

# MARINE CASUALTY REPORT

COLLISION INVOLVING SS AFRICAN STAR  
AND M/V MIDWEST CITIES AND TOW IN  
MISSISSIPPI RIVER ON MARCH 16, 1968

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 10, NOV 1970

SS AFRICAN STAR AND M/V MIDWEST CITIES AND TOW  
COLLISION IN THE MISSISSIPPI RIVER WITH LOSS OF LIFE  
ON MARCH 16, 1968

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

COLLISION INVOLVING THE SS AFRICAN STAR  
AND M/V MIDWEST CITIES AND TOW, RESULTING IN  
FIRE AND LOSS OF LIFE, IN THE MISSISSIPPI RIVER  
ON MARCH 16, 1968

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 March 21, 1968. A representative of the National Transportation Safety Board attended a portion of these proceedings as observer. We have reviewed the investigative record and considered those facts which are pertinent to the Board's statutory responsibility to make a determination of cause or probable cause and make recommendations to prevent recurrence.

SUMMARY OF FACTS

The collision of the downbound cargo vessel SS AFRICAN STAR and upbound towing vessel M/V (Motor Vessel) MIDWEST CITIES' tank barge INTERCITY No. 11 occurred at 0340, c.s.t. March 16, 1968, at about Mile 46 Above Head of Passes (AHP) in a fairly straight and wide part of the Mississippi River. Fire and explosions caused by this collision resulted in the sinking of the barge INTERCITY No. 11, and severe damage to the AFRICAN STAR and her cargo. Of a total of 11 passengers and 52 crewmembers in the freighter, two passengers were killed and nine were injured; 15 crewmembers were killed, four are missing and presumed dead, and 31 were injured. The MIDWEST CITIES was pushing two barges, of which INTERCITY No. 11 was the second. The AFRICAN STAR was making good about 16 knots on a course of 140° true, the MIDWEST CITIES 6 knots, course 320° true, a few minutes before the collision. Visibility at night was good, and both vessels had been advised on different radio frequencies of the other vessel's movements. Direct communication between these vessels was not possible due to lack of a common frequency. Both vessels were equipped with marine radar which was in use. Both pilots sighted the other vessel on radar after the initial visual sighting. The pilots of both vessels sighted the navigation lights of the other vessel at about 1½ miles. Witnesses on other passing vessels stated that the navigation lights on the AFRICAN STAR, MIDWEST CITIES, and INTERCITY No. 14 were readily seen. The wind and current did not materially affect the relative movements of either vessel. The steering gear and machinery

of both vessels were in good operating order. The AFRICAN STAR and MIDWEST CITIES had passed other vessels during the midwatch, and the pilots in charge had safely navigated their vessels. The pilot on the AFRICAN STAR was a licensed pilot, but the pilot of the MIDWEST CITIES was unlicensed. Both pilots had extensive experience on the Mississippi River. A lookout was posted on the bow of the AFRICAN STAR, but not on the MIDWEST CITIES. The master, third mate, and helmsman were also on the bridge of the AFRICAN STAR.

Two divergent versions of maneuvers resulting in this casualty were given by the personnel on the two vessels involved. The pilot of the MIDWEST CITIES stated that when he sighted the AFRICAN STAR's range and red sidelights on his port bow at about  $1\frac{1}{2}$  miles, the MIDWEST CITIES was about 250 feet from the east bank, running parallel to the side of the river. He considered it to be a head and head meeting situation, and he sounded the appropriate one-blast whistle signal for a port-to-port passing, to which the AFRICAN STAR responded with one blast. He assumed a safe passage until the AFRICAN STAR sounded two blasts when her bow was abeam the lead barge. He saw the AFRICAN STAR's green sidelight and responded with one blast. He then blew four blasts on the whistle, backed full from full ahead, put the rudder hard right, but it was too late to avert the collision. The bow of the AFRICAN STAR cut into the port side of No. 4 tank of INTERCITY No. 11 at an angle of about  $45^{\circ}$ . The MIDWEST CITIES was made up to the rake end of this barge. After the impact, the lead barge INTERCITY No. 14 broke adrift, and the starboard wire on the INTERCITY No. 11 parted, but the port wire was still secured to the towing vessel. When fire broke out on the barge and surrounding river, the pilot of the MIDWEST CITIES backed full to part the port wire and to clear the intense fire. He estimates it took about a minute to get free, and his vessel was backing towards the west bank. The captain of the towing vessel then relieved him, and proceeded to skirt the fire in the river and assist the burning AFRICAN STAR.

The pilot of the AFRICAN STAR later related a completely different chain of events leading to the collision. He stated that after clearing several vessels, and making 16 knots, the AFRICAN STAR was slightly west of midriver when he sighted the MIDWEST CITIES' two white tow lights and green sidelights on his starboard bow, just above Socola Light. The tow appeared to be favoring the west bank and running parallel to it. It appeared to him to be a normal starboard-to-starboard meeting situation, never a head and head meeting. Both pilots stated that they were following the local practice of "points and bends," which required the upbound tows to favor the points and descending deep draft vessels to favor the bends or midchannel. He ordered the rudder  $15^{\circ}$  left, to "give a more perfect green to green light." Shortly afterwards, the rudder was placed amidships to check the ship's swing, which put the ship a little east of midchannel. When the MIDWEST CITIES tow was one-half to

three-quarters of a mile ahead, he sounded two short blasts on the whistle, but no reply was heard. As the pilot headed for the radar, the third mate called his attention to the tow which was crossing his starboard bow showing red sidelights. This was about two minutes after the two-blast signal was sounded. The danger signal was sounded. Hard right rudder, one blast, then emergency full astern were ordered and executed. By this time, the situation was beyond the point of taking corrective action and the AFRICAN STAR's bow penetrated into INTERCITY No. 11 on the port side of the tow, at about a 45° angle. Full astern was in effect a minute before the collision. Fire and several explosions resulted in less than a minute, and the southeasterly wind engulfed the AFRICAN STAR in flames. The pilot backed clear, and intentionally grounded the vessel on the west bank at Mile 45.8 (AHP). Burning oil from the barge ignited the tarpaulins, and fires started in Nos. 2, 4, and 5 holds on the AFRICAN STAR. Deck cargo was ignited, the paint on the ship burned, and dense smoke filled the engineroom and accommodation spaces. The aluminum containers on deck were melted, and their contents burned. Three days were required to extinguish the fire in No. 5 hold. Problems were experienced in lowering the boat and launching the inflatable liferaft, as the boat cover and man ropes burned and the plastic cover of the liferaft was ignited. The intense fire and smoke in the quarters gutted the passageways, and a number of passengers and crewmembers were trapped. Several persons escaped from rooms through portholes when the passageways outside their quarters were impassable. Several persons were burned due to ignition of the life preservers and clothing they were wearing. Six burned bodies were found at the top of the ladder leading from the cabin deck to the main deck, where a wooden gate was fitted across the top of the ladder.

The INTERCITY No. 11 grounded and sank near the west bank at Mile 45.7 (AHP). After being released by the Coast Guard, the MIDWEST CITIES recovered the loose INTERCITY No. 14 and secured it, undamaged. The towing vessel sustained minor damages. Total cost of this collision exceeded \$1,000,000, exclusive of cargo damage on board the AFRICAN STAR.

Rescue operations were commenced promptly after the MIDWEST CITIES requested immediate assistance via the marine operator in New Orleans. Coast Guard helicopter evacuation of badly burned victims was rapid and certainly saved the lives of persons injured on the AFRICAN STAR. The MIDWEST CITIES, a New Orleans fireboat, and a local ferry with a firetruck on board assisted the Coast Guard boats in fighting the fire. Several crewmembers of the AFRICAN STAR demonstrated unusual bravery in fighting the fire on deck. Fighting the fire was complicated by inaccessibility of the cargo manifest of hazardous materials, which was located in the chief mate's room. Power was maintained on the AFRICAN STAR to keep the vessel aground, and to keep lights, and the fire and bilge pumps in operation. The loss of life would have been more severe except for the gallant effort of the vessel's crew and others involved in the rescue and firefighting operations.

## ANALYSIS

The Commandant concluded that the witnesses of the two vessels gave such conflicting testimony that it was impossible to reconstruct the events leading up to the collision. The Safety Board is not in a position to judge the credibility of the witnesses, and is therefore not able to resolve the conflicts in their testimony. However, it is readily apparent that the pilots of both vessels failed to communicate properly under the existing collision avoidance system. A careful analysis of all causal factors in this case was made in an effort to determine the underlying causes of this tragic casualty.

The AFRICAN STAR and MIDWEST CITIES were subject to the Inland Rules of the Road and Pilot Rules at the time of the collision. Prudent compliance with these rules by both pilots would have averted the collision. The Coast Guard concluded that both pilots violated 33 U.S.C.203, Rule I, which requires:

"When steam vessels are approaching each other head and head, that is, end on, or nearly so, it shall be the duty of each to pass on the port side of the other; and either vessel shall give, as a signal of her intention, one short and distinct blast of her whistle, which the other vessel shall answer promptly by a similar blast of her whistle, and thereupon such vessels shall pass on the port side of each other. But if the courses of such vessels are so far on the starboard of each other as not to be considered as meeting head and head, either vessel shall immediately give two short and distinct blasts of her whistle, which the other vessel shall answer promptly by two similar blasts of her whistle, and they shall pass on the starboard side of each other.

"The foregoing only applies to cases where vessels are meeting end on, or nearly end on, in such a manner as to involve risk of collision; in other words, to cases in which, by day, each vessel sees the masts of the other in a line, or nearly in a line, with her own, and by night to cases in which each vessel is in such a position as to see both the sidelights of the other.

"It does not apply by day to cases in which a vessel sees another ahead crossing her own course, or by night to cases where the red light of one vessel is opposed to the red light of the other, or where the green light of one vessel is opposed to the green light of the other or where a red light without a green light or a green light without a red light, is seen ahead, or where both green and red lights are seen anywhere but ahead."

The pilot of the MIDWEST CITIES testified that he was complying with the first sentence of this rule, which applies to vessels approaching each other head and head, and proposed a port-to-port passing. The pilot on the AFRICAN STAR testified that he did not interpret the meeting situation as being head and head, and considered himself to be governed by the second sentence of Rule I. Upon hearing no reply to his whistle signal, however, he failed to comply with Rule III of this section which requires:

"If, when steam vessels are approaching each other, either vessel fails to understand the course or intention of the other, from any cause, the vessel so in doubt shall immediately signify the same by giving several short and rapid blasts, not less than four, of the steam whistle."

The Inland Rules of the Road do not explicitly state what other action should be taken by vessels when an agreement to pass is not mutually adopted. However, in the exercise of due regard for danger of collision, the pilots should have stopped, and backed their vessels' engines when they were in doubt as to the other vessel's intentions. Rule 25(a)(iii) of the proposed "United States Nautical Rules" (H.R. 214) would make such action mandatory. However, under the General Prudential Rule (Article 27) of the present Rules, such action is indicated.

The question whether the meeting of the AFRICAN STAR and MIDWEST CITIES was a head and head situation was not answered by the Coast Guard investigative report. In a head and head meeting situation, Rule I requires each vessel to pass on the port side of the other. A definite determination of this question is further complicated by the legal acceptance of the "points and bends" local practice. This provides that with mutual assent upbound tows favor the points, and downbound deep draft vessels favor the bends of the river. Large tows experience practical problems in navigating sharp bends, and seek the less strong current in the lee of the points when upbound.

Use of the locally accepted "points and bends" practice can result in conflict with the Inland Rules of the Road. This practice often results in a starboard-to-starboard passing in the meeting situation. The reach of the river was almost straight in the area of this collision, and the "points and bends" practice should not have been a complicating factor. Both pilots followed the "points and bends" local practice. The pilot of the MIDWEST CITIES indicated that he had crossed from Point Michel to Pointe a La Hache, and the other pilot stated he was favoring the bends, or the general channel line shown on the U. S. Army Corps of Engineers' "Flood Control and Navigation Maps of the Mississippi River." No other detailed

instructions or recommended tracklines for upbound and downbound traffic are available to pilots on this heavily trafficked inland waterway system. Pilots must evaluate each meeting situation on the basis of the particular situation and, based on their own judgment, decide which rule applies, or if the "points and bends" practice should be followed. In this case, one or both of the pilots erred in evaluating the meeting situation. In spite of both pilots' knowing of the other vessel's movements prior to sighting each other, seeing the other vessel's navigation lights, sounding of whistle passing signals, detecting each other on radar, and favorable navigation conditions, they did not effect a safe passage.

The pilot of the AFRICAN STAR stated he sighted the green sidelight and two white lights of the towing vessel well on his starboard bow, favoring the west bank, and running parallel to it. The pilot of the MIDWEST CITIES reported sighting the red sidelight and range lights of the AFRICAN STAR on the tug's port bow, indicating to him that she was in mid-river. This statement is directly opposed to that of the pilot of the AFRICAN STAR. In addition, two pilots on other vessels stated the MIDWEST CITIES was favoring the east bank just prior to the collision. The fact that the AFRICAN STAR cut into the port side of the lead barge and at a substantial angle, even after the right rudder movement, makes it difficult to account for the green light on the tow being visible to AFRICAN STAR personnel.

Neither pilot slowed his vessel, or took evasive measures until the vessels were in extremis. The methods of conveying their intentions prescribed by the Inland Rules of the Road did not succeed in this case. Whistle signals and the target aspect of the navigation lights should have alerted the pilots of these vessels earlier that one vessel was planning a port-to-port passage, the other a starboard-to-starboard, had both pilots been more attentive. The lack of a common radiotelephonic frequency on the two vessels precluded the pilots from reaching a passing agreement by radio.

Both pilots believed that the collision occurred at Mile 46 AHP, approximately in mid-river. This is difficult to reconcile with the statement of two other pilots that the MIDWEST CITIES was favoring the east bank. Prior to the collision, the tow turned right, yet the sunken INTERCITY No. 11 grounded on the west bank. One explanation which could account for this is that the AFRICAN STAR went to the east of midchannel when it put on left rudder, and the MIDWEST CITIES backed full to try to break loose from the burning INTERCITY No. 11 and was backing towards the west bank for approximately one minute before the port wire was cast off or parted. The transverse momentum of this barge across the river, combined with the river current, probably accounts for the position of the grounded barge 700 feet off the west bank.



The apparent failure of bridge personnel on the AFRICAN STAR to hear the MIDWEST CITIES' one-blast whistle signal has no satisfactory explanation. With the wind following the towing vessel, a lookout posted on the bow of the AFRICAN STAR, and the doors on the bridge open, the whistle signal of the MIDWEST CITIES should have been audible. The pilot on the MIDWEST CITIES heard the AFRICAN STAR's whistle signals in spite of a headwind and relatively higher noise level common to smaller diesel-propelled vessels. Moreover, the towing vessel was equipped with an amber-colored whistle signal light which should have been visible for one mile. The bow lookout on the AFRICAN STAR testified he heard his vessel sound one blast of the whistle which was answered immediately by one blast from the MIDWEST CITIES. He further stated that both vessels repeated these one-blast signals, but he did not report this to the bridge, nor did he report his initial sighting of the tow's red and white navigation lights. He did not recall hearing any two-blast whistle signals from the AFRICAN STAR.

This case illustrates the fact that whistle signals are not of themselves a reliable means of communicating vessels' passing or turning intentions. Voice bridge-to-bridge radiotelephonic communications capability on a uniform operational frequency would probably have prevented this tragedy. Radio affords instant information and the opportunity to assent or object to the passing proposed by the vessel initiating the communication. Other advantages are that it is reliable day or night, and even when vessels are not in sight of each other, a safe passage can be arranged by correct interpretation of radar information. The Safety Board has previously noted the need for legislation requiring bridge-to-bridge radiotelephonic communications on a common frequency, in the report of the collision of the M/V ALVA CAPE and SS TEXACO MASSACHUSETTS, and in our reports of special studies of "Collisions of Radar-Equipped Merchant Ships," adopted December 18, 1968, and "Towing Vessel Study," adopted August 29, 1969.

The Safety Board believes that the pilot of the AFRICAN STAR should have sounded the danger signal, and slowed or stopped his vessel as soon as he did not hear a reply to his two-blast whistle signal. Closer surveillance of the other vessel's movements would have alerted both pilots earlier to the potential for collision, and would have enabled them to take evasive action.

This accident points up again the uncertainties and difficulties which are experienced in applying the Inland Rules of the Road to arrange a safe passing. Arranging for passing requires the effective use of two modes of communication (visual in both directions and audible in both directions) plus the exercise of correct judgment. Failure of one of the two modes of communication, neither of which has an effective backup, can create a situation in which one or more persons must estimate correctly the intentions of others. In this accident, there was a lack of agreement before the accident which resulted in the collision. The testimony of

the pilots during the investigation regarding the situation prior to the accident implies a failure of both communication modes.

At the  $1\frac{1}{2}$  mile distance between the vessels at first sighting and with the relative closing speed of 22 knots, the time before passing was approximately 246 seconds. The initiation of the two-blast whistle signal by the pilot of the AFRICAN STAR and the awaiting of a similar response would have consumed about 30 seconds, including about 16 seconds for sound transmittal. The left rudder application, swinging, and return of the rudder to amidships would have required at least another 30 seconds. When the pilot of the AFRICAN STAR became uncertain, it would have required about 10 to 15 seconds for him to evaluate the situation using radar. After stop was rung on the engine order telegraph, evidence is that another 60 seconds passed before full astern was ordered and about 10 seconds would have been required to obtain full reverse thrust. The collision occurred approximately 120 seconds after stop was rung, and the Coast Guard estimated the relative speed at about 10 knots at collision. Thus, very little time was available for reverse thrust after stop was ordered. These response times are not unusual.

It is not possible to reconstruct the time sequence from the evidence, but it is apparent that, at this relative approach speed of 22 knots, the amount of time available in which to realize any error of visual analysis and correct it or to resolve a disagreement, was very limited. The Inland Rules of the Road do not directly provide solutions to the problems that may be met in following them, nor do they insure that collision can always be avoided by stopping short of an object ahead. It is clear, however, that one of the methods of negotiating a passing with reduced risk, when visual contact and whistle signals alone are to be relied upon, is to reduce speed as a partial compensation for the delays encountered when this system is used.

In this collision, resulting in a major fire and explosions, the most likely source of ignition of the highly volatile crude oil on INTERCITY No. 11 was the sparks produced by the shearing of the barge by the bow of the AFRICAN STAR. There is also a possibility that the electric wiring for the barge lights was shorted and produced sparks. The rapidity with which the fire spread on the river and on board the AFRICAN STAR is attributed to the series of explosions on the INTERCITY No. 11 which sprayed burning oil over the bow of the ship. The wind blew this blanket of flame down on the AFRICAN STAR. The combustibles on deck, and later in the holds, continued to burn after the burning spray of oil had subsided. Fighting this fire was hampered by the burning of a number of deck fire hoses. The intensity of the heat is evidenced by the melting of the aluminum containers stowed on the main deck. Later firefighting efforts by other than ship's crew were hampered by lack of information on the location and properties of hazardous materials stored in the containers and in the holds.

Intense fire and heavy choking smoke made efforts of personnel to escape from the vessel difficult. Most of the crew and passengers were in their quarters when the fire occurred, and the passageways outside their accommodation spaces were impassable. Some managed to get out on deck through portholes and were rescued. The fire also interfered with the lowering of the lifeboat and inflatable liferaft, the covers of which were aflame. Burning oil on the water surrounding the vessel prevented personnel from jumping overboard to get away from the burning vessel. It was fortunate that this burning oil was not located in an area contiguous to shore facilities handling hazardous materials, or a catastrophic casualty might have developed ashore.

The rescue operations were timely and well coordinated. Helicopter evacuation of the badly burned victims hastened their medical treatment. The action of the Plaquemines Parish Sheriff, Port Sulphur Hospital, and U.S. Public Health Service in New Orleans is the result of a commendable example of prompt contingency planning and operations.

Firefighting by the AFRICAN STAR crew controlled the fire until the Coast Guard vessels, the fire truck on board the ferry, and New Orleans fireboat arrived. The early firefighting efforts probably prevented the complete gutting by fire of the AFRICAN STAR.

#### PROBABLE CAUSE

The National Transportation Safety Board finds that the probable cause of this casualty was the failure of the pilots of the AFRICAN STAR and the MIDWEST CITIES to reach agreement for a safe passing. The pilot of the AFRICAN STAR interpreted the meeting to require a starboard-to-starboard passing whereas the pilot of MIDWEST CITIES thought it required a port-to-port passing. Contributing to the cause was (a) the lack of a common radiotelephonic frequency on the two vessels, and (b) the failure of both pilots to keep the other vessel's movement under closer surveillance and to slow or stop and take evasive action when no agreement for passing was reached.

The fire and subsequent explosions were caused by sparks generated by the shearing of the INTERCITY No. 11's steel side and deck by the bow of the AFRICAN STAR. Rapid spread of the fire on the AFRICAN STAR is attributed to the wind's blowing the burning oil over the bow of the AFRICAN STAR, and the abundance of combustibles on deck.

The many fatalities and injuries sustained on board the AFRICAN STAR were due to the rapid spread of fire and heavy smoke in living spaces, and burning oil surrounding the vessel, precluding personnel from jumping overboard.

## RECOMMENDATIONS

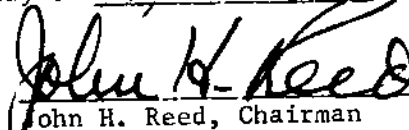
The National Transportation Safety Board concurs in the need for early enactment of Federal legislation to require commercial vessels operating on the navigable waters of the United States to have the capability of voice bridge-to-bridge radio communications, on a common navigational safety frequency, as proposed by H.R. 6971 and S. 1240. The Board has also supported the need for enactment of Federal legislation requiring the licensing of all persons in charge of the navigation of towing vessels by the Coast Guard (H.R. 13987).

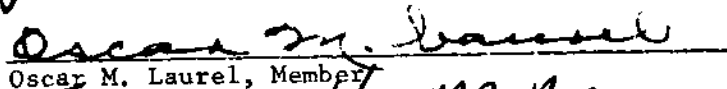
The Safety Board also recommends that:

1. The Coast Guard, Army Corps of Engineers, and Coast and Geodetic Survey consider: including in the Coast Pilot or other appropriate navigational guide, information for the inland waterways on the "points and bends" custom and its effect on 33 U.S.C. 203 (Rule I) and 33 U.S.C. 210 (Article 25), the narrow channel rule, and other navigational information useful in navigating these waters; and the need for clarification of these rules in the proposed "United States Nautical Rules" (H.R. 214).
2. The Coast Guard consider amending the regulations for cargo vessels to require manually operable air ports not less than 16 inches in diameter, or kickout panels, to provide an additional means of escape from berthing compartments located above the main deck. (This recommendation was previously made for tank vessels in the GULFSTAG report dated May 29, 1968.)
3. The Coast Guard study the need for fire-resistant lifeboat and inflatable liferaft covers, and fire hoses.
4. The Coast Guard consider regulations requiring that hazardous cargo manifests be located in specified and accessible locations on all cargo vessels.

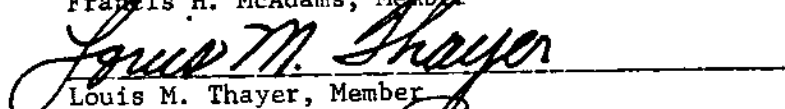
BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

Adopted this 23rd day of September, 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/AFRICAN STAR  
MIDWEST CITIES

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13 MAR 1970

Commandant's Action

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The Marine Board of Investigation convened to inquire into the circumstances surrounding the collision and fire, with loss of life, involving the SS AFRICAN STAR and the M/V MIDWEST CITIES and tow, INTERCITY #11 and INTERCITY #14, in the Mississippi River on 16 March 1968.

1. The record of the Marine Board of Investigation convened to investigate the 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 of the casualty by the National Transportation Safety Board.
2. At 0340 CST, 16 March 1968, the dry cargo vessel SS AFRICAN STAR collided in a meeting situation with the tank barge INTERCITY #11, being towed by pushing ahead of the M/V MIDWEST CITIES in the lower Mississippi River at Mile 46 Above Head of Passes.
3. Approaching Socola Light (Mile 44.8) from New Orleans the axis of the river changes from about  $143^{\circ}T$  to  $113^{\circ}T$  at Mile 45 as it rounds Pointe a la Hache.
4. During the early morning hours of 16 March 1968, there was reported some haze and patch fog on the river. At the time of the casualty the weather was clear and the visibility was good. The radar units on the AFRICAN STAR and MIDWEST CITIES were in operation before and at the time of the collision, but were not continuously observed by the watch personnel of either vessel.
5. The AFRICAN STAR was enroute New Orleans to Newcastle, Australia with 11 passengers, 52 crew members and 5,364 tons of general cargo. Her speed over the bottom with a one (1) knot following current was estimated to be 16 knots. The BOLIVAR MARU was also downbound and approximately 10 miles ahead of the AFRICAN STAR proceeding at the same speed. The respective pilots communicated with each other on portable transceivers using the frequency of 156.65 MHZ regarding traffic and weather conditions. The

pilot of the BOLIVAR MARU reported that the AFRICAN STAR could expect to meet two upbound tows about Bohemia Light (Mile 44.9). Approaching Favret Light, Mile 52.5, an upbound vessel, the HELLENIC CHARM was sighted. Agreement was reached by communicating on 156.65 MHZ to a starboard to starboard meeting. The vessels met at Mile 50 with the HELLENIC CHARM in mid river and the AFRICAN STAR favoring the left descending bank. At 0324, the vessel's speed was slowed to half ahead when approaching Pointe a la Hache ferry crossing. Speed was increased to 21 nozzles, equivalent to about 16 knots at 0331. After clearing the HELLENIC CHARM, as the AFRICAN STAR widened to mid-channel, an upbound tow was sighted above Bohemia Light. Whistle signals for a meeting situation were exchanged for a port to port passing. The tug EL CELLO GRANDE and tow favoring the left descending bank met the AFRICAN STAR at Mile 47. When clear of the EL CELLO GRANDE the lights of the MIDWEST CITIES came into view. At 0336, while on a heading of 140°T, a green side light and two white lights in a vertical line were first observed off the starboard bow at a range of 1½ miles. The record indicates that the required amber and colored side lights on the lead barge INTERCITY #14, and the white towing lights and colored side lights on the MIDWEST CITIES, were burning brightly. The report, however, does not reveal whether the amber light or which of the side lights on the tow or the tug were seen from the AFRICAN STAR. The AFRICAN STAR's rudder was ordered left 15 degrees and then midship to open the range lights and to better show the green light to the MIDWEST CITIES. As the vessels closed the AFRICAN STAR sounded a two blast passing signal. This was not heard on the MIDWEST CITIES. The pilot moved to the radar scope to look at the visual presentation when he was alerted by the Third Mate that a vessel was crossing in front of the AFRICAN STAR. The tug and tow appeared to be crossing sides of the river in front of the AFRICAN STAR. Collision was imminent. The danger signal followed by one blast of the whistle was sounded by the AFRICAN STAR. The rudder was ordered hard right, and at 0338 stop was rung on the engine order telegraph followed by full astern at 0339. The AFRICAN STAR started swinging to the right when at 0340 on a heading of 153°T, the bow struck the after port side of the INTERCITY #11 at an angle of 45°.

6. The MIDWEST CITIES enroute from Shell Terminal, Southwest Pass, Louisiana to Texas City, Texas, via the Gulf Intercoastal Waterway was upbound in the Mississippi River making six (6) statute miles per hour over the bottom stemming a one knot current towing by pushing ahead the unmanned tank barges INTERCITY NO. 11 and INTERCITY NO. 14. Each barge was loaded with 19,050 barrels of crude oil. The length of the tug and barges was 611 feet. Approaching Point Michel, Mile 43.8, another upbound tow, tug EL CELLO GRANDE overtook the MIDWEST CITIES at 0320. A passing agreement was reached by using voice radio, 2738 KHZ, whereby the EL CELLO GRANDE was to favor the right descending bank of the river. During this period, as the EL CELLO GRANDE was overtaking the MIDWEST CITIES, a downbound freighter, the BOLIVAR MARU met and passed clear with the EL CELLO

GRANDE starboard to starboard and with the MIDWEST CITIES port to port. At a distance of 1½ miles the range lights and red side lights of the AFRICAN STAR were sighted. The record and report do not reveal the range light aspect as sighted from the MIDWEST CITIES; it did, however, determine that the port side light on the INTERCITY NO. 14 was being displayed unscreened on an oil drum at the time of the collision. When collision was evident, the rudder of the MIDWEST CITIES was put over to the right and the engine was put in reverse. The danger signal was sounded by the MIDWEST CITIES, and at the same time the danger signal was heard from the AFRICAN STAR.

7. The crude oil cargo on the barge ignited seconds after the collision. Several explosions on the barge caused oil to be sprayed on the AFRICAN STAR. The fiercely burning oil ignited many secondary fires in combustible material on board the vessel. When the fixed CO<sub>2</sub> system was discharged to fight the fire in No. 5 hold, a flexible line ruptured between a cylinder valve and the header. This did not prevent the effectiveness of the CO<sub>2</sub> or the containment of the fire in the hold. The AFRICAN STAR backed out of the barge shortly after the collision and was purposely beached on the right descending bank at Mile 45.9. The INTERCITY NO. 11 sank in 43 feet of water about 700 feet from the right descending bank at Mile 45.8.

8. As a result of the collision two passengers and fifteen crew members were killed, four members of the crew are missing and presumed dead, and a total of thirty-one crew members and nine passengers were injured from the AFRICAN STAR. There were no injuries or deaths aboard the MIDWEST CITIES.

#### REMARKS

1. Marked conflict in the record between the witnesses of the two vessels, together with the lack of evidence of the range light aspect and other vital material necessary to establish accurate positions of the vessels, make the reconstruction of events leading up to the collision impossible.

2. In concurrence with the Board's Conclusion No. 1, it is considered that the primary cause of the casualty was the failure of the AFRICAN STAR and MIDWEST CITIES to agree on a method of passing.

3. In further concurrence with the Board's Conclusion No. 3, it is considered that the responsibility for this casualty rests solely with the pilots of the two vessels. It is concluded, however, that there was a greater degree of culpability on the part of the pilots than the "poor judgement" indicated by the Board.

4. There is evidence of violation of the Inland Rules of the Road on the part of the pilot of the AFRICAN STAR:

a. The failure to reach timely agreement for safe passing when meeting another vessel (33 U.S.C. 203, Rule I).

b. The failure to sound a timely danger signal in the face of the uncertainty regarding the course and intentions of the MIDWEST CITIES when no answer was received to the initial passing signals (33 U.S.C. 203, Rule III).

5. The pilot of the AFRICAN STAR displayed poor judgement, if not negligence, in shifting from visual to radar observation of the movements of MIDWEST CITIES when he had heard no response to his one-blast passing signal.

6. The evidence of negligence and violation of Inland Rules of the Road on the part of the pilot on the SS AFRICAN STAR will be forwarded for appropriate action to the American Pilots Association.

7. There is evidence of violation of the Inland Rules of the Road on the part of the pilot of the M/V MIDWEST CITIES:

a. The failure to reach a timely agreement for the port to port passing intended by the MIDWEST CITIES (33 U.S.C. 203, Rule I).

8. There is evidence of violation of the Inland Rules of the Road on the part of the owners of the INTERCITY NO. 14 for navigating the vessel while displaying the port side light unscreened. (33 U.S.C. 157), (Pilot Rules 33 CFR 80.16).

9. The evidence of violations on the part of the pilot of the M/V MIDWEST CITIES and on the part of the INTERCITY NO. 14 will be forwarded to Commander, Eighth Coast Guard District for appropriate action under the Administrative Penalty Procedures.

10. We cannot concur with the Board's Conclusion No. 7 that there was no evidence of material failure due to the fact that a flexible CO<sub>2</sub> line ruptured aboard the SS AFRICAN STAR. This, however, did not contribute to the casualty.

11. It is further considered that the record in this case contains evidence of criminal liability within the purview of Title 18 U.S.C. 1115 on the part of the pilots of the two vessels. Accordingly, this case will be referred to the Department of Justice for possible prosecution.

12. Appropriate action is being taken to suitably recognize those crew members who demonstrated meritorious and heroic action aboard the SS AFRICAN STAR during the period following the collision.

13. Legislation for bridge-to-bridge, voice radio communication between vessels, and licensing requirements for persons in charge of the navigational watch of towing vessels, is now pending in Congress.



W. J. SMITH

14 Admiral, U. S. Coast Guard  
Commandant





DEPARTMENT OF TRANSPORTATION  
UNITED STATES COAST GUARD

Address reply to:  
Commander  
8th CG District  
New Orleans, La.

5943/SS AFRICAN STAR  
30 June 1969

From: Marine Board of Investigation  
To: Commandant (MVI)  
Subj: SS AFRICAN STAR, M/V MIDWEST CITIES AND TOW; COLLISION AND FIRE  
ON MISSISSIPPI RIVER, ON 16 MARCH 1968, WITH LOSS OF LIFE

FINDINGS OF FACT

1. At about 0340 on the morning of 16 March 1968, the U. S. Freight Vessel AFRICAN STAR, bound for sea, and the inbound Tank Barge INTERCITY NO. 11, being towed by pushing ahead of the motor towing vessel MIDWEST CITIES, collided in the Mississippi River in the vicinity of Mile 46 Above Head of Passes. The Tank Barge was holed and its cargo of crude oil spread upon the surface of the water. The crude oil ignited, and fire engulfed the AFRICAN STAR, resulting in death to fifteen (15) crew members and two (2) passengers. Four (4) crew members of the AFRICAN STAR are missing and presumed dead. A total of thirty-one (31) crew members and nine (9) passengers from the AFRICAN STAR suffered varying degrees of injury, mostly from burns, and were hospitalized. The INTERCITY NO. 11 sank approximately 800 feet downriver from the position where the AFRICAN STAR was intentionally grounded on the right descending bank at approximately Mile 46 Above Head of Passes.

2. Description of vessels involved:

Name:	AFRICAN STAR	MIDWEST CITIES
Official Number:	249351	239680
Service:	Freight Vessel	Tug
Gross Tons:	7971	165
Net Tons:	4624	129
Length:	468.6'	83.2'
Breadth:	69.6'	24'
Depth:	29.2'	7.2'
Propulsion:	Steam	Diesel
Horsepower:	8500	850
Home Port:	New York, New York	Wilmington Delaware
Owners:	Farrell Lines, Inc. 1 Whitehall Street New York, New York	National Marine Service, Inc. 1750 Brentwood Blvd. St. Louis, Missouri

Name:	(AFRICAN STAR)	(MIDWEST CITIES)
Master:	Adorian W. Schodle 1444 Davidson Road Abington, Pennsylvania	Dolton Hergruder 511 New Irwin Drive Plaquemine, Louisiana
License:	Master, Oceans No. 301905	None
Certificate:	CDB No. 029668	Tankerman, Grade "B" or Lower: Z-1071996
Last Inspection for Certification:	Biennial	Uninspected
Date:	3 February 1967	
Port:	Baltimore, Maryland	
Last Inspection:	Drydock & Mid-Period Reinspection	
Date:	1 March 1968	
Port:	Baltimore, Maryland	

Name:	INTERCITY NO. 11	INTERCITY NO. 14
Official Number:	271985	272720
Service:	Tank Barge	Tank Barge
Gross Tons:	1319	1319
Net Tons:	1319	1319
Length:	264'	264'
Breadth:	50'	50'
Depth:	11.1'	11.1'
Propulsion:	None	None
Home Port:	Wilmington, Delaware	Wilmington, Delaware
Owners:	Intercity Barge Co., Inc. 1750 Brentwood Blvd. St. Louis, Missouri	Intercity Barge Co., Inc. 1750 Brentwood Blvd. St. Louis, Missouri
Operators:	National Marine Service, Inc. Same address	National Marine Service, Inc. Same address
Master:	Unmanned	Unmanned
Last Inspection for Certification:	Biennial	Biennial
Date:	1 December 1966	27 January 1967
Port:	Port Arthur, Texas	Port Arthur, Texas

3. Personnel - Deaths, Missing and Injured:

- a) Known dead - Address and next of kin as listed in Shipping Articles and Passenger List

Name: Arthur BATCHELOR, Z-870770-D2, Utility  
Address: 200 W. 90th Street, Apt. 2A, New York, New York  
NOK: Sister, Mary Butler - Same Address

Name: Samuel L. BROWN, Z-195762-D1, Ass't. Storekeeper  
Address: 2636 E. Federal Street, Baltimore, Maryland  
NOK: Wife, Shirley - Same Address

Name: Justin BURDO, Z-347464-D3, Able Seaman  
Address: 618 Surfside Avenue, Baltimore, Maryland  
NOK: Wife, Paula - Same Address

Name: William A. COMBASH, Z-335848-D6, Ordinary Seaman  
Address: 4011 Aragon Drive, Baltimore, Maryland  
NOK: Mother, Gladys - 2746 Ellicott Drive, Baltimore, Maryland

Name: Mrs. Courtney FOWLER, P.P. #H1050030, Passenger  
Address: 1747 Wroxton Court, Apt. 3, Houston, Texas  
NOK: Unknown

Name: Peter J. HENEBERY, JR., Z-896732-D2, Ordinary Seaman  
Address: Box 152, Isle of Palms, South Carolina  
NOK: Mother, Myrtis - Same Address

Name: Arthur HUDSON, JR., Z-198412R, Messman  
Address: 1523 E. Fairmount Avenue, Baltimore, Maryland  
NOK: Sister, Alberta Collins - Same Address

Name: Cornelius JONES, Z-972386-D3, Wiper  
Address: 4023 Reisterstown Road, Baltimore, Maryland  
NOK: Wife, Sara - Same Address

Name: Mrs. Anne LANE, Passenger  
Address: Box 313, Lake Junaluska, North Carolina 28745  
NOK: Unknown

Name: Willie LATTEN, Z-1252458, Messman  
Address: 9821 Stedman Street, Houston, Texas  
NOK: Sister, Cletha Jones - Same Address

Name: Darwin A. McDONALD, Z-69404, Chief Steward  
Address: 859 Jefferson Avenue, Brooklyn, New York  
NOK: Wife, Evelyn - Same Address

Name: Douglas C. NAEGELE, Z-1244554, Deck Cadet  
Address: 2405 Vance Avenue, Wheeling, West Virginia  
NOK: Father, Cecil - Same Address

Name: Lucas QUEVEDO, Z-769082, Able Seaman  
Address: E. 10 N-16 Glenview Gardens, Ponce, Puerto Rico  
NOK: Wife, Antonia - Same Address

Name: James T. QUIRK, Z-866174, License No. R21340, Radio Officer  
Address: 6182 Watermon Avenue, St. Louis, Missouri  
NOK: Sister, Anne C. - Same Address

Name: Richard W. SCHAUER, Z-1243179, License No. 368336,  
Third Assistant Engineer  
Address: 442 E. 86th Street, New York, New York  
NOK: Mother, Lydia - Same Address

Name: Paul THOMPSON, JR., Z-1245227, Messman  
Address: Box 16, Ansonville, North Carolina  
NOK: Wife, Mary - Same Address

Name: Irvin VILTZ, Z-1000223, Wiper  
Address: 508 - 14th Street, Lafayette, Louisiana  
NOK: Mother, Effie - Same Address

b) Missing and presumed to have perished:

Name: Paul M. HANLY, Z-124486, Engine Cadet  
Address: 2 Patience Lane, Westbury, Long Island, New York  
NOK: Father, Mortimer - Same Address

Name: Alfred S. HAY, Z-445408, License No. 326965, Third Mate  
Address: 49 Oakland Avenue, Uniontown, Pennsylvania  
NOK: Wife, Grace - Same Address

Name: Stephen T. SMITH, Z-1204605, Cadet Engineer  
Address: Box 187, Gamboa, Canal Zone  
NOK: Father, George F. - Same Address

Name: Philip H. WHITMAN, Z-1254357, Electrician  
Address: 115 Whip Lane, Glen Burnie, Maryland  
NOK: Wife, Peggy L. - Same Address

c) Injured and incapacitated for a period in excess of 72 hours:

Name: Mrs. Erna ALPERT, Passenger  
Address: 3411 - 34th Avenue, Apt. 3-B, Astoria, New York  
Injury: Minor burns on fingers and smoke inhalation

Name: Jack BOYNTON, Z-247371, Fireman/Watertender  
 Address: 3706 Forest Park Avenue, Baltimore, Maryland  
 Injury: Smoke Inhalation

Name: James CARLINO, Z-1188708, Wiper  
 Address: 1525 Chalmette Street, Baltimore, Maryland  
 Injury: Burns

Name: Anthony CERKO, Z-259464-D1, Second Electrician  
 Address: 990 Dalton Avenue, Baltimore, Maryland  
 Injury: Burns

Name: Lauro CISTERNINO, Z-621702, Able Seaman  
 Address: 1644 W. 7th Street, Brooklyn, New York  
 Injury: Burns

Name: Hubert D. CLARK, Z-65119-D1, Oiler  
 Address: 700 S. Buchanan Street, Amarillo, Texas  
 Injury: Smoke Inhalation

Name: Herman COFIELD, Z-900869, Boatswain  
 Address: 2133 Braddish Avenue, Baltimore, Maryland  
 Injury: Minor burns on nose

Name: Mrs. Mildred A. DAVIS, Passenger  
 Address: 18 Ellis Court, Medina, West Australia  
 Injury: Burns

Name: Anton DEMHARTER, Passenger  
 Address: 3937 Piedmont Street, New Orleans, Louisiana  
 Injury: Smoke inhalation and burns

Name: Mrs. Carmen Marie DEMHARTER, Passenger  
 Address: 3937 Piedmont Street, New Orleans, Louisiana  
 Injury: Smoke Inhalation

Name: Mrs. Margaret E. DEMLER, Passenger  
 Address: Anwell Road, East Millstone, New Jersey  
 Injury: Smoke inhalation, burns, and fractures of both lower legs

Name: John P. FADDEN, Passenger  
 Address: 3117 Austin Street, Brookline, Massachusetts  
 Injury: Burns

Name: George W. FIRTH, Z-99026-D1, Oiler  
 Address: 408 West Virginia Avenue, Clarksburg, West Virginia  
 Injury: Minor burns to hands

Name: Webster FRANCIS, Z-1184649-D1, Messman  
Address: 6942 Peyton Street, Houston, Texas  
Injury: Slight burns to left ear

Name: Morris GALLAUD, Z-920321, Able Seaman  
Address: 1628 N. Villere Street, New Orleans, Louisiana  
Injury: Burns

Name: Amin GAZALY, Z-1155029, Ordinary Seaman  
Address: 279 Fifth Avenue, Brooklyn, New York  
Injury: Smoke Inhalation

Name: John L. GORDON, Z-833642-D2, Messman  
Address: 2165 Jewel Court, Mobile, Alabama  
Injury: Smoke inhalation

Name: Joao GOUVEIA, Z-816149-D1, Deck Maintenance  
Address: 3 Watson Street, Somerville, Massachusetts  
Injury: Burns and smoke inhalation

Name: Basil HEROUT, Z-618453, Messman  
Address: 2447 Eighth Street, New York, New York  
Injury: Smoke inhalation

Name: Michael KEFELAS, Z-1069084, Chief Cook  
Address: 6801 Ridge Boulevard, Brooklyn, New York  
Injury: Burns

Name: Roy A. LANG, Z-167209-D2, Fireman/Watertender  
Address: Estate Benders, Box 2664, St. Thomas, V. I.  
Injury: Smoke inhalation

Name: James McCARTHY, Z-435801, Second Mate  
Address: 25 Mereland Road, New Rochelle, New York  
Injury: Right shoulder and neck injuries

Name: Patrick McLAUGHLIN, Z-1200818, Fireman/Watertender  
Address: 50 Virginia Street, Dorchester, Massachusetts  
Injury: Burns

Name: Leopoldo G. MARTINEZ, Z-514112, Carpenter  
Address: 8921 Ramin Drive, Houston, Texas  
Injury: Burns

Name: Nicholas METKOVIC, Z-548510, Third Mate  
Address: 51 Hill Avenue, Watsonville, California  
Injury: Burns

Name: Mrs. Augusta May MILES, Passenger  
Address: 18 Jessie Road, Kensington Park, South Australia  
Injury: Smoke inhalation

Name: Raymond PURNELL, Z-901862-D1, Ass't. Pantryman  
Address: 1236 East Lafayette Avenue, Baltimore, Maryland  
Injury: Burns

Name: William A. REDDICK, JR., Z-1262023, Second Cook & Baker  
Address: 1021 West 49th Street, Savannah, Georgia  
Injury: Burns

Name: Robert J. REDFERN, Z-438451, Third Assistant Engineer  
Address: 607 Mill Street, Pittsburgh, Pennsylvania  
Injury: Smoke inhalation

Name: Bernard ROSENBLATT, Z-173982-D1, Messman  
Address: 6315 Martindale Road, Randolph, Massachusetts  
Injury: Burns

Name: Cordero SANDOVAL, Z-734412-D4, Third Cook  
Address: 159 Milford Street, Brooklyn, New York  
Injury: Smoke inhalation

Name: Adorian W. SCHODLE, BK-029668, Master  
Address: 1444 Davidson Road, Abington, Pennsylvania  
Injury: Burns

Name: Earl H. SINGLETON, Z-1157140-D1, Oiler  
Address: Rt. 1, Box 1, McClellansville, South Carolina  
Injury: Burns

Name: Paul C. STEPHENS, Z-871448-D1, Able Seaman  
Address: 199 Shore Road, Ocean View, New Jersey  
Injury: Burns

Name: Willard B. STOTLER, Z-349131-D2, Deck Maintenance  
Address: 1618 East Baltimore Street, Baltimore, Maryland  
Injury: Smoke inhalation

Name: Joseph M. SULLIVAN, Z-341153, Able Seaman  
Address: 65 Vera Street, Portland, Maine  
Injury: Burns

Name: Roland Bruce TIMBS, Passenger  
Address: 22 Union Street, Toowong, Brisbane, Australia  
Injury: Smoke inhalation and minor burns

Name: Mrs. Teresa E. TIMBS, Passenger  
Address: 22 Union Street, Toowong, Brisbane, Australia  
Injury: Minor Burns

Name: Edward M. USASZ, Z-1254357, Chief Mate  
Address: 18 Oxlade Drive, New Farm, Brisbane, Australia  
Injury: Burns

Name: Calvin E. WILLETTS, Z-627650-D1, First Assistant Engineer  
Address: 48 States #1, Pleasantville, New Jersey  
Injury: Burns

4. Principal personnel involved:

a) Adorian W. SCHODLE, Continuous Discharge Book No. 029668, age 47, home address 1440 Davidson Road, Abington, Pennsylvania, was serving as Master of the AFRICAN STAR. He holds a Coast Guard License No. 301905 to serve as Master of Steam and Motor Vessels, Any Gross Tons, upon Oceans, and endorsed as Radar Observer, Issue 5-8. Subsequent to his graduation from the U. S. Merchant Marine Academy in 1944, he has been continuously employed by Farrell Lines, Inc., excepting a period ashore of approximately two (2) years and a period during the Korean Conflict of about two (2) years, in which he served on active duty as an officer in the U. S. Navy. He has approximately thirteen (13) years experience in the capacity of master of cargo type vessels, of which two (2) years were experienced as master of C-3 type vessels.

b) Adolph M. AJUBITA, Continuous Discharge Book No. 310319-D1, age 46, home address 5644 Vermillion Boulevard, New Orleans, Louisiana, is a member of the Crescent River Port Pilots Association, and was serving as a compulsory state pilot on board the AFRICAN STAR. He holds a Coast Guard License, No. 37040, to serve as Master of Steam and Motor Vessels of any Gross Tons upon Oceans; also, First Class Pilot on the Mississippi River from Southport, Louisiana to the sea via South and Southwest Passes, Inner Harbor Navigation Canal, Louisiana from the Mississippi River to Lake Pontchartrain, Intracoastal Waterway from the Inner Harbor Canal to and including Michoud, Louisiana, Mississippi River Gulf Outlet from Light 117 to the Sea Buoy, Issue 5-8. He began his career as a merchant seaman in 1937 and obtained a license as Third Mate in 1941. He served in all capacities of Mate on both passenger and cargo vessels until elected to the Crescent River Port Pilot's Association in mid 1950. He completed his apprenticeship to the association and was commissioned a Pilot by the State of Louisiana in February 1951. His service has been continuous with the Association since his commissioning. He also holds certificates attesting completion of a course of instruction in Radar Observation and Loran.



c) Morris Joseph MATHERNE, Z-991316, age 43, home address Post Office Box 25, Raceland, Louisiana, was the Pilot on Watch on board the MIDWEST CITIES. He holds a Merchant Mariner's Document validated for emergency service and endorsed as Tankerman, Grade "B" and Lower. Prior to his employment as Pilot with National Marine Service in late 1967, he has had approximately thirteen (13) years experience on board inland pusher type towboats as deckhand and pilot. He completed the second grade in school and has received no other formal education. His ability to read and write is limited to little more than signing his name.

d) Dalton HERGRUDER, Z-1071996, age 32, home address 511 Irwin Drive, Plaquemine, Louisiana, was the Master of the MIDWEST CITIES. He holds a Merchant Mariner's Document validated for emergency service and endorsed as Tankerman, Grade "B" and Lower, and Ordinary Seaman, Wiper and Messman. He began his employment with National Marine Service in 1954 as Deckhand and has served in the capacity of pilot for approximately nine and one-half (9 1/2) years and as master for about two and one-half (2 1/2) years. He completed the eighth grade in school and has no other formal education.

#### 5. Weather - Current - Radar

Clear, slight haze. The winds were light from the south and southeast. The river was at a low stage, with current estimated to be between one-half and one mile per hour. The AFRICAN STAR and MIDWEST CITIES were equipped with radar installations. The unit on each vessel was in operation prior to and at the time of the casualty, but were not being continuously observed by the watch personnel on either vessel.

6. a) The AFRICAN STAR, on 2 March 1968, began Voyage No. 80, enroute from Baltimore, Maryland to Marcus Hook, Pennsylvania, and other east and Gulf Coast ports to load cargo destined for Australia and New Zealand. At the completion of loading at the final U. S. port - New Orleans, Louisiana - the vessel had on board cargo distributed in the five cargo holds, on deck and also on the hatch covers. For the most part, cargo containers, both of steel and aluminum construction, were secured on the hatches and on the main deck outboard, in way of No. 2, 3 and 4 holds. Secured athwartships and aft of No. 5 hatch was a former railroad tank car containing 20.5 tons of pine oil. Included in the "labeled" cargo was Freon gas in cylinders secured on the open deck outboard of and to starboard of No. 5 hatch; also on the port side of this hatch were drums containing lubricating oil. Ladders and catwalks of wood had been installed on the main deck forward and aft of the midshiphouse in way of cargo interferences to provide passage and access by the crew to the various working spaces. At the time of departure from New Orleans, the vessel had on board approximately 5,364 tons of general cargo, 6,355 barrels of fuel oil, and 420 tons of fresh water. The draft of the vessel

was 22'07" forward, 23'05" aft, with a mean draft of 23'00". Preparatory to the scheduled departure of the AFRICAN STAR from Esplanade Wharf, New Orleans, Louisiana, early on the morning of 16 March 1968, personnel on board tested the navigational equipment, and the equipment was found to be in good working order. At 2345, the tug JASON SMITH arrived and was secured along the port side forward for the purpose of assisting in undocking the vessel. At 2400, the pilot, Adolph M. Ajubita, boarded the vessel and conferred with the Master relative to the vessel's departure and passage via the Mississippi River to the sea. At 0040, the vessel, under the pilotage of Captain Ajubita, cleared the Esplanade Wharf and was maneuvered with the assistance of the tug JASON SMITH to swing to port and to head down stream. At 0051, the vessel was headed down stream, and at 0054 the tug JASON SMITH was away. At 0117, and when the vessel was just below the Tenneco Oil Docks, Mile 89 AHP, the anchor watch on the forecastle was secured with the anchors ready for letting go.

b) The midnight to 0400 deck sea watch consisted of Alfred S. Hay, Third Mate, Joseph M. Sullivan, AB, Lucas Quevedo, AB, and Amin Gazaly, OS. In the engineroom, the sea watch consisted of Robert J. Redfern, Third Assistant Engineer, Roy A. Long, F/WT, and George W. Firth, Oiler. Additionally, and consistent with the policy of the owners of the vessel in requiring an additional engineer in the engineroom while navigating in pilot waters, Herbert V. Woodger, the Chief Engineer, was present and operated the main engine throttle during this transit.

c) The BOLIVAR MARU, piloted by Elmo J. Hahn, was also downbound and approximately ten (10) miles ahead of the AFRICAN STAR and proceeding at about the same speed. The respective pilots communicated with each other on 156.65 MHZ, referred to locally as Channel 13, regarding traffic and weather conditions when the BOLIVAR MARU was in the vicinity of Point a la Hache. Pilot Hahn reported that the visibility was clear at that time, and that the AFRICAN STAR could expect to meet two upbound tows a little above Bohemia Lt., Mile 44.9. One tow was described as a tug with a barge on a short hawser "running wide", that is to say - the tow was favoring mid-channel rather than holding to either bank. The other tow was described as two barges being pushed ahead by a tug, and this tow also was described as tending toward mid-channel rather than toward either bank.

d) When the AFRICAN STAR was at Favret Lt., Mile 52.5, and favoring the left descending bank, an upbound vessel, the HELLENIC CHARM, piloted by James H. Miller, was sighted in the vicinity of Point a la Hache. The respective pilots communicated with each other on 156.65 MHZ and agreed to a starboard to starboard meeting. The vessels met at about Mile 50,

with the HELLENIC CHARM in mid-river and the AFRICAN STAR favoring the east, or left descending bank. When clear of the HELLENIC CHARM, the AFRICAN STAR widened towards mid-channel, and shortly thereafter the first upbound tow was sighted above Bohemia Light, Mile 44.9, and holding slightly to its right, or east of mid-channel. Radio communications were not established with this upbound tow. However, meeting signals were exchanged, with the tow answering the one blast signal initiated by the AFRICAN STAR. The vessels closed, and with the AFRICAN STAR tracking along the channel line and a tug identified as the EL CELLO GRANDE and Tow favoring the east bank, a port to port meeting occurred at about Mile 47.

e) On the bridge, the vessel was being conned by the Pilot, Captain AJUBITA, and the Master was also available about the bridge. On the wheel was Quevedo, A.B. Sullivan, A.B., was the lookout on the bow, and Gazaly, O.S., was on standby in the crew's messroom. The bridge windows were closed and the side doors were open to the bridge wings. The radar was in operation on the two (2) mile range and observations were being made by the deck officers on occasion, but continuous viewing or a radar plot was not being maintained. The outside deck lights were extinguished, and there were no undue reflections in the wheelhouse. In the engineroom, Woodger, Chief Engineer, was standing the throttle watch, Redfern, Third Assistant Engineer, was carrying out the normal routine necessitated by engine maneuvering conditions. Lang was attending to his duties as Fireman/Watertender, as was Firth, the Oiler. At about 0320, the oncoming deck watch had been called by Gazaly, O.S., and Firth, Oiler, had called the oncoming engineroom watch. All main and auxiliary machinery was operating satisfactorily.

f) The vessel had been maneuvered at various engine speeds during the downbound transit, and when Point a la Hache was abeam, the speed was ordered increased to full ahead (60 RPM - 13 KTS) and a minute later, when abeam the Point a la Hache Ferry Landing, the speed was increased to 21 nozzles (78 RPM - 16 KTS).

7. a) The MIDWEST CITIES, with the empty Tank Barges INTERCITY NO. 11 and INTERCITY NO. 14 in tow, arrived at the Shell Oil Company Terminal, Southwest Pass, Mississippi River, Louisiana, at approximately 0800 on 15 March 1968. The tow was broken, and loading operations were begun by the Master and crew of the MIDWEST CITIES. The two barges were loaded to a draft of approximately 9'6", corresponding to approximately 19,050 barrels of crude oil in each barge. An analysis of a representative sample of the Louisiana "Sweet" crude loaded revealed an API gravity of 30.6, a flash point (Pensky Martens) of 80.0°, and a Reid vapor pressure of 3.2 PSIA, which categorized the product as a Grade "C" flammable liquid.

Upon completion of loading, the tow was remade for an intended transit to Houston, Texas via the Mississippi River and the Gulf Intracoastal Waterway. The two barges were made up box end to box end in the usual manner, using wire rope face and jockey lines, tensioned by ratchets. The MIDWEST CITIES was made up to the rake end of the INTERCITY NO. 11 using conventional methods, tensioned by hand operated winches. The length of the tug and barges was approximately 620 feet.

b) Electrical power of 110-120 volts, d.c., for the navigational lights located on the bow of the lead barge, INTERCITY NO. 14, was provided by portable cable connections between the MIDWEST CITIES and INTERCITY NO. 11 and between INTERCITY NO. 11 and INTERCITY NO. 14. Cable runs on each barge were contained in conduit with receptacles at each end. The MIDWEST CITIES and tow had previously been involved in a collision on 7 December 1967. While transiting the Intracoastal Waterway with the INTERCITY NO. 14 in the lead and in a loaded condition, a head and head collision occurred with another barge, which was in a light condition. As a result, the INTERCITY NO. 14 sustained damages to the port side light stand and socket. This port side light was being displayed unscreened on an oil drum subsequent to the collision, and repairs were not effected until 30 March 1968.

c) The MIDWEST CITIES and tow departed the Shell Terminal, Southwest Pass, Louisiana, a few minutes before 1800 on 15 March 1968, northbound for the Gulf Intracoastal Waterway. The Master, Dolton Hergruder, Z-1071996, and one Deckhand were on watch at this time and continued so until midnight, at which time they were relieved by the Pilot, Morrison J. Matherne, and the Deckhand, R. W. Reynolds. While underway, a six and six watch system is in effect, with the Master and one Deckhand standing 12:00 to 6:00 night and afternoon watches. At the time of relief, the tow was at about Mile 24 AHP and making good approximately six statute miles per hour. At about 0320, another upbound tow, the Tug EL CELLO GRANDE, proceeding at approximately eight (8) miles per hour, with a barge on a short hawser, overtook the MIDWEST CITIES and tow in the vicinity of Point Michel, Mile 43.8 AHP. At this time, the MIDWEST CITIES was nearly in mid-channel, but slightly favoring the right descending bank. A passing agreement was reached between the pilots of the respective vessels, using voice radio, 2738 KHZ, in which the EL CELLO GRANDE was to favor the right descending bank closely and hold a steady course, more or less, and in so doing would pass well clear of the MIDWEST CITIES and also be headed up, to cross over to the left descending bank at about Bohemia Light, Mile 44.9 AHP. During this passing, a downbound freighter, the BOLIVAR MARU, was sighted in the bend at about Socola Light, Mile 44.8 AHP. Signals were not exchanged; however, the BOLIVAR MARU met and passed clear with the EL CELLO GRANDE starboard to starboard, and with the MIDWEST CITIES port to port. The EL CELLO GRANDE and tow continued upbound and completed the crossing to the east bank at about Bohemia Light, Mile 44.9 AHP.

8. a) At approximately 0336, the AFRICAN STAR, when clear of the EL CELLO GRANDE, and on a course coincident to the channel line of the river, sighted the second expected tow just off the starboard bow and at a range of about one and one-half (1 1/2) miles. The tow was in the bend of the river above Socola Light and on a course parallel to and favoring the right descending bank. Attempts by the bridge watch of the AFRICAN STAR to establish voice radio communication with this tow were unsuccessful due to the lack of a common frequency.

b) The MIDWEST CITIES, having been advised via radiotelephone by the EL CELLO GRANDE of the presence of another downbound vessel, sighted the AFRICAN STAR bearing slightly off the starboard bow and at a range of about one and one-half (1 1/2) miles.

c) As the vessels closed, the AFRICAN STAR sounded a two blast passing signal, and left 15 degrees rudder was applied to open the range lights and show a better green light to the MIDWEST CITIES. Simultaneous with this maneuver of the AFRICAN STAR, the MIDWEST CITIES altered course to starboard and sounded a one blast whistle signal, intending to execute a port to port passage. The respective whistle signals were not heard by the other vessel.

d) The AFRICAN STAR, upon receiving no response to the passing signal and observing the tow crossing her bow, stopped its engine at 0338. The danger signal was sounded, the rudder placed hard right, and the engine was reversed full at 0339. As the AFRICAN STAR began to swing to starboard, a one blast passing signal was sounded. The MIDWEST CITIES continued to turn to its starboard and across the axis of the channel. When in extremis, and on a course of approximately 020°T, the engine of the MIDWEST CITIES was stopped, reversed, and the danger signal was sounded.

e) With about 10 knots headway and on a heading of 153°T, the bow of the AFRICAN STAR collided with the after port side of the INTERCITY NO. 11 at an angle of approximately forty-five (45°) degrees, and penetrated the hull of the barge to a distance of more than half the beam. A gentle bump, with a grinding noise, was felt and heard by a number of persons on board, and recorded by the engine room personnel as having occurred at 0340.

9. a) The crude oil cargo of the INTERCITY NO. 11 was ignited seconds after the collision, and the burning oil from the ruptured tanks spread on the surface of the water. Before the AFRICAN STAR could back clear, a number of explosions took place within the tanks of the INTERCITY NO. 11, and burning crude oil showered upon the AFRICAN STAR; the vessel quickly became a mass of flame.

b) The AFRICAN STAR was backed clear of the INTERCITY NO. 11, and at 0341 the engine was ordered half ahead, and at 0342 the bow of the vessel was intentionally driven aground on the west bank of the river approximately one (1) mile above Socola Light. The engine was continued ahead to hold the vessel in a position perpendicular to the bank.

10. When the collision occurred, and on the order of the Master of the AFRICAN STAR, the general alarm was sounded. At this time, the oncoming watch personnel were in varying degrees of readiness and, other than those on watch, all other crewmembers and passengers were asleep or resting in their quarters.

11. The Third Mate, Hay, and the Helmsman, Quevedo, were seen on the bridge by the Master after the collision, but the time of their departure, or their course of action could not be determined. However, shortly after the collision, Hay was seen in the bridge deck passageway in company of the Radio Officer, Quirk, at which time the Master ordered Quirk to transmit a "Mayday". There is no record of such a message having been received on radiotelephone or CW frequencies.

12. Oil, sprayed on board the AFRICAN STAR by the explosions, burned fiercely, and secondary fires were started by combustible material such as canvas hatch tarpaulins, lifeboat covers, paint on the midshiphouse, wooden doors, deck overlays, and dunnage associated with the deck cargo. The intensity of the flames was such as to melt aluminum cargo containers on the main deck. Flames swept through the athwartship passageways of the midshiphouse, and the paint on the bulkheads and overhead was seared and blistered. The wooden doors about the weather deck were burned and charred. Heavy smoke permeated the interior spaces of the vessel; however, the heat and fire did not damage those interior rooms or spaces that were closed by joiner doors. In the engineroom, the supply ventilation systems were secured due to the heavy smoke intake.

13. The crew and passengers, aroused by the general alarm, sought first to go on deck. In some instances, their attempts were thwarted by the smoke and heat in the passageways, forcing them to remain in their quarters. Others were successful in leaving, only to be met by burning oil falling from above as they arrived on the weather deck levels on the starboard side - the fire and heat being too intense to endure on the port side. Minor confusion existed during the first few minutes after the alarm was sounded, but this quickly subsided under the leadership of the Master and his officers.

14. After the grounding, the Master left the bridge and went to the cabin deck to see to the safety of the passengers and crew, and to appraise the general situation. During this time, he became seriously burned about the feet, face and hands, resulting in his immobilization and having to be carried back to the bridge by the crew.

15. Second Mate McCarthy, the oncoming deck watch officer, seeing flames through the portlight in his room, hurriedly dressed and went on deck in the vicinity of the No. 1 lifeboat. The heat, smoke and flames were intense, but he was successful in gathering a number of passengers and crew into a small room for refuge until the fire subsided. He then supervised the extinguishment of small fires in and around No. 1 lifeboat and made preparation to lower the boat. He was assisted by Mr. Metkovic, Third Mate, Stotler - Deck Utility, Cisternino - Able Seaman, and Gouveia - Deck Maintenance. The lifeboat was lowered to the deck edge, and the injured crewmembers and passengers were assisted into the boat. Purnell - Assistant Pantryman, and Stotler - Deck Maintenance, visited the passenger and crew quarters in search for additional survivors. On orders of the Master, the lifeboat was lowered to the water's edge.

16. Large fires were seen burning aft in the vicinity of the railroad tank car of pine oil and the drums of lube oil stowed abreast No. 5 hatch. McCarthy left the area of No. 1 lifeboat after it was lowered, and with Metkovic - Second Mate, Tocci - Second Assistant Engineer, and McLaughlin - Fireman/Watertender, organized a fire-fighting team and, with hoses, were successful in confining the fires and cooling the flammable liquid cargoes in the area. During this time, fire was discovered in the port side of the upper 'tween deck of No. 5 hold. Tocci left the scene and proceeded to the CO<sub>2</sub> stowage room to discharge the gas into the space. He met with some difficulty in that some of the gas was discharged into the room through a ruptured flexible line between a cylinder valve and the header. This acted only as a temporary deterrent, and sufficient gas was discharged into No. 5 upper 'tween deck to contain the fire.

17. a) A number of crewmembers, in their escape from the fire on the open decks, took shelter under the winch platform on the starboard side forward of the midshiphouse. Among these were Cofield, Martinez, Willets, Stephens, Rosenblatt, Reddick, Smith, and a passenger, Miss Lane. When the fire subsided, the pilot ladder, which had been made ready prior to sailing, was thrown over the side, and with mutual assistance, the group climbed down and into the water.

b) Firth, the Oiler on watch, left the engineroom due to difficulty in breathing in the smoky atmosphere. He ultimately found his way to the cabin deck and there began assisting three passengers, Mr. and Mrs. Timbs, and Mr. Fadden, down to the main deck on the port side. This group jumped overboard and swam ashore.

c) Sullivan, the bow lookout, sought his own safety, and was at the ladder leading from the forecastle head to the main deck when the collision occurred. When making his way aft on the starboard side abreast No. 1 hatch, explosions occurred which showered the vessel with burning oil, and causing severe burns to Sullivan. Ultimately, he found his way to the boat deck and was assisted into No. 1 lifeboat.

d) In the engineroom, the Chief Engineer - Woodger, Third Assistant Engineer - Redfern, and Fireman/Watertender - Lang, continued to maintain the plant in full operational status.

18. A review of the cargo plan indicated that the cargo was stowed in accordance with applicable dangerous cargo regulations. A dangerous cargo manifest signed by the Master was on board and in custody of the Chief Mate; however, due to the serious injuries received by the Master and the Chief Mate, the manifest could not be immediately produced when requested by the Coast Guard Boarding Officer.

19. The charred bodies of a passenger, Mrs. Courtney L. Fowler, and crewmembers Ordinary Seaman Peter J. Henebery, Wiper Cornelius Jones, Messman Willie Latten, and Wiper Irvin Viltz, were found on the starboard side of the cabin deck in the vicinity of the ladder leading to the main deck. The body of the Chief Steward, Darwin A. McDonald, was found on the port side of the main deck at the after corner of the midshipouse.

20. Simultaneously with the collision impact, deckhand Reynolds departed the wheelhouse to arouse the watch below. The impact of collision parted the mooring wires between the two barges and the starboard face wires between the towboat and the INTERCITY NO. 11. Attempts to sever the remaining port face wires with an axe to permit the towing vessel to back clear of the fire were unsuccessful, but with the Master's assistance, the wire was cast loose. After freeing the towboat from the barge, the Master, Dalton Hergruder, relieved the pilot and maneuvered the MIDWEST CITIES clear of the other vessels and the fire upon the water. The INTERCITY NO. 14 drifted clear of danger. At 0530, 16 March 1968, the U. S. Coast Guard Rescue Coordination Center at New Orleans, Louisiana, received initial report of this casualty from the Master of the MIDWEST CITIES via the New Orleans marine operator.

21. The MIDWEST CITIES, finding itself in a position upriver from the fire and the grounded AFRICAN STAR, stood in on the starboard side of the burning vessel and began the rescue of the passengers and crew. Those persons in the No. 1 lifeboat which had been lowered to the water's edge were taken on board. The group which had abandoned the vessel via the pilot ladder were also taken on board. The MIDWEST CITIES then proceeded to the closest dock, located a short distance upriver from the grounded AFRICAN STAR, and disembarked the survivors. The MIDWEST CITIES then returned to the AFRICAN STAR and assisted in fighting the fire on the after deck of that vessel.

22. A Plaquemines Parish Deputy Sheriff arrived on the scene and began arrangements to transport the injured to the hospital at Port Sulphur, Louisiana, located a few miles south of the casualty. As the severity of each individual's injuries became known, coupled with the magnitude of the casualty, the more seriously injured were transported to the various hospitals in New Orleans by both Coast Guard Helicopters and by private ambulances.




23. At about 0530, the fires on board the AFRICAN STAR had been brought under control, and the MIDWEST CITIES departed to retrieve the INTERCITY NO. 14, adrift in the river.

### CONCLUSIONS

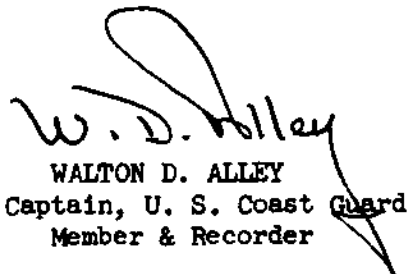
1. That the primary cause of the casualty, to the extent determinable, was due to the failure of the meeting vessels to establish an understanding as to the manner in which they would pass.
2. That both the pilot of the AFRICAN STAR, Adolph M. Ajubita, and the pilot of the MIDWEST CITIES, Morrison Joseph Matherne, misjudged the developing situation. Matherne intended to pass port to port, and Ajubita intended to pass starboard to starboard. These intentions were not successfully conveyed, and an agreement was not achieved. At 0338, the AFRICAN STAR altered to port to open her range lights and show a stronger green side light. At the same time, the MIDWEST CITIES was altering course to starboard. The distance at this time was approximately 3,800 feet. Once both vessels commenced these maneuvers, collision was imminent.
3. That the pilots of the AFRICAN STAR, Adolph M. Ajubita, and of the MIDWEST CITIES, Morrison Joseph Matherne, used poor judgement in the selection of vessel speeds, well knowing they were approaching a meeting situation which was not resolved.
4. That any doubt as to the intention of course of the other vessel could have been readily resolved by the use of bridge-to-bridge radio-telephone, if both vessels had been equipped with a common frequency.
5. That there is no evidence that any personnel of the Coast Guard or any other government agency contributed to the casualty.
6. That there is no substantial evidence of misconduct, inattention to duty, negligence, or incompetence, or willful violation of law or regulation warranting action under the provisions of R.S. 4450, as amended.
7. That there is no evidence of material failure on the part of the vessels concerned.
8. That no aids to navigation nor any uncharted or incorrectly charted area or objects contributed to the cause of the casualty.
9. That the source of ignition of the crude oil in the INTERCITY NO. 11 is attributed to a spark generated by the severing of the electrical cable leading to the navigational lights on INTERCITY NO. 14 or by the grating and tearing of the steel plating of INTERCITY NO. 11 by the bow of the AFRICAN STAR.

RECOMMENDATIONS

1. That the U. S. Coast Guard continue to support, through the Department of Transportation, the early enactment of Federal legislation to require all commercial vessels, regardless of tonnage, operating upon the navigable waters of the United States to have a capability for and to use voice radio communication, bridge to bridge, for navigational safety purposes.
2. That the U. S. Coast Guard continue to support, through the Department of Transportation, the early enactment of Federal legislation to require that all persons in charge of the navigational watch of towing vessels shall be licensed for such service by the U. S. Coast Guard.
3. That those crew members whose actions during this disaster were meritorious be properly recognized. This will be the subject of separate correspondence from this board.

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

  
MERLE L. HARBORT  
Captain, U. S. Coast Guard  
Member

  
WALTON D. ALLEY  
Captain, U. S. Coast Guard  
Member & Recorder

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