



# UNITED STATES COAST GUARD

## REPORT OF THE INVESTIGATION

### INTO THE

RONNIE R (ON 1245550) AND GA6620ZT COLLISION ON THE SAVANNAH RIVER  
INVOLVING INJURIES AND LOSS OF LIFE ON AUGUST 27, 2021



MISLE ACTIVITY NUMBER: 7300444

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commandant  
United States Coast Guard

US Coast Guard Stop 7501  
2703 Martin Luther King Jr. Ave. SE  
Washington, DC 20593-7501  
Staff Symbol: CG-INV  
Phone: (202) 372-1032  
E-mail: [CG-INV1@uscg.mil](mailto:CG-INV1@uscg.mil)

16732/IIA #7300444  
04 February 2025

**COLLISION BETWEEN INDUSTRIAL VESSEL RONNIE R (O.N. 1245550)  
AND RECREATIONAL VESSEL GA6620ZT RESULTING IN THE LOSS OF  
TWO LIVES ON THE SAVANNAH RIVER IN THE VICINITY OF PORT  
WENTWORTH, GEORGIA ON AUGUST 27, 2021**

**ACTION BY THE COMMANDANT**

The record and the report of the investigation convened for the subject casualty have been reviewed. The record and the report, including the findings of fact, analysis, conclusions, and recommendations are approved subject to the following comments. This marine casualty investigation is closed.

**ACTION ON RECOMMENDATIONS**

**Recommendation 1:** Recommend Aids to Navigation and Position, Navigation, and Timing Division (CG-NAV-1) develop and implement procedures to ensure United States Coast Guard (USCG) Aids to Navigation Manual Administration COMDTINST 16500.7A is followed during and after the temporary movement of Aids to Navigation on the navigable waterways of the United States. Additionally, revise the Memorandum of Understanding (MOU) between the USCG and United States Army Corps of Engineers (USACE) titled Interagency Coordination of Aids to Navigation Needs at USACE Navigation Projects, (in effect as of June 13, 2013) to include additional funding to the USCG to assist with the temporary movement of Aids to Navigation (ATON) during dredging operations.

**Action:** I do not concur with this recommendation. The existing policy framework in Chapter 12.C.5.c of the Aids to Navigation Administration Manual (COMDTINST M16500.7A) already provides sufficient guidance through the mandatory "shall" language regarding the temporary movement of ATON on the navigable waterways of the U.S., ensuring compliance without requiring further modification.

Looking forward, the development of United States Aids to Navigation Information Management System (USAIMS) Online will improve the management of Marine Safety Information (MSI), including Notices to Mariners (NTM). USAIMS Online has the potential to enhance the system with features such as required fields for documenting temporary ATON changes and automated warnings for exceeding policy thresholds (e.g., exceeding the 180-day limit). Alignment of policy updates with these capabilities will streamline compliance and address identified concerns. Collaboration with relevant stakeholders will be critical to realizing these improvements as USAIMS Online functionality evolves.

Revisiting the existing Memorandum of Understanding (MOU) with USACE to include funding provisions would not align with the intended purpose or limitations of MOUs as defined by the Memoranda of Understanding/Agreement Instruction (COMDTINST 5216.18A). MOUs are non-binding and designed to clarify roles and responsibilities, not to serve as mechanisms for acquiring or managing funding. Pursuing supplemental agreements, such as interagency agreements (IAAs) or formal contracts, would be a more appropriate avenue to address funding needs for temporary ATON movements.

The Office of Navigation Systems (CG-NAV) has proactively addressed the ATON funding challenge by submitting a Legislative Change Proposal (LCP) that would require the USACE to reimburse the Coast Guard for costs associated with ATON relocations, changes, and related activities. This LCP is currently under review by the Department of Homeland Security for approval. If enacted, this legislative change will formalize funding mechanisms, providing a consistent and legally binding solution to the issue without relying on informal agreements such as MOUs.

**Administrative Recommendation 1:** Recommend, Marine Safety Unit (MSU) Savannah, Officer in Charge, Marine Inspection, initiate an investigation into the master's negligent operation of the RONNIE R in accordance with 46 CFR Subpart 5.101.20.

**Action:** I concur with this recommendation. MSU Savannah should initiate an administrative suspension and revocation (S&R) investigation against the master's merchant mariner credential.

**Administrative Recommendation 2:** Recommend USCG Seventh District refer this case to the Department of Justice for criminal proceedings regarding negligent vessel operations of the RONNIE R. that resulted in the deaths of two individuals.

**Action:** I note that the Seventh District's criminal referral for this case was declined by the Department of Justice. As a result, I recommend that MSU Savannah pursue the administrative S&R investigation referenced in my response to Administrative Recommendation 1.

  
W. R. ARGUIN  
Rear Admiral, U. S. Coast Guard  
Assistant Commandant for Prevention Policy



16732  
14 August 2023

**RONNIE R (ON 1245550) AND GA6620ZT COLLISION ON THE SAVANNAH RIVER  
INVOLVING INJURIES AND LOSS OF LIFE ON AUGUST 27, 2021**

**ENDORSEMENT BY THE DISTRICT COMMANDER**

The record and the report of the investigation convened for the subject casualty have been reviewed. The record and the report, including the findings of fact, analysis, conclusions, and recommendations are approved subject to the following comments. It is recommended that this marine casualty investigation be closed.

**ENDORSEMENT/ACTION ON RECOMMENDATIONS**

**Safety Recommendation 1.** Recommend Aids to Navigation and Position, Navigation, and Timing Division (CG-NAV-1) develop and implement procedures to ensure USCG Aids to Navigation Manual Administration COMDTINST 16500.7A is followed during and after the temporary movement of Aids to Navigation on the navigable waterways of the United States. Additionally, revise the Memorandum of Understanding (MOU) between the United States Coast Guard (USCG) and United States Army Corps of Engineers (USACE) titled Interagency Coordination of Aids to Navigation Needs at USACE Navigation Projects, (in effect as of June 13, 2013) to include additional funding to the USCG to assist with the temporary movement of ATON during dredging operations.

**Endorsement:** The USACE and USCG often work closely together in maintain the Marine Transportation System and ensuring safe navigation. While funding decisions are determined by the U.S. government, it is possible for the USACE to allocate funds to support the USCG's efforts in moving aids to navigation in U.S. waterways. The MOU between the USACE and the USCG should be revised to address funding and establish clear guidelines for the relocation of federal ATON. The MOU should ensure they align with the evolving needs and priorities of the agencies involved. This collaboration helps maintain the safety and efficiency of maritime transportation in the country.

**Administrative Recommendation 1.** Recommend Marine Safety Unit Savannah, Officer in Charge, Marine Inspections, initiate an investigation into the master's negligent operation of the RONNIE R in accordance with 46 CFR Subpart 5.101.

**Endorsement:** Concur with this recommendation. Marine Safety Unit Savannah will pursue suspension and revocation of the master's Merchant Mariners Credential after any criminal or Judicial Civil Penalty (JCP) determined or adjudications are finalized.

**Administrative Recommendation 2.** Recommend USCG Seventh District refer this case to the Department of Justice for criminal proceedings regarding negligent vessel operations of the RONNIE R. that resulted in the deaths of two individuals.

**Endorsement:** Concur with this recommendation. If a criminal or JCP DOJ is not supported, alternative civil actions should be considered such as Letter of Warning, Notice of Violation, or Class I/II Civil Penalty.



NICOLETTE A. VAUGHAN  
Captain, U.S. Coast Guard  
Chief of Prevention, Coast Guard District Seven

Enclosures: (1) Investigating Officer's Report  
(2) Memorandum of Understanding (MOU) between the USCG and USACE titled  
Interagency Coordination of Aids to Navigation Needs at USACE Navigation  
Projects



16732  
22 Feb 2023

**RONNIE R (ON 1245550) AND GA6620ZT COLLISION ON THE SAVANNAH RIVER  
INVOLVING INJURIES AND LOSS OF LIFE ON AUGUST 27, 2021**

**ENDORSEMENT BY THE OFFICER IN CHARGE, MARINE INSPECTION**

1. The record and the report of the investigation convened for the subject casualty have been reviewed. The record and the report, including the findings of fact, analysis, conclusions, and recommendations are approved subject to the following comments. It is recommended that this marine casualty investigation be closed.

2. Safety Recommendation:

a. **Safety Recommendation** (8.1.1) Recommend Aids to Navigation and Position, Navigation, and Timing Division (CG-NAV-1) develop and implement procedures to ensure USCG Aids to Navigation Manual Administration COMDTINST 16500.7A is followed during and after the temporary movement of Aids to Navigation on the navigable waterways of the United States. Additionally, revise the Memorandum of Understanding between the USCG and USACE titled Interagency Coordination of Aids to Navigation Needs at USACE Navigation Projects, (in effect from June 13, 2013) to include additional funding to the USCG to assist with the temporary movement of ATON during dredging operations.

**Endorsement:** Concur: The Coast Guard should establish standard procedures regarding tracking the temporary or permanent movement of Aids to Navigation. Furthermore, recommend CG-NAV-1 take this safety recommendation for action.

3. Administrative Recommendations:

a. **Administrative Recommendation 1** (8.2.1) Referral: Recommend, Marine Safety Unit Savannah, Officer in Charge, Marine Inspection, initiate an investigation into of the master's negligent operation of the RONNIE R in accordance with 46 CFR Subpart 5.101.

**Endorsement:** Concur: Marine Safety Unit Savannah's Senior Investigating Officer has been directed to complete this recommendation.

b. **Administrative Recommendation 2** (8.2.2) Referral: Recommend USCG Seventh District refer this case to the Department of Justice for criminal proceedings regarding negligent vessel operations of the RONNIE R. that resulted in the deaths of two individuals.

**Endorsement:** Concur: In accordance with paragraph 3.b. that USCG Seventh District should refer this case to the Department of Justice for criminal proceedings for negligent vessel operation.

**Action:** I am directing the Marine Safety Unit Savannah Senior Investigating Officer to commence an investigation against the Master of the RONNIE R in accordance with 46 CFR Part 5.101.



Kevin A. Broyles  
Commander, U.S. Coast Guard  
Commanding Officer  
Officer in Charge, Marine Inspection  
Marine Safety Unit Savannah

Enclosures: (1) Executive Summary  
(2) Investigating Officer's Report

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16732  
14 February 2023

## **RONNIE R (ON 1245550) AND GA6620ZT COLLISION ON THE SAVANNAH RIVER INVOLVING INJURIES AND LOSS OF LIFE ON AUGUST 27, 2021**

### **EXECUTIVE SUMMARY**

At approximately 2050 EST on August 27, 2021, the industrial vessel RONNIE R, and the recreational vessel GA6620ZT collided in the Savannah River. The RONNIE R with two crewmembers onboard, was outbound Savannah River conducting an inspection of dredge pipe lighting and the GA6620ZT, with seven persons onboard while inbound Savannah River headed to a local boat ramp. The collision caused multiple persons on the GA6620ZT to be ejected, killing two and injuring five. The RONNIE R suffered minor damage and the GA6620ZT was a total loss.

As a result of its investigation, the U.S. Coast Guard determined the collision was the initiating event for this casualty. This was followed by the ejection of five of the seven passengers on the GA6620ZT leading to the death of two individuals. Additionally, the ejection of the operator led the GA6620ZT to continue to maneuver without an operator. The casual factors that contributed to this casualty include:

1. Failure of both vessel operators to adhere to multiple Inland Navigation Rules,
2. Failure of Weeks Marine, Inc., owner and operator of the RONNIE R to establish policies and procedures for small vessel operations,
3. Failure of the operator and passengers of the GA6620ZT to wear lifejackets, and
4. Failure of the operator of the GA6620ZT to wear the installed engine cutoff switch.



16732  
14 February 2023

**RONNIE R (O.N. 1245550) AND GA6620ZT COLLISION ON THE SAVANNAH RIVER  
INVOLVING INJURIES AND LOSS OF LIFE ON AUGUST 27, 2021**

**INVESTIGATING OFFICER'S REPORT**

**1. Preliminary Statement**

1.1. A marine casualty investigation was conducted following the collision incident between RONNIE R and GA6620ZT, and this investigation report is submitted in accordance with Title 46, Code of Federal Regulations (CFR), Subpart 4.07, and under the authority of Title 46, United States Code (USC) Chapter 63.

1.2. The Lead Investigating Officer designated the owner of the RONNIE R and passengers on the GA6620ZT, as parties in interest in accordance with Title 46 CFR Subpart 4.03-10.

1.3. The United States Coast Guard (USCG) was the lead agency for all evidence collection activities involving this investigation. Other members of the investigation team included South Carolina Department of Natural Resources (SC DNR), and Georgia Department of Natural Resources (GA DNR). Although SC DNR and GA DNR share jurisdiction of the Savannah River, the incident occurred on the South Carolina side of the river and SC DNR was the lead State Agency for the incident. USCG Marine Safety Unit Savannah has jurisdiction over the entirety of the Savannah River. In accordance with the most recent Recreational Boating Safety Memorandum of Agreement between USCG and SC DNR, USCG leads any boating accident investigation that involve at least one commercial vessel and results in a fatality.

1.4. All times listed are in Eastern Standard Time using a 24-hour format and are approximate.

## 2. Vessel Involved in the Incident



Figure 1. RONNIE R. provided by SC DNR

Official Name:	RONNIE R
Identification Number:	O.N. 1245550
Flag:	U.S.
Vessel Class/Type/Sub-Type	Miscellaneous/General
Build Year:	2013
Gross Tonnage:	25 GT
Length:	47 Feet
Beam/Width:	12 Feet
Draft/Depth:	4 Feet
Main/Primary Propulsion: (Configuration/System Type, Ahead Horse Power)	Outboard/Twin 300HP
Owner:	WEEKS MARINE INC Cranford, NJ, USA
Operator:	WEEKS MARINE INC Cranford, NJ, USA



Figure 2. GA6620ZT post incident photograph taken by SC DNR

Official Name:	GA6620ZT
Identification Number:	GA6620ZT
Flag:	GA State registered
Vessel Class/Type/Sub-Type	Recreational
Build Year:	2001
Gross Tonnage:	2 GT
Length:	21 feet
Beam/Width:	7 foot 9 inches
Draft/Depth:	Approximately 18 inches
Main/Primary Propulsion: (Configuration/System Type, Ahead Horse Power)	Outboard 200HP
Owner:	Private Owner Rincon, GA, USA
Operator:	Recreational Operator Rincon, GA, USA

### 3. Deceased, Missing, and/or Injured Persons

Relationship to Vessel	Sex	Age	Status
Operator of GA6620ZT	Male	23	Deceased
Passenger 1 of GA6620ZT	Male	21	Deceased
Passenger 2 of GA6620ZT	Male	28	Injured
Passenger 3 of GA6620ZT	Female	23	Injured
Passenger 4 of GA6620ZT	Female	22	Injured
Passenger 5 of GA6620ZT	Female	21	Injured
Passenger 6 of GA6620ZT	Male	23	Injured

### 4. Findings of Fact

#### 4.1. The Incident:

4.1.1. On August 27, 2021, at 2020 hours, the GA6620ZT departed Freeport Landing in Daufuskie Island, SC en route to Houlihan boat ramp in Port Wentworth, GA with a recreational operator and six recreational passengers on board. The operator of GA6620ZT had completed a Boater Education course as prescribed by Georgia Law and held a current State of Georgia boater education certificate.

4.1.2. At 2030 hours, the vessel RONNIE R departed its landing located on Hutchinson Island, GA en route to inspect dredge subline lights in the vicinity of the Booster Barge 137 near Buoy 40 on the Savannah River. The vessel was crewed by two individuals: a commercial mariner holding a Master 100-ton coastal waters credential, serving as the vessel's Master, and an un-credentialed crewmember, serving as a mate/deckhand.

4.1.3. One passenger on the GA6620ZT noted the operator of the GA6620ZT installed and energized an all-around white light and side lights (red and green navigation lights).

4.1.4. At 2040 hours, the operator of the GA6620ZT took a video during the transit from Daufuskie Island. The video showed the vessel underway on a plane and all-around white light energized and side light tower in place. The location of the vessel on the water where the video was taken is unknown.

4.1.5. At 2053 hours, the GA6620ZT turned into the Savannah River from Fields Cut proceeding inbound on the starboard side of the channel traveling at approximately 25 miles per hour.

4.1.6. At 2055 hours, the RONNIE R passed Booster Barge 137 proceeding outbound on the Savannah River to the east, traveling at approximately 24 miles per hour. The RONNIE R moved to the port side on the inbound side of the channel and the master began visual inspection of the dredge pipe subline lights utilizing a remotely operated spotlight above the operating station between the vessel's navigation lights. The mate was seated in the cabin.

4.1.7. At 2056 hours, the master of the RONNIE R observed the GA6620ZT coming towards his vessel on a near head meeting situation but slightly to his starboard.

- 4.1.8. At 2056 hours, passengers on the GA6620ZT observed the RONNIE R almost dead ahead and yelled to the operator to affirm he saw the vessel.
- 4.1.9. Two passengers on the GA6620ZT noted they did not see any navigation lights on the RONNIE R, except for a bright light.
- 4.1.10. The RONNIE R turned to port and came to all-stop.
- 4.1.11. The GA6620ZT maintained current speed and turned to starboard.
- 4.1.12. At 2057 hours, both vessels collided at the port bow of the RONNIE R and the port side slightly forward of center console of the GA6620ZT.
- 4.1.13. The collision caused five people to be ejected from the GA6620ZT into the water, to include the operator and four of the seven passengers in the GA6620ZT.
- 4.1.14. The GA6620ZT, while still in gear with the engine running and no operator, proceeded toward the north bank of the Savannah River.
- 4.1.15. One of the passengers that remained on the GA6620ZT put the vessel's throttle into neutral shortly after the collision.
- 4.1.16. At 2059 hours, the RONNIE R hailed a nearby dredge, the J.S. CHATRY, via VHF and notified them of the incident.
- 4.1.17. By 2100 hours, the RONNIE R rescued three of the five people in the GA6620ZT that were ejected into the water.
- 4.1.18. At 2103 hours, the J.S. CHATRY hailed the USCG via VHF about the incident.
- 4.1.19. At 2104 hours, the RONNIE R picked up the two passengers remaining on the GA6620ZT.
- 4.1.20. At 2106 hours, a rescued passenger on the RONNIE R called Chatham County Emergency Management Services (EMS) to report the incident.
- 4.1.21. At 2115 hours, the GA6620ZT was reported as severely damaged (See Figure 2) and capsized in the vicinity of the incident.
- 4.1.22. At 2138 hours, a USCG small boat from Station Tybee was on-scene and confirmed with the crew of the RONNIE R that two passengers from the GA6620ZT were still in the water.
- 4.1.23. At 2211 hours, Savannah Fire Department deployed a diver in the vicinity of the capsized GA6620ZT and reported that no passengers were under or near the capsized vessel.
- 4.1.24. At 2214 hours, the RONNIE R transferred all rescued passengers to Chatham County EMS for transport to a local hospital.

4.1.25. At 2214 hours, USCG, Other Governmental Agencies, and Good Samaritans searched for the missing operator and passenger from GA6620ZT with negative results.

4.1.26. On August 28, 2021, USCG, Other Governmental Agencies, and Good Samaritans continued to search for the missing operator and passenger from GA6620ZT with negative results.

4.1.27. On August 29, 2021, at 0758 hours, a Good Samaritan reported a body floating near the entrance to Fields Cut off the Savannah River at approximately 32 04.53N latitude 080 57.61W longitude.

4.1.28. At 0832 hours, a Good Samaritan reported a body floating south of the Elba Island loading docks on the Savannah River, no latitude and longitude was provided.

4.1.29. At 0913 hours, both bodies were recovered and transported to U.S. Army Corps of Engineers (USACE) Depot on Hutchinson Island, GA.

4.1.30. At 0949 hours, Jasper County South Carolina Coroner identified the deceased as the two missing persons from the GA6620ZT.

4.1.31. The master of the RONNIE R was subject to mandatory chemical testing for evidence of drugs and alcohol use in accordance with 46 CFR Subpart 4.06. The alcohol test was conducted on August 28, 2021, at 0216 hours. The drug test was on the same day at 1101 hours. Results of the tests were negative.

4.1.32. The operator of the GA6620ZT was subject to mandatory chemical testing for evidence of drugs and alcohol use in accordance with 33 CFR Subpart 95.035. Toxicological testing was conducted on specimens (lung decomposition fluid) collected on September 3, 2021 at 1045. Results of the test were negative for drugs and inconclusive for alcohol.

4.1.33. On September 3, 2021, an autopsy was conducted by the Jasper County Coroner's Office. Preliminary cause of death of both deceased passengers on the GA6620ZT was due to drowning with contributory conditions as blunt force trauma to head, torso, and extremities.

#### 4.2. Additional/Supporting Information:

##### 4.2.1. Vessels:

4.2.1.1. The RONNIE R is a 47-foot aluminum hulled vessel powered by twin 300 horsepower outboards owned and operated by Weeks Marine Inc. The operating station is totally enclosed and the vessel has an open deck area forward to transport equipment and personnel. The vessel is equipped with an Automatic Identification System (AIS). This system is a maritime navigation safety communications system that is standardized by the International Telecommunication Union and adopted by the International Maritime Organization. AIS provides vessel information including; the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically. The information is transmitted to similarly equipped shore stations, other ships, and aircraft. Position information is broadcasted very

frequently and typically between every 2-10 seconds-depending on the vessel's speed or every 3 minutes if at anchor.

4.2.1.1.1. The RONNIE R and her crew are employed to support dredging operations on the Savannah River. Typical dredging operations include transferring workers and supplies from a landing on Hutchinson Island, GA as well as to the Dredge J.S. CHATRY and BOOSTER 187. The vessel also completed nightly inspections of the subline buoy light.

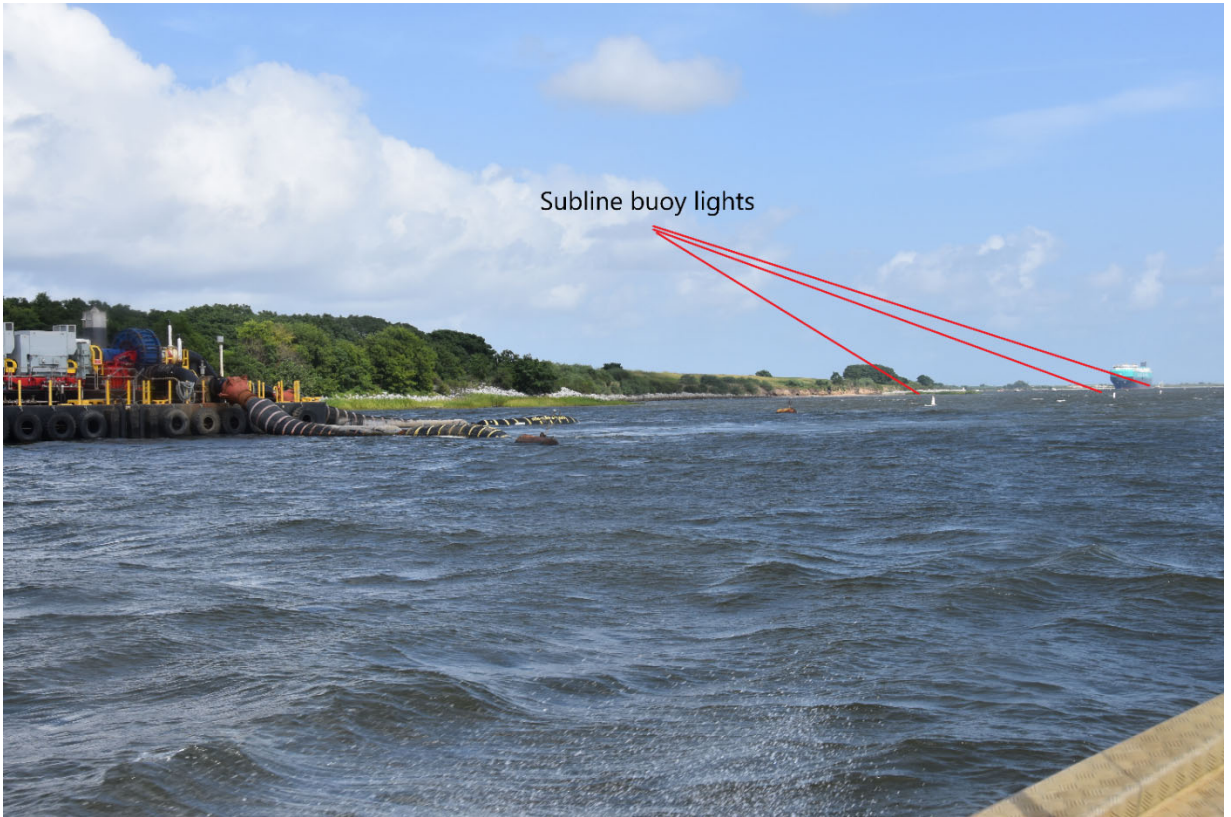


Figure 3. Subline buoy lights that were inspected the night of the incident by the RONNIE R., Buoy 40 is not pictured but located to the right of the first highlighted subline light. Booster Barge 187 is located to the left. Photograph taken by SC DNR, labels place by USCG.

4.2.1.1.2. On April 5, 2019, USCG conducted a Small Vessel Security boarding of the RONNIE R. No deficiencies were noted.

4.2.1.2. The GA6620ZT is a 21-foot center console fiberglass recreational vessel powered by one 200 horsepower outboard. The vessel was equipped with an automatic engine cut-off switch. The vessel had a Global Positioning System (GPS) Unit GARMIN model ECHOMAP Plus 93sv. The GPS was severely damaged and submerged in salt water after the incident. All attempts to extract voyage data was unsuccessful.





Figure 3. GPS from GA6620ZT. Photograph taken by SC DNR

4.2.1.2.1. The GA6620ZT has no USCG boarding history.

4.2.2. Involved personnel:

4.2.2.1. The Master of the RONNIE R holds a Merchant Mariner Credential (MMC) with an officer rating of “Master of self-propelled vessels not including auxiliary sail of less than 100 gross registered tons upon near coastal waters.” The Master of the RONNIE R began working a 12-hour work shift on August 23, 2021, which continued up to the time of the incident on August 27, 2021 (worked 12 hours in each 24 hours for four days straight). The routine shift typically began at approximately 1800 and ended at 0600 the following day.

4.2.2.2. The operator of the GA6620ZT held a current State of GA education certificate which was issued on July 20, 2013. Passengers on the GA6620ZT stated the operator drank a couple of beers on the way to Daufuskie Island but stopped drinking at dinner, no exact time was given.

4.2.3. Weather and Environment:

4.2.3.1. The weather at the time of the incident was unremarkable. Although dark, visibility was 10 miles. Temperatures were normal for the time of year and winds were light. Sunset was at 1955 and twilight ended at 2019. Low tide was at 1919 at approximately 1.45 feet above mean low water.

4.2.4. Dredging operations in the vicinity of the incident:

4.2.4.1. On August 2, 2021 the USCG issued a Local Notice to Mariners (LMN:31/21) informing mariners of the following: “Weeks Marine has placed a submerged pipeline on the North side of the Savannah River Channel between Barnwell Island Flats Lighted Buoy 50(LLNR 4970) and Long Island Crossing Range Lighted Buoy 32 (LLNR 4815). The submerged pipeline will remain and not be removed until the completion of dredging operations. All dredged material will be pumped using a combination of floating and submerged line to the assigned disposal area. Continuing until approximately December 25, 2021 the hydraulic dredge J.S. CHATRY and attendant plant will be operating between Long Island Crossing Long Island Crossing LB 33 (LLNR 4820), and Tybee Knoll Cut Range Lighted Buoy 21 (LLNR 4735). Weeks 187 ELECTRIC BOOSTER will be located approximately 1000 feet upstream of Elba Island Lighted Buoy 40 (LLNR 4855). Work limits for dredging operations along the Savannah River Channel will be bound by the following approximate positions: Tybee Knoll Cut Range Lighted Buoy 21 (LLNR 4735) approximate position: 32-02-05.33N / 80-52-23.04W, and ACL TURNING BASIN LIGHT 60 (LLNR 5020) approximate position: 32-04-52.182N / 81-04-14.644W. Dredging operations will continue 24/7. The dredge will monitor VHF-FM Channels 13 and 16. Mariners are urged to use extreme caution and transit the area at their slowest safe speed to create minimum wake after passing arrangements have been made.”

4.2.4.2. Location of Booster 187 and submerged dredge lines:

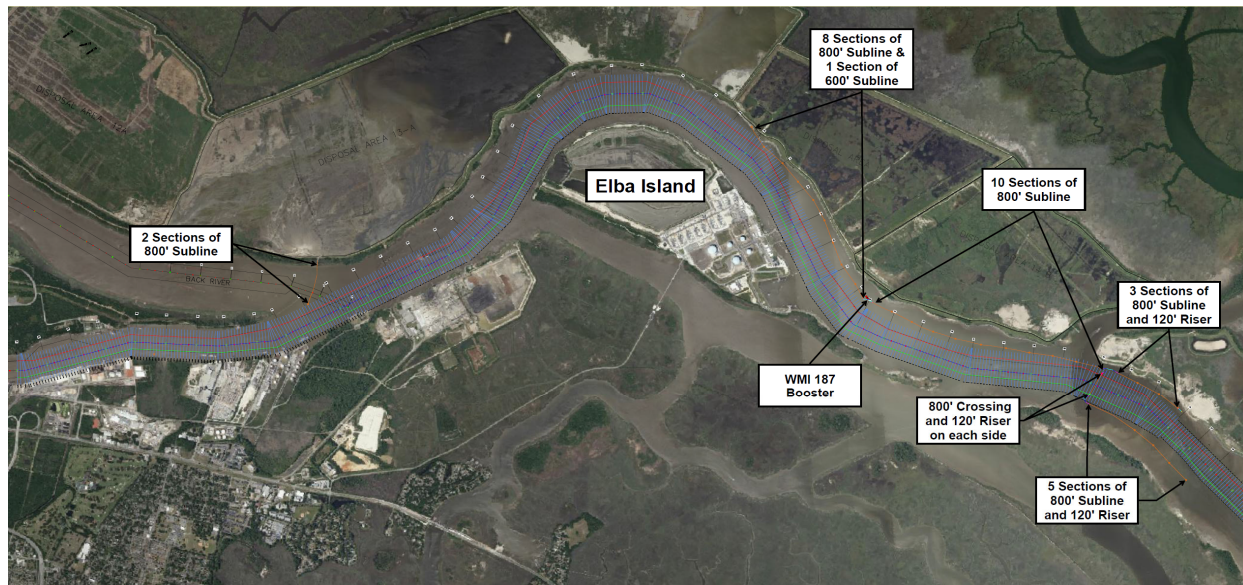


Figure 4. Booster location and subline provided by USACE, labels placed by USCG.

4.2.4.3. Aids to Navigation, Elba Island Lighted Buoy 40:

4.2.4.3.1. Aids to Navigation (ATON) are structures utilized by mariners to determine positions and safe courses. The locations of ATONs are shown on published nautical charts, USCG published light list, and most marine GPS systems. On November 10, 2020, Weeks Marine was authorized by USCG District 7 Waterways Management Division to move Buoy 40 from its original published location at 32 04

40.979N, 080 58 49.219W to 32 04 43.436N, 080 58 50.330W in preparations for dredging operations. Weeks Marine stated in their request that they would move the buoy back to its original location in a few days and notify the USCG once it was completed. On November 15, 2020, Weeks Marine emailed the USCG stating they successfully moved Buoy 40 to the temporary location and would return it to its original location once the dredge surveys were conducted which was scheduled to be completed as early as November 16, 2020. The Buoy was not moved back to its original location until after the incident on August 27, 2021. Although required by USCG policy (COMDTINST 16500.7A), the temporary location was not published in the Local Notice to Mariners.

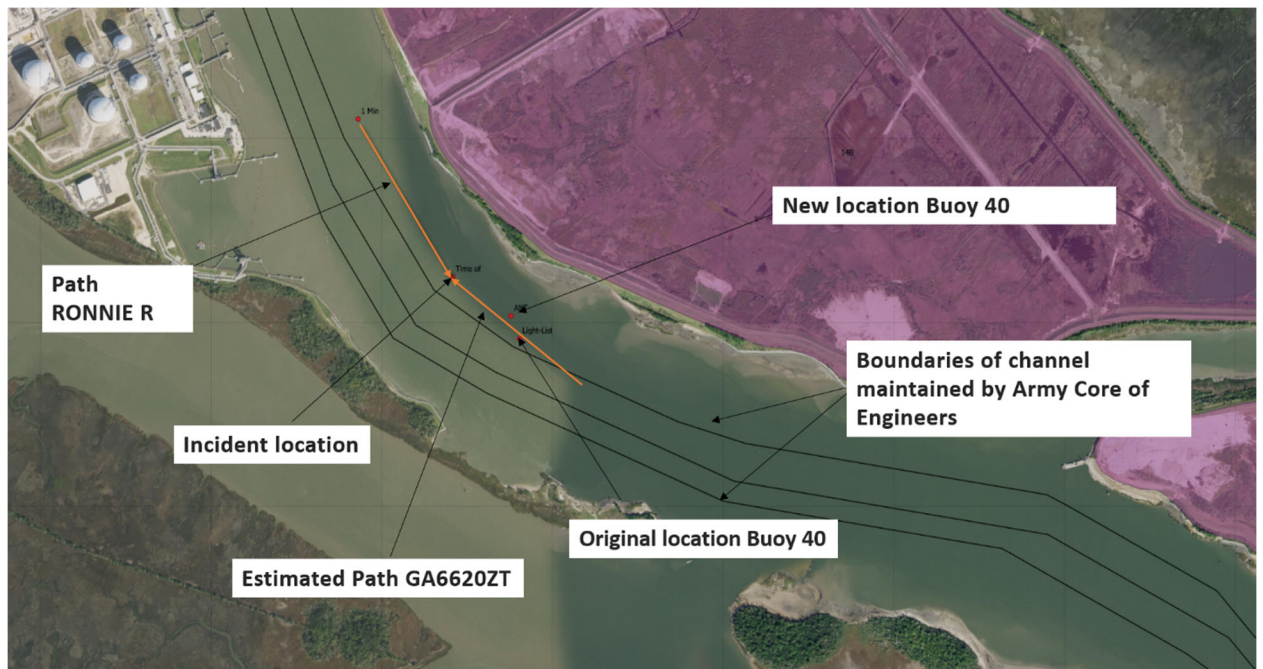


Figure 5. Location of Buoy 40, overlay provided by USACE, labels placed by USCG.

#### 4.2.5. Background lighting and visibility of vessel navigation lighting in the vicinity of the incident:

4.2.5.1. Two passengers on the recreational vessel stated they did not observe navigation lights on the RONNIE R prior to the collision. The Master of the RONNIE R stated the navigation lights were energized and USCG Investigators observed the next morning that the navigation lights were operable. On September 29, 2021, USCG Investigators re-created the conditions of the incident by observing the RONNIE R on the same approach it took the night of the incident. Multiple runs by the RONNIE R were conducted including one at sunset and one at twilight. Runs were also completed with the RONNIE R's spotlight on and off. USCG Investigators made the observations from a USCG vessel drifting at the approximate location of the GA6620ZT the night of the incident. See figures 6, 6b, 7 and 7b.



Figure 6. Photograph of RONNIE R. approaching buoy 40 approximately 8 minutes after twilight end with spotlight energized during the re-creation of the incident. Note: Lighting enhanced due to advanced camera lens taken by USCG Investigator.



Figure 7. Photograph of RONNIE R. approaching buoy 40 approximately 15 minutes after twilight end. Note: Unenhanced photograph taken by USCG Investigator.



Figure 6b. RONNIE R. highlighted in red box. Note: Background light are from waterfront facility. Photograph taken by USCG Investigator.

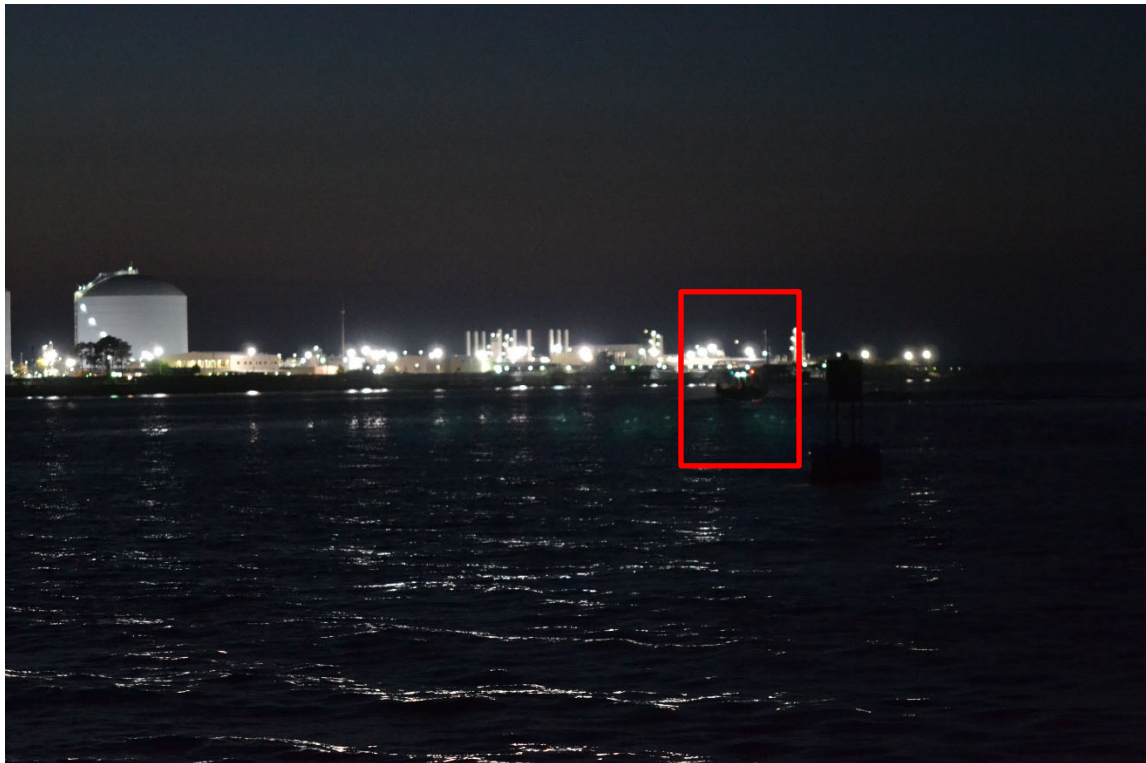


Figure 7b. . RONNIE R. highlighted in red box. Photograph taken by USCG Investigator.

4.2.5.2. The GA6620ZT was inspected by USCG investigators after it was recovered from the water after the incident. The all-around white light extension pole was damaged but in place and the side light extension pole was missing. The rocker switch for the all-around white light and side lights was in the “on” position.

#### 4.2.6. Operation Policy for RONNIE R:

4.2.6.1. The owner/operator of the RONNIE R did not have a specific policy or procedures for small boat night operations or a policy regarding work hours and rest periods for vessel operators and is not required by existing laws or regulations.

#### 4.2.7. Lifejacket use:

4.2.7.1. Although the GA6620ZT had the appropriate number of required lifejackets on the boat at the time of the incident, no one on board was wearing a lifejacket. Current Federal or State law do not require adults to wear lifejackets on recreational vessels.

#### 4.2.8. Engine cut off switch:

4.2.8.1. An Engine Cut Off Switch (ECOS) was installed and under Federal Law in effect as of April 1, 2021, ECOS is required to be worn by the operator while on plane or above displacement speed. Planing is when a vessel builds up enough speed, at which point hydrodynamic lift rather than buoyancy is supporting the vessel. Inspection of the GA6620ZT after the incident showed the ECOS clip still in place with the lanyard hanging down at the operator station. A passenger on the GA6602ZT stated after the collision he noticed the engine was still running and in gear so he put the throttle into the neutral position.

## 5. Analysis

5.1. There was a failure to follow 33 CFR Subpart B 83.05 ‘Look-out’ requirements of Navigation Rule 5. Specifically, it states every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

5.1.1. Prior to the collision, the master of the RONNIE R was operating the vessel, monitoring the radar, and inspecting the dredge subline lights at night while proceeding at approximately 24 miles per hour (as recorded by the AIS) outbound on the inbound side of the channel. The deckhand/mate was seated in the cabin and not utilized to maintain proper look-out. The deckhand/mate stated he was unaware the collision took place until the operator of the RONNIE R informed him of the incident in violation of Rule 5. Additionally, Weeks Marine, the owner/operator of the RONNIE R., had no written policy or guidance for small vessel operation in times of limited visibility.

5.1.2. Shortly before the collision, the operator of the GA6620ZT had taken a “selfie” video which he turned completely around while traveling on plane in violation of Rule 5.

5.2. There was a failure to follow 33 CFR Subpart B 83.06 Safe Speed Rule 6. “Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.” These prevailing conditions on the night of the incident included: darkness, presence of background lights from shore, and the presence of equipment from dredging operations. Witnesses from both vessels indicated they spotted each other from a distance of approximately 50 to 100 yards. Investigation analysis indicates that vessels on a head-on situation traveling at 15 miles per hour at 50 yards apart would have less than 3.5 seconds to take action to avoid a collision.

5.2.1. According to RONNIE R’s AIS, the vessel was traveling at approximately 24 miles per hour in violation of Rule 6.

5.2.2. A witness on the GA6620ZT stated the vessel slowed down some to listen to music and dance. The Master of the RONNIE R stated the GA6620ZT was headed toward him at a high rate of speed. The exact speed of GA6620ZT was unknown because its GPS was destroyed during the incident. However, the video taken by the operator of the GA6620ZT minutes earlier showed the vessel “on plane”. The investigation analysis indicates that vessels of this type, load, and horsepower will typically travel 25 to 35 miles an hour while on plane in violation of Rule 6.

5.3. There was a failure to follow 33 CFR Subpart B 83.08, Acts to Avoid Collision Rule 8 (e). The rule indicates that if necessary to avoid collision, a vessel shall slacken her speed or by stopping or reversing her means of propulsion.

5.3.1. The investigation analysis indicates that the GA6620ZT proceeded at current speed while attempting to avoid collision in violation of Rule 8(e).

5.3.2. The RONNIE R came to all stop in accordance with Rule 8(e).

5.4. There was a failure to follow 33 CFR Subpart B 83.09, Narrow Channels Rule 9. The Rule indicates that a vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.

5.4.1. The RONNIE R was outbound Savannah River outside the channel with the closest shore to her port side in violation of Rule 9.

5.4.2. The GA6620ZT was inbound Savannah River outside the channel with the closet shore to her starboard side in accordance with Rule 9.

5.5. There was a failure to follow 33 CFR Subpart B 83.14, Head on Situation Rule 14 (a) and (c). The Rule states in paragraph (a) that unless otherwise agreed, when two power-driven vessels are meeting on reciprocal or nearly reciprocal courses to involve risk of collision, each shall alter her course to starboard so that each shall pass on the port side of the other. Paragraph (c) states that when a vessel is in any doubt as to

whether such a situation exists, she shall assume that it does exist and act accordingly by altering their course to starboard.

5.5.1. The RONNIE R turned to port to avoid the collision in violation of Rule 14.

5.5.2. The GA6620ZT turned to starboard to avoid the collision in accordance with Rule 14.

5.6. There was a failure to follow 33 CFR Subpart C 83.20, Lights and Shapes Rule 20. The Rules concerning lights (83.20 through 83.31) shall be complied with from sunset to sunrise. Specifically, during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the lights specified in these Rules. Such lights shall not impair their visibility or distinctive character or interfere with the keeping of a proper lookout.

5.6.1. The RONNIE R had a spotlight energized above the operating station between its navigation lights at the time of the incident in violation of Rule 20. During a reenactment by USCG Investigators of the path the RONNIE R traveled on the night of the collision, it was noted that the lighting at a nearby facility could make the navigation lights of approaching vessels difficult to observe. Additionally, the RONNIE R's spotlight was energized for inspection of the subline buoy lights, this further impaired the visibility of its required navigation lights as indicated in Figures 6, 6b, 7, and 7b.



Figure 8. Spotlight used by master of RONNIE R. to inspect subline lights, taken by USCG.

5.7. Use of alcohol and dangerous drugs while operating a vessel:

5.7.1. The master of the RONNIE R. submitted to a post casualty drug and alcohol test with negative results.



5.7.2. USCG Investigators requested an autopsy and toxicological screening via the Jasper County South Carolina Coroner for the operator of the GA6620ZT. The Medical University of South Carolina (MUSC) conducted the autopsy and collected biological samples from the operator of the GA6620ZT. In the autopsy report, MUSC remarked the operator's bladder was empty and no urine samples were collected. Additionally, in separate correspondence, MUSC stated they were unable to collect vitreous fluid (clear fluid that fills the space between the lens and retina of the eyeball). Two samples of lung decomposition fluid were collected by MUSC and sent to NMS Labs, in Horsham, PA for analysis.

5.7.3. Testing indicated no dangerous drugs but did discover the presence of ethanol 299 mg/dL, caffeine, and cotinine (metabolite of nicotine). The results were reviewed by a certified Forensic Toxicologist who verified ethanol was present in the operator's lung decomposition fluid. Although ethanol was found, they stated without vitreous fluid for comparison (it is not as susceptible to postmortem biological process), it would not be possible to ascertain if the ethanol present was attributed to ante mortem ingestion (ingestion of alcohol while alive), postmortem processes of the biological specimen (ethanol produced by bacterial decomposition of cells after death), or a combination of both. Therefore, the exact blood alcohol level of the operator could not be determined from the results of the toxicological analysis.

5.7.4. Witnesses on the GA6620ZT stated they observed the operator of the GA6620ZT consume a "couple of beers" on the way to Daufuskie earlier in the day. A video taken shortly before the collision shows the operator's right eye closed and left eye partially closed. In 33 CFR Subpart 95.020 it states an individual is under the influence when: the individual is operating a recreational vessel and has a Blood Alcohol Concentration (BAC) level of .08 percent or more, by weight, in their blood or the individual is operating any vessel and the effect of the intoxicant(s) consumed by the individual on the person's manner, disposition, speech, muscular movement, general appearance or behavior is apparent by observation. Although admission of consuming alcohol and droopy eyelids are indicators of intoxication, BAC could not be determined through biological testing and a Field Sobriety Test could not be performed. Therefore, it cannot be determined if the operator was under the influence of alcohol as defined in 33 CFR Subpart 95.020.

#### 5.8. Temporary placement of Buoy 40:

5.8.1. The Master of the RONNIE R stated he had to follow a course on the channel side of Buoy 40 (Buoy 40 was still off station, See Section 4.2.4.3) due to the presence of a sand bar (shallow water) while headed outbound Savannah River and conducting the subline light inspection. He also stated as he passed Buoy 40, he would angle back toward the subline lights, outside the channel near the shore and complete his inspection. The actual track of the GA6620ZT was not attainable due to the destruction of its GPS unit. The projected track GA6620ZT is based off the location of the incident and the Master of the RONNIE R's statement that he saw the GA6620ZT dead ahead, slightly off to his starboard side. This indicates that the vessel was on a path following the inbound side of the channel with the temporary position of Buoy 40 on its starboard side (See Figure 5). It is unclear if the track of GA6620ZT was affected by the temporary placement of Buoy 40 North West of its

published location. However, if the operator of the GA6620ZT was following the red buoys on the inbound side of the channel and Buoy 40 was in its published location, GA6620ZT's track that night would be approximately 75 to 100 yards to the Southeast (See Figure 5).

## **6. Conclusions**

### 6.1. Determination of Cause:

6.1.1. The initiating event occurred when the RONNIE R and the GA6620ZT collided. Contributing factors to this event were:

6.1.1.1. There was a failure of both operators to maintain a proper lookout.

6.1.1.2. There was a failure of both operators to observe a safe operating speed with the prevailing conditions.

6.1.1.3. There was a failure of the operator of the GA6620ZT to come to all stop to avoid collision.

6.1.1.4. There was a failure of the Master of the RONNIE R to proceed on the outer limit of the channel which lay to her starboard side.

6.1.1.5. There was a failure of the Master of the RONNIE R. to turn to starboard when meeting another vessel on a head on or near head on course.

6.1.1.6. The Master of the RONNIE R displayed a spotlight that impaired the visibility of navigation lights.

6.1.1.7. Lack of Policy. The owner and operator of the RONNIE R, Weeks Marine, Inc. had no formal written policy regarding small vessel operations. Specifically, there was lack of policy to: (1) follow prescribed Rules of the Road, (2) practice proper bridge resource management, or (3) set limits on crewmember work hours.

6.1.2. After the collision, five people (four of the seven passengers and the operator of the GA6620ZT) were ejected with all of them sustaining injuries. Contributing factors to this event were:

6.1.2.1. The failure of both operators to observe a safe speed with the prevailing conditions.

6.1.3. The operator and one passenger on the GA6620ZT suffered major injuries and drowned. Contributing factors to this event were:

6.1.3.1. Failure to wear lifejackets.

6.1.4. After the collision, the GA6620ZT's engine was running in gear and continued to make way without an operator.

6.1.4.1. Failure to wear installed ECOS clip.

6.2. Evidence of Act(s) or Violation(s) of Law by Any USCG Credentialed Mariner Subject to Action Under 46 USC § 77:

6.2.1. The USCG alleges that the Master of the RONNIE R acted in a negligent manner by not following prescribed Navigation Rules and Regulations, specifically:

6.2.1.1. 33 CFR Subpart B 83.05, the Master did not use all available means to maintain a proper look-out.

6.2.1.2. 33 CFR Subpart B 83.06, the Master was travelling at an unsafe speed and unable to avoid collision.

6.2.1.3. 33 CFR Subpart B 83.09, the Master was traveling on the outer limit of the channel that laid to the vessel's port side.

6.2.1.4. 33 CFR Subpart B 83.14, the Master turned to port to avoid head on collision.

6.2.1.5. 33 CFR Subpart C 83.20, the Master energized a spotlight after sunset that impaired the visibility of navigation lights.

6.3. Evidence of Act(s) or Violation(s) of Law by USCG Personnel, or any other person: There was no evidence of violations by any other person.

6.4. Evidence of Act(s) Subject to Civil Penalty: 46 USC § 7703 authorizes Suspension and Revocation (S&R) action against a merchant mariner's credential if, while acting under the authority, the mariner commits an act of negligence. There was evidence to suggest, the Master of the RONNIE R. operated in a negligent manner by failing to follow prescribed Navigation Rules and Regulations.

6.5. Evidence of Criminal Act(s): In accordance with 18 USC § 1115, "Every captain, engineer, pilot, or other person employed on any steamboat or vessel, by whose misconduct, negligence, or inattention to his duties on such vessel the life of any person is destroyed, and every owner, charterer, inspector, or other public officer, through whose fraud, neglect, connivance, misconduct, or violation of law the life of any person is destroyed, shall be fined under this title or imprisoned not more than ten years, or both." There is evidence to suggest that the Master's negligent operation of the RONNIE R contributed to the deaths of two persons.

6.6. Need for New or Amended U.S. Law or Regulation: Laws and regulation currently exist for all the contributing factors for the initiating event and subsequent events. No new laws are recommended.

6.7. Unsafe Actions or Conditions that Were Not Causal Factors:

6.7.1. Engine Cut Off Switch.

6.7.1.1. Shortly after the collision a passenger that was not ejected from the GA6620ZT stated he noticed the engine was still in gear (propeller still spinning) and put the engines throttle control into the neutral position. One passenger on the GA6620ZT stated when she was ejected, she swam up to

the surface and her side hit the engine's blades or propeller which was turning slowly. Had the first passenger not placed the vessel's engine in neutral, the surfacing passenger could have sustained life threatening injuries. Although the ECOS clip was not worn by the operator of the GA6620ZT, it did not contribute to the initiating event or subsequent events.

#### 6.7.2. Placement of Buoy 40

6.7.2.1. The USCG maintains the ATON system to assist mariners in the process of navigation. In accordance with 33 CFR Subpart 62.21, "The Coast Guard makes reasonable efforts to inform the navigator of known discrepancies, and to correct them within a reasonable period of time, depending upon resources available. Occasionally, a temporary aid to navigation, which provides different but similar service, is deployed until permanent repairs can be made to the original aid. Notification of such temporary changes is made through the notice to mariners' system." In November of 2020, Buoy 40 was moved by Weeks Marine from its published location and although Weeks Marine stated in an email dated November 15, 2020, they would move Buoy 40 back to its original location as early as November 16, 2020, it was not moved back until after the incident. Additionally, the USCG did not make the required notice to the public per the USCG Aids to Navigation Manual Administration COMDTINST 16500.7A when Buoy 40 was moved to its temporary location on November 15, 2020.

### 7. **Actions Taken Since the Incident**

7.1. No actions have been taken to date.

### 8. **Recommendations**

8.1. Safety Recommendation:

8.1.1. Safety Recommendation 1: Recommend Aids to Navigation and Position, Navigation, and Timing Division (CG-NAV-1) develop and implement procedures to ensure USCG Aids to Navigation Manual Administration COMDTINST 16500.7A is followed during and after the temporary movement of Aids to Navigation on the navigable waterways of the United States. Additionally, revise the Memorandum of Understanding between the USCG and USACE titled Interagency Coordination of Aids to Navigation Needs at USACOE Navigation Projects, (in effect as of June 13, 2013) to include additional funding to the USCG to assist with the temporary movement of ATON during dredging operations.

8.2. Administrative Recommendations:

8.2.1. Referral 1: Recommend, Marine Safety Unit Savannah, Officer in Charge, Marine Inspection, initiate an investigation into of the master's negligent operation of the RONNIE R in accordance with 46 CFR Subpart 5.101.

8.2.2. Referral 2: Recommend USCG Seventh District refer this case to the Department of Justice for criminal proceedings regarding negligent vessel operations of the RONNIE R. that resulted in the deaths of two individuals.



GS-12, U.S. Coast Guard  
Investigating Officer