). The pilot of the

UNION FAITH used a portable transceiver operating on 156.65 MHz, but apparently was not monitoring 2738 kHz. Both vessels were equipped with marine radar. The radar was in operation on the towing vessel, but not monitored. It is not known whether the radar on the UNION FAITH was operating or being monitored. Navigation lights required by the Inland Rules of the Road and Pilot Rules were operating on the UNION FAITH and the WARREN J. DOUCET and her tow. The whistles of both vessels were operated prior to the casualty.

The casualty occurred after nightfall; however, the weather was clear and visibility was good, with a range of about 10 miles. The wind direction was northerly about 7 miles per hour. Traffic control lights for vessels in the vicinity of Algiers Point were not in operation, as the level of the river had not reached the limits requiring their operation (33 CFR 207.200(C)). The current was about 3 knots.

The collision occurred slightly upstream from the Greater New Orleans Bridge on the left descending side of the river. I.O.C. No. 7 caught fire on contact and broke loose from the tow. A series of explosions followed almost immediately and the UNION FAITH was engulfed in flames. The barge broke into two sections which drifted down the river ablaze and later sank. Crude oil burned on the river and threatened the moored vessels and the harbor facilities. The UNION FAITH drifted downriver, burning from stem to stern, and sank about 0200 on April 7, 1969. Twenty-five persons aboard the UNION FAITH, including all personnel on the vessel's bridge at the time of the casualty, are missing and presumed dead.

Estimated monetary loss of vessels and cargo, and repairs to the bridge are in excess of $2,227,000. The total cost including lost time and repatriation of survivors is not determinable but considerably larger than the above figure. The sunken vessel created a hazard to navigation. The cost of removing the UNION FAITH from the river was about $1,647,000.

This collision narrowly missed resulting in a catastrophic fire along the New Orleans waterfront. The action of the master of the towing vessel CAPPY BISSO, in hooking on the anchor chain of the burning UNION FAITH, prevented the ship from drifting downstream into the waterfront areas. Fortunately, the anchors dropped after the collision, slowing the drift of the freighter. New Orleans fireboats extinguished the two burning sections of tank barge I.O.C No. 7 before the latter could spread the fire ashore. Other towing vessels and pilots moved 13 moored vessels along the downstream docks, as a precautionary measure. Thus, prior emergency planning, fortuitous circumstances, and timely coordinated action by many waterfront personnel averted a potential major fire.

ANALYSIS

The WARREN J. DOUCET, downbound for Algiers Locks, was favoring the right descending bank in Gouldsboro Bend until she reached a point approximately one-half mile above the Greater New Orleans Bridge. She then changed course to cross the river to the left descending side, with the intention to round Algiers Point in the bend. The course was being directed toward the bridge pier located on the New Orleans side of the river. Shortly before he changed course, the master made a radio transmission on 2738 kHz to contact any upbound traffic in the vicinity. When he received no answer, he announced that he was coming down the "two-whistle side" with three oil barges in tow. Shortly after he changed course, he sighted the lights of the UNION FAITH as that vessel rounded Algiers Point, about 1½ miles distant, bearing dead ahead.

When the vessels were approximately 1 1/8 miles apart, and the UNION FAITH was bearing one point on his starboard bow, the master of the DOUCET sounded a two-blast signal proposing a starboard-to-starboard passing but received no reply. The DOUCET maintained her course and speed. When the vessel had closed to approximately one-half mile, personnel aboard the WARREN J. DOUCET noted, by the changing aspect of the UNION FAITH's navigation lights, that the freighter was altering her course to her starboard and her bearing remained constant. The master of the DOUCET sounded another two-blast signal and again received no reply. Following the second signal, the rate of change of the UNION FAITH's course to her right increased. Realizing that collision was imminent, the master of the WARREN J. DOUCET turned his searchlight on the lead barge, sounded four blasts of the whistle, and placed his vessel's engines full astern. The UNION FAITH also sounded a danger signal and put her engines full astern. The speed of the UNION FAITH had been reduced to about 5.5 knots about 5 minutes before the order for dead slow (about 3 knots) which was in effect approximately 2 minutes before the danger signal was sounded.

The stem of the UNION FAITH penetrated the starboard side of I.O.C. No. 7 at an angle of about 45° at a point about one-third the length from the bow of the barge.

In analyzing all available causal factors, it is apparent that bridge personnel on the UNION FAITH did not detect the tow until the meeting situation was in extremis. This analysis is based mainly on the information given by personnel on the WARREN J. DOUCET, since all bridge personnel on watch on the UNION FAITH were lost. However, the ordering of dead slow 2 minutes prior to the collision indicates the pilot of the freighter was uncertain of the situation at that time, particularly because the vessel still had 3 miles to go before reaching its destination, and dead slow would have delayed arrival. It is likely that the collision would have been avoided had the pilot of the UNION FAITH ordered full astern in lieu of dead slow; however, he did not do so until collision was imminent.

After the UNION FAITH rounded Algiers Point, the bridge personnel should have seen the two white lights and sidelights on the DOUCET which indicated a towing vessel pushing barges. The navigation lights on the I.O.C. No. 7 may have been difficult to see; however, bridge personnel using binoculars, under good conditions of visibility, should have been able to see the barge lights in sufficient time to take evasive measures. Background lights and reflections from the water may have made the barge lights difficult to detect. This raises the question of the state of attentiveness on the bridge of the UNION FAITH, but no information is available concerning this probable contributing factor.

A question of the indefiniteness of the regulations (46 CFR 113.55-30) governing navigation lights is raised by this case. The lead barge, I.O.C. No. 7, carried battery-powered red, green, and amber navigation lights mounted on stands at the forward end, 4 feet above the deck. These lights were powered by two No. 6 1½-volt dry cell batteries in series, supplying 3 volts to the .15 ampere bulbs, or .45 watts. Thus, the total electric power supplied to the lights on the lead barge of this 27,000-barrel tow of flammable crude oil was 1.35 watts. Section 80.16(g) of the Pilot Rules for Inland waters requires that these barge lights be visible at a distance of 2 nautical miles on a clear night. 46 CFR 113.55-30 prescribes 5.5 candlepower measured outside the lens to meet this visibility requirement. These regulations further recommend, by type number, various bulbs which meet this luminosity standard; however, they do not list recommended bulbs for 3-volt operations. A 75-watt bulb (at 115 volts) is recommended to produce the 2-mile visibility in a green fresnel lens. Thus, the ½-watt bulbs used on the I.O.C. No. 7 appear to be of very low power in comparison with others recommended. There is no practical method to measure the light intensity prescribed by these regulations, other than under laboratory conditions.

Inquiries by the Safety Board of the manufacturer of the navigation lights used on barge I.O.C. No. 7 indicate that it is next to impossible to provide performance data on lights using dry batteries because too many factors are involved. The manufacturer could not make any statement regarding "range of visibility." This situation is typical of the state of the art in such dry battery operated lights. At present, enforcement of the literal requirements of 46 CFR 113.55-30 would require laboratory testing of every type of light in use.

The tug was displaying proper navigation and towing lights powered by the vessel's 115-volt electrical system. The distance between the lights on the lead barge and those on the tug was approximately 580 feet, and there was no illumination on the barges anywhere between the lights on the towing vessel and the lights on the lead barge. Thus, the available target, to be detected in 580 feet to identify a barge, was a darkened object extending only 1 foot above the water, except for occasional vents and expansion trunks which might have extended as far as 3 feet above the water.

At the time the barge and towing vessels should have been visible to the UNION FAITH, after it rounded Algiers Point, the ½-watt navigation lights on the lead barge would have been almost directly in line with the 115-volt navigation lights of the WARREN J. DOUCET and the CAT & MITCH. Just before collision, the aspect the tow presented to the UNION FAITH would have been one towing vessel with two white lights, one above the other, and a green side light. There would also have been a second towing vessel, immediately adjacent to the first, showing a green side light, and then a third green light, accompanied by an amber light on the lead barge a considerable distance to the right of the easily recognizable towing vessel. The ½-watt green light and the amber light would have appeared to the UNION FAITH approximately 400 feet to the right of the lights of the WARREN J. DOUCET and the CAT & MITCH, assuming that the 580 feet actual distance was foreshortened by the 45^{0} collision angle. In this 400-foot zone, the low barges would have been virtually invisible. (The danger signal was blown by the UNION FAITH only after the master of the WARREN J. DOUCET illuminated these barges with his searchlight.) This was the visual aspect which the pilot of the UNION FAITH was probably attempting to diagnose during the approximate 2-minute period in which the UNION FAITH was operating at dead slow. It may be assumed that he realized the nature of the object ahead and its position shortly before he put the engines of the UNION FAITH full astern. This would probably have been shortly after the DOUCET illuminated the barges and the UNION FAITH sounded the danger signal.

During the period when the tow was turning to cross the river, the aspect of the lights on the tow would have changed, and if all the lights could be seen, and they were continuously observed, they could have been interpreted correctly as those of a tow turning across the river, even if it was impossible to see the low-lying barges. To have made this interpretation, however, may have required the use of binoculars to distinguish the lights on the towing vessels from the low-powered lights on the lead barge. It is not known whether binoculars were available or were employed. Binoculars are not required, but common sense dictates their use to take advantage of the increased visibility they provide. The visibility requirements for navigation lights do not assume the use of binoculars. The navigation lights on the towing vessel and barge I.O.C. No. 7 were observed by a stevedore on board the SS MAIDEN CREEK just prior to the collision.

It appears that both vessels were equipped with radar, but that it was not used to clarify the meeting situation. The master of the DOUCET said it was used occasionally, but under conditions of clear visibility, it was not needed. Had he watched the track of the UNION FAITH, it should have been apparent earlier that this vessel was crossing toward the New Orleans side of the river, Proper evaluation of the information from radar can provide a better plan view of the other vessel's relative movement than can be judged visually.

The failure of the UNION FAITH personnel to hear the towing vessel's two-blast whistle signals may have been affected by the wind which was blowing against the DOUCET. The Rules of the Road require mechanically propelled vessels to be equipped with "an efficient whistle or siren." The Motorboat Act requires a range of 1 mile for whistles on Classes 2 and 3 motorboats, but no performance standards are prescribed for larger vessels. Range of audibility is difficult to determine due to such variables as wind, atmospheric conditions, obstructions, wave condition, noise level on the receiving vessel, frequency, and directional properties of the whistle. The need for specifying a minimum audible range for ships' whistles is obvious. A rating system, such as that developed by the International Association of Lighthouse Authorities, seems to be desirable.

Both vessels were following the local "points and bends" practice, by which the upbound vessel favors Algiers Point, and the downbound tow favors the bend, or New Orleans side, of the river. The UNION FAITH had previously passed three other downbound tows on her starboard side. The master of the DOUCET overheard conversations concerning these passing agreements on 2738 kHz, and was cognizant of the upbound freighter prior to sighting her lights. Following this local practice results in vessels' and tows' crossing from one side of the river to the opposite side, and in starboard-to-starboard passings. Pilots normally broadcast their movement and proposed passing in the blind prior to rounding a bend in the river. The master of the DOUCET did so on 2738 kHz, and the pilot of the UNION FAITH apparently broadcast his vessel's intentions on 156.65 MHz, having previously done so with the SS PRESIDENT and M/V MAMA LEAR. In this case, following the local custom led to the crossing situation and ultimate collision, since no radio or whistle agreement for passing was mutually reached by the two vessels.

This collision demonstrates the practical limitations of the visual and audible methods of communicating intentions of passing prescribed by the Inland Rules of the Road. The pilot of the WARREN J. DOUCET was unaware that the UNION FAITH apparently did not see the tow's lights, or hear his initial two-blast signal, until he observed the change of course of the freighter. Performance standards for navigation lights and whistles required by the rules are vague, or nonexistent. The pilot of one vessel has no way of knowing whether his whistle signal is heard on another vessel, unless a responding whistle signal is received. He has no specific way of knowing the range of audibility of his whistle. Similarly, he does not know how far his navigation lights can be seen. When he receives no response to his whistle signal, he does not know whether his proposal is heard, or is not acceptable to the other vessel. Uncertainty exists, and under the Inland Rules, he should sound the danger signal, but again he is not sure this signal will be heard. Prudent seamanship requires his slowing or stopping his vessel until agreement for passing is achieved. The decision on how far from the other vessel he should slow or stop when no whistle reply is heard requires accurate judgment by the person in charge of the vessel. Relative speed, wind, current, maneuvering characteristics of both vessels, restrictions of navigable waters, local customs, traffic

pattern, and a number of other factors must be considered in his decision-making process. Article 27 of the Inland Rules of the Road appears to recognize that there will be maneuvering situations, system failures, and other types of hazards and circumstances where departure from the rules is necessary to avoid collision, stating:

> "In obeying and construing these rules due regard shall be had to all dangers of navigation and collision, and to any special circumstances which may render a departure from the above rules necessary to avoid immediate danger."

This rule recognizes that even strict compliance with the Inland Rules does not assure that collisions will not occur, and that rules are fallible. In this sense, Article 27 implies that the system for avoiding collisions is known to be incomplete. Although Article 27 appears to fix responsibility upon the person in charge of the navigation of the vessel to avoid "all dangers" and to compensate for all "special circumstances," such judgment is not always a practical possibility. In this accident, there was no objective basis in the circumstances of the accident or in Article 27, by which a time of necessity for a still slower speed or a stop on the part of either the UNION FAITH or the WARREN J. DOUCET could have been determined. Thus, although Article 27 is stated in broad terms, it did not function here as a workable backup to the failed communication systems.

The Inland Rules of the Road do not provide for any backup system for the required navigation lights, whistle signals, or maneuvering rules. Dual filament bulbs for navigation lights, and tell-tale indicators for these lights, are frequently installed on larger vessels but are not required by rules or regulations. As previously noted, binoculars serve as a backup for visual detection of other vessels, but are not required. Similarly, radar supplements the visual evaluation of a meeting situation, but radar is not required. In this case, the pilot of the WARREN J. DOUCET used the vessel's searchlight to illuminate his tow, a backup system to the navigation lights on his lead barge. Searchlights are not required by regulations. Bridge-to-bridge radiotelephone communications serve as the most effective backup system to both visual and audio methods of collision avoidance, but this method of communication of passing intentions is not required by law or regulation. In this case, lack of a common voice radio frequency precluded use of voice communications to avoid the collision. Particular emphasis on the lack of legal requirements for voice radio communications is made by the Board under Recommendations.

It is likely that the collision would have been avoided had the traffic control lights for this area been in operation. These lights are actuated when the river reaches 10 feet on a rising stage, on the Carrollton Gage. The stage of the river was approximately 9.3 feet at the time of the casualty.

The probable source of ignition of the highly volatile crude oil in the I.O.C. No. 7 was sparks produced by the shearing of the deck and side of the barge by the bow of the UNION FAITH. Resulting explosions on the barge probably holed the bow of the UNION FAITH, which utlimately sank by the head. Rapid spread of the fire on board the UNION FAITH is attributed to these explosions which shot burning oil onto the vessel. The flames from the burning vessels damaged the 150-foot high Greater New Orleans Highway Bridge. The barge was impaled on the bow of the freighter, then broke in half, each portion passing down the ship's sides. Tarpaulins and wood hatch covers, and subsequently, the combustible general cargo in the holds, were ignited. Wood deck, doors, and panelling in the accommodation spaces burned. The intense flames and pungent smoke blocked the usual routes of escape from some of the quarters. Several persons escaped through portholes to the deck, and jumped overboard. The Safety Board has noted before the effectiveness of portholes as an alternative means of escape in the burning and foundering of the SS GULFSTAG (report released May 29, 1968). The loss of life is attributed to the victims' being trapped by the fire and smoke in their quarters, as well as in the engineroom and on the bridge. More would have been lost but for the prompt rescue efforts of the crew of the towing vessels McGRATH II and CAPPY BISSO.

PROBABLE CAUSE

The National Transportation Safety Board finds that the probable cause of this collision was the failure of the UNION FAITH to detect the WARREN J. DOUCET and the position of its tow until collision was imminent. Factors which resulted in this failure included: inability to communicate on a common radiotelephone frequency; probable insufficiency of the navigational lights on the Barge I.O.C. No. 7 to draw attention to its location; probable insufficiency of the whistle of the WARREN J. DOUCET to effect communication with the UNION FAITH at an adequate distance under the existing weather conditions of reception aboard UNION FAITH; apparent nonuse of available radar by either vessel to monitor the movements of the other vessel; and apparent lack of constant surveillance of the lights on the towing vessel by bridge personnel on the UNION FAITH.

A contributing factor was the failure of the WARREN J. DOUCET to sound immediately the danger signal and take avoiding action when the changing aspect of the UNION FAITH's navigation lights indicated that the vessel was altering course to her starboard. The apparent change in the heading of the UNION FAITH should have been considered of particular importance since the WARREN J. DOUCET had no passing agreement with the UNION FAITH and, in fact, had not even received a whistle signal reply. There is no indication that the danger signal would have been heard, but avoidance action would have reduced the probability of collision.

The major factor contributing to the loss of life was the rapidity with which the fire from the highly volatile crude oil engulfed the UNION FAITH and blocked the normal exits in the midship house.

RECOMMENDATIONS

The National Transportation Safety Board concurs in Recommendations Nos. 2 and 3 of the Marine Board concerning the need for bridge-to-bridge radiotelephone communication and the licensing of the operators of towing vessels.

Chairman John H. Reed of the National Transportation Safety Board appeared October 13, 1969, before the Subcommittee on Coast Guard, Coast and Geodetic Survey, and Navigation of the House of Representatives' Committee on Merchant Marine and Fisheries, in support of H.R. 13987 -- a bill to provide for the licensing of personnel on towing vessels. The Board previously recommended similar legislation in its report of the loss of the towing vessel M/V SOUTHERN CITIES and in its special studies, "Collisions of Radar-Equipped Merchant Ships and Preventive Recommendations" and "Towing Vessel Safety and Accident Preventive Recommendations."

We support S. 1240, a bill to require a radiotelephone on certain vessels navigating upon specified waters of the United States, and plan to testify on the need for such legislation before the Senate Commerce Committee.

In addition, the Safety Board recommends that:

(1) The Congress enact the House-passed H.R. 6971, bridge-to-bridge radiotelephone bill, at the earliest date practicable. Our analysis of this collision, as well as others, indicates the potential for a catastrophic casualty involving vessels carrying hazardous materials; and the need for assurance of such communications' capability between vessels transporting these commodities.

(2) Pending enactment of such legislation, the American Pilots' Association urge their pilots to request the master of vessels which they are piloting to guard the local towing vessel frequency, and broadcast their vessels' operational intentions on this frequency, in addition to the broadcast by the local pilots on the local UHF frequency.

(3) The American Pilots' Association establish a policy whereby their member pilots will request masters of vessels which they are piloting to arrange for the monitoring of ship's radar, when available, to assist in collision avoidance, even under conditions of good visibility.

(4) The Coast Guard initiate enforcement action to insure that navigation lights used on barges meet the requirements of 46 CFR 113.55-30. Specifications for approval of battery-operated navigational lights should be developed and included in 46 CFR 161, and approved models and manufacturers included in Coast Guard Equipment Lists (CG 190). It appears that enforcement can best be accomplished by laboratory tests of the manufacturer's products at the manufacturer's facility.

(5) The Coast Guard determine by necessary laboratory tests whether the types of navigational lights used on the barge I.O.C. No. 7 met the requirements of 46 CFR 113.55-30.

(6) The Coast Guard, in its present study of the visual effectiveness of shipboard navigational lights relative to the lighted background conditions in harbors and other developed areas of the inland waterways, include the problem of attention-getting and definition of orientation of barge tows. It is the Board's view that changes in regulations resulting from this study should prevent any possiblity of uncertainty as to what type of vessel is seen, and provide a comfortable margin of light output well beyond that which could be shown to provide theoretically the desired range of visibility.

(7) The Coast Guard should consider amending the law and regulations to specify minimum performance standards for whistles on all vessels provided with them in accordance with the applicable Rules of the Road, similar to the standards proposed by the International Association of Lighthouse Authorities.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

Adopted this 15th day of October, 1970:

John H. Reed, Chairman

Oscar M. Laurel, Member

Francis H. McAdams, Member

Louis M. Thayer, Member

Isabel A. Burgess, Member

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDANT(MVI-3)
U.S. COAST GUARD
WASHINGTON, D.C.
20591

5943/UNION FAITH -
WARREN J. DOUCET
A-8 Bd
14 JAN 1970

Commandant's Action

on

The Marine Board of Investigation convened to inquire into the circumstances surrounding the collision between the SS UNION FAITH (Taiwan) and the Tank Barge IOC No. 7 being pushed ahead by the tug WARREN J. DOUCET in the Mississippi River on 6 April 1969, with loss of life

1. The record of the Marine Board of Investigation convened to investigate subject casualty has been reviewed, and the record, including the Findings of Fact, Conclusions and Recommendations, is approved subject to the following comments and the final determination of the cause by the National Transportation Safety Board.

SYNOPSIS OF FINDINGS OF MARINE BOARD OF INVESTIGATION

1. On the evening of 6 April 1969 the SS UNION FAITH and the Barge IOC No. 7, one of the three loaded tank barges being pushed ahead by the tug WARREN J. DOUCET, assisted by the towboat CAT & MITCH, collided in the Mississippi River at New Orleans, Louisiana.

2. Fire and explosions ensued almost immediately after the collision on both the tank barge and the freighter. Twenty-five persons on board the SS UNION FAITH are missing and presumed dead. Three of the twenty-six Chinese survivors were injured by burns and smoke inhalation. There were no other known injuries or deaths. The freighter and the tank barge burned and sank in the channel after drifting downstream from the Greater New Orleans Bridge.

3. As the vessels were closing prior to the collision the downbound M/V WARREN J. DOUCET was directing her course at an

angle across the river toward the left descending side in order to round Algiers Point. The upbound SS UNION FAITH which had already come around Algiers Point also altered her course toward the left descending side of the river prior to the collision.

4. When the M/V WARREN J. DOUCET, upstream from the Greater New Orleans Bridge, sighted the lights of the SS UNION FAITH at Algiers Point approximately 1-1/2 miles away, she sounded a two blast whistle signal which was not answered. She then sounded another two blast signal while maintaining her course and speed but again received no answer. After watching the navigational lights of the upbound SS UNION FAITH and realizing that she was directing her course to starboard toward the left descending side of the river, the M/V WARREN J. DOUCET sounded four blasts on her whistle and placed her engines full astern. The SS UNION FAITH which had averaged approximately 9.5 miles per hour before slowing her engines shortly before the collision occurred also sounded a four blast danger signal and placed her engines full astern. The stem of the SS UNION FAITH cut into the starboard side of the lead Barge IOC No. 7 at an angle of about 45 degrees approximately 1/3 the length of the barge abaft the head log.

REMARKS

1. Concurring with the Marine Board of Investigation, it is considered that the primary cause of the casualty was the failure of the SS UNION FAITH and the M/V WARREN J. DOUCET to reach an agreement as to the method of passing when in a meeting situation.

2. The heroic actions of the crews of the vessels involved in fire fighting and search and rescue operations as noted by the Marine Board of Investigation in Conclusion No. 8 are the subject of correspondence separate from the report of investigation.

3. This Action is not concerned with and does not extend to the Administrative Penalty Procedures recommended by the Marine Board. Such administrative penalties are within the cognizance of the District Commander with an appeal to the Commandant available only if a penalty is assessed.

4. Legislation concerning bridge-to-bridge radio communications, and the licensing of towboat operators is now pending in Congress.

W. J. [illegible]
Admiral, U.S. Coast Guard
Commandant

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER
Eighth Coast Guard Distri
Customhouse
New Orleans, La. 70130

5943/SS UNION FAITH
M/V WARREN J. DOUCET
3 July 1969

From: Marine Board of Investigation
To : Commandant (MVI)

Subj: SS UNION FAITH (TAIWAN) and Tank Barge IOC No. 7, being pushed by Tug WARREN J. DOUCET, collision, 6 April 1969; in the Mississippi River, vicinity of Greater New Orleans Bridge, with loss of life

Findings of Fact

1. At or about 1915 CST on 6 April 1969 the upbound Taiwan Freight Vessel SS UNION FAITH and the downbound American Tank Barge IOC No. 7, being pushed by the Tug WARREN J. DOUCET, and assisted by the towboat CAT & MITCH, collided in the vicinity of Mile 96 of the Mississippi River. Fire and explosions ensued almost immediately on both the tank barge and freighter. Twenty-five (25) persons on board the UNION FAITH are missing and presumed dead. Three of the twenty-six (26) Chinese survivors were injured to such a degree as to cause them to be incapacitated for a period in excess of 72 hours by burns and smoke inhalation. There were no other known injuries or deaths. The freighter and tank barge burned and sank in the channel, downstream from the Greater New Orleans Bridge.

2. Vessel data:

Name	UNION FAITH	IOC #7
Official No.	1831	259422
Service	Freight Vessel	Tank Barge
Gross Tons	7301	627
Net Tons	4002	627
Length	503.25 feet	194.5 feet
Breadth	64.11 feet	35.0 feet
Depth	27.73 feet	10.2 feet
Propulsion	Steam Turbo	None
Horsepower	8800	None

Owners/Operators	China Union Lines Ltd. 46 Kwantsien Road Taipei, Taiwan	Burton Shipyard, Inc. P. O. Box 3636, Port Arthur, Texas, 77004 Oper: B & B Towing Co., Inc., P. O. Box 250, Lockport, La.
Master	YUEN-LAI FAN c/o China Union Lines 46 Kwantsien Road Taipei, Taiwan	None
License	N/A	None
Last Inspected for Certification	N/A	
Date and Port	N/A	3 March 1969 Port Arthur, Texas
Last Inspection	N/A	Same as above
Number in Crew	50 plus 1 Pilot	None
Name	WARREN J. DOUCET	CAT AND MITCH
Official No.	507165	272311
Service	Towing	Towing
Gross Tons	116.94	49.09
Net Tons	79	33.00
Length	65.4 feet	53.4 feet
Breadth	22.0 feet	17.3 feet
Depth	9.6 feet	7.1 feet
Propulsion	Diesel	Diesel
Horsepower	800	600
Owners/Operators	Warren J. Doucet, Inc. P. O. Box 115 Galliano, La. 70354	C & G Boat Co., Inc. P. O. Box 193 Galliano, La., 70354

Master	Tillman F. LeBlanc P. O. Box 141 LaRose, La.	Clarence Gisclair Route 2, Box 182 A Cutoff, La.
License	None	None, MMD Z-1173078
Last Inspected for Cert.	Uninspected	Uninspected
Date and Port	"	"
Last Inspection	"	"
Number in Crew	3	2

3. The following is a list of the persons who are missing and are presumed dead as a result of the casualty:

CHINESE FREIGHTER UNION FAITH

Name	ADDRESS	POSITION
KENNETH H. SCARBROUGH	5810 Fleur deLis Dr. New Orleans, La.	Pilot - CG Lic. No. 401178, issued 6-4-68 New Orleans MMD # Z-718224-D2
FAN YUEN-LAI	Taiwan	Master
LIN TERNG-SHYONG	Taiwan	2/Mate
YOUNG JEA-CHAO	Taiwan	3/Mate
CHENG WAN-SHIN	Taiwan	Radio Operator
HSU YI-KUNG	Taiwan	Chief Engineer
CHOW MONG-KAN	Taiwan	1/Engineer
LIU SHOO-CNIH	Taiwan	2/Engineer
CHENG YU-CHUNG	Taiwan	3/Engineer
CHEN CHING-YOAN	Taiwan	3/Engineer
LEE FU-CHAI	Taiwan	Elec. Engr.
YANG CHUANG-SHONG	Taiwan	Quartermaster
SIAO CHOU-KEN	Taiwan	Quartermaster

KAO PEI-LIANG	Taiwan	Quartermaster
YU KUEI-FANG	Taiwan	Fireman
HUANG TUNG-JAN	Taiwan	Oiler
HO PAE-LIN	Taiwan	1/Oiler
HU EN-CHIUK	Taiwan	Fireman
CHO CHING-HSIANG	Taiwan	Fitter
CHENG CHU-FING	Taiwan	Oiler
WU YUNG-KAN	Taiwan	Messboy
WANG SHYANG-SING	Taiwan	c/Cook
CHIN HSIAO-CHOU	Taiwan	Cook
CHIN PING-HUA	Taiwan	Steward
HWANG YA-SEN	Taiwan	Visitor

The following persons were injured and incapacitated for more than 72 hours:

JANG GOANG-CHYN	Taiwan	Fitter
CHAO YU-SHI	Taiwan	Cook
FAN AU-FU	Taiwan	Messboy

4. At the time of the casualty the wind was northerly, approximately 7 miles per hour and the air temperature 66 degrees F. The atmosphere was dark with a visibility of approximately 10 miles. The river stage was approximately 9.3 feet, and the current 3 to 4 miles per hour.

5. Both the WARREN J. DOUCET and the SS UNION FAITH were equipped with radar. The WARREN J. DOUCET's radar was in service at the time of the collision. The status of UNION FAITH's radar is not known. Each of the vessels involved carried the proper navigation lights.

6. The WARREN J. DOUCET changed her three (3) crew members in the Inner Harbor Navigation Canal at 1300 CST on 6 April 1969 and, after locking through, cleared the Inner Harbor Navigation Canal Locks with her tow at approximately 1630, bound for Baton Rouge, Louisiana. The tow consisted of 3 tankbarges each loaded with approximately 9000 barrels of crude oil and made up in tandem with the WARREN J. DOUCET pushing. The TM 113 was

the face barge and the IOC #7 was the lead barge. The tow, assisted after departure from the locks by the Tug CAT & MITCH made up to the port side of the barge TM 113, was able to make 3 1/2-4 miles per hour against the current. The CAT & MITCH had orders to assist the tow from the Inner Harbor Navigation Canal Locks to the vicinity of the Harvey Canal, approximately 5 miles upstream, from which point the WARREN J. DOUCET was to proceed alone with the three barges to Baton Rouge. At approximately 1730, and prior to the departure of the CAT & MITCH, it was found that the WARREN J. DOUCET, unassisted, could not make sufficient speed in the river to justify continuing on alone. The WARREN J. DOUCET's owner was informed of this situation and he ordered the tow to turn around and proceed downriver to the Algiers Locks with the CAT & MITCH assisting and to take an alternate route to Baton Rouge, using the Gulf Intracoastal Waterway. The tow was turned around above the Harvey Canal at a position approximately 3 miles above the Greater New Orleans Bridge at about 1830 and proceeded down stream at a speed of about 4 1/2 miles per hour with the CAT & MITCH made up as before. The WARREN J. DOUCET was running her engines at one-half speed and the CAT & MITCH at approximately one-quarter speed. The tow maintained a course which favored the right descending bank until reaching a point approximately 1/2 mile above the Greater New Orleans Bridge, when the course was changed to cross the river toward the bridge abutment located nearer the New Orleans, or left descending side.

7. There were three downbound tows being pushed by the tugs TONI ANN, SASSAFRAS, and MAMA LEAR, in that order, ahead of the WARREN J. DOUCET. The master of the WARREN J. DOUCET overheard conversations on 2738 KHZ between the masters of these vessels indicating that the three tows would make a starboard to starboard meeting with an upbound freight vessel which later proved to be the UNION FAITH. When the WARREN J. DOUCET was approximately 1/2 mile upstream from the Greater New Orleans Bridge, the master first sighted the lights of the UNION FAITH in the vicinity of Algiers Point approximately 1 1/2 miles away. Shortly thereafter she sounded a two blast signal which was not answered. She then sounded another 2 blast signal while maintaining her course and speed across the river. No answer was received to this second signal. The range lights of the UNION FAITH, which had previously appeared open to her own port, closed and then opened to starboard and her port running light broke clear. Realizing that the UNION FAITH was turning in the direction of the tow and that a collision was imminent the master of the WARREN J. DOUCET turned his searchlight on the lead barge, sounded four blasts of his whistle and placed his engine full astern. Both the CAT & MITCH and the UNION FAITH then sounded danger signals. The CAT & MITCH momentarily reversed its engines to assist the WARREN J. DOUCET and then let go her tow lines in order to get clear. Shortly thereafter

at approximately 1915 the collision occurred, slightly upstream from the Greater New Orleans Bridge on the west side of the channel (toward the left descending bank) in the vicinity of the bridge pier. The stem of the UNION FAITH cut into the starboard side of the lead barge, IOC #7, at about a 45 degree angle and approximately 1/3 the length of the barge abaft the head log. The impact caused the stern of the IOC #7 to heave up and part the tow wires, thus breaking her adrift from the tow. Immediately after impact there was fire on the barge IOC #7 and the UNION FAITH and the first of a series of explosions. The UNION FAITH and the two sections of the severed IOC #7 continued to burn as the WARREN J. DOUCET backed out from the conflagration, and with the remainder of the tow proceeded down river to tie up. As the Tug CAT & MITCH backed away from the tow one of her towing lines trailing over the side fouled in the starboard propeller, damaging the clutch and housing, and rendering the engine in-operative. She then proceeded on one engine and tied up on the right descending bank. There was no other damage to the Tug CAT & MITCH. The barges TM 113 and LB 19, and the WARREN J. DOUCET were undamaged. No injuries were suffered by the crew members of these vessels.

8. An analysis of the crude oil cargo of the tank barges in tow of the WARREN J. DOUCET determined that it had the following characteristics:

Odor	Petroleum, crude oil
Specific Gravity at 60 degrees F	0.8043
Initial Boiling Point	131.0 degrees F
Reid Vapor Pressure at 20 degrees C	6.0 lbs per square inch
Pensky-Martens Closed Tester Flash Point	58.0 degrees F
Open Tester Flash Point	Room temperature, or below

9. The SS UNION FAITH, a 504' freight vessel of Taiwan registry, drawing approximately 15' forward and 20' aft was laden with general cargo which included high density baled cotton, paper rolls, rubber footwear, plastic flowers, iron wire rolls, and sheets of plywood. At about 1840 CST she weighed anchor and departed the General Anchorage in the Mississippi River approximately 5 miles below the Greater New Orleans Bridge, bound for the Public Commodity Warehouse Docks, approximately 3 miles up river from the bridge. There were fifty-one persons on board at the time, including the pilot and one visiting Chinese national, the master of another China Lines vessel. The remaining forty-nine were Nationalist Chinese crew members of the UNION FAITH. Kenneth H. Scarbrough, who had been a member of the Crescent River Port Pilots' Association of New Orleans since 1961 was the pilot assigned to move the SS UNION FAITH from anchorage to the loading dock.

10. After departure from anchorage, the UNION FAITH proceeded up river at various speeds. At approximately 1855 in the general vicinity of Mile 93, the UNION FAITH agreed both by radio voice communications on 156.65 MHz and with whistle signals to a starboard to starboard meeting with the downbound SS PRESIDENT, a local excursion vessel. At this time the UNION FAITH was making good approximately 10 miles per hour and was favoring the right

descending side of the river in order to round Algiers Point. Before rounding Algiers Point the UNION FAITH executed a starboard to starboard meeting with the M/V MAMA LEAR and tow. After rounding Algiers Point the UNION FAITH agreed to a passing by radio-telephone (Channel 13 - 156.65 MHz) and also exchanged whistle signals with the ferry boat CRESCENT which passed under her stern and she then executed starboard to starboard meetings with the M/V SASSAFRAS and tow and the M/V TONI ANN and tow. The lights of the UNION FAITH were sighted coming around Algiers Point by the TONI ANN just after the TONI ANN passed under the Greater New Orleans Bridge. The UNION FAITH was favoring the right descending side of the river and making a speed estimated at 11 miles per hour. Prior to meeting the UNION FAITH the master of the M/V SASSAFRAS had called the master of the TONI ANN, whose tow was about 1000 feet astern of the SASSAFRAS, concerning the meeting. The master of the SASSAFRAS advised that he had talked to the pilot of the upbound ship UNION FAITH and had told the pilot that the vessels would meet him and pass starboard to starboard if it was agreeable to the TONI ANN. The TONI ANN acknowledged this transmission and found a starboard to starboard meeting acceptable. The M/V WARREN J. DOUCET and the M/V CAT & MITCH were equipped with 2738 KHz but were not fitted to communicate with the UNION FAITH on Channel 13 (156.65 MHz) which was the channel being used by the pilot to talk to the SS PRESIDENT, the ferry CRESCENT, and the M/V SASSAFRAS. The UNION FAITH was not equipped with 2738 KHz in her pilot house and could not establish a passing agreement with the WARREN J. DOUCET by radio-telephone. The UNION FAITH continued upstream and after meeting the TONI ANN altered course toward the left descending side of the river. Shortly before the collision the UNION FAITH, which had averaged 9.5 miles per hour from the anchorage, reduced her speed to slow speed ahead and then to dead slow speed ahead. Just before the collision the engine room received a stop bell followed immediately by an emergency full astern. A danger signal was sounded by the UNION FAITH as her masthead lights passed under the Greater New Orleans Bridge. The collision occurred at about 1915 while the engines were backing full. The collision resulted in immediate ignition of the barge's crude oil cargo and a rapid spreading of the fire. The UNION FAITH was quickly engulfed in this fire and shortly burning from bow to stern. She drifted slowly downstream, with the barge IOC #7 still on her bow. While the UNION FAITH and the barge IOC #7 were under the Greater New Orleans Bridge about 300 feet outboard from the bridge pier, an explosion occurred near the bow of the UNION FAITH. The fire resulted in minor damage to the bridge, one hundred and fifty feet above the river, but did not materially affect its major structural members. One section of the burning barge, which was now in two sections, floated free and drifted aft downstream along the port side of the UNION FAITH. After a short period of time, the other section of the IOC #7, still burning violently, also drifted aft along the port side of the UNION FAITH and went downstream where the fires on the barges were extinguished. Sometime during this period, twenty-five crew members escaped from the vessel by jumping from the stern and going over the side, to be rescued by the tugs McGRATH II and CAPPY BISSO. The UNION FAITH continued to burn violently topside, and in her cargo holds, while taking on an increasing port list and settling by the head. At approximately 0145, 7 April 1969, with the main decks forward awash, the UNION FAITH rolled over on her port side and remained in that position, still burning, until 0200 when she sank in a position approximately midstream, off Julia Street Wharf in 110 feet of water, where the wreck was subsequently

buoyed. One section of the barge on which the fire had been extinguished, sank approximately 150 yards out from the foot of the Toulouse St. Wharf in one hundred and ten feet of water. The second section sank approximately 75 yards out from Poland St. Wharf.

11. Chris A. REIDER, master of the tug McGRATH II, upon seeing the collision and resulting fire, departed his position near Perry St. Wharf with one deckhand, William ARBUCKLE, and arrived on the scene to find intensive fire surrounding the vessel and the barge on its bow. After repeated passes with his vessel to the ship's side, Captain REIDER was successful in rescuing approximately twenty crew members of the UNION FAITH who had taken refuge in the poop area berthing quarters and who had come out during clear intervals, either to slide down ropes or jump into the river. The tug CAPPY BISSO, with Douglas J. GRUBBS, master, also arrived on the scene from its position at the Toulouse St. Wharf. The master of the CAPPY BISSO also took his vessel into the fire area to rescue approximately six of the UNION FAITH crewmen. Captain GRUBBS, noting that the vessels anchors were down with a short scope of chain then made his vessel fast to the port anchor chain, and maintaining a strain thereon prevented the burning vessel from drifting toward the wharves on the New Orleans side of the river. The major portion of the fire fighting effort was on the part of the City of New Orleans' two fireboats DELUGE and the BOURGEOIS, which were assisted by Coast Guard small boats with portable pumps. From approximately 1930 to 0030 CST, on 7 April, the DELUGE and the BOURGEOIS pumped water on the burning ship and water and foam on the barge sections. The barge fires were extinguished at 2130 and fire fighting efforts on the UNION FAITH terminated at approximately 0030 on 7 April, due to the danger of the vessel capsizing.

12. During the period of this emergency, the river pilots and local tugboats quickly mustered their forces to move ships from positions of potential danger. This action was undertaken with dispatch and skillfully carried out.

13. Two Coast Guard helicopters, the Coast Guard Cutter POINT SPENCER, the buoy tender WEDGE, and the Coast Guard 40' and 53' boats participated in a search for possible survivors until 1120 on 8 April 1969.

CONCLUSIONS

1. That the cause of the casualty was the failure of the UNION FAITH and the WARREN J. DOUCET to reach an agreement as to the method of passing when in a meeting situation. Due to the death of all navigation personnel on the bridge of the UNION FAITH there is insufficient evidence to determine why the UNION FAITH did not initiate a whistle signal or answer the whistle signal of the WARREN J. DOUCET or why she turned to her starboard after meeting the tug TONI ANN and tow. Although it is evident that the UNION FAITH had not sighted the WARREN J. DOUCET or tow at the time she changed course to her starboard, there is insufficient evidence to determine the time at which the tug and tow were eventually sighted.

2. That there is no evidence of any material failure.

3. That since the only person directly involved in the casualty who held a license issued by the Coast Guard is deceased, no further action under the revocation and suspension proceedings is indicated.

4. That there is evidence of violation of the following Inland Rules of the Road:

a. WARREN J. DOUCET:

(1) Article 18, Rule III, neglect to sound timely danger signal upon failure to understand course or intention of approaching vessel.

b. SS UNION FAITH

(1) Article 18, Rule I, failure to sound passing signals.

5. That there is no evidence that any personnel of the Coast Guard or any other government agency contributed to the casualty.

6. That no aids to navigation nor any uncharted or incorrectly charted objects were involved.

7. That this casualty may have been prevented if a passing agreement had been established as required by the Inland Rules of the Road and the Pilot Rules for Inland Waters. Bridge to bridge radio-telephone communications may also have prevented the casualty by assisting the vessels in arriving at an agreement as to the method of meeting and passing.

8. That the actions of the crews of the tugs McGRATH II and CAPPY BISSO, which resulted in the saving of twenty-six lives and possibly preventing the burning of UNION FAITH from drifting into the New Orleans wharves are highly commendable. That the efforts of the fire boats DELUGE and BOURGEOIS, and the Coast Guard units engaged in fire fighting or search and rescue are worthy of note. That the efforts of the pilots, tugs and tug operators to remove vessels from areas of potential danger are worthy of recognition.

RECOMMENDATIONS

1. It is recommended that further investigation be conducted under the administrative penalty procedures in relation to the evidence of violations of the Rules of the Road.

2. That the Coast Guard actively pursue the passage of legislation requiring the installation and use of compatible bridge to bridge radio-telephone equipment aboard all commercial vessels in navigable waters of the United States.

3. That appropriate requirements for the manning of towboats and the licensing of all persons entrusted with their navigation be established.

ROSS P. BULLARD
Rear Admiral, U. S. Coast Guard
Chairman

WILLIAM A. MONTGOMERY
Captain, U. S. Coast Guard
Member

FORREST E. STEWART
Commander, U. S. Coast Guard
Member

ROLAND H. BAZAJOU
Lieutenant Commander, U. S. Coast Guard
Member & Recorder