

5800
14 Feb 01

~~CONFIDENTIAL RESTRICTED DATA~~ - (Unclassified upon removal of Enclosures (1), (24), (31), (37) and (39))

From: Rear Admiral C. H. Griffiths, Jr., USN
To: Commander Submarine Force, U. S. Pacific Fleet

Subj: PRELIMINARY INQUIRY INTO THE COLLISION BETWEEN USS GREENEVILLE (SSN 772) AND JAPANESE FISHING VESSEL EHIME MARU THAT OCCURRED OFF THE COAST OF OAHU, HAWAII, ON 9 FEB 2001. (U)

Ref: (a) COMSUBPAC ltr 5800 Ser 00J/1281 dtd 12 Feb 01
(b) JAG Manual
(c) COMSUBPAC ltr 5800 Ser 00J/1282 dtd 13 Feb 01

Encl: (1) Preliminary Reconstruction of Tracks and Events
(2) Summary of initial interview with Commanding Officer, USS GREENEVILLE (SSN 772) dtd 10 Feb 2001.
(3) Summary of initial interview with Executive Officer, USS GREENEVILLE (SSN 772) dtd 11 Feb 2001.
(4) Summary of initial interview with LTJG Coen, USS GREENEVILLE (SSN 772) dtd 10 Feb 2001.
(5) Summary of initial interview with the Navigator, USS GREENEVILLE (SSN 772) dtd 11 Feb 2001.
(6) Summary of initial interview with ST1 McGibney, USS GREENEVILLE (SSN 772), Sonar Supervisor, dtd 10 Feb 2001.
(7) Summary of initial interview with FT1 Seacrest, USS GREENEVILLE (SSN 772), FTOW, dtd 10 Feb 2001.
(8) Summary of initial interview with ET1 Carter, USS GREENEVILLE (SSN 772), ESM Operator, dtd 11 Feb 2001.
(9) Summary of initial interview with STS3 Bowie, USS GREENEVILLE (SSN 772), Sonar Operator, dtd 11 Feb 2001.
(10) Summary of initial interview with STS1 Reyes, USS GREENEVILLE (SSN 772), Sonar Technician, dtd 11 Feb 2001.
(11) Summary of initial interview with YNSN Ramirez, USS GREENEVILLE (SSN 772), Stern-Planesman, dtd 11 Feb 2001.

Derived from: DOE-DOD Classification Guide
CG-RN-1 Revision 3 dtd February 1996
RESTRICTED DATA

This document contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure Subject to Administrative and Criminal Sanctions.

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Exhibit 1

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- (12) Summary of initial interview with ETCS Smith, USS GREENEVILLE (SSN 772), RM Supervisor, dtd 11 Feb 2001.
- (13) Summary of initial interview with ET1 Thomas, USS GREENEVILLE (SSN 772), A-NAV, dtd 11 Feb 2001.
- (14) Summary of initial interview with ET3 Blanding, USS GREENEVILLE (SSN 772), Quarter Master of the Watch, dtd 10 Feb 2001.
- (15) Summary of initial interview with MM1 Harris, USS GREENEVILLE (SSN 772), Chief of the Watch, dtd 10 Feb 2001.
- (16) Summary of initial interview with SK3 Feddler, USS GREENEVILLE (SSN 772), Helmsman, dtd 11 Feb 2001.
- (17) Summary of initial interview with MMC Streyle, USS GREENEVILLE (SSN 772), Diving Officer of the Watch, dtd 10 Feb 2001.
- (18) Summary of initial interview with LCDR Meador, USS GREENEVILLE (SSN 772), Engineer Officer (Manned the Bridge after collision), dtd 13 Feb 2001.
- (19) Summary of interviews with Captain Brandhuber, SUBPAC COS, dtd 13 Feb 2001.
- (20) Summary of initial interview with FT3 Brown, USS GREENEVILLE (SSN 772), Control Room Observer, dtd 14 Feb 2001.
- (21) Summary of initial interview with STSSN Rhodes, USS GREENEVILLE (SSN 772), Sonar Operator (UI), dtd 14 Feb 2001
- (22) Summary of initial interview with LT Pritchett, USS GREENEVILLE (SSN 772), Control Room Observer, dtd 14 Feb 2001
- (23) Summary of initial interview with YN2 Quinn, USS GREENEVILLE (SSN 772), Control Room Observer, dtd 14 Feb 2001
- (24) Inventory of Documentary Evidence and all Documentary Evidence Listed.
- (25) Results of Investigation into Sensor Operability on USS GREENEVILLE (SSN 772).
- (26) Status of BSY-1 Spherical Array Transducer Penetrator Replacement.

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- (27) USS GREENEVILLE (SSN 772) Post Collision Ship Inspections.
- (28) BSY-1 System Diagrams including HF Array and Hull Array diagrams.
- (29) Chart 19340 marked with operating areas and shipping lanes
- (30) Excerpt from Sailing Directions in Reference to Shipping Lanes IVO Hawaii.
- (31) Qualitative Assessment of Active Sonar Utilization for Searching and Localization.
- (32) Historical Information on VIP Cruises.
- (33) Personnel Loading in the Control Room and Sonar Room of USS GREENEVILLE (SSN 772) on 9 Feb 2001
- (34) Analysis of Visual Detection Ranges for Swell Height vs. Ship's Depth.
- (35) METOC Data for Moored Weather Buoy 51003 on 9 Feb 01
- (36) Ship's Characteristics of FV EHIME MARU (in Japanese)
- (37) Report of Communications Status and Procedures on USS GREENEVILLE (SSN 772).
- (38) NTSB Report on 1989 Collision Between USS Houston and US Tug BARCONA.
- (39) Video and Photographic Surveillance of External Damage on USS GREENEVILLE (SSN 772)

Preliminary Statement

1. A preliminary inquiry into the subject collision was conducted between 09 February and 14 February 2001. All reasonably available evidence was collected or is forthcoming, and each directive of the convening authority in references (a) and (c) has been met, as indicated below.

2. The nature of the preliminary investigation consisted of interviews of key personnel stationed aboard USS GREENEVILLE (SSN 772) during the time of the subject incident, most notably the Commanding Officer, Executive Officer, Officer of the Deck, Navigator, Sonar Supervisor, Sonar Technicians on watch or in sonar at the time, Fire Control Technician of the Watch and the ESM Operator on watch at the time. Additionally, the OOD on the bridge following the collision, and a senior Naval Officer rider

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(CAPT Brandhuber, Chief of Staff, COMSUBPAC), were interviewed. The summaries are transcriptions of their interviews. Some of those interviewed have not yet had an opportunity to check the accuracy of the interview summaries due to time constraints.

3. The civilian guests that were embarked during the underway that resulted in the collision have not been interviewed for this investigation. I did not consider it constructive to the completeness of the investigation to do so.

4. Additionally, relevant ship's logs were collected, particularly those required under Chapter 12 of reference (b). There were significant difficulties in gathering data. Most notable were that mylar overlays for navigation charts in use at the time of the collision had been erased and there were no working audio tapes or Periviz tapes. An initial review of key logs was conducted. An initial visual, photographic and video survey of the USS GREENEVILLE's hull was conducted as well. A reconstruction of the course of the two vessels and significant events occurring on the USS GREENEVILLE (SSN 772) just prior to the collision was assembled. Analysis and reconstruction of available fire control and sonar data, was conducted. Review and analysis of ship and shore side communications was conducted. Due to the time constraints placed on the completion of this report, further document and evidence review and additional in-depth analysis is required. LCDR Barry L. Harrison, JAGC, USN was consulted and provided advice, support, and supervision as needed, during the conduct of this investigation.

5. While not specifically tasked, the preliminary inquiry reviewed areas symptomatic of issues dealing with operating area assignment and the conduct of VIP cruises in the Hawaiian operating area. Findings of fact (15) through (21), and opinions (2), (3) and (10) pertain. I also had the opportunity during the conduct of this inquiry to review the 1990 NTSB Safety Recommendation Report after their investigation into the USS HOUSTON collision in 1989. The report is attached as enclosure (38).

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6. On 13 Feb 01, the Convening Authority orally extended the deadline for completion of the Preliminary Investigation as previously indicated in reference (a) to the close of business on 14 Feb 01. Reference (c) subsequently reiterated this extension in writing.

Preliminary Findings of Fact

1. That a collision occurred on 9 February 2001 between the USS GREENEVILLE (SSN 772) off the coast of Oahu Hawaii and the Japanese Fishing Vessel EHIME MARU.
2. That as a result of this collision, there appears to have been multiple deaths of personnel that had been onboard Japanese Fishing Vessel.
3. That as a result of the collision, there has been substantial property loss and damage both to the USS GREENEVILLE (SSN 772) and to the Japanese Fishing Vessel which was lost at sea.
4. That the collision occurred as the USS GREENEVILLE (SSN 772) conducted an emergency surfacing for training and as a demonstration for on board visitors.
5. That prior to conducting the emergency surfacing, the USS GREENEVILLE (SSN 772) had prepared, ascended to and operated at periscope depth to ensure the area where they would be surfacing was clear of vessels that would either endanger own ship or be endangered when the ship surfaced.
6. That the ability to safely conduct the emergency surfacing was dependent upon correct performance of both the preceding preparation and operation at periscope depth.
7. That in the time preceding the collision, there were fundamental errors by the USS GREENEVILLE (SSN 772) in maneuvering the ship for Target Motion Analysis of passive sonar contacts while preparing for the ascent to periscope depth. It appears that the EHIME MARU was held on the ship's passive sonar system and a tracker had been assigned as contact S-13. However:
 - A. The ship did not appear to recognize that sonar data collected during high-speed angles and maneuvers was not reliable to utilize as a basis of contact management.
 - B. That once slowing from the high speed maneuvers, the ship did not conduct deliberate TMA legs, in number and

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- duration, to adequately ascertain the current contact situation before proceeding to periscope depth.
- C. That as a consequence, S-13 was never recognized as a contact whose range was close enough to be of concern.
8. That during the time spent at periscope depth there were fundamental errors in using the opportunity to ensure the safety of the upcoming emergency ballast tank blow evolution:
- A. The ship was only at periscope depth for an estimated 2 minutes which significantly limited opportunities for visual and electronic emitter search and detections.
- B. The short period at periscope depth did not allow the ESM operator to develop the information available on the WLR-8 screen beyond aural analysis.
- C. While at periscope depth, the Commanding Officer conducted an abbreviated high power search of the sector in which existing sonar contacts were bearing at an ordered keel depth of 58 feet.
- D. The high power visual search conducted by the Commanding Officer was deficient because:
- It was not coordinated between the scope operator, FTOW and sonar.
 - It was not carefully conducted down the bearings of existing sonar contacts.
 - Height of eye of the periscope was not high enough in the seas to provide an assured adequate distance to the horizon.
- E. That on the day of the collision at a keel depth of 58 feet the interaction of variables (wave/swell height and height of eye) affecting distance to the horizon could limit maximum range for visual detection of the bridge on the EHIME MARU to as little as about 2kyds.
9. Sonar issues:
- A. That during a period of several hours prior to and including the collision, sonar was improperly manned with only the Sonar Supervisor and one qualified Broadband Operator. The sonar technician on the second console was unqualified and there was no qualified watchstander assigned. The unqualified technician was under the supervision of the Sonar Supervisor and a volunteer off-watch first class sonar technician who was not continuously present in sonar.

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- B. That prior to and while preparing to go to periscope depth, classification data beyond surface contact was not determined on contacts held including the EHIME MARU due to the contacts being quiet.
 - C. That there were considerable disparities between the CO, OOD, FTOW, Sonar Supervisor and sonar operators on which contacts they held. These disparities never surfaced during real time interactions between these key players.
 - D. That use of active sonar would not have provided any appreciable additional opportunities to detect the EHIME MARU in the period preceding periscope depth operations, the period at periscope depth or during the period immediately prior to the emergency blow.
 - E. That the USS GREENEVILLE (SSN 772) passive and MF active spherical array was near 100% with only 3 bad transducers out of approximately 1120.
 - F. That USS GREENEVILLE (SSN 772) had remaining in place a temporary standing order which placed unnecessary restrictions on the use of MF active sonar since transducer faults requiring limited power had been recently repaired in the SRA.
 - G. That the USS GREENEVILLE (SSN 772) HF active sonar system was in a reduced status condition because 18 of 60 staves were OOC.
 - H. That the USS GREENEVILLE (SSN 772) unnecessarily placed the BQR 22 out of commission even though the processor and one of the two display units in sonar was available. The ship arbitrarily chose to electrically isolate the broken portions of the system in a way that prevented the operation of any part of the system.
10. That there appears to have been significant deficiencies on the USS GREENEVILLE (SSN 772) in interactions between senior shipboard supervisors including the CO, XO and OOD.
- A. That the Commanding Officer was widely admired by the crew and seen as self-confident and competent.
 - B. That the CO was in total charge in control, issuing essentially all orders to the OOD. The OOD appeared to carry out these orders without independent thought in the exercise of his watchstander duties.

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- C. That the directive nature of the Commanding Officer with the OOD as described above appears to have been a standard relationship during important or high tempo operations.
 - D. That the XO was present in the Control Room and recognized the apparent inadequacies in some of the key prerequisite evolutions for safely conducting an EMBT blow, including the TMA maneuvers preceding the ascent to PD and the periscope high look at PD. However, he chose to not make the Commanding Officer aware of these inadequacies when they occurred.
11. That there appears to have been a general breakdown in communications between the OOD, CO and FTOW
 - A. That just prior to and during operations at periscope depth, a solution on sonar contact S-13, apparently the EHIME MARU, was entered into the Fire Control System by the FTOW with a range of approximately 4,000 yds and generated into 2,000 yds. Range on this contact was out-spotted to approximately 9,000 yds prior to the collision because the FTOW assumed the generated range was erroneous in light of the OOD and CO holding no visual contacts.
 - B. That neither the CO nor OOD were made aware that there was a fire control system solution on S-13 inside approximately 4,000 yds during the period the ship was at periscope depth and prior to conducting the emergency blow.
 12. That in the time preceding the collision, it appears USS GREENEVILLE (SSN 772) did not adequately consider the condition of one important sensor, specifically the Analog Video Signal Display Unit (AVSDU).
 13. That in the time preceding the collision, it appears USS GREENEVILLE (SSN 772) did not adequately prioritize scheduled evolutions to ensure an appropriate margin for safety.
 14. That in the time subsequent to the collision, it appears that prompt, prudent and effective action was taken by USS GREENEVILLE (SSN 772) and other participants for search and rescue of survivors.
 15. That civilian visitor operation of equipment under the direct supervision of qualified watchstanders did not contribute to the collision.

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16. That there were a large number of people (25) in the control room. While this was comparable to the number of people who would be in the control room for Battlestations per the Ship's watch bill, the distribution was significantly different. A significant number of these people were on the periscope stand between the OOD/CO and the Fire Control panels and FTOW.
17. That as a result of the number of people on the periscope stand between the OOD/CO and the FTOW and the apparent intention of the Commanding Officer to rely solely on sonar information, the FTOW did not actively participate in tactical discussion with the Commanding officer or Officer of the Deck.
18. That the operating areas assigned to USS GREENEVILLE (SSN 772) for this operation were located to the south of the heavily trafficked shipping lanes servicing Honolulu Harbor.
19. That the course of 166 selected by the captain of the FV EHIME MARU was chosen because it would reach the boundary of the US exclusive economic zone the fastest to allow fishing activity. The location of fish buoy FAD "P" (inside the USS GREENEVILLE's operating areas to the south of the collision) was not a factor in the selection of the FV EHIME MARU's course.
20. That the average length of time allotted for VIP embarks conducted by Pearl Harbor submarines is about six hours, the same length of time allotted to USS GREENEVILLE (SSN 772) on the day of the collision.
21. That there is no standard agenda for submarine VIP embarks. The specific plan for any given VIP embark is determined by the ship's commanding officer; one ship with a good plan will share it with other ships who adapt it for their own use. The plan used by the USS GREENEVILLE (SSN 772) on 9 February 2001 had been used successfully by the ship for previous VIP embarks, and was similar in scope and complexity to plans used by other submarines.
22. That the initial report of the collision was made by USS GREENEVILLE (SSN 772) to COMSUBPAC Command Watch Center via SATHICOM in a timely and effective manner.
23. That COMSUBPAC relayed the report of the collision to U.S. Coast Guard Authorities in Honolulu in a timely and effective manner.

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24. That Search and Rescue communications for coordination and execution between USCG and USN units including USS GREENEVILLE (SSN 772) were conducted in a professional and effective manner.
25. The ship quickly determined that the condition of the seas would prevent their sending divers into the water unless the survivors were in some form of extremis.

Opinions

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Recommendations

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