

U.S. Department of  
Homeland Security

United States  
Coast Guard



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5830  
26 September 2016

## MEMORANDUM

From: *ASMcKinley 27 Sep 16*  
A. S. McKinley, RDML  
Board President

To: CG LANTAREA (LANT-00)

Subj: MAJOR INCIDENT INVESTIGATION (MII) INTO THE CIRCUMSTANCES  
SURROUNDING THE LOSS OF LIFE DURING THE F/V ORIN C SAR CASE IN  
THE SECTOR BOSTON AOR ON 3 DECEMBER 2015

Ref: (a) CG LANTAREA (LANT-00) memo 5830 of 10 Dec 15  
(b) Major Incident Investigation Manual, COMDTINST M5830.4  
(c) Boat Ops training Volume I, COMDTINST M16114.32C  
(d) Boat Ops training Volume II, COMDTINST M16114.33B  
(e) The U.S. Coast Guard Addendum to the United States Search and Rescue  
Supplement (NSS) to the International Aeronautical and Maritime Search and  
Rescue Manual  
(f) 47 Operators Handbook, COMDTINST M16114.25B  
(g) Boat Crew Seamanship Manual, COMDTINST M16114.5C

### 1. Executive Summary:

On 03 December 2015, Sector Boston received a radio call from the F/V FOXY LADY requesting permission to cross through a closed fishing area in order to assist the F/V ORIN C. The ORIN C had lost power approximately 20 miles east of Cape Ann, MA. The FOXY LADY offered to tow the ORIN C to Gloucester, MA. Once the FOXY LADY was on scene, they began a stern tow of the ORIN C. During several hours of towing, the line parted multiple times. After a large wave crashed into the ORIN C, breaking through the pilothouse windows, the ORIN C began taking on water. The Coast Guard Station Gloucester launched the CG47259, a 47' Motor Life Boat, and Air Station Cape Cod launched CG0630, a MH-60T helicopter, to assist. Once the CG47259 arrived on scene, they passed a pump to the ORIN C to assist with dewatering efforts. The dewatering efforts initially appeared to be keeping the water flow out of the ORIN C. The CG47259 picked up the tow from the FOXY LADY and began towing the ORIN C towards Gloucester in 10 foot seas and 30 knot winds. After an hour, the crew of the ORIN C radioed that they were experiencing difficulty getting suction to keep the pump running. The decision was made to cut the tow, have the three ORIN C crewmembers don immersion suits, and enter the water for recovery by the CG47259.

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The three crewmembers donned their immersion suits. The first two entered the water and were recovered in less than three minutes. The third crewman appeared to attempt to climb higher on the ORIN C rather than enter the water. As the ORIN C's stern became submerged, the third crewman entered the water and began to swim away from the CG47259. The ORIN C sank. The CG47259 maneuvered around the debris field and deployed a surface swimmer to recover the third crewman who was unresponsive. Cardiopulmonary resuscitation (CPR) was initiated and a medevac was requested. The flight surgeon advised not to conduct a medevac due to the fact that it would interrupt CPR. Once on scene, CG6030 attempted to deliver a rescue swimmer with an Automatic External Defibrillator (AED) but was unsuccessful due to the heavy weather. The crew on the CG47259 continued with CPR and return to port. After one hour of CPR without success the flight surgeon recommended that CPR should be suspended. About an hour later, the CG47259 moored at Station Gloucester at 2225 local time where the third crewman was pronounced deceased.

The MII Board President found that progressive flooding from an unknown source on the ORIN C caused the vessel to sink and forced the crew to go into the water. Furthermore, there were contributing factors in this case. After initially dewatering the vessel, difficulty was experienced by the ORIN C crew in maintaining suction on the P6 pump. They were not able to keep the pump running continuously in a manner to prevent the progressive flooding. Sea conditions at the time of the ORIN C sinking prevented the Coast Guard CG47259 rescue boat from coming alongside the ORIN C to make a direct recovery of the crew. The last crewman from the ORIN C to enter the water was disorientated and unresponsive after entering the water. This factor delayed his recovery by the CG47259.

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Mr. Doug Canney

~~F/V ORIN C 03 Dec 15 prior to tow by F/V FOX Y LADY~~

## 2. Preliminary Statement:

- a. *Authority:* Per reference (a) and in accordance with reference (b), this investigation was convened by, Commander, U. S. Coast Guard Atlantic Area.
- b. *Purpose:* This is an investigation convened to inquire into the facts surrounding the Coast Guard mishap involving the loss of life during the F/V ORIN C SAR case in the Sector Boston AOR on 03 December 2015, to prepare a publically-releasable report, and to gather and preserve all available evidence for use in litigation, claims, disciplinary actions, administrative proceedings, and for other purposes.
- c. *Board Composition:*
  1. Board President: RDML A. S. McKinley
  2. Legal Advisor: LCDR T. J. McGill
  3. Subject-Matter Expert: BMC D. R. Hansen
  4. Recorder/Admin: LT J. D. Lavallee
- d. *Conduct of the Board:* The Board began making travel arrangements and requested documentary evidence immediately upon receipt of the Convening Order on Thursday,

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11 December 2015. All board members convened at Sector Boston on 14 December 2015. The Board reviewed all available documentary evidence. The Board physically inspected the Motor Lifeboat CG47259. The Board interviewed all CG47259 crewmembers, the Sector Boston duty watch standers, the Command staff at Station Gloucester, the Aircraft Commander and rescue swimmer of CG6030, the Air Station Cape Cod Flight Surgeon and the Master of F/V FOXY LADY. The Board attempted multiple times to interview the two surviving crew of the F/V ORIN C with negative results. No Miranda/Article 31(b) rights were administered. The Board members returned to their respective permanent units on Saturday, 19 December 2015 and continued to analyze the evidence and prepare the report. Support from the personnel at Sector Boston and Station Gloucester was outstanding.

- e. *Coordination:* During the course of the investigation, the MII Team met with the President of the Mishap Analysis Board, (MAB). The extent of the interaction consisted of the MAB providing the MII Team “Part A, non-privileged” information only. The MII president provided the MAB with video evidence as well. The MII Team also coordinated with the Sector Boston Marine Casualty Investigator.

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**4. Findings of Fact:**

a. *Accident Summary:* On 03 December 2015, the F/V ORIN C lost engine power 20 nautical miles (NM) east of Cape Ann, MA. The F/V FOXY LADY attempted to tow the ORIN C for several hours. The tow line parted multiple times and the ORIN C suffered damage to their pilothouse windows and roof by a wave and began taking on water. A Coast Guard Motor Lifeboat CG47259 from Station Gloucester responded and passed a pump to dewater the vessel. The CG47259 then took over the tow. After several more hours, the flooding on the ORIN C increased and caused the vessel to begin to sink. All three crewmen entered the water in immersion suits as the ORIN C sank. The CG47259 recovered all three crewmen. One crewman was unresponsive. CPR was administered for an hour with negative results. (Exhibit 3, Tabs C, D, E and L)

b. *Background:*

1. The F/V FOXY LADY is a commercial fishing boat home ported in Gloucester, MA. The vessel is 45 feet in length and has a single 400 hp diesel engine. (Exhibits 2, 3)
2. The F/V ORIN C was a commercial fishing vessel home ported in Gloucester, MA. The vessel was built in 1976, was 51.4 feet in length, 28 gross tons and had a single 300 hp diesel engine. The vessel's call sign was WDC6351. The vessel was constructed of wood. The vessel was exempt from Commercial Fishing Vessel Examination inspection requirements (Exhibits 2, 3).
3. A 07 May 2014 article in *FisheryNation.com* indicated that the F/V ORIN C had run aground near Ten Pound Island in Gloucester Harbor and had suffered damage to her keel. The keel was repaired at the Gloucester Marine Railways on Rocky Neck. (Exhibit 15)

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Photo from FisherlyNation.com article showing keel damage

c. *Sequence of Events:*

1. At 0915 (all times local) on 03 December 2015, Coast Guard Sector Boston receives a radio call from the F/V FOXY LADY requesting permission to travel through a closed fishing area to assist F/V ORIN C. The ORIN C had lost engine power approximately 20 NM east of Cape Ann, MA. The Sector Boston watch gave FOXY LADY permission to cross through the area. The Sector also established a 30 minute comms guard with the FOXY LADY. The weather forecast called for gale force winds. However, the four NOAA buoys in the vicinity indicated 3-5 foot seas and winds less than 22 knots (KTS). (Exhibits 3, 8)
2. At approximately 1200 the FOXY LADY arrived at ORIN C's location. The two captains talked via radio. ORIN C's Captain explained that he thought that water in his fuel has caused his engine to shut down but he is otherwise fine. He reported that he has 10,000 lbs of slime eel catch onboard. The ORIN C requested a tow back to Gloucester. The Captain of the FOXY LADY agreed to tow ORIN C. The Captain

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of the FOXY LADY described the weather as 5-7 foot seas with winds at 15-20 knots. He also stated that the weather was deteriorating. The Captain on the FOXY LADY stated he felt that with the winds coming from the west, the closer he could get the ORIN C to shore, the more the waves would diminish due to a reduced fetch. (Exhibits 3, 5)

3. At approximately 1215 FOXY LADY began a tow using approximately 250 feet of stranded synthetic long line. However, the tow line parted at least three times, shortening the length of the tow line to under 100 feet. (Exhibits 3, 10)



Tow by FOXY LADY

Mr. Doug Canney

4. At 1449 Sector Boston received a call from FOXY LADY stating that the tow line had parted again and a large wave had broken the pilot house window and part of the roof structure. ORIN C reported that they were taking on water but were able to pump the water out and they were not in distress. The Sector Boston Command Center watch briefed the Command Duty Officer (CDO), Search and Rescue Mission Coordinator (SMC), and the Sector Commander. The Command Center directed that a pre-notification call be made to Air Station Cape Cod in case a helicopter would be needed. (Exhibits 3, 5)
5. At 1502 Sector Boston directed Station Gloucester to launch a 47' MLB to assist the ORIN C. Station Gloucester's CG47259 MLB had just finished a two hour harbor familiarization and returned to the Station to switch out some crew members. The mission risk analysis was completed. Sector recorded the score as 26 (amber) with 3 for supervision, 4 for planning, 5 for crew, 5 for crew fitness, 4 for environment and 5 for evolution. Several of the crew indicated the GAR score was in the amber initially and mitigated somewhat by having a heavy weather coxswain onboard. The CG47259 departed the Station with nine crew (three crew were onboard for 'break in' training) to assist the ORIN C with a tow. ETA was 1.5 hours. (Exhibits 3, 5)

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A Coast Guard 47' Motor Lifeboat – stock image

6. NOAA buoy weather data indicated that conditions at Gloucester upon departure of the CG47259 from the Station were 4 foot seas, 23 knots of wind, clear and 45 degree air temperature. Buoy data for weather on scene at the ORIN C 20 NM offshore indicated 6-7 foot seas, 24-29 knot winds. (Exhibit 8)
7. The coxswain of CG47259 briefed his crew on the heavy weather forecast prior to departure. (Exhibit 3)
8. At 1617, the ORIN C advised Sector Boston that they were taking on water and their pumps had stopped working. The source of water ingress was unknown. (Exhibit 3)
9. At 1650, the CG47259 arrived on scene with ORIN C. The coxswain stated that there were no 'telltale' signs that the ORIN C was in jeopardy of foundering. The boat seemed to roll well in the sea conditions and did not have any observable delayed righting moment. (Exhibit 3)
10. The Captain of ORIN C initially advised that the water level was at the engine air cleaner. The CG47259 stated that they would pass a P6 pump to ORIN C in a float can using a tending line. (Exhibit 3)





P6 pump w/discharge hose – stock image



P6 Pump in a float can – stock image

11. At 1717, the CG47259 successfully passed the P6 pump to ORIN C; at 1737 the ORIN C crew reported that the pump was working and dewatering the boat. (Exhibit 3)
12. At 1813, the CG47259 took the ORIN C in a stern tow at 3 knots with 800 feet of tow line attached to a bit on the bow of ORIN C. The coxswain described sea conditions as 10 foot seas and 30 knot winds from the west. (Exhibit 3)
13. At 1845, the ORIN C advised that they were having problems with the P6 pump. It seemed to have trouble keeping suction. Crew on CG47259 helped troubleshoot the pump problem over the radio and helped the ORIN C discover that several rags were blocking the screened intake portion of the suction hose. (Exhibit 3)
14. At 1914, the ORIN C reported dewatering efforts have bro [redacted] bottom of the oil pan on the engine. (Exhibit 3)
15. At 1942, the ORIN C reported that they were having difficulty keeping the pump running. The ORIN C crew advised that more water seemed to be coming in and the water level was now at the exhaust on the engine. (Exhibit 3)
16. At 1954, the coxswain told the ORIN C that his primary concern were the three lives onboard and not the fishing boat. He asked the Captain of the ORIN C if his vessel is safe. (Exhibit 3)
17. At 2002, the Captain on the ORIN C stated that the water had risen to the galley and that the vessel was no longer safe. (Exhibit 3)



P6 Suction hose Stock image

18. At 2004, the coxswain advised that he was going to break the tow and directed the ORIN C crew to don their immersion suits. CG47259 began to back down and retrieve the tow line and finally cuts the tow line. (Exhibit 3)



Example of immersion suit – stock image

19. At 2013, the coxswain directed the crew of the ORIN C on how to enter the water. The plan was to have one crew at a time go into the water so that the CG47259 could retrieve them. The coxswain also noticed that the ORIN C seemed to have a slower righting moment and was laboring to starboard. (Exhibit 3)
20. At 2017, the first crewman from the ORIN C entered the water in an immersion suit and was recovered by the CG47259 in less than three minutes. Sea state was estimated by the coxswain to be 10 feet. (Exhibit 3)
21. At 2018, the bow of the ORIN C began to rise and the stern to settle. (Exhibit 3)
22. At 2020, the coxswain ordered the remaining two crew on ORIN C to get into the water for recovery. The second crewman entered the water and was recovered in less than three minutes. The third crewman (identified as the deceased) hesitated to leave the boat. The stern of ORIN C was awash. The third crewman appeared to climb higher on the ORIN C and entered the water. (Exhibit 3)
23. At 2022, the third crewman began to swim away from the CG47259 on his back using a backstroke. The crew called to him to attempt to direct him to the CG47259 now surrounded by debris. The ORIN C sank. (Exhibit 3)
24. At 2023, the third crewman appeared to be unresponsive, floating on his back with his face upwards. The third crewman was observed with his face out of the water most of the time, but occasionally wave motion caused his face to dip under water. The CG47259 maneuvered through the debris field in an attempt to recover him. The coxswain directed a Coast Guard member aboard CG47259 to deploy as a surface swimmer to retrieve the third crewman. A line was secured to the swimmer's waist

and he deployed into the water wearing his drysuit. The swimmer brought the third crewman to the side recess on the starboard side of CG47259. The time from the third crewman entering the water to being brought to the side of the CG47259 was approximately three to four minutes. The third crewman appeared unresponsive and was not breathing. (Exhibit 3)



Starboard side recess on CG47259

25. At 2030, the third crewman was recovered into the side recess of the CG47259. Watery white foam was reported to be discharging from the mouth of the third crewman. It took the efforts of seven crew aboard CG47259 approximately four minutes to get the third crewman onto the CG47259 due to extreme sea state and the third crewman's size estimated at close to 300 lbs. It took several more minutes to get the third crewman up to the aft deck in order to have space to perform CPR. (Exhibit 3)
26. At 2034, the coxswain requested a medevac from Sector. Sector Boston consulted the Air Station Cape Cod flight surgeon who stated that a medevac was not advised due to the fact that it was riskier to stop CPR to conduct a medevac. (Exhibit 3)
27. At 2109, Air Station Cape Cod diverted CG6030, a Coast Guard H-60 helicopter, from a nearby training flight to the CG47259's location. They planned to try to lower a rescue swimmer, who was an EMT with an Automated External Defibrillator (AED), to the CG47259. (Exhibits 3, 5)
28. At 2124, CG6030 arrived on scene and attempted to lower a rescue swimmer to CG47259. The rescue swimmer was able to get lowered to the point where his feet

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landed on the aft buoyancy chamber on the CG47259 but the motion of the boat due to sea state knocked him backwards off the CG47259. One additional attempt to lower the swimmer failed and the effort was aborted. (Exhibits 3, 5)

29. At 2131, the flight surgeon advised the CG47259 that they could cease CPR. (Exhibit 3)
30. At 2225, CG47259 moored at Station Gloucester where the third crewman from the ORIN C was declared deceased. (Exhibit 3)
- d. *Maintenance*: P6 Pump - Records indicate that CG-P6 pump's (serial # 58756) most recent maintenance was completed on 20 November 2015. The maintenance card "MPC R-C-11047 (inspect /accept)" was submitted. This was the incorrect MPC for monthly maintenance due to an administrative error. The last correctly documented monthly maintenance was completed on 24 October 2015 using "MPC R-M-1614". (Exhibit 6)
- e. *Vessel Systems*:
  1. CG472459 – Asset Status from the maintenance tracking system, ALMIS for the period surrounding the mishap: (Exhibit 17)
    - a. 01 DEC 15 - Asset Status - Fully Mission Capable (FMC) – Boat salty, conducted fresh water wash down. Conducted main engines lube oil viscosity test. Test complete IAW A55000.0 Dilution: port 0.6 starboard 0.3. (Exhibit 17)
    - b. 02 DEC 15 - Asset Status - Fully Mission Capable (FMC) – Boat dirty, washed boat. Conducted main engines lube oil viscosity test. Test complete IAW A55000.0 Dilution: port 0.8 starboard 0.7. (Exhibit 17)
    - c. 03 DEC 15 - Asset Status - Fully Mission Capable (FMC) – Conducted main engines lube oil viscosity test. Test complete IAW A55000.0 Dilution: port 0.7 starboard 0.4. (Exhibit 17)
    - d. 04 DEC 15 - Asset Status - Disabled – Asset is out of service until completion of MISHAP Investigation. (Exhibit 17)
  2. Discrepancies found: None. (Exhibit 17)
- f. *Weather*: The weather at the time of the mishap was: air temperature 46 F, water temperature 50 F, clear skies with 10 NM visibility, wind from the west at 22-25 KTS

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with gusts to 30 KTS, wave height 8-10 FT, wave direction from the west. Gale conditions were forecasted. Sunset: 1609 hours 03 December 2015. (Exhibit 8)

g. *Crew Qualifications:*

1. The qualifications for the crew of CG47259 were verified as follows: (Exhibit 13)

- a. Heavy Weather Coxswain: BM1  
Current Certification – 01 JUL 15  
Initial HVY WX Certification – 03 MAR 15  
MLB Initial Certification – 31 JAN 07
- b. Boat Engineer: MK3  
Current Certification – 24 JUN 15  
Initial Certification – 24 JUN 15  
Initial Crew MLB – 12 MAY 15
- c. Crewman 1: MK2  
Current Certification – 24 NOV 15  
Initial Certification – 24 NOV 15
- d. Crewman 2: BM2  
Current Certification – 01 JUL 15  
Initial Certification – 01 FEB 07
- e. Crewman 3: MK1  
Current Certification – 04 NOV 15  
Initial Certification – 22 OCT 15
- f. Crewman 4: FN  
Current Certification – 12 MAY 15  
Initial Certification – 12 MAY 15

h. *Medical:*

1. Coast Guard crew - There was no evidence pertaining to the CG47259 crew of sociological or psychological factors relating to or contributing to the mishap. At the time of the mishap, all CG47259 crewmembers were current with medical readiness requirements and were fit for full duty. There was no evidence any of the CG47259 crewmembers had consumed alcohol that day. Post-mishap urine samples test results were negative for any prohibited substances. The crewmembers had appropriate rest prior to the mission and did not exceed crew fatigue standards. (Exhibit 12)

2. Coroner's Report on Deceased – The deceased third crewman was the Master of the ORIN C. The cause of death was determined to be drowning. Contributing causes were listed as Cardiac Hypertrophy and Atherosclerotic Cardiovascular Disease. He weighed 297 pounds. There was bruising on his chest and his ribs were fractured. The toxicology report indicated that his blood tested positive for Cannabinoid (Delta-9 THC 3.3 ng/ml). (Exhibit 9)
  - i. *Operations and Supervision:*
    1. Sector Boston and Station Gloucester utilized a general risk assessment scoring tool referred to as Green, Amber, Red (GAR). The GAR risk measurement tool utilizes crew input to score risk into one of three categories; low risk, caution, and high risk. The higher the GAR score, the higher the perceived risk. At the beginning of the case, Sector Boston gave the case a score of 17. When the CG47259 readied to depart the Station, the crew scored the mission risk as 26 (supervision 3, planning 4, crew 5, crew fitness 5, environment 4, evolution 5). A score of 26 is at the low end of the caution risk (amber) portion of the risk scale. The crew mitigated their score to 26 by having a heavy weather coxswain onboard. The coxswain and crew were all properly certified and current for the positions they had on the CG47259. (Exhibit 2)
  - j. *Human Factors Analysis:*
    1. Organizational influences - During the course of investigation, the following factors were noted:
      - i. Resource problems – none.
      - ii. Personnel Selection and Staffing – none.
      - iii. Policy and Process issues – none.
      - iv. Climate/Culture influences – none.
    2. Supervision - During the course of investigation, the following factors were noted:
      - i. Supervisory violations – none.
      - ii. Planned inappropriate actions – none.
      - iii. Inadequate supervision – none.
    3. Preconditions - During the course of investigation, the following factors were noted:
      - i. Environment – The physical weather conditions (cold, wind, and waves) were determined to be a contributory factor to the mishap. Cold temperatures, wind and waves have a detrimental effects on crews. The specific extent to which personnel were negatively impacted was not able to be directly measured. At least two break in crew on the CG47259 became seasick and vomited during the mishap. Heavy wave action may also have contributed to weakening of the ORIN C's water tight integrity

during towing. Wave action also complicated and slowed the recovery of the unresponsive third crewman from the ORIN C. Wave and wind action contributed to the aborted attempt to deliver the rescue swimmer from the Coast Guard helo to the small boat. (Exhibit 16)

- ii. Physical and Mental State - The loss of consciousness of the deceased was a causal factor in the time and effort required to recovery and administer CPR. The coroner's report identified that there was THC in the deceased's system. (Exhibits 9, 16)

4. Acts - During the course of investigation, the following factors were noted:

- i. Performance Based Errors – The crew members on the ORIN C were initially able to start and operate the P6 pump to dewater their boat. At some point later in the tow, the crew radioed the CG47259 to advise they were having problems keeping the pump running. Coast Guard crew attempted to help the ORIN C crew troubleshoot the problem over the radio. The ORIN C crew was able to remove rags from the intake hose to get the pump running again. Later the crew of the ORIN C advised the water level was rising at an alarming rate into the galley. It was not precisely determined when the pump stopped working. Several actions may have occurred to cause a pump malfunction; first, the intake hose may have clogged again, secondly, the ORIN C crew may have had difficulty understanding how to operate the pump and, finally, a mechanical malfunction of the pump may have occurred. The only evidence on the pump's operation or malfunction comes from Coast Guard crew interviews and the audio files of the VHF radio calls between the Coast Guard rescue boat and the crew on ORIN C. The crew of ORIN C did not make themselves available to the MI investigators to give details on the pump operation despite multiple attempts to interview them. (Exhibits 3, 6, 11, 16)

- ii. Judgment and Decision Making Concerns – See below.

- 1. Heavy weather safety belts – None of the Coast Guard crew on the CG47259 wore a heavy weather safety belt. The heavy weather safety belt is required to be worn in heavy weather conditions (seas > 8 FT and/or winds > 30 Kts). Only five belts were available on the CG47259. The coxswain should have ensured that four additional belts were brought onboard, one for each person due to the forecasted gale conditions (heavy weather). Additionally, the coxswain should have ensured that once heavy weather was actually encountered, the crew wore the safety belts. As a mitigating point, seven crew were required to work in the vicinity of the starboard recess of the Coast Guard rescue boat at the same time to recover the third crewman. It would have been very

difficult for all crew to snap their belts to attachment points on the boat and still effectively maneuver to recover the person in the water. (Reference (g), Exhibits 3, 16)

2. Rescue boat surface swimmer – The crewman who acted as the surface swimmer had completed the required training and was current on that training. He wore the appropriate drysuit. However, the surface swimmer failed to wear a swimming harness. A swimming harness and tending line are required for surface swimmer deployment. The swimmer did have a line tied to his waist. The concern is that the swimming harness has a quick release that allows the swimmer to disengage from the line if entangled. A heaving line manually tied around the waist does not have a quick release mechanism. (Reference (g), Exhibits 3, 16)

k. *Additional Areas of Concern:*

1. Previous damage - As mentioned in paragraph 4.b.3 above, the ORIN C was a 39 year old wooden boat. She had suffered keel/bottom damage in a grounding off Ten Pound Island at some point, as documented in the article in *FisheryNation.com*. Photos show a portion of the forward keel removed for repair. Attempts to gain more information from the owner of the repair facility on the physical condition of the ORIN C at that time proved unsuccessful. (Exhibits 3, 15)
2. Automated External Defibrillator, (AED) - The CG47259 rescue boat does not carry an AED as part of standard equipment. The Coast Guard helo CG6030 carried a rescue swimmer who was EMT qualified. The rescue swimmer carried an AED as part of his medical kit. The helo arrived on scene above the CG47259 54 minutes after the third crewman was recovered and CPR commenced. Weather conditions prevented the delivery of the rescue swimmer to the CG47259. When asked why the AED wasn't lowered to the boat, the aircraft commander stated that the standard practice has been to deliver the medical kit contents to include the AED with the certified EMT rescue swimmer. Due to the 54 minutes that had elapsed, it is not known how effective if at all an AED might have been to resuscitation efforts. (Exhibit 3)

5. **Opinions:**

- a. *Cause of the Mishap:* I find by clear and convincing evidence that the cause of the mishap was drowning. The cause of the sinking of the ORIN C was progressive flooding from the ingress of seawater from an unknown source on the vessel.



Subj: MAJOR INCIDENT INVESTIGATION (MII) INTO THE  
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b. *Contributory Factors:*

1. I find by a preponderance of the evidence that a contributing factor to the mishap was:
  - i. The environmental conditions of wind and waves prevented a direct recovery of the three crewman from the ORIN C. The two vessels could not safely be brought side to side to effect a crew transfer. This required the three crew from the ORIN C, including the Master, to enter the water for an indirect recovery.
  
2. I find by a preponderance of the evidence that a contributing factor to the sinking of the ORIN C was:
  - i. The crew on the ORIN C had difficulty maintaining suction on the P6 pump, which hampered dewatering efforts. It is unclear if the pump malfunctioned, the intake hose became clogged again, or if the crew's unfamiliarity with pump operation hampered dewatering efforts.

6. **Attestation:** The Findings of Fact and Opinions are those of the Board President and do not constitute an official determination by the U.S. Coast Guard concerning this mishap, nor may such information be considered an admission of liability of the United States or by any person referred to in those Facts and Opinions.

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Enclosures: (1) Evidence inventory  
(2) MII Witness List  
(3) MII Board Members

Exhibits: (1) Convening Order  
(2) MISLE Case 1003424  
(3) Interview Summaries of witnesses  
(4) Station Gloucester radio log  
(5) Sector Boston Radio log  
(6) P6 pump maintenance records  
(7) Sector Boston VMS track screen shots  
(8) NOAA Weather Buoy data  
(9) Coroner's Report (Massachusetts Office of the Chief Medical Examiner)  
(10) Video of ORIN C taken by FOXY LADY crew  
(11) Audio files (radio and phone calls)  
(12) CG47259 Crew urinalysis results

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- (13) CG47259 Crew qualification documentation
- (14) Photos of F/V ORIN C
- (15) FisheryNation.com article on ORIN C grounding
- (16) DoD's Human Factors Analysis and Classification System – Version 7.0
- (17) ALMIS maintenance data on CG47259 rescue boat.