DEPARTMENT OF THE NAVY

COMMANDER BATTLE FORCE SEVENTH FLEET COMMANDER CARRIER STRIKE GROUP FIVE UNIT 200218 BOX 1 FPO AP 96602

> 5830 Ser N00/328 11 Aug 17

From: Commander, Carrier Strike Group FIVE

To: Commander, Navy Personnel Command (PERS-13)

Subj: SUPPLEMENTAL PRELIMINARY INQUIRY AND LINE OF DUTY

DETERMINATION REGARDING INJURIES AND THE DEATHS OF SEVEN SAILORS ABOARD USS FITZGERALD (DDG 62) ON OR ABOUT 17 JUNE 2017

Ref: (a) JA

(a) JAGMAN 2012, Chapter II

(b) CSG-5 5830 Ser N00/253 of 23 Jul 17

Encl: (1) Supplemental Preliminary Inquiry and Line of Duty Determination Regarding

Injuries and the Deaths of Seven Sailors Aboard USS FITZGERALD (DDG 62) on or

about 17 June 2017

- 1. In reference (b), I directed additional investigation into the damage control and life-saving efforts of the crew of USS FITZGERALD (DDG 62) following the collision that occurred on 17 June 2017. My review of the additional findings confirmed my original determination that the injuries to the three surviving service members, and the deaths of seven Sailors, occurred in the line of duty and not due to misconduct.
- 2. The investigation directed in reference (b) was limited to the events that occurred after the collision; other ongoing investigations address events that occurred prior to the collision. Members and individuals who assisted with the post-collision response efforts provided much of the information in enclosure (1); additional resources included records related to medical treatment and damage control procedures.
- 3. The Sailors assigned to Berthing 2 should be commended for their response to the dangerous and deadly threat they faced. They did what is expected of Sailors in such a situation: they checked racks to ensure everyone was awake; they formed calm lines to egress the space on the port side, away from the flooding; and they filed out of the Berthing in an orderly fashion, assisting one another to the ladder. Two Sailors chose to remain at the bottom of the ladder on the port side of the compartment, and then on top of the hatch after they egressed, in order to help others out of the space even as the water was rising and began flooding into the space around them. The choices made by these two Sailors likely saved the lives of at least two of their shipmates.
- 4. After the collision, FITZGERALD Sailors responded to the myriad damage control scenarios occurring throughout the ship. Flooding, structural damage, and reports of white smoke stressed the damage control organization; at the same time, efforts to restore power, propulsion, steering and navigation continued. The crew of the FITZGERALD fought hard in the dark of night to

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save their ship. Ultimately, those damage control efforts and restoration processes succeeded in safely bringing FITZGERALD into port under her own power.

- 5. Through their swift and, in many cases, heroic actions, members of the FITZGERALD crew saved lives. No damage control efforts, however, would have prevented Berthing 2 from flooding completely within the first two minutes following the collision, or the deadly circumstances in that situation. In spite of the fact that the Berthing was never completely secured, seven Sailors were unable to egress the space. The loss of seven shipmates is a tragedy beyond words and a reminder of the dangers inherent in the mission of every ship and Sailor. My thoughts and prayers are with their families and friends. I am grateful to all those whose professionalism was essential to the recovery of FITZGERALD and her crew, including: Yokosuka Port Operations; tug crews; the crew of USS DEWEY; Navy divers; the Japanese Maritime Self Defense Force; Japanese Coast Guard; and the team of American and Japanese workers.
- 6. The support the FITZGERALD received after the collision was only the beginning of an outpouring of support by both the American and Japanese communities. The same partners who provided support in the initial hours and days following the tragedy have proven invaluable to the FITZGERALD crew and community as they recover. We continue to care for both the ship and her crew as they begin the rebuilding process. No one could have foreseen the challenges FITZGERALD would face, but the courage and strength shown by her crew, even as they mourn the loss of seven shipmates, underscore the essence of Navy's core values.

C. F. WILLIAMS

C.F. William

From: **(b) (6)**

To: Commander, Carrier Strike Group FIVE

Subj: SUPPLEMENTAL PRELIMINARY INQUIRY AND LINE OF DUTY DETERMINATION REGARDING INJURIES AND THE DEATHS OF SEVEN SAILORS ABOARD USS FITZGERALD (DDG 62) ON OR ABOUT 17 JUNE 2017

Ref: (a) My ltr of 28 Jun 17

Encl: (1) CSG-5 ltr 5830 Ser N00/237 of 23 Jul 17

(2) CSG-5 ltr 5830 Ser N00/321 of 1 Aug 17

(3) Timeline of Events(4) List of Annexes

- 1. Reference (a) is the preliminary inquiry and line of duty determination regarding injuries to three Sailors and the deaths of seven Sailors aboard USS FITZGERALD (DDG 62) (FITZGERALD) on or about 17 June 2017. This preliminary report was concluded on 28 June 2017; the findings were that each of the injuries and deaths occurred in the line of duty and none were due to any member's own misconduct. Commander, Carrier Strike Group FIVE (CCSG-5) approved the findings of the preliminary inquiry on 30 June 2017. CCSG-5 also forwarded the line of duty findings to Navy Personnel Command (PERS-13) on 30 June 2017 to expedite processing of survivor benefits for the dependents of the deceased service members, and disability retirement or severance pay for the injured service members. Nothing in this supplementary inquiry changes the findings or recommendations in reference (a) that the injuries sustained by the ten members of the FITZGERALD crew, named in reference (a), were incurred in the line of duty, not due to their own misconduct.
- 2. Enclosure (1) directed further inquiry to supplement reference (a). Specifically, CCSG-5 directed further inquiry into the facts and circumstances pertaining to post-collision damage control and life-saving efforts aboard FITZGERALD on 17 June 2017. This supplemental report describes the immediate aftermath of the collision, including flooding within FITZGERALD's damaged compartments, actions to evacuate flooded spaces, and efforts to rescue the ship's crewmembers. This report then sets forth the crew's damage-control activities, the nature and extent of injuries to the crew, and efforts to provide medical care to the most critically injured personnel, along with details regarding assistance provided by other vessels, diving activities, and FITZGERALD's return to port in Yokosuka. This report is confined to an account of the facts and circumstances post-collision and neither discusses the circumstances that led to the collision nor provides opinions or recommendations, as these are outside the scope of the direction in enclosure (1), and are likely addressed in other investigative reports.
- 3. This report was derived from discussions with crew members present aboard FITZGERALD at the time of the collision and discussions with individuals who assisted in the response. Additionally, I have reviewed the records kept regarding the damage control efforts

and medical treatment for those injured in the collision. I have endeavored to review the most reliable information available regarding damage control and life-saving efforts post-collision. Enclosure (3) is a timeline of events relevant to this inquiry, and was prepared using the materials and information discussed above; of note, more facts have become available through the investigative process. There are discrepancies between past public statements of the Navy and even my own earlier report. This supplemental report resolves those discrepancies to the greatest extent possible, and is the most accurate account of post-collision events based on the evidence available.

Background

- 4. FITZGERALD is an Arleigh Burke Class Destroyer commissioned in 1995 and homeported in Yokosuka, Japan, as part of the Forward Deployed Naval Forces and Carrier Strike Group FIVE. Approximately 300 Sailors serve aboard FITZGERALD.
- 5. ACX CRYSTAL (CRYSTAL) is a container ship built in 2008 and flagged in the Philippines. In the early morning hours of 17 June 2017, CRYSTAL was en route to Tokyo Harbor
- 6. CRYSTAL is 222 meters (728 feet) long with a gross tonnage of approximately 29,000. FITZGERALD is 154 meters (505 feet) long with a gross tonnage of approximately 9,000. Figure 1 illustrates the relative sizes of the vessels.

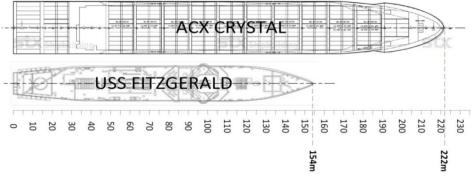


Figure 1 - Relative Size of Vessels

7. On the morning of 16 June 2017, FITZGERALD departed Yokosuka, Japan for routine operations. FITZGERALD began an outbound transit to sea from the Sagami Wan operating area at approximately 2300. By 0130 hours on 17 June 2017, FITZGERALD was approximately 56 nautical miles to the southwest of Yokosuka, Japan, near the Izu Peninsula within sight of land and continuing its transit outbound. The seas were relatively calm at 2 to 4 feet. The sky was dark, the moon was



Figure 2 – Japan with expanded view of Sagami Wan

relatively bright, and there was scattered cloud cover and unrestricted visibility.

8. FITZGERALD was operating in a standard condition for deployed ships steaming at night, including being at "darkened ship," meaning that all exterior lighting was off except for the

navigation lights, and all interior lighting was switched to red instead of white light. The damage control posture of the ship was "Modified ZEBRA," meaning that all doors inside the ship, and all hatches (openings located on the floor between decks) at the main deck and below were shut in order to help secure the boundaries between different areas of the ship in case of flooding or fire. Watertight scuttles on the hatches (smaller openings that can be opened or closed independently of the hatch) were left open in order to allow easy transit between spaces. Figure 3 provides a representation of a similar watertight scuttle. These conditions were the

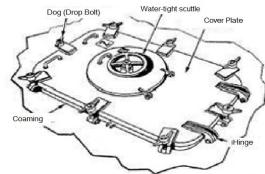


Figure 3 - Depiction of Watertight Hatch with Scuttle

normal state of the ship at that hour as required by international navigation rules of the road, and by procedures established for all U.S. Navy surface ships.

The Collision and Its Impact

9. At approximately 0130 on 17 June 2017, FITZGERALD and the container ship ACX CRYSTAL collided.

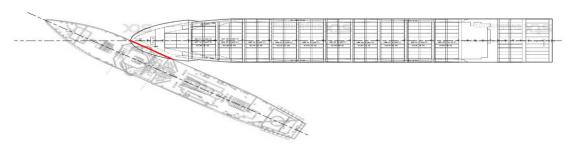


Figure 4 – Diagram of Collision points

10. The port (left) side of CRYSTAL's bow, near the top where the anchor hangs, struck FITZGERALD's starboard (right) side above the waterline. CRYSTAL's bulbous bow, under the water, struck FITZGERALD on the starboard side just forward of the middle part of the ship. Figure 5 provides a representation of a bulbous bow. CRYSTAL's bulbous bow struck the starboard access trunk, an entry space that opens into Berthing 2 through a non-watertight door.

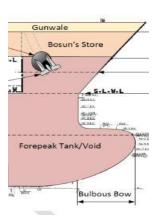


Figure 5 - Depiction of a Bow and Bulbous Bow





Figure 6 – Starboard side of FITZGERALD

Inset Above: Damage to FITZGERALD above the waterline at the 03 Level near CO's Cabin
Inset below: FITZGERALD in drydock with patch over the 13ft x 17ft hole at Berthing 2/AUX 1

12. The impact of CRYSTAL's bulbous bow below the waterline punctured the side of FITZGERALD, creating a hole measuring approximately 13ft by 17ft, spanning the second and third decks below the main deck. The hole allowed water to flow directly into Auxiliary Machinery Room 1 (AUX 1) and the Berthing 2 starboard access trunk. The force of impact from CRYSTAL's bulbous bow and resulting flood of water pushed the non-water tight door between the starboard access trunk and Berthing 2 inward. The wall supporting this door pulled away from the ceiling and bent to a near-90 degree angle. As a result, nothing separated Berthing 2 from the onrushing sea, allowing a great volume of water to enter Berthing 2 very quickly.

- 13. Water poured into the ship from the hole in the hull and flooded into spaces directly connected to areas near the hole or not separated by a watertight barrier, including Berthing 2 and associated spaces; AUX 1 and associated spaces; and other spaces forward of the hole. Other spaces were flooded due to cross flooding, which is the flooding of spaces that are connected to damaged spaces and that have the ability to be isolated with a water tight barrier, but which could not be sealed off in time due to the rapid flooding caused by the large hole in the side of the ship. Additionally, spaces were partially flooded due to a ruptured firemain (large seawater pipes that provide water for fighting fires) and ruptured AFFF (Aqueous Film-Forming Foam) piping. See Annex (c) for a detailed list of flooded spaces.
- 14. The following spaces suffered structural damage: CO's Cabin, Stateroom, and Bathroom; Officer Stateroom; Berthing 2 Starboard Access Trunk; AUX 1; Repair Locker Number 2 passageway; Combat Information Center passageway; (b)(3) 10 U.S.C. § 130 multiple fan rooms; Combat Systems Maintenance Central airlock and ladderwell; Electronic Workshop Number 1; and the Starboard Break.
- 15. The impact at the moment of collision caused FITZGERALD to list (tilt) a reported 14 degrees to port. FITZGERALD then settled into a 7 degree starboard list as the sea flooded into Berthing 2 through the starboard access trunk and weighted the ship deeper into the water on the starboard side.
- 16. The collision resulted in a loss of external communications and a loss of power in the forward portion of the ship.
- 17. Following the collision, FITZGERALD changed her lighting configuration at the mast to one red light over another red light, known as "red over red," the international lighting scheme that indicates a ship that is "not under command." Under international navigation rules of the road, this signifies that, due to an exceptional circumstance such as loss of propulsion or steering, a vessel is unable to maneuver as required.

Berthing 2

18. Berthing 2 is a crew area containing 42 racks (beds) and spans from one side of the ship across to the other side two decks below the main deck of the ship. It includes its own head, a shower and bathroom space accessed via a non-watertight door. It also includes a lounge filled with sofas, chairs, a table, and a television where the crew in the berthing can relax and recreate. The space is approximately 29 feet long, approximately 40 feet across, and with ceilings approximately 10 feet high. The racks are stacked with a top, middle, and bottom rack, each with a mattress and privacy curtains. Figure 7 provides an example of how the racks would have been configured in Berthing 2. At the time of collision, the space was illuminated only by red lights in accordance with the darken ship procedures.



Figure 7 – Berthing 2 Layout Diagram (facing aft)

19. Berthing 2 has three ways out (egress points), of which two are on the port side. The first port side egress is up a ladder through a watertight hatch with a watertight scuttle at the top of the ladder. Figures 8 and 9 show this egress point on a ship of the same class as FITZGERALD. The second port side egress is an escape scuttle in the ceiling that leads directly into Berthing 1. Figure 10 shows this egress point on a ship of the same class as FITZGERALD. This escape scuttle is usually in the down position, as it would become a trip hazard in Berthing 1 if left in the up position.



Figure 8 – Sample Berthing 2 Port Egress Ladder



Figure 9 – Sample Berthing 2 Watertight Scuttle at top of Port Egress Ladder



Figure 10 – Sample Berthing 2 Port Side Ladder through Escape Scuttle

20. The third egress point is on the starboard side, where CRYSTAL's bulbous bow struck FITZGERALD. A non-watertight door leads from Berthing 2 to the starboard access trunk. In

that trunk, a ladder leads up one deck into a space just outside of Berthing 1. Figures 11 through 13 are examples of the starboard side egress on a ship of the same class as FITZGERALD. There is no hatch separating the starboard access trunk outside Berthing 2 and the space above it. Also in this starboard access trunk there is a hatch and watertight scuttle connected to a ladder going down to the Forward Interior Communications (FWD IC) space. (b)(3) 10 U.S.C. § 130

(b)(3) 10 U.S.C. § 130



Figure 11 – Sample Berthing 2 Starboard Side Egress – Ladder Up

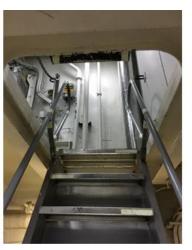


Figure 12 – Sample Berthing 2 Starboard Side Egress – Ladder Up



Figure 13 – Sample Berthing 2 Starboard Side Egress – Scuttle Down to Forward IC (no outlet)

Evacuating Berthing 2

- 21. Of the 42 Sailors assigned to Berthing 2, at the time of collision, five were on watch and two were not aboard. Of the 35 remaining Sailors in Berthing 2, 28 escaped the flooding. Seven Sailors perished.
- 22. Some of the Sailors who survived the flooding in Berthing 2 described a loud noise at the time of impact. Other Berthing 2 Sailors felt an unusual movement of the ship or were thrown from their racks. Still other Berthing 2 Sailors did not realize what had happened and remained in their racks. Some of them remained asleep. Some Sailors reported hearing alarms after the collision, while others remember hearing nothing at all.
- 23. Seconds after impact, Sailors in Berthing 2 started yelling "Water on deck!" and "Get out!" One Sailor saw another knocked out of his rack by water. Others began waking up shipmates who had slept through the initial impact. At least one Sailor had to be pulled from his rack and into the water before he woke up. Senior Sailors checked for others that might still be in their racks.
- 24. The occupants of Berthing 2 described a rapidly flooding space, estimating later that the space was nearly flooded within a span of 30 to 60 seconds. By the time the third Sailor to leave arrived at the ladder, the water was already waist deep. Debris, including mattresses, furniture, an exercise bicycle, and wall lockers, floated into the aisles between racks in Berthing 2,

impeding Sailors' ability to get down from their racks and their ability to exit the space. The ship's 5 to 7 degree list to starboard increased the difficulty for Sailors crossing the space from the starboard side to the port side. Many of the Sailors recall that the battle lanterns were illuminated. Battle lanterns turn on when power to an electrical circuit is out or when turned on manually. The yellow boxes hanging from the ceiling in Figure 14 are battle lanterns.

25. Sailors recall that after the initial shock, occupants lined up in a relatively calm and orderly manner to climb the port side ladder and exit through the port side watertight scuttle. Figure 14 provides an example of the route Sailors would have taken from their racks to the port side watertight scuttle on a ship of the same class as FITZGERALD. They moved along the blue floor and turned left at the end to access the ladder. Figure 14 provides an example and sense of scale. Even though the Sailors were up to their necks in water by that point, they moved forward slowly and assisted each other. One Sailor reported that FC1 Rehm pushed him out from under a falling locker. Two of the Sailors who already escaped from the main part of Berthing 2 stayed at the bottom of the ladder well (see Figure 8) in order to help their shipmates out of the berthing area.



Figure 14 – Sample Berthing 2 View from Row 3 of racks to the port side (open door on right leading to head)

- 26. The door to the Berthing 2 head (bathrooms and showers) was open and the flooding water dragged at least one person into this area. Exiting from the head during this flood of water was difficult and required climbing over debris.
- 27. As the last group of Sailors to escape through the port side watertight scuttle arrived at the bottom of the ladder, the water was up to their necks. The two Sailors who had been helping people from the bottom of the ladder were eventually forced to climb the ladder as water reached the very top of the Berthing 2 compartment. They continued to assist their shipmates as they climbed, but were eventually forced by the rising water to leave Berthing 2 through the watertight scuttle themselves. Before climbing the ladder, they looked through the water and did not see any other Sailors. Once through the watertight scuttle and completely out of the Berthing 2 space (on the landing outside Berthing 1) they continued to search, reaching into the dark water to try to find anyone they could. From the top of the ladder, these two Sailors were able to pull two other Sailors from the flooded compartment. Both of the rescued Sailors were completely underwater when they were pulled to safety.
- 28. The last Sailor to be pulled from Berthing 2 was in the bathroom at the time of the collision and a flood of water knocked him to the deck (floor). Lockers were floating past him and he scrambled across them towards the main berthing area. At one point he was pinned between the lockers and the ceiling of Berthing 2, but was able to reach for a pipe in the ceiling to pull himself free. He made his way to the only light he could see, which was coming from the port side watertight scuttle. He was swimming towards the watertight scuttle when he was pulled

from the water, red-faced and with bloodshot eyes. He reported that when taking his final breath before being saved, he was already submerged and breathed in water.

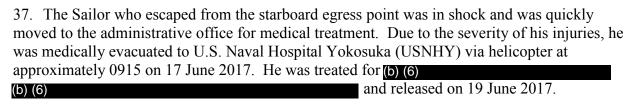
- 29. After the last Sailor was pulled from Berthing 2, the two Sailors helping at the top of the port side watertight scuttle noticed water coming into the landing from Berthing 1. They remained in case any other Sailors came to the ladder. Again, one of the Sailors stuck his arms through the watertight scuttle and into the flooded space to try and find any other Sailors, even as the area around him on the landing outside of Berthing 1 flooded. Berthing 1, with no watertight door between it and the landing, began to flood.
- 30. Another Sailor returned with a dogging wrench, a tool used to tighten the bolts, on the hatch to stave off flooding from the sides of the hatch. The three Sailors at the top of the ladder yelled into the water-filled space below in an attempt to determine if there was anyone still within Berthing 2. No shadows were seen moving and no response was given.
- 31. Water began shooting up and out of the watertight scuttle into the landing. Finding no other Sailors, they tried to close the watertight scuttle to stop the flood of water. The force of the water through the hatch prevented closing the watertight scuttle between Berthing 2 and Berthing 1. The scuttle was left partially open. They then climbed the ladder to the Main deck (one level up from the Berthing 1 landing), and secured the hatch and scuttle between Berthing 1 and the Main deck. In total, 27 Sailors escaped Berthing 2 from the port side ladder.
- 32. One Sailor escaped via the starboard side of Berthing 2. After the collision, this Sailor tried to leave his rack, the top rack in the row nearest to the starboard access trunk, but inadvertently kicked someone, so he crawled back into his rack and waited until he thought everyone else would be out of the Berthing 2. When he jumped out of his rack a few seconds later, the water nearly reached his top bunk, already chest high and rising.
- 33. After leaving his rack, the Sailor struggled to reach the starboard egress point through the lounge area.
- 34. He moved through the lounge furniture and against the incoming sea. Someone said "go, go, go, it's blocked," but he was already underwater. He was losing his breath under the water but found a small pocket of air. After a few breaths in the small air pocket, he eventually took one final breath and swam. He lost consciousness at this time and does not remember how he escaped from Berthing 2, but he ultimately emerged from the flooding into Berthing 1, where he could stand to his feet and breathe. He climbed Berthing 1's egress ladder, through Berthing 1's open watertight scuttle and collapsed on the Main Deck. He was the only Sailor to escape through the starboard egress point.
- 35. The flooding of Berthing 2 resulted in the deaths of seven FITZGERALD Sailors. The racks of these seven Sailors were located in Rows 3 and 4, the area closest to the starboard access trunk and egress point and directly in the path of the onrushing water, as depicted in Figure 15.



Figure 15 – Berthing 2 Layout of Racks and Lockers (facing aft)

36. After escaping Berthing 2, Sailors went to various locations. Some assembled on the mess decks to treat any injuries and pass out food and water. Others went to their General Quarters (GQ) stations to assist with damage control efforts. Another Sailor went to the bridge to help with medical assistance. One Sailor later took the helm and stood a 15-hour watch in aft steering after power was lost forward.

Other Rescue Efforts



38. The Combat Systems Officer (CSO), a lieutenant, was injured in the collision. He was not in his stateroom at the time of the collision, but returned to it and assisted his roommate, who was trapped inside his rack by the force of the collision. (b)(3) 10 U.S.C. § 130

He suffered (b) (6)

(b) (6) . Due to the severity of his injuries, he was medically evacuated to USNHY via helicopter at approximately 0915 on 17 June 2017. He was treated and released on 18 June 2017.

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- 39. The CO was in his cabin at the time of the collision. The CRYSTAL's bow directly struck his cabin, located above the waterline. The impact severely damaged his cabin, trapping him inside. The CO called the bridge requesting assistance.
- 40. Five Sailors used a sledgehammer, kettlebell, and their bodies to break through the door into the CO's cabin, remove the hinges, and then pry the door open enough to squeeze through. Even after the door was open, there was a large amount of debris and furniture against the door, preventing anyone from entering or exiting easily.
- 41. A junior officer and two chief petty officers removed debris from in front of the door and crawled into the cabin. The skin of the ship and outer bulkhead were gone and the night sky could be seen through the hanging wires and ripped steel. The rescue team tied themselves together with a belt in order to create a makeshift harness as they retrieved the CO, who was hanging from the side of the ship.
- 42. The team took the CO to the bridge, where a medical team assessed his condition. As he was being monitored by personnel on the bridge, his condition worsened. A team of stretcher bearers moved the CO from the bridge to the at-sea cabin at 0319, and shortly thereafter, due to the severity of his injuries, he was medically evacuated from the ship at 0710 to USNHY via helicopter. He was treated and released on 18 June 2017.

Damage Control Background

- 43. All U.S. Navy ships are designed to withstand and recover from damage due to fire, flooding, and other damage sustained during combat or other emergencies. Each ship has a Damage Control Assistant (DCA), working under the Engineering Officer, in order to establish and maintain an effective damage control organization.
- 44. The DCA oversees the prevention and control of damage including control of stability, list, and trim due to flooding (maintaining the proper level of the ship from side to side and front and back), coordinates firefighting efforts, and is also responsible for the operation, care and maintenance of the ship's repair facilities. The DCA ensures the ship's repair party personnel are properly trained in damage control procedures including firefighting, flooding and emergency repairs. The DCA is assisted by the Damage Control Chief (DCC), a chief petty officer specializing in Damage Control.
- 45. The crew trains on damage control (DC) continuously, with drills being run in port and underway throughout the year to prepare the teams for damage to equipment and spaces. Training on basic and advanced DC principles occurs during all drills, including location and use of all DC equipment, increasing and maintaining watertight integrity, and repairing and isolating damage to maintain stability and buoyancy of the ship. FITZGERALD received its DC certification in April 2017.
- 46. During any emergency condition (fire, flooding, combat operations), the DCA coordinates and supervises all damage control efforts from the Central Control Station (CCS), a station

equipped with communications and diagrams of the ship to track damage, or as a backup, from one of the three Damage Control Repair Lockers.

- 47. Damage Control Repair Lockers are specialized spaces stationed throughout the ship filled with repair equipment and manned during emergencies with teams of about 20 personnel trained to respond to casualties. There are three repair lockers on the FITZGERALD: Repair Locker 2, Repair Locker 5, and Repair Locker 3. Repair Locker 2 covers the forward part of the ship, Repair Locker 5 covers the engineering spaces and Repair Locker 3 covers the aft part of the ship. Each locker is maintained with similar equipment. Personnel assigned to repair lockers are trained and qualified to respond to and repair damage from a variety of sources with a specific focus on fire and flooding. Each repair locker can act independently but is also designed to support the others and can take over the responsibilities for any locker if damage prevents that locker's use. The repair lockers are normally unmanned unless the ship sets a condition of higher readiness like GQ when they would be manned within minutes.
- 48. GQ is announced by an alarm that sounds throughout the ship to alert the crew of an emergency situation or potential combat operations. All crewmembers are trained to report to their GQ watchstation and to set a higher condition of material readiness against fire, flooding, or other damage. This involves securing additional doors, hatches, scuttles, valves and equipment to isolate damage and prepare for combat.

Damage Control Response

- 49. At the time of the collision, the DCA was asleep in her rack. She woke up when she felt the ship lurch. The collision alarm then sounded and the DCA quickly dressed and proceeded to CCS. From there, she directed DC efforts, sounded the GQ alarm using the general shipboard announcement system (1MC), and set primary and secondary boundaries (a first and second line of defense to control the spread of the flooding).
- 50. The DCC was in his rack at the time of the collision. He was thrown from his top rack and immediately dressed and went to CCS. CCS began to receive reports of flooding throughout the ship. The DCA initially received a report that there was a 12ft by 12ft hole in AUX 1 and that the space was flooding. The DCA also received a report of a 3ft by 5ft hole and flooding in the starboard passageway to Berthing 1 and 2. The two reports concerned the same hole, which spread into two spaces. The hole was later determined to be 17ft by 13ft.
- 51. Based on reports of flooding in Berthing 2 and AUX 1, the DCC attempted to reach Repair Locker 2. Repair Locker 2 is the closest repair locker to the flooding in Berthing 2 and AUX 1, and would normally be where the main repair effort would originate for those spaces. However, due to the flooding, the DCC could not reach Repair Locker 2. Since ships all train to use any repair locker in case damage like flooding or fire blocks access, the DCC went to Repair Locker 5 to lead the damage control efforts from there.
- 52. When the 1MC stopped working, the DCA continued to communicate with the damage control parties on Net 80, an internal communications network which can be accessed at various

locations throughout the ship. Along with sound powered telephones and hand-held radios, these comprise the normal communications channels used during emergencies.

- 53. Damage control parties used eductors to remove water from flooded spaces. Eductors use a jet of water, typically supplied from the ship's firemain system, to remove water from spaces. FITZGERALD also used three onboard pumps to remove water from the ship. Two of the pumps functioned as designed and a third seized and was inoperable for the duration of the recovery efforts.
- 54. Berthing 1 was partially flooded to five feet by water entering from the hole created by the impact in Berthing 2 and AUX 1. Damage control parties tried to limit and reduce the flooding with eductors, but with no watertight hatch or door between Berthing 2 and Berthing 1 on the starboard side to act as a barrier against the progressive flooding, water passed freely into Berthing 1 and undermined dewatering efforts. Berthing 1 had water in the space until after the ship returned to Yokosuka and entered dry-dock (a place where water is drained from around the ship to allow for repairs).
- 55. Berthing 2 and AUX 1 were completely flooded as a direct result of the impact of the collision. Damage Control Parties attempted to combat flooding with eductors and pumps, but free movement of the sea though the hole in the starboard access trunk impeded dewatering efforts. Dewatering of Berthing 2 was completed only after the ship entered dry-dock on 11 July 2017; AUX 1 was dewatered using an additional pump once a patch was installed in Yokosuka.



Figure 16 - Non-watertight door frame from Berthing 2 to the ladder going up to Berthing 1 Access Trunk. There is no hatch at the top of this ladder to prevent water from flooding up into Berthing 1.

- 56. The Starboard Passageway was partially flooded due to the ruptured Fire Main and AFFF piping as a direct result of the impact (1.5 feet of water on deck, three feet of AFFF on deck). Damage Control Parties used two eductors to effectively counter the flooding. They also used shoring, a material designed to reinforce a structural defect, along the passageway to mitigate the effects of the collision.
- 57. Radio Central was partially flooded as a result of proximity flooding. The crew effectively combatted flooding with stuffing tube compound and then dewatered the space using buckets and swabs (mops). Main Engine Room 1 had minor flooding due to proximity flooding from the AUX 1 Waste Water Tank and AUX 1 Oily Waste Tank. An eductor was aligned to effectively dewater the space and the water level remained below three feet.
- 58. Sonar Control, Sonar Control Fan Room, Sonar Control Passageway, Sonar Admin Office, and Combat Systems Equipment Room 1 were partially flooded with five feet of water on the deck. Subsequent damage control efforts effectively dewatered the space using an eductor and pump.

- Subj: SUPPLEMENTAL PRELIMINARY INQUIRY AND LINE OF DUTY
 DETERMINATION REGARDING INJURIES AND THE DEATHS OF SEVEN
 SAILORS ABOARD USS FITZGERALD (DDG 62) ON OR ABOUT 17 JUNE 2017
- 59. The Forward 400Hz, Fan Room, and Power Conversion Room experienced both flooding and white smoke. Progressive flooding through the vents in AUX 1 resulted in two feet of water on the deck, which was engaged using eductors, buckets, and swabs. Dewatering efforts continued while water continued to flow in, maintaining one foot depth of water or less.
- 60. As Sailors reported to their GQ stations and continued with DC efforts, departments began to take musters of their Sailors (having all members report to a specific location in order to be counted). Reports of missing Sailors began to come in.
- 61. The DCA received a report that three Sailors were trapped in Sonar Control as a result of the collision. Realizing there was flooding in the spaces above them, the Sailors in Sonar Control radioed for assistance. A team was sent in but initial attempts to reach them were unsuccessful because the passageway was completely obstructed due to damage. This was also one of the areas that suffered cross-flooding through deck drains that could not be secured before flooding advanced. The team reached the escape hatch above the Sonar Control space, which was topped with a few inches water. They went through the hatch and were able to assist the Sailors trapped inside at approximately 0215.
- 62. Departmental musters continued. At 0225, two Sailors were identified as unaccounted for in a Combat Systems departmental muster. At approximately 0316, four Sailors were reported as unaccounted for. At 0540, a final, accurate all-hands muster was received in which seven Sailors remained missing.

Arrival of Assistance

- 63. The Japanese Coast Guard sent the vessels IZANAMI and KANO from Shimoda to assist FITZGERALD. IZANAMI arrived at approximately 0452. Japanese helicopters remained in the vicinity of FITZGERALD and assisted in search and rescue efforts, along with U.S. Maritime Patrol aircraft.
- 64. A Japanese Coast Guard helicopter arrived to medically evacuate the CO by lowering a rescue litter (basket) onto the deck while hovering above FITZGERALD because the significant list of the ship to the starboard side prevented the helicopter from landing. The Japanese Coast Guard helicopter then transported the CO to USNHY.
- 65. At 0745, USS DEWEY (DDG 105) executed an emergency underway from Yokosuka Naval Station to assist FITZGERALD.
- 66. Because FITZGERALD would take on additional water if the ship moved too quickly on the transit home, speed was limited to approximately 3 to 5 knots. At 0914 all water levels were reported as holding steady.
- 67. At 0911, Deputy Commodore, Destroyer Squadron FIFTEEN arrived via helicopter, along with a doctor, DCC, and Chaplain to support the crew. Two Sailors (the CSO and the Sailor who

escaped Berthing 2 through the starboard egress) were loaded onto the aircraft using a litter and were medically evacuated on the same aircraft as it departed. These Sailors were brought to USNHY.

- 68. At approximately 1000, FITZGERALD requested a Rescue and Assistance Team (R&A), at least 12 personnel, and all additional DC pumps and hoses from DEWEY.
- 69. At approximately 1200, the DEWEY R&A team and 14 personnel with an additional P-100 pump and firehoses embarked FITZGERALD. Between the hours of 1200 and 1900 the DEWEY R&A team assisted with dewatering, provided food and water, and remained aboard FITZGERALD until FITZGERALD arrived pierside in Yokosuka.
- 70. At 1226, two Japanese Self Defense Force (JMSDF) Helicopters, one JMSDF P-3C, one USN P-8, and one USN helicopter were in the area of the collision helping to support the search and rescue effort.

Transit to Yokosuka

- 71. FITZGERALD was underway at 0453 at 3 knots. The ship was able to begin the transit to homeport under her own power.
- 72. Once flooding was stabilized, the list was held at 5 degrees to the starboard side.
- 73. At 0815, two YT tugboats dispatched from Port Operations in Yokosuka Naval Base came alongside FITZGERALD. The tugs were driven by U.S. Navy Harbor pilots and approached carefully due to FITZGERALD's severe list. One tugboat was stationed in front of FITZGERALD with a line to FITZGERALD's bow to help tow.
- 74. The second tugboat was configured in a "power make up" approximately half-way down the length of FITZGERALD on the port side to maintain control of FITZGERALD in case she lost all propulsion and steering and could not move under her own power. A "power make up" is the way to most closely connect a tugboat and a ship to best control the movement of a ship. It is done by connecting two lines from the tugboat to the ship, whereas normally they would only connect one.
- 75. Steering in a straight line was challenging given the damage FITZGERALD had sustained. The ship lost the ability to steer from the normal location in the pilothouse; steering was conducted from Aft Steering, an arrangement not often used but frequently practiced.
- 76. At 1607, FITZGERALD entered the inner harbor of Yokosuka Naval Base. In order to set up an effective separation scheme (similar to traffic lanes), Yokosuka Naval Base Port Operations hired a commercial tugboat to escort and provide an additional buffer against other harbor traffic.

- Subj: SUPPLEMENTAL PRELIMINARY INQUIRY AND LINE OF DUTY
 DETERMINATION REGARDING INJURIES AND THE DEATHS OF SEVEN
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- 77. At 1854 FITZGERALD moored pier-side in Yokosuka. The tugboats maneuvered to minimize water from the tugboats going into the ship, and transitioned to "pusher boats" as FITZGERALD approached the pier. "Pusher boats" are very small and make minimal wake and are able to provide the final guidance for a ship coming into a pier.

Diving and Recovery Efforts

- 78. Once FITZGERALD was back in Yokosuka, a Navy dive team conducted two dives. It was not possible to send divers into Berthing 2 before this because ships have no dive equipment aboard, nor do they have trained and qualified divers.
- 79. The first dive occurred on the evening of 17 June 2017 and focused on doing an initial assessment of the ship and looking for ways for divers to enter into the damaged spaces.
- 80. The second dive began at 0454 the following morning, 18 June 2017. The divers entered the Berthing 2 space through the hole in the starboard side of the ship. The divers immediately found GMSN Dakota Rigsby near the top of the starboard access trunk. His foot was caught between the ladder and the wall but, as the foot was easily released by the divers, there was no indication of whether this happened while he was trying to leave or if he floated to this position after he passed away. GMSN Rigsby's body was brought to the dive boat at 0523.
- 81. The divers went back into the water at 0611 and entered the ship. Once back inside the Berthing 2 space, they immediately found YN3 Shingo Alexander Douglass, FC2 Carlos Sibayan, PS1 Xavier Martin and STG3 Ngoc Truong Huynh. These Sailors were found in the lounge area of Berthing 2. STG3 Ngoc Truong Huynh's body was found underneath a television, but it did not appear that he had been pinned by the television. GM2 Hernandez was found in the main passageway of Berthing 2 nearest the lounge area. Along with GMSN Rigsby, these Sailors were all found on the starboard side of Berthing 2.
- 82. The door to the bathroom in Berthing 2 was closed. When the divers entered the bathroom, they found FC1 Gary Rehm just inside this space.
- 83. Each of the Sailors recovered by the divers were removed from the ship, covered, brought to the surface, and placed in one of the dive boats. Each of the boats had screens and tarps in order to conceal the remains from potential media or bystanders. The remains of the seven Sailors were taken from the point of recovery via ambulance to USNHY. The FITZGERALD Command Master Chief identified each of the bodies.

Injuries

84. The Sailor who escaped the starboard side of Berthing 2 suffered (b) (6)
(b) (6)
(b) (6)
(c) He was medically evacuated to the USNHY because of the severity of his injuries and released on 19 June 2017.

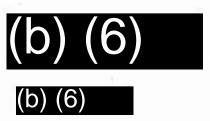
85. The CSO suffered (b) (6)
(b) (6) He was medically evacuated to the USNHY because of the severity of his injuries and released on 18 June 2017.

86. The CO suffered (b) (6)

(b) (6)

He was medically evacuated to the USNHY because of the severity of his injuries and released on 18 June 2017.

- 87. The Armed Forces Medical Examiner's System (AFMES) conducted autopsies on the seven deceased FITZGERALD Sailors. The cause of death for all seven deceased was drowning.
- 88. AFMES confirmed that several of the deceased Sailors had signs of blunt force injury such as contusions and abrasions; however, those injuries were by themselves not fatal.
- 89. GMSN Dakota Kyle Rigsby, USN, died on 17 June 2017 while onboard FITZGERALD. He was 19 years old.
- 90. YN3 Shingo Alexander Douglass, USN, died on 17 June 2017 while aboard FITZGERALD. He was 25 years old.
- 91. FC2 Carlos Victor Ganzon Sibayan, USN, died on 17 June 17 while aboard FITZGERALD. He was 23 years old.
- 92. PS1 Xavier Alec Martin, USN, died on 17 June 2017 while aboard FITZGERALD. He was 24 years old.
- 93. STG3 Ngoc Truong Huynh, USN, died on 17 June 2017 while aboard FITZGERALD. He was 25 years old.
- 94. GM2 Noe Hernandez, USN, died on 17 June 2017 while aboard FITZGERALD. He was 26 years old.
- 95. FC1 Gary Leo Rehm, Jr., USN, died on 17 June 2017 while aboard FITZGERALD. He was 37 years old.



NT OZ

DEPARTMENT OF THE NAVY

COMMANDER BATTLE FORCE SEVENTH FLEET COMMANDER CARRIER STRIKE GROUP FIVE FPO AP 96602

> 5830 Ser N00/253 23 Jul 17

From: Commander, Carrier Strike Group FIVE

To: (b) (6)

Subj: SUPPLEMENTAL PRELIMINARY INQUIRY AND LINE OF DUTY

DETERMINATION REGARDING THE DEATHS OF SEVEN SAILORS ONBOARD

USS FITZGERALD (DDG 62)

Ref: (a) JAGINST 5800.7F

(b) CSG-5 ltr 5830 Ser N00/237 of 22 Jun 17

(c) Your ltr of 28 Jun 17

- 1. Per Chapter II of reference (a), you are appointed to conduct a supplementary investigation into the matters set forth in reference (b). Upon further review of reference (c), additional discussion with respect to damage control and life-saving efforts of the FTZ crew, post-collision, is warranted. You are hereby directed to prepare a report supplementing your letter of 28 June 2017, to include these additional post-collision matters, and to report your findings to me no later than 4 August 2017, unless an extension of time is granted.
- 2. This supplemental report in no way alters line of duty findings forwarded to PERS-13 on 30 June 2017. This action was previously taken to expedite processing of certain survivor benefits for the dependents of the deceased service members and disability retirement or severance pay for the injured service members.

3. You may seek legal advice and administrative assistance from my Deputy Staff Judge Advocate, (b) (6) JAGC, USN, during the course of your investigation. She can be reached at DSN: (b) (6)

C. F. WILLIAMS

C.F. William

Copy to: (b) (6)



DEPARTMENT OF THE NAVY

COMMANDER BATTLE FORCE SEVENTH FLEET COMMANDER CARRIER STRIKE GROUP FIVE FPO AP 96602

> 5830 Ser N00/321 1 Aug 17

From: Commander, Carrier Strike Group FIVE

To: (b) (6)

Subj: SUPPLEMENTAL PRELIMINARY INQUIRY AND LINE OF DUTY

DETERMINATION REGARDING THE DEATHS OF SEVEN SAILORS ONBOARD

USS FITZGERALD (DDG 62)

Ref: (a) JAGINST 5800.7F

(b) CSG-5 ltr 5830 Ser N00/253 of 23 Jul 17

(c)(b) (6) Itr of 28 Jun 17

1. Your request for an extension in the above named matter is approved. Report your supplemental findings to me no later than 18 August 2017.

2. My point of contact on this matter is my Staff Judge Advocate, (b) (6)
USN. She can be reached at DSN: (b) (6)

C. F. WILLIAMS

C.F. Will:

SUPPLEMENTAL TIMELINE OF EVENTS ABOARD USS FITZGERALD FOLLOWING COLLISION AT SEA ON OR ABOUT 17 JUN 17

This timeline was created after a review of the materials listed as references and enclosures included in this report, along with additional documents that are not releasable at this time. All times are reported in Japan Standard Time, also known at the India time zone, the time zone in which USS FITZGERALD was located when the collision occurred. The times given are approximate and reflect the best information available to the investigator at this time. Other investigations may have access to more accurate data and any discrepancies should defer to the most reliable data.

The following abbreviations are used:
FTZ – USS FITZGERALD (DDG 62)
CDS 15 – Commander, Destroyer Squadron FIFTEEN
CFAY – Commander, Fleet Activities Yokosuka
JMSDF – Japanese Maritime Self-Defense Force

All times are approximate

17 June 2017

0000	FTZ underway in the Sea of Japan on the way to Subic Bay, Philippines. She
	was on a course of 230 degrees (True) at 20 knots with modified ZEBRA set
	throughout the ship. The ship was darkened, with the exception of exterior
	lights required for navigation. The Commanding Officer was off of the bridge.
Approx. 0130	Collision with the ACX CRYSTAL on the starboard side. Berthing 2 is flooded within 30-60 seconds.
0132	FTZ sounds collision alarm for two seconds.
0140	Auxiliary Machinery Room 1 (AUX 1) and Berthing 2 are reported as
	completely flooded.
0140	Loss of primary gyro.
0143	All power forward is lost.
	General Quarters set.
0144	Number one switchboard isolated.
0135	Commanding Officer reported trapped in his stateroom.
0146	Commanding Officer freed from his stateroom and brought to the bridge.
0148	FTZ in single generator operations. Eductors placed in Berthing 1. Eductors
	prove ineffective.
0150	Commanding Officer reported as "down and (b) (6)." Medical team called to
	the bridge to assist.
0158	Three crew members are reported as trapped in Sonar Control.
0200	FTZ makes initial report of collision at sea to CDS 15 via personal cell phone at
	approximately 0220.
0201	Rupture reported in the forward fire main.
0217	Communication established with Sonar Control and the crew members trapped
	there are freed shortly afterwards.

0218	Japanese Coast Guard en route to FTZ location.
0213	Steering shifted from Bridge to Aft Steering. 1MC ceases to operate.
0224	Initial report of Sailors missing following various departmental musters.
0240	FTZ reports loss of communications and loss of propulsion.
0245	85 tons of water estimated to be in the forward portion of FTZ.
0247	AUX 1 reported as fully flooded to the officer of the deck.
0252	YN3 Douglass reported as missing.
0305	Berthing 1 reported to the officer of the deck (OOD) as fully flooded.
0312	514 tons of flooding water estimated; five feet of water reported in the starboard passageway.
0319	Commanding Officer is moved from the bridge to his at-sea cabin by stretcher bearers to be treated for (b) (6)
0321	Flooding in the starboard passageway reduced to four feet.
0321	
0222	Loss of power to Main Engine Room 1.
0333	Loss of power to IVCS phones from Forward Interior Communications casualty.
0335	Starboard shaft locked.
0344	Tug boats depart Commander, Fleet Activities Yokosuka to support FTZ.
0351	Flooding in starboard passageway down to one foot.
0354	Japan Coast Guard preparing to depart from Shimoda to render assistance.
0410	Japan Coast Guard vessels IZANAMI and KANO depart Shimoda to render assistance.
0417	Large merchant identified as "HCX Crystal."
0437	Japan Coast Guard vessel KANO arrives to render assistance.
0438	FTZ reports damage assessment update: unconfirmed 12ftx12ft hole on starboard side; flooding remains contained; dewatering continues; single gas turbine generator operations.
0450	Flooding in the starboard passageway reduced to eight inches.
0452	Japanese Coast Guard vessel IZANAMI on station U.S. maritime patrol aircraft
0.132	preparing for launch from Kadena Air Base; FTZ making way at 3kts.
0453	FTZ underway, moving under her own power at 3kts.
0521	No potable water available on the ship.
0526	Seven Sailors remain unaccounted for.
0540	FTZ reports second all-hands muster complete and seven Sailors are
0340	unaccounted for.
0615	Japanese Coast Guard ships and helicopter remain on scene; and Search and
0013	Rescue efforts initiated for seven missing Sailors.
0620	Berthing 1 has two feet of water remaining and that level is holding.
0637	
	Emergency flight quarters set in support of the medical evacuation.
0712	Japanese Coast Guard medical evacuation helicopter overhead.
0722	Japanese Search and Rescue helicopter on scene; dewatering starboard
0727	passageway complete; U.S. Maritime Patrol Aircraft en route.
0727	CDR Babbitt assumes command of FTZ.
0728	Medical evacuation helicopter receives the Commanding Officer and one representative from the crew to travel with him to U.S. Naval Hospital Yokosuka.

0746	USS DEWEY (DDG 105) executed an emergency underway from Yokosuka,
	Japan, to assist FTZ.
0800	FTZ switches to paper charts due to loss of navigation systems.
0828	Two tugs from Yokosuka alongside FTZ.
0911	Deputy Commodore, CDS-15, Doctor, Damage Control Chief, and Chaplain arrive aboard FTZ to provide assistance.
0915	Two FTZ crew members medically evacuated to U.S. Naval Hospital Yokosuka for treatment.
0940	Water levels holding.
1001	USS DEWEY reports FTZ requested Rescue and Assistance Team (R&A), at least 12 personnel, and all additional P-100 pumps and additional hoses.
1029	U.S. Maritime Patrol Aircraft on scene to support search and rescue; assess large hole in hull causing free communication with sea and maximum speed is 5kts; and AUX 1, Radio, Berthing 1 and Berthing 2 remain completely flooded and inaccessible though flooding is contained.
1035	FTZ has a consistent 5 degree starboard list; total of three personnel reported medically evacuated assessed as stable; FTZ assesses no other injuries require medical evacuation.
1203	At approximately 1203, USS DEWEY on scene providing damage control equipment and support; USS DEWEY R&A team of 14 personnel with additional P-100 pump and firehoses embark FTZ. USS DEWEY DCA relieves FTZ DCA in CCS. USS DEWEY R&A team remained aboard FTZ until FTZ was pierside CFAY.
1226	2 JMSDF helicopters, one JMSDF P-3C, one USN P-8, and one USN helicopter on scene supporting search and rescue (SAR) effort.
1234	Report that seven crew members remain unaccounted for made to the officer of the deck.
1526	Sonar Control reported as flooded out to the officer of the deck.
1607	FTZ enters inner harbor of Yokosuka Naval Base.
1629	Seven feet of water in Berthing 1 and 5 feet of water in the radio vestibule reported to the officer of the deck.
1829	Main engines secured.
1856	FTZ moored; shifted colors.
1939	Harbor pilot departs FTZ.
1949	Repair parties from USS CHANCELLORSVILLE, USS STETHEM, USS BENFOLD, USS BLUE RIDGE, and an electrical team from SRF arrive to provide assistance.
2125	Divers in the water conducting initial assessment.
2138	Shore power cables connected.

18 June 2017

0404	Divers arrive to FTZ.
0454	Divers in the water and enter Berthing 2 for the first time.
0523	GMSN Rigsby's body recovered and brought to the dive boat. Divers exit the water to develop a plan to retrieve the remaining Sailors.

0613	Second dive boat arrives.
0620	GMSN Rigsby's body transferred to second dive boat.
0657	The bodies of YN3 Douglass, FC2 Sibayan, PS1 Martin, and STG3 Huynh
	recovered.
0705	GM2 Hernandez's body recovered.
0708	FC1 Rehm's body recovered.
0712	The body of GMSN Dakota Kyle Rigsby is brought to U.S. Naval Hospital
	Yokosuka.
0844	The body of YN3 Shingo Alexander Douglass is brought to U.S. Naval Hospital
	Yokosuka.
0845	The body of FC2 Carlos Victor Ganzon Sibayan is brought to U.S. Naval
	Hospital Yokosuka.
0900	DESRON 15 directs SAR efforts to cease.
0920	The body of PS1 Xavier Alec Martin is brought to U.S. Naval Hospital
	Yokosuka
0922	The body of STG3 Ngoc Truong Huynh is brought to U.S. Naval Hospital
	Yokosuka.
0928	The body of GM2 Noe Hernandez is brought to U.S. Naval Hospital Yokosuka.
0929	The body of FC1 Gary Leo Rehm Jr. is brought to U.S. Naval Hospital
	Yokosuka.

List of Annexes

Annex A: Photographs

- 1. Commanding Officer's Stateroom on FITZGERALD Exterior View
- 2. Commanding Officer's Stateroom on FITZGERALD Interior View
- 3. Starboard Access Trunk outside Berthing 2 on FITZGERALD and USS BENFOLD (DDG 65) (same class of ship as FITZGERALD)
- 4. Racks in Berthing 2 on FITZGERALD and on same class of ship as FITZGERALD
- 5. Lounge in Berthing 2 View from racks
- 6. Lounge in Berthing 2 View from lounge facing egress

Annex B: Sketches

- 1. Sailor sketch depicting chest high water from the top rack
- 2. Sailor sketch depicting egress from starboard section of Berthing 2 (above water)
- 3. Sailor sketch depicting egress from starboard section of Berthing 2 (below water)
- 4. Sailor sketch depicting ceiling in Berthing 2
- 5. Sailor sketch depicting path of starboard egress from Berthing 2
- 6. Diagram of Berthing 2
- 7. Diagram of Berthing 2 (annotated with Tango recoveries)

Annex C: Damage Control

1. Catalog of Flooding and Structural Damage



A1: Commanding Officer's Stateroom on FTZ - Exterior View

(b)(3) 10 U.S.C. § 130

USS BENFOLD Starboard Access Trunk as seen from Berthing 2



USS BENFOLD Starboard Access Trunk
- Hatch & Scuttle to Forward Interior
Communications Room Below



USS BENFOLD Starboard Access Trunk

– Ladder to Berthing 1 Access Trunk

Above



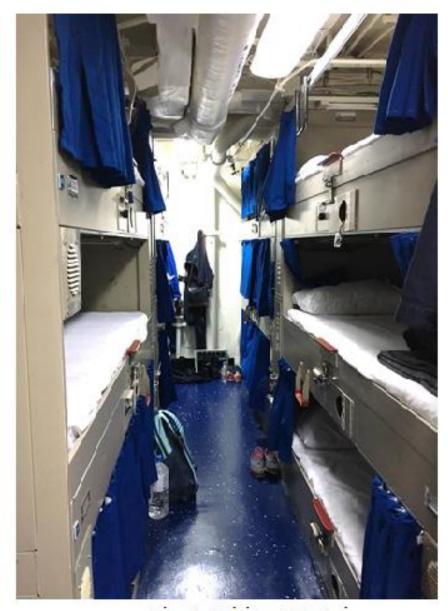
USS FITZGERALD Starboard Access Trunk as seen from Berthing 2



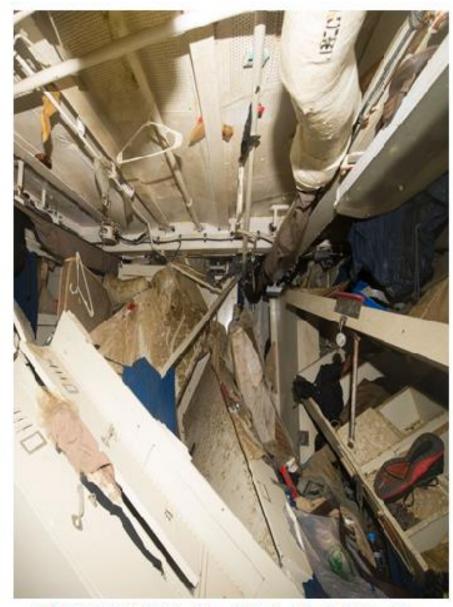
USS FITZGERALD Starboard Access Trunk - Hatch & Scuttle to Forward Interior Communications Room Below



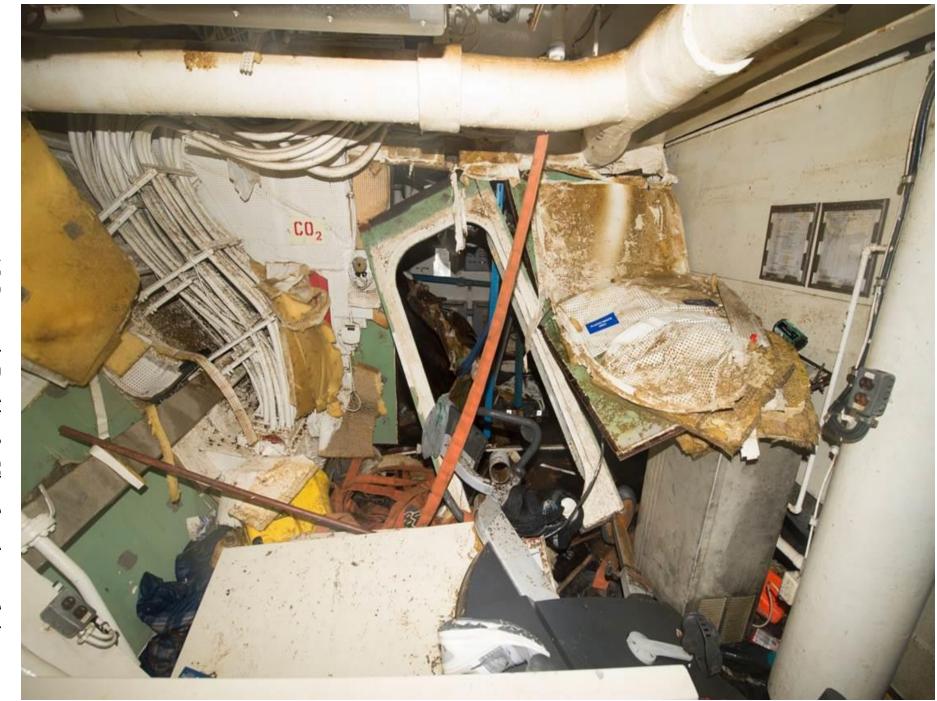




Sample Berthing 2 Racks



FITZGERALD Berthing 2 Racks Post-Deflooding

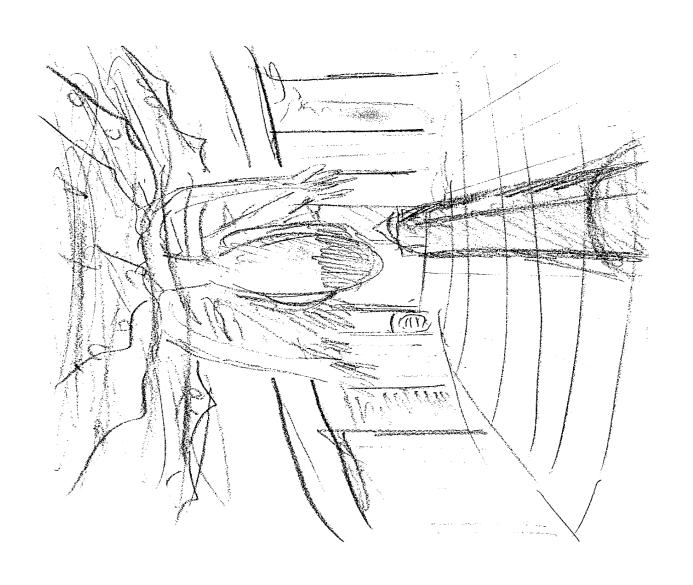


A5: Lounge in Berthing 2 - View from lounge facing egress



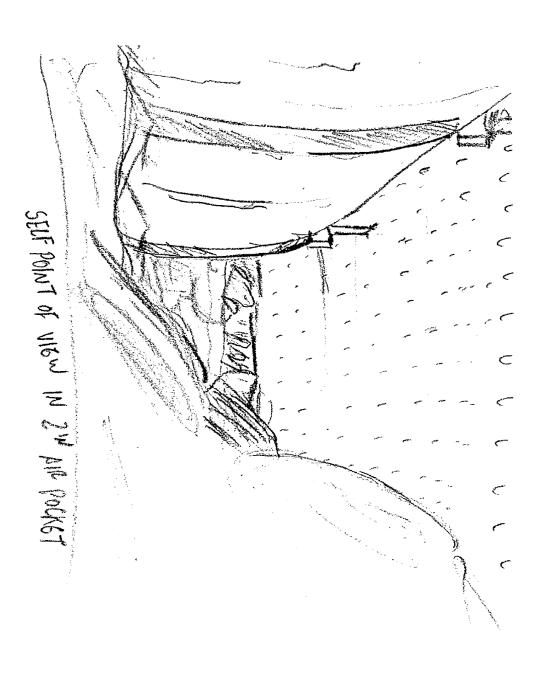
A6: Lounge in Berthing 2 - View from racks

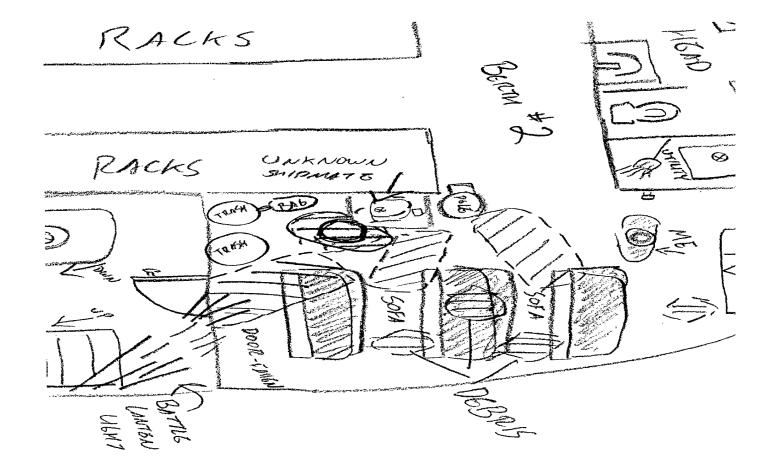
B1: Sailor sketch depicting chest high water from top rack



B2: Sailor sketch depicting egress from starboard section of Berthing 2 (above water)

Sailor sketch depicting egress from starboard section of Berthing 2 (below water)





(b)(3) 10 U.S.C. § 130

Be-Diagram of Berthing 2

PORT

MIDSHIPS

STBD

B7:Diagram of Berthing 2 (annotated with Tango recoveries

PORT

MIDSHIPS



