13 Apr 01

From: Vice Admiral John B. Nathman, U.S. Navy
Rear Admiral Paul F. Sullivan, U.S. Navy
Rear Admiral David M. Stone, U.S. Navy
Rear Admiral Isamu Ozawa, JMSDF
To: Commander in Chief, U.S. Pacific Fleet

Subj: COURT OF INQUIRY INTO THE CIRCUMSTANCES SURROUNDING THE COLLISION BETWEEN USS GREENEVILLE (SSN 772) AND JAPANESE M/V EHIME MARU THAT OCCURRED OFF THE COAST OF OAHU, HAWAII ON 9 FEBRUARY 2001

Ref: (a) JAGMAN
(b) JAGINST 5830.1

Encl: (1) Record of Proceedings

PRELIMINARY STATEMENT

1. On 9 February 2001, at 1343 local time, the USS GREENEVILLE (SSN 772) and the Japanese Motor Vessel (M/V) EHIME MARU collided in waters nine miles south of Oahu, Hawaii. Within minutes of the collision, the M/V EHIME MARU was lost, along with nine of her embarked complement.

2. Immediately after the collision, Commander, Submarine Force, U.S. Pacific Fleet, appointed Rear Admiral Charles H. Griffiths, Jr., U.S. Navy, Commander, Submarine Group NINE, to conduct a preliminary investigation into the facts and circumstances of this collision. While given only four days in which to complete his review, Rear Admiral Griffiths provided invaluable service to the Navy and this Court by preserving and organizing the available evidence, and by compiling a comprehensive list of factors potentially contributing to the collision.

3. On 17 February 2001, Commander in Chief, U.S. Pacific Fleet, appointed this Court of Inquiry to conduct additional fact-finding and analysis. Specifically, the Court of Inquiry was directed to accomplish the following:

a. To inquire into all of the facts and circumstances connected with the collision, resulting deaths and injuries to the Japanese passengers and crew of the Japanese M/V EHIME MARU, the damages resulting therefrom, and any fault, neglect, or responsibility for the incident;

b. To examine the operational policies and practices of Commander, Submarine Force, U.S. Pacific Fleet's implementation of the Distinguished Visitor Embarkation (DVE) Program;

c. To examine the propriety of the assigned location for USS GREENEVILLE's operations on 9 February; and

d. To examine and make findings as to whether Captain Robert L. Brandhuber, Chief of Staff, Submarine Force, U.S. Pacific Fleet, as senior officer onboard USS GREENEVILLE on 9 February, was in a position to intervene and prevent the chain of events leading to the collision.

4. The Convening Authority named the following individuals as parties to the Court of Inquiry:

a. Commander Scott D. Waddle, U.S. Navy, Commanding Officer, USS GREENEVILLE;

b. Lieutenant Commander Gerald K. Pfeifer, U.S. Navy, Executive Officer, USS GREENEVILLE;

c. Lieutenant (Junior Grade) Michael J. Coen, U.S. Navy, USS GREENEVILLE, Officer of the Deck at the time of collision.

5. At the invitation of the Convening Authority, Rear Admiral Isamu Ozawa of the Japan Maritime Self-Defense Force participated as an advisor and non-voting member of the Court. Authority for Rear Admiral Ozawa's appointment was based primarily upon Section 0211.h of reference (a), which specifically permits participation of entities with an interest in the subject under inquiry. The Court welcomed and benefited from Rear Admiral Ozawa's active involvement throughout the investigative process. While participating in the Court's deliberations, Rear Admiral Ozawa did not vote on the findings of fact, opinions, and recommendations. Only that evidence introduced in open court and available to all parties was considered in the Court's deliberations.

6. The Court was originally ordered to commence its inquiry on 22 February 2001. Pursuant to requests from counsel for the

parties, the Convening Authority continued the convening date to 5 March 2001. Important procedural matters warranted this delay.

a. Issues involving detail of military counsel and retention of civilian counsel were finally resolved.

b. Technical advisors for the parties were requested and appointed.

c. Counsel and technical advisors for the parties were afforded time to prepare.

The Court also required this additional time to properly organize for the hearing portion of the inquiry. In light of the significant national and international focus on these proceedings, this preparatory period was essential to the Court's efficient and effective mission accomplishment. After 12 days of receiving testimony and evidence, the Court of Inquiry closed on 20 March 2001.

7. While the National Transportation Safety Board (NTSB) did not participate in the proceedings, NTSB officials were invited and did observe open sessions of the Court. The NTSB directly assisted the Court by providing copies of statements taken by NTSB investigators from certain civilian guests onboard USS GREENEVILLE on 9 February.

8. During the course of the proceedings, the Court considered whether the naming of additional parties was warranted. Specifically, the actions of Captain Brandhuber and Fire Control Technician First Class Petty Officer Patrick Seacrest, U.S. Navy, on 9 February were carefully reviewed. The Court determined that, while both individuals were remiss in the performance of their respective duties, trial by court-martial was not a foreseeable result. Petty Officer Seacrest provided sworn testimony to the Court under a grant of testimonial immunity. No other individuals or parties received grants of immunity.

9. As noted in Rear Admiral Griffiths' preliminary investigation, several important evidentiary items were

unavailable. Sonar working audio tapes and PERIVIS tapes from 9 February do not exist. The Contact Evaluation Plot was not properly maintained in the 45-minute period before the collision. The mylar overlay for the navigation charts in use at the time of the collision was mistakenly erased during the search and rescue phase. Despite these deficiencies, there was no overall impact on the Court's ability to determine relevant facts. Specifically, this investigation involved the first use of automated sonar data logger files for purposes of reconstructing USS GREENEVILLE's track on 9 February. The Acoustic-Rapid Commercial Off-The-Shelf (COTS) Insertion (A-RCI) upgrade onboard USS GREENEVILLE enabled Navy officials to conduct a second by second review of exact course, speed, depth, sonar and tactical system data. Such information allowed precise analysis of important aspects of USS GREENEVILLE's track, including ship parameters during target motion analysis, time at periscope depth, and contact management. The A-RCI system proved instrumental in examining and understanding both the system and human dynamics at work immediately prior to this collision.

10. None of the civilian guests embarked onboard USS GREENEVILLE on 9 February were called to testify before the Court.

a. Naval personnel provided significant evidence on the relevant issues involving the embarked guests. Specifically, the Court learned how this particular embark was arranged, what evolutions USS GREENEVILLE planned and performed for the guests, where the guests were located in the Control Room for the afternoon events, and the individual actions of guests invited by USS GREENEVILLE's Commanding Officer to participate in the emergency surfacing maneuver.

b. Based upon the evidence presented, the Court was able to make essential findings, opinions, and recommendations regarding both the effect of the civilian guests' presence, as well as implementation of the DVE program within Submarine Force, U.S. Pacific Fleet.

c. While the Court considered calling certain civilian witnesses, it was decided that their testimony was not so

essential to warrant issuance of subpoenas. First, in that the Court received sufficient evidence on the relevant issues, testimony of the civilian guests would have been largely cumulative. Second, the NTSB provided the Court with transcripts of interviews conducted with the two civilian guests deemed most relevant, those under supervision at control stations during the emergency surfacing maneuver. Third, the civilian guests' lay perspective of submarine operations on 9 February would have been of little substantive value to the Court. Finally, the Court was sensitive to the expressed desire of certain civilian guests not to participate in the inquiry. Given these factors, there was no compelling need or reason to subpoena civilian witnesses.

11. The parties were afforded all substantive and procedural rights applicable to Courts of Inquiry, including the right to present evidence and make statements to the Court.

a. CDR Waddle elected to make a sworn statement to the Court, which starts at page 1653 of the verbatim transcript.

b. LCDR Pfeifer elected to provide an unsworn written statement. (Exhibit 75).

c. LT(jg) Coen elected to provide an unsworn oral statement, which starts at page 1645 of the verbatim transcript.

12. Inconsistencies between the recollections of the various witnesses exist. These did not inhibit the Court's ability to reliably determine relevant facts. Where deemed of interest or otherwise significant, such inconsistencies are footnoted.

13. The Court received outstanding support from the following staffs: Commander in Chief, U.S. Pacific Fleet; Commander, Submarine Force, U.S. Pacific Fleet; Commander, Navy Region Hawaii; the Office of the Judge Advocate General; the Chief of Navy Information; Trial Service Office Pacific, and; Naval Legal Service Office Pacific. Lieutenant Theresa Brown, U.S. Navy, led the Court's transcription team, and utilized the talents of numerous Legalmen assigned in the local Oahu area. LT Brown's team consistently produced verbatim transcripts in 24 hours.

Their remarkable efforts warrant appropriate recognition by Commander, Naval Legal Service Command.

14. Given the circumstances of this incident, the decision to convene a Court of Inquiry was both necessary and appropriate.

a. The formal procedures applicable to Courts of Inquiry allowed thorough investigation of the facts in an open and fair proceeding. The participation of the parties greatly assisted the Court in coming to a full understanding of relevant facts. The integrity of the process was proven, and the rights of the parties zealously safeguarded. Through proper organization and careful preparation, the Court utilized the formal hearing process to move forward with purpose and diligence.

b. It is clear, however, that a Court of Inquiry should not be convened without full appreciation for its significant procedural and substantive requirements. The decision to convene a Court of Inquiry requires a careful balancing of all circumstances. Once committed, this form of investigative body requires investment of significant resources and time.

c. In light of numerous procedural lessons learned, the Court recommends that the Office of the Judge Advocate General, with input from Counsel for the Court and Fleet Judge Advocate, U.S. Pacific Fleet, conduct a thorough review and update of reference (b).

15. In organizing this report, the Court follows the specific taskings contained in the appointing order. Each area assigned for investigation is addressed. In evaluating the circumstances of the collision, the Court found it useful to separately describe the search and rescue effort. As directed, the Court has provided opinions and recommendations.

16. The Court’s findings, opinions, and recommendations have undergone security review and are unclassified. Portions of witness testimony and some evidentiary exhibits are classified at the CONFIDENTIAL/NOFORN level. All transcripts and exhibits are appropriately marked. In taking testimony and collecting evidence, the Court imposed specific procedures to properly safeguard classified material. Most significantly, these

included appointment of a dedicated Security Manager to the Court; obtaining necessary clearance for Rear Admiral Ozawa; execution of a nondisclosure agreement by civilian counsel; pre-briefing witnesses on procedures to follow if responses called for discussion of classified matters; clearing the courtroom during classified testimony; and monitoring the proper handling and securing of material by all counsel and parties.

17. The Court is concerned that the public reporting of this collision may have fostered a perception that submarine surfacing operations are inherently dangerous to submarine and surface vessel alike. This tragic incident could and should have been avoided by simply following existing Navy standards and procedures in bringing submarines to the surface.

18. All times contained in this report are local Hawaiian Standard Time.

Subj: COURT OF INQUIRY INTO THE CIRCUMSTANCES SURROUNDING THE COLLISION BETWEEN USS GREENEVILLE (SSN 772) AND JAPANESE M/V EHIME MARU THAT OCCURRED OFF THE COAST OF OAHU, HAWAII ON 9 FEBRUARY 2001

FINDINGS OF FACT

I. The Collision

Introduction

1. A collision involving the USS GREENEVILLE (SSN 772) and the Japanese M/V EHIME MARU occurred at 1343 on 9 February 2001, approximately nine miles south of Oahu, Hawaii, at position 21° 05.5'N, 157° 49.1'W. (Exhibits 45, 60).

2. In less than ten minutes, EHIME MARU had sunk. Nine of her complement have never been accounted for. (Exhibits 45, 60).

3. While suffering damage, GREENEVILLE was able to return to Naval Station Pearl Harbor under its own power on the morning of 10 February. No sailors or civilians onboard GREENEVILLE were physically injured during the collision. (Exhibits 45, 60).

4. The responsibility for collision avoidance rests solely on the submerged submarine. (Exhibit 1, enclosure 24 (CO GREENEVILLE Standing Order 0620); Exhibit 2).

M/V EHIME MARU - Background

5. EHIME MARU was a vessel owned by the Ehime Prefecture, Japan, and used by the Prefecture's Uwajima Marine Products High School. The ship operated under Japanese registry, number 135174. (Exhibits 54, 60).

6. Constructed and launched in 1996, EHIME MARU was a "moving classroom" for high school students preparing for employment in the marine products industry. The ship's specific objectives were to develop student's experience at sea and to provide hands-on training as to:

a. Long-line tuna fishing;

b. Maritime navigation, instrumentation, and operation;

c. Marine engines; and

d. Oceanographic observation and research of marine life resources.

(Exhibit 54).

7. EHIME MARU was approximately 190 feet in length, with a total tonnage of 500 tons. The ship had a white hull and superstructure, a blue line around the hull, a band of black at the top of its stack, and a whirlpool-like logo in red and blue amidships. The top of the Bridge was approximately 24 feet above the waterline. EHIME MARU's highest point, the center radar mast, stood approximately 48 feet above the water. (Exhibits 10, 53, 54).

8. EHIME MARU's maximum boarding capacity was listed as 67 people (20 crew, 2 instructors, and 45 students). (Exhibit 54).

9. EHIME MARU was equipped with eight 25-man inflatable life rafts, and two 6-man inflatable life rafts. The ship also maintained an emergency position indicating radio beacon (EPIRB). (Exhibits 53, 54, 60).

10. On 9 February, the Captain of EHIME MARU was Hisao Ohnishi. (Exhibit 53).

11. On the morning of 9 February, EHIME MARU was located at Pier 9, Honolulu Harbor. The ship was preparing for an underway to its assigned training area, as determined by Japan's National Marine Products High School Training Vessel Operation Association. The ship was to head for the vicinity of 14°N, 156°W. (Exhibit 53).

12. EHIME MARU was underway at approximately 1200. The ship's complement consisted of 35 people: 20 crew, 2 instructors, and 13 students. (Exhibit 53).

13. Once clear of Honolulu Harbor, EHIME MARU set a course of 166° true, with a speed of 4 knots. At approximately 1245, the ship increased speed to 11 knots. This course and speed were entered into the ship's automatic pilot, and maintained until

the time of collision. (Testimony of CAPT Ohnishi, page 1040; Exhibit 53).

14. EHIME MARU was operating its surface search radar, an X-band 50 kW model BR-3440MA-X59. This radar remained on until the time of collision. (Exhibits 53, 54).

15. In reconstructing the events leading to this collision, Navy officials determined the track of EHIME MARU primarily through information on course and speed provided by Captain Ohnishi. Verification of the final 3 miles of EHIME MARU's transit came from Federal Aviation Administration radar tracking. (Testimony of CAPT Kyle, page 526; Exhibit 4).

USS GREENEVILLE – Leadership and Reputation

16. CDR Scott D. Waddle, USN, assumed command of GREENEVILLE on 19 March 1999. (Testimony of CDR Waddle, page 1662).

a. Testimony described CDR Waddle as a gregarious, charismatic, professional naval officer, one self-confident in his own abilities and quick to take advantage of opportunities to make his command, the Navy, and himself look good. (Testimony of RADM Konetzni, page 736-40, 748, 784-85, 805-12; CAPT Brandhuber, page 853, 877-78, 885, 890; CAPT Snead, page 921-22, 925, 927-28; LCDR Meador, page 1317; MMCM Coffman, page 1335; FT1 Seacrest, page 1618).

b. As GREENEVILLE's Commanding Officer (CO), CDR Waddle was an engaged and personable leader. He assumed a "hands on" management style, particularly during operational evolutions requiring precision and attention to detail. This tendency was noted by Commander, Submarine Force, U.S. Pacific Fleet (COMSUBPAC), who specifically saw fit to mention this trait to CDR Waddle during an embark onboard GREENEVILLE in March 2000. At that time, COMSUBPAC told CDR Waddle to "not run too fast," and to give his crew the opportunity to grow. (Testimony of RADM Konetnzi, page 736-41, 772-23; LCDR Meador, page 1317; LT Sloan, page 980; MMCM Coffman, page 1334-35).

c. The crew of GREENEVILLE respected CDR Waddle's technical proficiency, admired him as a CO, and had grown accustomed to receiving praise under his leadership. Having CDR Waddle in the Control Room during events added a sense of security to watchstanders. (Testimony of RADM Griffiths, page 274-75; CAPT Brandhuber, page 853; LT Sloan, page 981-83; MMCM Coffman, page 1334-35; STS1 McGiboney, page 1470; MM1 Harris, page 1275; FT1 Seacrest, page 1618).

17. LCDR Gerald K. Pfeifer, USN, reported to GREENEVILLE as Executive Officer (XO) in October 1999. For the reporting period November 1999 to October 2000, he was rated the best XO in Submarine Squadron ONE. (Testimony of CAPT Snead, page 926; Exhibit 72).

18. LT(jg) Michael J. Coen, USN, reported to GREENEVILLE in March 1999, and was assigned primary duties as the Electrical Division Officer. LT(jg) Coen qualified as Officer of the Deck (OOD) in June 2000, and received his submarine warfare qualification in August 2000. LT(jg) Coen's reputation as an OOD was one of being methodical and meticulous. This also meant he would typically take more time than more experienced OODs in accomplishing tasks. Because of GREENEVILLE's operational schedule in the last six months of 2000, LT(jg) Coen had limited experience at sea as a qualified OOD. (Testimony of CDR Waddle, page 1782; LT Sloan, page 1015-16; LT Pritchett, page 1369; MMC Streyle, page 1224; MM1 Harris, page 1277; STS1 Reyes, page 1214-15; Exhibits 69, 70).

19. GREENEVILLE took pride in having established and maintained a favorable reputation on the Pearl Harbor waterfront.

a. Testimony revealed that experienced and inexperienced crew members alike were positive about serving onboard GREENEVILLE. The crew believed their command to be among the Navy's elite fast attack submarines. (Testimony of LT Sloan, page 983; MMCM Coffman, page 1334; ETCS Smith, page 1294; MMC Streyle, page 1245; MM1 Harris, page 1274; ET1 Thomas, page 1084; STS1 Reyes, page 1209-11; STS3 Bowie, page 1294).

b. These beliefs were positively reinforced by the chain of command. GREENEVILLE consistently received above average, or

higher, marks in Submarine Squadron ONE and SUBPAC evaluations of performance. The ship received Tactical "T," Medical "M," Admin "A" awards, was a SUBPAC leader in retention, and was a strong contender for Squadron ONE's Battle Efficiency Award, despite the fact she had not deployed. (Testimony of CAPT Snead, page 918, 821-25; RADM Konetzni, page 736-41, 772-73, 805-21; CAPT Brandhuber, page 878; Exhibit 72).

20. The CO's theme of "Safety, Efficiency, Backup" was well known onboard GREENEVILLE. (Testimony of LCDR Meador, page 1310; ETCS Smith, page 1295; MM1 Harris, page 1275; STS1 McGiboney, page 1477; STS1 Reyes, page 1210; ET3 Blanding, page 1104; SK3 Feddeler, page 1284; STS3 Bowie, page 1164-65; STSSN Rhodes, page 1178).

USS GREENEVILLE's Inter-Deployment Training Cycle/Operations Schedule

21. GREENEVILLE was the first submarine fitted to host the "Advanced Seal Delivery System." For this reason, she had not been a part of SUBPAC's normal deployment rotation. GREENEVILLE had not completed a WESTPAC during CDR Waddle's two years as CO. (Testimony of CAPT Snead, page 915).

22. GREENEVILLE was scheduled for WESTPAC deployment commencing in the summer of 2001. (Testimony of CAPT Snead, page 915).

23. GREENEVILLE was in a Selected Restricted Availability (SRA) maintenance period (dry dock) from September to December 2000. The SRA period was successful, being completed on time, with no major issues. (Testimony of CAPT Snead, page 915-16).

24. Squadron ONE staff were pleased with the ship's SRA period, noting that she was kept meticulously clean throughout. Squadron ONE staff also noted that GREENEVILLE made aggressive use of shore trainers in trying to maintain crew proficiency while in the SRA. (Testimony of CAPT Snead, page 915-916).

25. Coming out of SRA, GREENEVILLE underwent sea trials on 21 December 2000. Post-sea trial evaluations were that she had performed well. (Testimony of CAPT Snead, page 916-17).

26. After sea trials, GREENEVILLE entered a holiday stand down period. (Testimony of CAPT Snead, page 917).

27. GREENEVILLE completed an EASTPAC deployment from 5 January to 2 February 2001, the first part of the submarine's pre-overseas movement (POM) preparations. During this underway, GREENEVILLE conducted acoustic trials at Ketchican, Alaska, normal underway training, and made a port call in San Francisco. (Testimony of CAPT Snead, page 917; Exhibit 48).

28. The Squadron ONE Engineer and SUBPAC N4 rode GREENEVILLE during EASTPAC. Feedback was that the ship was doing well, and that engineering training was coming along well. (Testimony of CAPT Snead, page 917-18; Exhibit 48).

29. Members of the SUBPAC Combat Systems Training Team also rode GREENEVILLE during EASTPAC for the purpose of assessing the ship's Sonar Division. This also resulted in a favorable evaluation. While the Division was rated as average (because of the SRA and turnover in the Division), the evaluation also assessed GREENEVILLE's Sonar Room as having the potential to become the best on the waterfront. (Testimony of CAPT Snead, page 918-20).

30. While in San Francisco, GREENEVILLE was contacted by Squadron ONE staff, and asked if the ship could support a SUBPAC Public Affairs civilian guest embark on 9 February. GREENEVILLE said it could support this embark. (Testimony of CAPT Snead, page 929; LCDR Werner, page 1505; Exhibits 32, 75).

31. According to operational schedules maintained by Squadron ONE, GREENEVILLE was to commence an underway period for Operational Reactor Safeguards Examination (ORSE) workups on 9 February. (Testimony of CAPT Snead, page 929).

32. While returning to Pearl Harbor from San Francisco, GREENEVILLE requested that Squadron ONE modify the ship's operations schedule to allow her to be in port for the weekend of 10-11 February. (Testimony of CAPT Snead, page 929; LT Sloan, page 990; MMC Coffman, page 1347; Exhibit 75).

33. GREENEVILLE arrived at Pearl Harbor on 2 February, and was met by the Commodore for Squadron ONE. Based on favorable reports regarding the progress of training, the Commodore felt that GREENEVILLE was far enough along in her training to support pushing back the start of the ORSE workup underway to 12 February. (Testimony of CAPT Snead, page 929-30; Exhibits 48, 75).

34. The Commodore's decision to allow GREENEVILLE to stay in port was also consistent with COMSUBPAC policy to minimize weekends underway. (Testimony of CAPT Snead, page 929-30).

35. Immediately thereafter, Squadron ONE staff notified (by phone) SUBPAC N3 staff of this schedule change, indicating that GREENEVILLE would get underway for ORSE workup on 12 February vice 9 February. (Testimony of CAPT Snead, page 932).

36. GREENEVILLE's commitment to get underway for the public affairs civilian guest embark on 9 February remained on the operations schedule. (Testimony of CAPT Snead, page 930-31; LCDR Werner, page 1507-10; Exhibit 1, enclosure 24 (NSSC Weekly Schedule)).

9 February – USS GREENEVILLE Mission and Manning

37. GREENEVILLE's sole mission on 9 February was to conduct a public affairs "distinguished visitor" (DV) embark for 16 civilian guests. (Testimony of CDR Waddle, page 1693, 1700; RADM Konetzni, page 759-61; RADM Griffiths, page 89, 226; CAPT Brandhuber, page 818; LCDR Werner, page 1510; Exhibit 32). (*For information on SUBPAC's DV Embarkation Program, and additional details regarding GREENEVILLE's DV embark of 9 February, see section III, infra*).

38. As with any at sea period, getting underway on 9 February had the collateral benefit of providing additional opportunity for crew training. (Testimony of RADM Konetzni, page 759-60; RADM Griffiths, page 89, 236-37; CAPT Snead, page 941).

39. The SUBPAC Chief of Staff, CAPT Brandhuber, accompanied the civilian guests embarked on USS GREENEVILLE on 9 February.

(Testimony of CAPT Brandhuber, page 820; Exhibit 32). (*For additional information on the role of CAPT Brandhuber, see section V, infra*).

40. The DV embark for 9 February, as detailed in the GREENEVILLE Plan of the Day (POD), called for a 0800 underway from Naval Station Pearl Harbor with a 1500 return. (Exhibit 3).

41. In manning the ship for a seven hour underway period, GREENEVILLE embarked with 11 of 17 officers and 95 of approximately 125 enlisted men.

a. GREENEVILLE left approximately 11 men ashore as line-handlers. This is a local requirement for all inner-harbor movements. (Testimony of MMCM Coffman, page 1348, Exhibits 41, 75).

b. Approximately 18 men were left ashore to attend training, including six Sonarmen and the Leading Chief Petty Officer (LCPO) for the Sonar Division. Relatively new onboard, the LCPO had specifically identified the need to work on the Sonar Room's ability to conduct target motion analysis and ranging techniques prior to WESTPAC. (Testimony of LT Van Winkle, page 1486-89; LT Mahoney, page 1385-86; Exhibits 41, 57, 59, 71, 75).

c. Those members of the Sonar Division left ashore were sent to the Naval Submarine Training Center Pacific Attack Trainer. (Testimony of LT Van Winkle, page 1486; Exhibit 71).

d. The remainder of the crew (approximately eight) was either on leave or attending formal schools. (Exhibit 1, enclosure 33; Exhibits 41, 75).

42. For its 9 February underway, GREENEVILLE was assigned an operations area (OPAREA) south of Oahu, specifically that area bounded by 21° 10'N, 19° 40'N, 158° 00'W, 157° 00'W (indicated on the CTG 14.5 Weekly OPSKED 06-01 as L13SX/P13XX, M15XX/P14XX). GREENEVILLE remained in the northwest portion of its assigned OPAREA throughout the day. (Testimony of RADM Griffiths, page 222; ET1 Thomas, page 1067; ET3 Blanding, page 1090; Exhibit 1,

enclosure 24 (CTG 14.5 Weekly OPSKED); Exhibits 62, 68). (*For additional information regarding GREENEVILLE's assigned OPAREA, see section IV, infra*).

43. GREENEVILLE's track from 1230 to 1343 on 9 February was initially reconstructed through use of the ship's logs. These preliminary efforts were verified and further refined through use of automated ship logger data taken directly from the A-RCI system.

a. Four groups performed independent reconstructions of GREENEVILLE's and EHIME MARU's track. SUBPAC N70 and N72 completed two separate and independent reconstructions. A third was done by Submarine Development Squadron TWELVE in Groton, Connecticut. The NTSB performed a fourth reconstruction.

b. The four reconstructions are virtually identical in all material ways, and accurately reflect the tracks of the two vessels from 1230 until the collision at 1343 on 9 February.

(Testimony of CAPT Kyle, page 522-29; Exhibit 4). (*See also Preliminary Statement, paragraph 9, supra*).

Morning Events Onboard USS GREENEVILLE

44. The Maneuvering Watch was stationed at 0719. (Exhibit 1, enclosure 24 (Deck Log)).

45. GREENEVILLE's Analog-Visual Signal Display Unit (AVSDU) was discovered to be out of commission (OOC) by the Navigator (NAV) early in the maneuvering watch, before the ship got underway. (Testimony of LT Sloan, page 945; LT Pritchett, page 1364).

a. The AVSDU is a sonar repeater in the Control Room, positioned in the overhead section of the Conn (the raised periscope stand). The AVSDU allows the Officer of the Deck to view sonar displays. (Testimony of RADM Griffiths, page 106-108, 117, 167-68).

b. Attempting to repair the AVSDU would have disrupted the Control Room, and may have required placing the sonar system

OOC. (Testimony of RADM Griffiths, page 108, 264, 314; LT Pritchett, page 1364; STS1 Reyes, page 1196-97).

c. A Trouble Log entry regarding the AVSDU was made at 0810. The NAV went to the CO's stateroom to inform him of the AVSDU's material condition. The CO initialed the Trouble Log. (Testimony of LT Sloan, page 946; LT Pritchett, page 1364; Exhibit 80).

d. It was decided to defer repair of the AVSDU until the return to port. (Testimony of RADM Griffiths, page 108; STS1 Reyes, page 1196-97).

e. The fact that the AVSDU was OOC did not require that the underway be cancelled. However, because this display would be unavailable to the OOD, compensatory measures to ensure adequate situational awareness of sonar contacts would be both expected and required. (Testimony of RADM Griffiths, page 106-08, 263-67, 300, 313-14; RADM Konetzni, page 791-793; CDR Waddle, page 1711; LT Sloan, page 946-48; LT Pritchett, page 1364).

f. The CO never took affirmative action to address with the XO, the NAV, or the OODs what AVSDU compensation would be put into effect for this underway period. Rather, the CO expected his OODs would know what to do, e.g., make more frequent trips to Sonar. There was no affirmative action on the part of any GREENEVILLE member to institute formal or systemic compensation that would be passed down to subsequent watchstanders. (Testimony of CDR Waddle, page 1710-24; LT Sloan, page 946-48).

46. GREENEVILLE was underway from Pier S-21B, Naval Station Pearl Harbor, at 0757. (Exhibit 1, enclosure 24 (Deck Log)).

47. During GREENEVILLE's outbound surface transit, the CO was on the Bridge. Civilian guests were cycled to the Bridge in small groups while on the surface. (Testimony of CDR Waddle, page 1705-06; LCDR Meador, page 1298; Exhibits 65, 66).

48. During the outbound surface transit, the CO observed the weather to be overcast and gray, with 3-4 foot seas, winds of

10-15 knots, and good visibility. (Testimony of CDR Waddle, page 1706-08).

49. The NAV was acting as Contact Coordinator during the outbound surface transit. He noted a high and choppy sea state, resulting in GREENEVILLE rolling more than normal. Through the Number 2 periscope, the NAV observed a hazy, off-white sky. He described the haze as “probably the worst I’ve ever seen it, where you could actually see a long, long distance, but not see clearly very far at all.” (Testimony of LT Sloan, page 944, 948-49, 989).

50. While using the Number 2 periscope, the NAV saw two trawlers at 10,000 yards. Both surface contacts had similar range and bearings, one was dark hulled, the other white. As the contacts came to 8,000 yards, the NAV had no problem in quickly reacquiring the dark hulled vessel during periscope sweeps, but concerted effort was required to relocate the white hulled vessel. This information was not passed down to subsequent OODs or to the CO or XO. (Testimony of LT Sloan, page 949-50, 989).

51. At 0851, the maneuvering watch was secured and a modified piloting party stationed. (Exhibit 1, enclosure 24 (Deck Log)).

52. At 0933, the NAV took the Deck and the Conn. The OOD watch was shifted to below decks. (Exhibit 1, enclosure 24 (Deck Log)).

53. At 0940, the CO came down from the Bridge. (Exhibit 1, enclosure 24 (Deck Log)).

54. At 1017, GREENEVILLE submerged at an approximate location of 21° 06’N, 157° 55’W, within its assigned OPAREA. (Exhibit 1, enclosure 24 (Deck Log; Position Log)).

55. The civilian guests were involved in submerging the submarine, at all the significant controls and stations, while under the supervision of qualified watchstanders. (Testimony of LT Sloan, page 952).

56. Throughout the morning, civilian guests toured the submarine in small groups, under the supervision of assigned escorts. The guests viewed officer and enlisted quarters, the Torpedo Room, Sonar Room, and the Control Room. While in the Control Room, guests were allowed to take the planes, under the direct supervision of the Planesman. While in the Sonar Room, sonar recordings of whale sounds were played for the guests. (Testimony of LCDR Meador, page 1297-98; LT Pritchett, page 1356-57; MM1 Harris, page 1251; Exhibits 64, 65).

57. According to the POD, lunch was scheduled for 1100 to 1200. However, in that the Wardroom only seats 10 people, GREENEVILLE conducted two seatings to accommodate the civilian guests. The CO presided at the first seating, from 1045 to 1145. The XO presided at the second seating, from 1145 to 1245. (Testimony of CDR Waddle, page 1725; LCDR Meador, page 1298; LT Pritchett, page 1357; Exhibits 75, 76).

58. At 1103, with the CO’s knowledge and express approval, GREENEVILLE went to test depth. At the time, the CO was in the Wardroom with the civilian guests. CAPT Brandhuber was also present, and surprised when he learned of the ship being at test depth. (Testimony of CDR Waddle, page 1683-86; CAPT Brandhuber, page 836; Exhibit 1, enclosure 24 (Deck Log)).

a. The CO made the decision to take GREENEVILLE to test depth to demonstrate its full capabilities to the civilian guests. He thought that the guests would have “something special to say, that you have observed the operational abilities of this ship.” (Testimony of CDR Waddle, page 1683-86).

b. The CO also wanted to obtain deep seawater samples while at test depth, to be placed in an oil sample bottle and labeled with a GREENEVILLE sticker, to provide the guests as a memento of their embark. This required breaking “rig for dive” to obtain the samples from the torpedo tube. (Testimony of CDR Waddle, page 1685-86; Exhibit 65).

c. The CO had approved taking GREENEVILLE to test depth, and given deep seawater samples, on prior DV embarks. (Testimony of CDR Waddle, page 1685; Exhibit 31).

d. The CO knew that information regarding GREENEVILLE's test depth is classified. Claiming that he never thought about the ramifications of possibly revealing test depth information, he rationalized the practice of going to test depth during DV embarks by saying that anytime a civilian embarks, they have access to classified information (e.g., fire control displays). (Testimony of CDR Waddle, page 1683-86).

59. GREENEVILLE secured from test depth at 1131. (Exhibit 1, enclosure 24 (Deck Log)).

Afternoon Schedule

60. According to the POD, GREENEVILLE was to commence an "angles" evolution at 1230, and conduct an Emergency Main Ballast Tank (EMBT) Blow at 1300. (Exhibit 3).

61. For its 9 February DV embark, GREENEVILLE was assigned a "Papa Hotel" time of 1400.

a. Papa Hotel is a point in the ocean southeast of the entrance to Pearl Harbor.

b. Assigning ships a particular time to be at Papa Hotel supports Navy harbor authorities in scheduling necessary services (e.g., tugs, line handlers, etc.).

c. Ships are told to assume that it will take one hour from Papa Hotel to pierside.

d. If ships are going to be early or late to Papa Hotel, port authorities must be contacted for appropriate instructions.

(Testimony of RADM Griffiths, page 90-91; CDR Waddle, page 1773-74; Exhibit 1, enclosure 24 (NSSC Weekly Schedule; CTG 14.5 Weekly OPSKED)).

62. According to the POD, GREENEVILLE was scheduled to be pierside at 1500. (Exhibit 3).

Afternoon Watch Assignments

63. LT(jg) Coen assumed the position of OOD at 1143. During the OOD passdown, the NAV did not provide LT(jg) Coen any specific guidance on how to compensate for loss of the AVSDU. The NAV also did not describe the haze conditions he had observed earlier through the periscope, or the effect such environmental conditions had on visually acquiring white hulled vessels. (Testimony of LT Sloan, page 948-50, 989; Exhibit 1, enclosure 24 (Deck Log)).

64. The GREENEVILLE watchbill for 9 February was not followed in manning afternoon watches in the Control and Sonar Rooms. (Testimony of CDR Waddle, page 1662-65; Exhibit 41).

a. Of 13 forward watchstations, 9 were manned by individuals other than the bill's designated watchstander. (Testimony of MMCM Coffman, page 1337-42; CDR Waddle, page 1662-65, 1677-78; Exhibit 41).

b. The GREENEVILLE Chief of the Boat (COB) prepared the watchbill. The COB normally performs this function by receiving input directly from Division Chiefs, collating the input, and conducting spot checks. As to the 9 February embark, the COB did not check the main watchbill against other watchbills (e.g., the maneuvering watchbill). The COB prepared the 9 February watchbill on 1 February. (Testimony of MMCM Coffman, page 1336-43; CDR Waddle, page 1664-65, 1676-83; MMC Streyle, page 1233-34; Exhibit 41).

c. Every signatory to the watchbill, including the CO and XO, was responsible for ensuring accuracy and appropriateness of watch assignments. (Testimony of CDR Waddle, page 1662-71, 1676-83; MMCM Coffman, page 1343).

d. 9 February was not perceived by the GREENEVILLE crew as a normal underway period. Failure to adequately plan led to ad hoc watchstanding. Who stood watch, and when, was determined by individual members of the crew, with no formal approval or

oversight from the chain of command.[1] (Testimony of CDR Waddle, page 1662-65; MMCM Coffman, page 1341; STS1 McGiboney, page 1475-76; FT1 Seacrest, page 1553; Exhibit 75).

e. The CO's signature on the watchbill gave it the force and effect of a directive. The watchbill was not treated as such on 9 February. (Testimony of CDR Waddle, page 1662-65, 1667; MMCM Coffman, page 1336-43; STS1 McGiboney, page 1431-32).

f. An additional watchbill discrepancy became obvious to the Court. While "Under Instruction" (U/I) watches were normally designated with an asterisk on the GREENEVILLE watchbill, this practice was not regularly applied to U/I watches in the Sonar Room. As a result, on 9 February, an unqualified individual was on the watchbill, assigned to stand watch in the Sonar Room. No one in the chain of command identified this discrepancy, despite that individual being listed as "delinquent" in his sonar qualifications on the 9 February POD. (Testimony of MMCM Coffman, page 1338-43; LT Van Winkle, page 1485; CDR Waddle, page 1668-71, 1675; MMC Streyle, page 1234; LT Mahoney, page 1378-80).

---

[1] Examples: a. Helm. Feddeler was on the afternoon watchbill to be Lee Helm (Sternplanes) but was not at that position. He was subsequently called from the Supply Shack to take the Helm during angles and high-speed maneuvers.
b. Lee Helm. Ramirez, who was to have the Helm in the morning, instead had the Sternplanes in the afternoon.
c. QMOW. Blanding was assigned the 1800-2400 section. He took the watch at 0900, so Carpenter could prepare charts. After a lunch break, and thinking the underway would be over at 1500, he resumed the watch during the period Kearns was to stand QMOW.
d. Sonar Supervisor. McGiboney was a Line Supervisor during as the maneuvering watch, so Holmes took his morning Sonar Supervisor watch. McGiboney relieved Holmes, so Holmes wouldn't have to stand back to back watches.
e. Sonar Operator. Bowie was not on the 9 February watchbill. On his own initiative, he relieved Anderson late morning.
f. FTOW. Originally scheduled to be left ashore, Seacrest got underway on 9 February because of Brennan being left ashore. Seacrest was on maneuvering watch, so Benkovic took Brennan's morning FTOW assignment, and Seacrest took Benkovic's afternoon watch.
g. Messenger. Afternoon watch was not stood by Brown.
h. Fathometer. Not assigned but required because of modified piloting party. Anderson takes the watch, instead of Sonar watch he's assigned.
i. Nav Supervisor. Not assigned, but required because of modified piloting party. Thomas takes both morning and afternoon watches.

65. FT1 Seacrest assumed the Fire Control Technician of the Watch (FTOW) at approximately 1130, and maintained that position until the time of collision. (Testimony of FT1 Seacrest, page 1543-44).

a. Sometime between 1230 and 1300, for a period of approximately ten minutes, FT3 Brown temporarily assumed the FTOW position so that FT1 Seacrest could take a smoke break. (Testimony of FT3 Brown, page 1051; FT1 Seacrest, page 1544).

b. While FTOW, FT3 Brown was told by the OOD (LT(jg) Coen) to alert him if bearing rates were getting higher on contacts. This direction was not passed by FT3 Brown, or restated by the OOD, to FT1 Seacrest upon his resumption of the watch. (Testimony of FT3 Brown, page 1051-52; FT1 Seacrest, page 1544).

66. Manning in the Sonar Room the hour before the collision consisted of the Sonar Supervisor, Passive Broadband Operator, and Workload Share Operator.

a. STS1 McGiboney was the Sonar Supervisor, and STS3 Bowie the Passive Broadband Operator. Both were properly qualified for these positions. (Testimony of STS1 McGiboney, page 1399; STS3 Bowie, page 1108; Exhibit 1, enclosure 24 (Training Records)).

b. The Workload Share Operator, STSSN Rhodes, was not qualified to independently stand the assigned watch. No “Over Instruction” (O/I) watch had been assigned to assist and directly monitor STSSN Rhodes. (Testimony of STSSN Rhodes, page 1170-71; STS1 McGiboney, page 1400; STS3 Bowie, page 1110; Exhibit 63).

67. GREENEVILLE’s BSY-1 sonar system requires both the Broadband and Workload Share Operators to be qualified watchstanders. An informal practice had been adopted on GREENEVILLE that sanctioned U/I Sonarmen standing watch without a dedicated, qualified O/I watch. (Testimony of CDR Waddle, page 1668, 1675; STS1 McGiboney, page 1400, 1431; STS3 Bowie, page 1110; STSSN Rhodes, page 1169-71; COMSUBLANT/COMSUBPACINST 5400.40A, §§ 2102, 4102; NWP 3-21.22.3, page 1-5).

68. Shortly prior to commencement of the angles evolution, a qualified Sonarman, STS1 Reyes, entered the Sonar Room to retrieve his jacket. At that time, STS1 Reyes noted the presence of civilian guests in the Sonar Room. STS1 Reyes volunteered to answer questions and explain sonar operations, so the guests would not distract the watchstanders. The guests left the Sonar Room as the GREENEVILLE was preparing for angles. At the request of the Sonar Supervisor, STS1 Reyes stayed to assist in the Sonar Room during angles and the ascent to periscope depth. (Testimony of STS1 Reyes, page 1183-85; STS1 McGiboney, page 1419-20; STSSN Rhodes, page 1173).

Initial Sonar Contact with M/V EHIME MARU; USS GREENEVILLE's Situational Awareness of the Surface Contact Picture

69. There were no material issues with GREENEVILLE's BSY-1 Sonar Array that impacted the Sonar team's ability to perform their duties on 9 February. (Testimony of RADM Griffiths, page 267; STS1 McGiboney, page 1405-08; STS1 Reyes, page 1209; Exhibit 1, enclosure 25).

70. GREENEVILLE's passive sonar array initially detected EHIME MARU at 12:31:59. As the 13th sonar contact detected on 9 February, EHIME MARU was assigned a contact number of "S-13."[2] (Exhibit 1, enclosure 24 (Sonar Logs); Exhibit 39).

71. From 1232 until approximately 1245, the Sonar Room maintained track[3] on three surface contacts: S-10, S-12 and S-13. (Exhibit 1, enclosure 24 (Sonar Logs)).

[2] Other designations include "V" for visual contacts, and "E" for electronic contacts, and are assigned based upon the sensor system which detected the contact.

[3] Throughout this discussion, mention is made of maintaining, fading, or losing track on sonar contacts. When a sonar contact is first detected a tracker is assigned, and assuming the signal is strong enough, will be entered into the Automatic Tracker Follower (ATF). The sonar system then automatically tracks the contact, and sends information on the contact to the fire control system for analysis. Signal strength can be negatively impacted, causing a fading or loss of track, by distance, being placed in the baffles, data scatter brought on by dynamic maneuvers, or environmental conditions. *See*, Testimony of RADM Griffiths, page 126-27, 352, 476.

72. Under normal conditions, a submarine's management of three surface contacts is not challenging. (Testimony of RADM Griffiths, page 127; STS1 McGiboney, page 1436; STS1 Bowie page 1133; STS1 Reyes page 1194; FT1 Seacrest, page 1552-53, 1623).

73. Contact with S-10, classified as a "light craft," was lost at approximately 1245. (Exhibit 1, enclosure 24 (Sonar Logs)).

74. From 1245 until approximately 1333, the Sonar Room maintained track on two surface contacts, S-12 and S-13. The sonar team was unable to obtain data necessary to further classify those contacts (e.g., tanker, merchant, light craft, etc.). (Testimony of STSSN Rhodes, page 1181; STS1 Reyes, page 1208; STS1 McGiboney, page 1410, 1443-44; Exhibit 1, enclosure 24 (Sonar Logs)).

75. Since approximately 1045, GREENEVILLE had sailed a 180° course. Shortly after 1200, the ship reached its furthest point south near position 20° 52.6'N, 157° 51'W (within its assigned OPAREA). At this point in time, GREENEVILLE reversed course to 000° and began the trip back towards Pearl Harbor. (Exhibit 1, enclosure 24 (Deck Log; Position Log)).

76. During the return trip to Pearl Harbor, GREENEVILLE was not maneuvered in a manner specifically designed to refine the submarine's understanding of the surface contact picture.

a. From approximately 1230 until 1325, GREENEVILLE generally maintained a northerly course, between 000° and 020°. Because of their relative positions, GREENEVILLE's course did not drive a change in S-13's bearing rate. (Testimony of CDR Waddle, page 1744; STS1 McGiboney, page 1412-14; FT1 Seacrest, page 1597; Exhibit 1, enclosure 24 (Deck Log); Exhibits 4, 7).

b. A baffle clear to course 240° was executed at 1240. This course had the actual effect of putting EHIME MARU (S-13) into GREENEVILLE's baffles. S-13 faded at 12:42:15. (Testimony of RADM Griffiths, page 122; STS1 McGiboney, page 1412-13; Exhibit 1, enclosure 24 (Deck Log; A-RCI Sonar Log); Exhibits 4, 7, 39).

c. GREENEVILLE returned to course 000° at approximately 12:47:45. Sonar contact with S-13 was regained at 12:55:30. (Exhibit 1, enclosure 24 (Deck Log; A-RCI Sonar Log); Exhibit 39).

d. The Sonar Supervisor and the FTOW can make recommendations to the OOD on how to maneuver a submarine for the purpose of analyzing surface contacts. This was not done on 9 February. (Testimony of STS1 McGiboney, page 1403, 1436; STS1 Reyes, page 1215; FT1 Seacrest, page 1548-49, 1598; LT Mahoney, page 1388).

77. Commencing at approximately 1300, the Contact Evaluation Plot (CEP) was not used to track and display surface contact information.

a. The CEP is a paper display maintained in the Control Room, on which own ship's data (e.g., course, depth, speed), as well as contact bearings and classification, are plotted. The CEP is a running contact history, placed in a central location, for the benefit of the Control Room watchstanders. (Testimony of RADM Griffiths, page 156-60; Exhibit 1, enclosure 24 (CEP)).

b. Maintaining the type of paper CEP found onboard GREENEVILLE is labor intensive, and when on a mission, a submarine will have a full-time person dedicated to the CEP. During routine transits, responsibility for maintaining the CEP is assigned to the FTOW. (Testimony of RADM Griffiths, page 159; FT1 Seacrest, page 1550-54).

c. By CO GREENEVILLE Standing Order 0230 and 0630, the CEP is to be maintained at all times. (Exhibit 1, enclosure 24 (Standing Orders)).

d. The FTOW made an affirmative decision not to update contact information on the CEP after 1300 on 9 February. His stated rationale was that the general contact situation was not of significant density, that it would have been difficult to keep the CEP updated during angles and high-speed maneuvers, and that civilian guests were standing between his watchstation and the CEP. The FTOW never informed anyone of his decision, nor

did he ask for assistance despite the presence of FT3 Brown, who had remained in the Control Room and was available to work the CEP. The CO, XO, OOD failed to notice that the CEP had not been updated. (Testimony of FT1 Seacrest, page 1550-54, 1601, 1623; CDR Waddle, page 1738-39; FT3 Brown, page 1059; Exhibit 1, enclosure 24 (CEP)).

Preparing for the Afternoon Events

78. The Engineering Officer of the Watch (EOOW) received permission from the OOD at approximately 1230 to obtain primary coolant samples.[4] Sampling commenced at 1242. (Testimony of LT Mahoney, page 1381; Exhibit 1, enclosure 24 (Engineering Log); Exhibit 76).

79. Shortly before 1300, the XO went to the CO's stateroom to report that Wardroom dishes would soon be stowed and that angles could commence thereafter. The CO and XO discussed who currently had the Helm, and decided that a more proficient Helmsman would be assigned during angles and high-speed maneuvers. (Testimony of CDR Waddle, page 1692-94; Exhibit 75).

80. The XO then exited the CO's stateroom, went to the Control Room, where he talked to civilian guests. (Testimony of LT Sloan, page 953; Exhibit 75).

81. At approximately 1300, the NAV entered the Control Room. Upon checking the charts, he noted GREENEVILLE's position as being 12-13 miles from Papa Hotel, with only 1 hour remaining. The NAV interrupted the XO's conversation with the guests, and reported this fact to the XO. (Testimony of LT Sloan, page 953; ET1 Thomas, page 953; Exhibit 1, enclosure 5; Exhibits 75, 76).

82. The XO returned to the CO's stateroom at approximately 1306, and stated that "we need to get going because we have a Papa Hotel in less than an hour." The CO was then signing

[4] The CO testified that he was contacted by the OOD while in the Wardroom, having lunch with the civilian guests, and that the CO granted permission to start the sampling. While there is a minor conflict over timing, it is clear that the CO gave permission to start the sampling. Testimony of CDR Waddle, page 1726.

pictures for civilian guests. The CO's response was "well, I guess we are going to be late." The XO's impression was that the CO was not concerned over the possibility of being late to Papa Hotel. (Testimony of CDR Waddle, page 1724; Exhibit 75, 76).

83. The NAV also went, separately from the XO, to the CO's stateroom to inform him of the distance and time to Papa Hotel. (Testimony of LT Sloan, page 953; Exhibit 1, enclosure 5).

84. At this same approximate time, the OOD called the EOOW and inquired when the plant sampling would be completed. The CO overheard the conversation on the 1MJ sound powered phone communications circuit. The CO picked up a handset and asked the EOOW exactly how much time was needed. The EOOW's estimation was 12 minutes.[5] The CO told the OOD to order the sample secured and to prepare the nuclear laboratory for angles. The EOOW described this exchange, and the premature securing of a primary sample, as unusual onboard GREENEVILLE. (Testimony of LT Mahoney, page 1381-82, 1390-91; CDR Waddle, page 1725-27; Exhibit 76).

85. Due to extension of the lunch period, the need to secure the galley in preparation for high-speed maneuvers, and the sampling taking place in engineering, angles did not commence until approximately 1316, 46 minutes after the scheduled POD time. (Testimony of RADM Griffiths, page 93-94; Exhibits 3, 4).

Angles

86. Immediately prior to commencement of angles, at approximately 1314, the CO walked from his stateroom into the Sonar Room to assess the contact picture. During this visit, he had a brief discussion of the surface contact picture with the Sonar Supervisor and reviewed the BSY-1 sonar displays. (Testimony of CDR Waddle, page 1713-14, 1727-31; STS1 McGiboney, page 1456).

[5] The CO testified that the EOOW's response was 30 minutes.

87. As he left the Sonar Room, the CO believed GREENEVILLE had two distant contacts to the north. (Testimony of CDR Waddle, page 1728).

88. At this same time, the OOD believed his contact picture to be two contacts to the north, and one to the south. (Exhibit 1, enclosure 4).

89. The CO came out of the Sonar Room and proceeded to the starboard side of the Control Room to review the fire control system displays and navigation plots.

a. To the CO, information from the sonar and fire control systems was consistent. Based upon his review, the CO believed he had a merchant going west along the coast, and a small craft to the northeast, probably fishing close to Oahu, approximately 7 miles distant.

b. The CO looked at the navigation plot only to determine ship position; he did not evaluate GREENEVILLE's course over time to determine whether the ship had been driven in a manner that would facilitate target motion analysis as to the contacts to the north.

(Testimony of CDR Waddle, page 1713-14, 1728-38; MMC Streyle, page 1219-20).

90. At 13:14:02, the Sonar Room was tracking two surface contacts, S-12 and S-13. Sonar data indicated S-13's bearing as 007° and maintaining (not drawing left or right). The fire control system solution entered by the FTOW for S-13 was bearing 007°, range 15,000 yards, course 024°, speed 11 knots, angle on the bow (AOB) of starboard 163°, an opening course. (Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibit 7).

91. In actuality, at 1314 EHIME MARU was at a range of approximately 15,000 yards, course 166°, speed 11 knots, and closing. (Exhibits 4, 53).

92. The CO did not ask for the OOD's understanding of the surface contact picture, either to help develop his own situational awareness or to critically assess the situational

awareness of his OOD and/or watchteam. The CO testified that his expectation was that each watchstander would have an appropriate awareness, consistent with their duties and responsibilities. His only concern at that point was to acquire his own understanding of the surface contact picture. (Testimony of CDR Waddle, page 1733-38, 1744).

93. No one in the Sonar Room was working ranges or conducting target motion analysis independent of the fire control system. (Testimony of STS1 McGiboney, page 1421, 1447-48; STS3 Bowie, page 1136; LT Mahoney, page 1385-87).

94. The OOD did not go into the Sonar Room between the start of angles and the time of collision. (Testimony of STS1 McGiboney, page 1414, 1418-20, 1428).

95. By 1316, the majority of civilian guests had gathered in the Control Room. The civilians stood in free spaces in and around the area of the Conn. Specifically, two or three guests were standing at the rear of the Conn, between the plotting tables; several were located in the forward port side of the Control Room, immediately behind the Ship Control Party; several were immediately forward of the OOD stand; and, several were along the forward starboard side, between the Conn and the fire control system displays. (Testimony of CAPT Brandhuber, page 856, 865; LT Sloan, page 958-59; FT1 Seacrest, page 1555-56; YN2 Quinn, page 1374; ET3 Blanding, page 1092; Exhibit 6).

96. CAPT Brandhuber was also in the Control Room, standing in the forward port side behind the Ship Control Party. (Testimony of CAPT Brandhuber, page 885; ET1 Thomas, page 1072).

97. GREENEVILLE commenced the angles evolution at approximately 1316. (Testimony of RADM Griffiths, page 93-94; Exhibits 4).

98. Angles are vertical movements in the water column, an evolution where the submarine cycles through a series of increasing up-and-down angles, ranging to a maximum of 30°, while changing depths between 150 and 650 feet. Angles are conducted to demonstrate the submarine’s ability to rapidly change depth. (Testimony of RADM Griffiths, page 110-11).

99. During angles, the OOD was standing immediately behind the Diving Officer of the Watch (DOOW), and the CO immediately behind him on the port side of the Conn. The XO was also positioned on the port side of the Control Room, aft of the Number 2 periscope. (Testimony of CAPT Brandhuber, page 854; CDR Waddle, page 1784; LCDR Meador, page 1299; LT Sloan, page 957-58; Exhibit 75).

100. The OOD was “excited, tight” during angles and high-speed maneuvers. Further, he had no previous experience with emergency surfacing evolutions. (Exhibit 1, enclosure 4).

101. The CO directed the angles evolution. The CO told the OOD what angle of attack he wanted placed on the submarine as well as what depth the CO wanted achieved. The OOD would then relay these commands to the DOOW and the Helm. (Testimony of CDR Waddle, page 1740, 1743, 1757-60, 1784-85; CAPT Brandhuber, page 856-57; LT Sloan, page 959-60, 1008; MMC Streyle, page 1221-22; ET1 Thomas, page 1070; ET3 Blanding, page 1095; Exhibit 76).

a. Personally directing angles and high-speed maneuvers was standard operating procedure for CDR Waddle. The CO provided direction and close oversight in all advanced, high-tempo operations, difficult maneuvering evolutions, and when entering new ports. This included directing even the most experienced OODs on GREENEVILLE. (Testimony of LT Sloan, page 980, 1018-19; CDR Waddle, page 1757-60; MMC Streyle, page 1231-32).

b. The issue of whether the CO was too directive in nature had been raised during the January 2001 EASTPAC. During a tracking exercise, the CO had been directing ship movements from displays in his stateroom. As Senior Watch Officer, the NAV was concerned that the OODs were losing valuable training, and that this might negatively impact their ability to act decisively during the upcoming WESTPAC. The NAV relayed these concerns to the CO. The CO’s response was that he thought that OOD’s would learn from seeing him do it correctly. The NAV also discussed the CO’s directive nature with the XO. (Testimony of LT Sloan, page 980-81, 1016-18; CDR Waddle, page 1757-60; Exhibit 1, enclosure 5).

102. As angles were being performed, the CO described the evolution to the civilian guests, utilizing the 1MC. (Testimony of CDR Waddle, page 1745; CAPT Brandhuber, page 857-58; MMC Streyle, page 1221; STS1 Reyes, page 1200).

103. Near the end of angles, the XO reminded the CO of the time and reported that GREENEVILLE was 13 miles from Papa Hotel. The CO replied, “I know what I am doing.” (Exhibits 75, 76).

104. GREENEVILLE completed angles at approximately 1325. (Testimony of RADM Griffiths, page 112; Exhibit 4).

105. At 13:25:02, the Sonar Room still maintained track on two surface contacts, S-12 and S-13. Sonar data indicated S-13’s bearing as 008° and maintaining. The fire control system solution for S-13 was bearing 013°, range 14,000 yards, course 024°, speed 11 knots, AOB of starboard 169°, an opening course. (Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibits 7, 40).

106. In actuality, at 1325 EHIME MARU was still on course 166°, speed of 11 knots, and had closed to within approximately 10,000 yards of GREENEVILLE’s position. (Exhibits 4, 7, 40).

High-Speed Maneuvers

107. GREENEVILLE next commenced a series of high-speed maneuvers, with large rudder turns. (Testimony of RADM Griffiths, page 112; Exhibit 4).

108. These high-speed maneuvers involved horizontal movements in the water column, hard turns left or right, up to flank speed and full rudder. These are conducted to demonstrate a submarine’s maneuverability in a tactical setting. (Testimony of RADM Griffiths, page 112).

109. During the high-speed maneuvers, the OOD and CO remained in the Control Room, in the same relative positions they had assumed for angles. (Testimony of CDR Waddle, page 1784; CAPT Brandhuber, page 858-59; Exhibit 6).

110. As he had during angles, the CO provided the OOD with rudder and speed directions, which were then relayed to the Helm by the OOD. (Testimony of CDR Waddle, page 1757-58, 1784-85; CAPT Brandhuber, page 859-60; LT Sloan, page 969-70; MMC Streyle, page 1223; ET3 Blanding, page 1095).

a. CO GREENEVILLE Standing Order 0120 states that "[i]f, at any time, the Commanding Officer issues a direct order to the Helm or Diving Officer concerning changes in course, speed, or depth, this constitutes automatic assumption of the Conn, and will be so logged in the Ship's Deck Log. The Officer of the Deck will announce to the Control Room watchstanders, 'The Captain has the Conn,' and will announce to the Commanding Officer, 'Sir, I have relinquished the Conn.'" (Exhibit 1, enclosure 24 (Standing Orders).

b. The CO never formally took the Conn. The OOD never announced that he had relinquished the Conn. (Testimony of CDR Waddle, page 1747, 1759).

c. The OOD had concerns about GREENEVILLE approaching the northern limit of its assigned OPAREA during this time. He did not relay his concerns to the CO. (Exhibit 1, enclosure 4).

111. During the high-speed maneuvers, the CO continued to describe the evolutions for the civilian guests. CAPT Brandhuber recalls the CO stating that he (the CO) would challenge any other boat to perform these maneuvers so well. (Testimony of CAPT Brandhuber, page 858; MMC Streyle, page 1223).

112. As it had been during angles, the attention of the CO and OOD was focused exclusively on ship control. CAPT Brandhuber recalled at one point the OOD making a move to leave the immediate area behind the DOOW. The CO stopped him from doing so by placing a hand on his shoulder, accompanied by words about how his attention needed to be on ship control. CAPT Brandhuber thought this appropriate mentoring by the CO. (Testimony of RADM Griffiths, page 110-12; CAPT Brandhuber, page 828-29, 888-89).

113. CAPT Brandhuber closely observed angles and high-speed maneuvers to evaluate GREENEVILLE's training and performance. At their conclusion, CAPT Brandhuber thought that the ship had demonstrated considerable proficiency in these demanding evolutions. (Testimony of CAPT Brandhuber, page 826, 828-29).

114. GREENEVILLE completed high-speed maneuvers at approximately 1331. (Testimony of RADM Griffiths, page 112; Exhibit 4).

115. Dynamic maneuvers, such as high-speed large rudder turns, negatively impact sonar displays. The GREENEVILLE Sonar Supervisor described the effect as making the sonar screens look like "spaghetti." Putting the contacts into the baffles during the large turns, and own ship noise during high speeds, also caused the contacts to lose track or fade. (Testimony of RADM Griffiths, page 113-14, 122-24, 476; CAPT Kyle, page 531; STS1 McGiboney, page 1421-2, 1437; STS3 Bowie, page 1112).

116. A period of time at a stable course and depth, with a speed of about 10 knots (in order to minimize interference from own ship's noise, yet enough speed to drive across the line of sight to a contact), was required for the passive sonar systems to regain reliable contact data. (Testimony of RADM Griffiths, page 113-14, 125-26, 252-53; CAPT Kyle, page 566-69, 571-72; LT Sloan, page 993; STS1 McGiboney, page 1422).

117. At 13:31:33, the Sonar Room still maintained track on two surface contacts, S-12 and S-13. Sonar data fluctuated during the period of high-speed maneuvers. The fire control system solution continued to show S-13 bearing 009°, range 14,000 yards, course 024°, speed 11 knots, AOB of starboard 165°, an opening course. (Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibits 7, 40).

118. In actuality, at 1331 EHIME MARU was still on course 166°, speed 11 knots, and had closed to within approximately 6,000 yards of GREENEVILLE's position. (Exhibits 4, 7, 40).

Preparations for Periscope Depth; Target Motion Analysis

119. After completing high-speed maneuvers, GREENEVILLE started preparations for the final scheduled evolution for the DV embark on 9 February, an emergency surfacing for training. GREENEVILLE needed to prepare for the ascent to periscope depth, come to periscope depth for a visual and electronic search of the surface, make a descent, and finally conduct the emergency surfacing maneuver. (Testimony of RADM Griffiths, page 109-10, 113-16, 128-32, 146-47; Exhibit 3).

120. Coming to periscope depth is a vulnerable time for submarines, due to the possibility of collision with surface contacts. During this time, the focus of the submarine's Control Room turns to surface contact management and target motion analysis. (Testimony of RADM Griffiths, page 115; Exhibit 1, enclosure 24 (Standing Order 6)).

121. Target motion analysis (TMA) is the study of relative motion, where a submarine determines the bearing, range, course, and speed of surface contacts relative to own ship. The process takes sonar data and develops parameters of movement through a coordinated, logical series of assumptions, solutions, and refinements. The submarine's computer solutions provide assistance and confirmation to human mental analysis, training, and experience. (Testimony of RADM Griffiths, page 115-16; CAPT Kyle, page 545, 552-53, 564).

122. Information ascertained through TMA allows the submarine to determine the surface contact situation and safely proceed to periscope depth. While at periscope depth, submarines employ additional visual and electronic sensors to assist in identifying and maintaining situational awareness of surface contacts. (Testimony of RADM Griffiths, page 115; CAPT Kyle, page 668).

123. The time required to conduct proper TMA is dependent upon numerous factors.

a. Factors include, but are not limited to, existing environmental conditions (e.g., sound velocity profile), the submarine's operational parameters, reliability of sensor data, signal strength of contacts (signal-to-noise ratio), and number

of contacts. (Testimony of RADM Griffiths, page 113-16; CAPT Kyle, page 665-66).

b. Generally, development of contact solutions requires data from two different courses, or "legs," of about three minutes each. The second leg also allows the ship to "clear the baffles," and identify contacts in that area of ocean to which the submarine is acoustically deaf. If a contact is identified during the baffle clear, an additional leg as to that contact is generally necessary. (Testimony of RADM Griffiths, page 252-53; CAPT Kyle, page 552).

124. In addition to an appropriate length of time, a "good leg" requires a steady course at a steady depth at a speed of about 10 knots. (Testimony of CAPT Kyle, page 566-69).

125. In addressing TMA, CO GREENEVILLE Standing Order 0610 states, in pertinent part:

a. "Stay on course . . . until there is enough data on the AVSDU and the Time/Bearing mode on the MK 81-2 displays to determine actual bearing rate and the direction of relative motion (about 3 minutes)."

b. "Change course at least [. . . .] degrees (normally 10 knots) to clear the previously baffled area. Try to select a course that will produce maximum speed across the line of sight while minimizing the number of maneuvers necessary to get two legs on the contacts. In general, select a course change that does not put the contact in the baffles so that the Dimus trace and effect of ship's change in speed across the line of sight can be monitored. Conservatively estimate each contact's range based on his bearing rate, fire control, or plot solutions."

(Exhibit 1, enclosure 24 (Standing Orders)).

126. TMA has inherent limitations: use of passive sonar systems will not detect all surface contacts (e.g., sailboats, vessels dead in the water). This reaffirms the importance of other sensor systems (visual and electronic) in safe surfacing operations. (Testimony of RADM Griffiths, page 115).

127. While submarines possess active sonar systems, using active systems to identify surface contacts is problematic.

a. Use of active sonar systems is dependent upon acoustic conditions in the water column and the operator's understanding of those specific conditions at the time active sonar is employed. Consequently, not all contacts will necessarily be detected by the operator.

b. Active sonar can result in false positive returns (non-existent contacts).

c. Active sonar puts noise in the water, thereby adversely impacting passive sonar systems, the primary and preferred sensors used by the submarine to detect, track, and classify contacts.
(Testimony of RADM Griffiths, page 117-19).

340° Leg

128. At 1331, GREENEVILLE was coming out of high-speed maneuvers to course 340°, at a speed in excess of 20 knots, and an approximate depth of 400 feet. (Testimony of RADM Griffiths, page 113, 123; CAPT Kyle, page 566-569; Exhibits 40, 42).

129. In order to conduct proper TMA, GREENEVILLE needed to come to a steady course, a shallower depth, and a slower speed. (Testimony of RADM Griffiths, page 113-14; CAPT Kyle, page 566-69; Exhibit 1, enclosure 24 (Standing Order 0610)).

130. After high-speed maneuvers were completed, CAPT Brandhuber moved to the aft port side of the Control Room, to look at the navigation plot and determine GREENEVILLE's location in her assigned OPAREA. CAPT Brandhuber never went to the Sonar Room or consulted with the FTOW. He never focused on the surface contact picture. CAPT Brandhuber remained in the aft port section of the Control Room until the collision. (Testimony of CAPT Brandhuber, page 830-31).

131. The CO and OOD were both located in the immediate area of the Conn. The XO was also still in the Control Room, aft of the

Number 2 periscope near the navigation chart. (Testimony of CAPT Brandhuber, page 860; Exhibit 75).

132. The CO told the OOD that he wanted the OOD to make preparations to proceed to periscope depth and get to periscope depth in five minutes. (Testimony of CDR Waddle, page 1745; Exhibit 1, enclosure 4; Exhibits 75, 76).

a. The CO knew his direction was an aggressive, if not impossible, order to comply with. The CO testified that his rationale for the order was to give the OOD a goal, that being to work efficiently. It was his intent to make this a training evolution for a slow and methodical OOD. (Testimony of CDR Waddle, page 1746-53).

b. The direction to be at periscope depth in five minutes was not consistent with CO GREENEVILLE Standing Order 6. As CDR Waddle testified, it would take a minimum of eight minutes for an OOD to properly comply with Standing Order requirements to conduct a periscope brief, conduct two good TMA legs, make the necessary report and obtain the CO's permission to proceed, and then make the ascent to periscope depth. (Testimony of CDR Waddle, page 1746-50; Exhibit 1, enclosure 24 (Standing Orders).

c. The XO heard the CO's direction to the OOD and also thought it to be aggressive. He said nothing at the time. (Exhibit 1, enclosure 3; Exhibits 75, 76).

133. Immediately after issuing this direction to the OOD, the CO walked off the Conn and went to his stateroom. (Testimony of CDR Waddle, page 1745; Exhibit 75).

134. At 13:31:36, as GREENEVILLE steadied on course 340°, the OOD ordered the DOOW to change depth to 150 feet and ordered the bell lowered from ahead flank to ahead 2/3. (Exhibit 1, enclosure 24 (Deck Log; Bell Book); Exhibits 4, 39, 40).

135. The XO, upon hearing the CO's direction to the OOD, reviewed the navigation chart to check GREENEVILLE's position in relation to Penguin Bank (shoal waters) and the ship's assigned OPAREA. (Exhibit 75).

136. The CO stopped for several moments in his stateroom, and then went to the Sonar Room. The CO asked the Sonar Supervisor if there were any contacts. At that time, Sonar Operators were just starting to regain reliable contact data after the high-speed maneuvers. The CO then left Sonar and entered the Control Room through the aft curtain. (Testimony of CDR Waddle, page 1746; STS3 Bowie, page 1115-16).

137. Knowing that the AVSDU was OOC, the XO informed the OOD that he would go to Sonar in order to assist the OOD in getting to periscope depth. At this point in time, the XO "had no idea what the contact picture was." As the XO entered Sonar from the forward door, he observed the CO walking through the aft curtain on his way into the Control Room. The XO was glad the CO had been in Sonar, as this meant the CO was involved in the evolution and it would be easier for the OOD to meet the five minute goal if the CO were already aware of the contact picture. The XO proceeded to talk to the Sonar Supervisor. (Testimony of LT Sloan, page 965; STS1 McGiboney, page 1420; STS3 Bowie, page 1114-16; Exhibit 75, 76).

138. The OOD did not conduct a periscope depth brief, as required under CO GREENEVILLE Standing Order 6. (Testimony of CDR Waddle, page 1750; CAPT Brandhuber, page 861; LT Sloan, page 968; ET1 Thomas, page 1081-82; STS1 McGiboney, page 1432-33; FT1 Seacrest, page 1560).

a. The purpose of such a brief is to gather the OOD, Sonar Supervisor, Radioman of the Watch, Electronic Support Measures (ESM) Operator, Navigation, and the Ship Control Party to discuss and prepare for the upcoming evolutions to be conducted at periscope depth. (Testimony of CAPT Kyle, page 546-47; LT Sloan, page 966-67, 987; ET1 Thomas, page 1082; Exhibit 1, enclosure 24 (Standing Orders)).

b. By not conducting this briefing, the watchteam did not receive information from Sonar on contacts held or sea state conditions. The OOD, Sonar Supervisor, and FTOW did not have the opportunity to discuss the contact picture. The ESM Operator was not provided sonar contact information to assist him in planning the electronic defensive search. (Testimony of

MMC Streyle, page 1226; MM1 Harris, page 1259-60; STS1 McGiboney, page 1422-23; FT1 Seacrest, page 1560-61).

c. Normal practice on GREENEVILLE was to conduct this brief. Given his attention to detail and methodical approach, LT(jg) Coen would have conducted this briefing under normal conditions. (Testimony of CDR Waddle, page 783; LT Sloan, page 1011; MMC Streyle, page 1224; STS1 McGiboney, page 1432-33; ET1 Thomas, page 1082, 1087; FT1 Seacrest, page 1561).

139. The OOD did make a 27MC announcement, informing the relevant watchstations to prepare to come to periscope depth. (Testimony of CAPT Brandhuber, page 861; ET1 Carter, page 1023; MMC Streyle, page 1224; MM1 Harris, page 1256).

140. GREENEVILLE was on course 340° for approximately 90 seconds (13:31:36 to 13:33:07). (Testimony of CDR Waddle, page 1750; Exhibits 39, 40, 42).

141. GREENEVILLE ascended from 400 to 154 feet while on course 340°. Time between 170 and 154 feet while on course 340° was approximately 20 seconds (13:32:47 to 13:33:07). (Exhibits 39, 40, 42).

142. GREENEVILLE slowed from 18 to 12.5 knots while on course 340°. Time between 13.5 and 12.5 knots while on course 340° was approximately 20 seconds (13:32:47 to 13:33:07). (Exhibits 39, 40, 42).

143. After completing high-speed maneuvers, and while on course 340°, GREENEVILLE started regaining reliable data for sonar contacts S-12 and S-13. (Exhibits 7, 40).

a. While on course 340°, the raw data received by the spherical array indicated a right 6° per minute bearing rate for S-13, indicating a close contact. (Exhibits 7, 8, 40).

b. GREENEVILLE’s Sonar Room knew how to identify such a significant bearing rate, and to immediately report it. (Testimony of CDR Waddle, page 1750; STS1 McGiboney, page 1421,

1447, 1458-59; STS1 Reyes, page 1189; STS3 Bowie, page 1117-18, 1121, 1155; STSSN Rhodes, page 1175-76).

c. Because of the effect of high-speed maneuvers on the sonar displays, neither the Sonar team nor the XO identified a high bearing rate. The XO studied the passive broadband display, but "could not tell much from the display because on that leg we had just come out of high-speed rudder turns." They had inadequate time while on the 340° leg to integrate the new data, and discern its reliability and relevance. (Testimony of RADM Griffiths, page 124-25; Exhibit 75).

d. If GREENEVILLE had maintained 340° course for three minutes, the Sonar team would have recognized the right 6° per minute bearing rate and seen it increase to 11° per minute. (Testimony of CAPT Kyle, page 570; CDR Waddle, page 1750; Exhibit 40).

144. When the CO reentered the Control Room from Sonar, he believed that the contact picture was the same as before angles, that being two distant surface contacts to the north, close to the coast of Oahu. (Testimony of CDR Waddle, page 1748-49, 1751).

145. Operating under this belief, the CO ordered the OOD to change course to 120° to conduct a baffle clear. (Testimony of CDR Waddle, page 1751; Exhibit 1, enclosure 24 (Deck Log); Exhibits 7, 8, 40, 42, 75).

120° Leg; Unintended Consequences; New Contact S-14

146. GREENEVILLE started its change to course 120° at 13:33:07. (Exhibit 1, enclosure 24 (Deck Log); Exhibits 39, 40, 42).

147. Immediately prior to this change of course order (at 13:32:48), the Sonar Room still maintained track on two surface contacts, S-12 and S-13. Raw sonar data indicated S-13's bearing as 017° and drawing right. The fire control system solution continued to show S-13 bearing 007°, range 15,000 yards, course 024°, speed 11 knots, AOB of starboard 163°, an opening

course. (Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibits 7, 40, 42).

148. In actuality, at 1333 EHIME MARU was still on course 166°, speed 11 knots, and had closed to within approximately 5,000 yards of GREENEVILLE's position. (Exhibits 4, 7, 40, 42).

149. The unintended consequence of coming to course 120° was to put GREENEVILLE on a collision course with contact S-13, which in turn resulted in a constant bearing rate. Because of this constant bearing rate, GREENEVILLE continued to assume that S-13 was a distant contact. The submarine never knew it was on a collision course with EHIME MARU. (Testimony of RADM Griffiths, page 112; Exhibits 4, 7, 8, 40).

150. Another unintended consequence of coming to course 120° was that S-12 was about to be put into the ship's baffles. (Testimony of CAPT Kyle, page 680; STS1 McGiboney, page 1453; Exhibit 1, enclosure 24 (A-RCI Sonar Log)).

a. Prior to losing contact, STS1 Reyes was actively involved in evaluating S-12.[6] STS1 Reyes believed S-12 might be a closing contact. He stepped out of the Sonar Room to discuss this situation with the FTOW. After checking his displays, the FTOW stated that he thought S-12 was opening. When STS1 Reyes returned to Sonar, he mentioned his concern to the XO. The XO reviewed the sonar display, stepped into the Control Room to review the fire control system, and returned to Sonar. The XO and STS1 Reyes concluded that it was own ship's speed that was

[6] In his testimony, STS1 Reyes consistently referred to S-10 as the contact he worked with the FTOW and XO. However, S-10 was lost at approximately 1245, prior to the time that STS1 Reyes and the XO were in the Sonar Room (the XO being in the Wardroom with civilian guests until approximately 1245). It is clear to the Court that STS1 Reyes has, since the day of the collision, confused his contact numbers. In his summarized statement of 11 February, STS1 Reyes indicated that as GREENEVILLE prepared for periscope depth, Sonar had three contacts – S-10, S-12, and S-13. Exhibit 1, enclosure 10. In actuality, they were S-12, S-13, and S-14. Given the time discrepancy, the fact that STS1 Reyes testified the contact he was referring to was lost during the baffle clear to course 120° and that, according to STS1 Reyes, the XO remained in Sonar after returning from the FTOW's position until the ship reached periscope depth, it is the Court's conclusion that STS1 Reyes was actually referring to S-12.

driving the contact and causing the closing effect. (Testimony of STS1 Reyes, page 1187-1188, 1203-1204; FT1 Seacrest, page 1547-48).

b. This positive interaction between the Sonar Room and FTOW in cooperatively working surface contact solutions is the appropriate and expected standard. It was not to occur with regard to S-13 or S-14. (Testimony of STS1 McGiboney, page 1428; STS1 Reyes, page 1187-88, 1203-04; FT1 Seacrest, page 1558).

151. As GREENEVILLE was coming to course 120°, the CO continued to explain evolutions to civilian guests via the 1MC. In explaining the reason for the baffle clear, the CO stated that GREENEVILLE needed to make sure that the submarine could safely come to periscope depth without hitting something on the surface. (Testimony of MM1 Harris, page 1257; STS1 McGiboney, page 1418; STS1 Reyes, page 1200).

152. At 13:33:03, just as GREENEVILLE was preparing to turn to course 120°, a new sonar contact, S-14, was detected. The Sonar Supervisor did not make a new contact report at that time. (Testimony of CDR Waddle, page 1753-54; STS1 McGiboney, page 1451-53; FT1 Seacrest, page 1561-63, 1631; Exhibit 1, enclosure 24 (Sonar Logs); Exhibit 39).

153. For a period of 01:45 minutes (13:33:03 to 13:34:48), Sonar and Fire Control maintained three contacts: S-12, S-13, and S-14.

a. During this time period, the fire control system solution for S-12 was range 19,000; for S-13 was range 15,000; and for S-14 was range 8,000.

b. After 13:34:48, track on S-12 was lost. S-12 would not be regained until approximately 1352, after the collision.

(Exhibit 1, enclosure 24 (A-RCI Sonar Logs)).

154. GREENEVILLE steadied on course 120° at 13:35:39. (Exhibit 39).

155. After steadying on course 120°, the OOD called for the "all contact report." (Testimony of FT1 Seacrest, page 1562, 1631).

156. In response, the Sonar Supervisor reported new contact S-14, as well as reports for other contacts held, via the 27MC. (Testimony of FT1 Seacrest, page 1562-63, 1631).

157. Neither the CO nor the OOD heard or, if heard, properly identified S-14 as being a new contact. As the ship prepared for the ascent to periscope depth, the CO and OOD thought that GREENEVILLE continued to maintain only two contacts.[7] (Testimony of CDR Waddle, page 1753-55; Exhibit 1, enclosure 4).

158. At no time did the XO, Sonar Supervisor, or FTOW recommend to the CO or the OOD that an additional TMA leg be conducted to further assess S-14. (Testimony of CDR Waddle, page 1749, 1754-55; FT1 Seacrest, page 1556-58, 1564-65, 1612; STS1 McGiboney, page 1429, 1453-54; Exhibit 75).

159. At no time during preparations for periscope depth did the CO or OOD ask for input from the FTOW on solutions for S-13 or S-14. (Testimony of CDR Waddle, page 1749; FT1 Seacrest, page 1556-58, 1577-78, 1601, 1612; Exhibit 75).

160. At no time did the CO, XO, or OOD make a coordinated effort to engage both the Sonar Supervisor and the FTOW as to what specific information was known regarding S-13 or S-14. (Testimony of CDR Waddle, page 1749; FT1 Seacrest, page 1556-58, 1564-65, 1577-78, 1601, 1612; STS1 McGiboney, page 1428, 1433; Exhibit 75).

[7] According to his summarized statement of 11 February, LT(jg) Coen's understanding was that in preparing to go to periscope depth, the "ship held two sonar contacts with one bearing 010° and the other bearing either 330° or 340° (the first contact was either S-12 or S-13 and the second was S-14)." Exhibit 1, enclosure 4. In testimony before the Court, the CO stated that he remembers Sonar reporting only two contacts, and because of the loss of the AVSDU and the fact that he did not have the contact numbers memorized, he did not recognize S-14 as being a new contact. Testimony of CDR Waddle, page 1753-55. The FTOW, however, testified that during the all contact report, he heard the Sonar Supervisor relay new contact information regarding S-14, as well as contact information on S-12 and S-13.

161. CO GREENEVILLE Standing Order 0610 requires the OOD "[w]hen on a steady course with the sonar search completed and clear to ascend, [to] inform the Commanding Officer of the status of preparations to bring the ship to periscope depth, routine evolutions planned while at periscope depth, and all sonar contacts." The OOD is to request the CO's permission to proceed to periscope depth. (Exhibit 1, enclosure 24 (Standing Orders)).

162. The OOD never made this report or asked the CO for permission to proceed. Because this report was not made, the OOD and FTOW did not compare their understanding of the contact picture. Given his attention to detail and methodical approach, LT(jg) Coen would have conducted this briefing under normal conditions. (Testimony of CDR Waddle, page 1755-56, 1783; ET1 Thomas, page 1087; FT1 Seacrest, page 1602).

163. The CO did not require the OOD to make this report since the CO believed that he (the CO) had an understanding of the surface contact picture, based upon his earlier walk-through of Sonar and the all contact report just received. (Testimony of CDR Waddle, page 1755-56).

164. The FTOW heard the CO state "I have a good feel for the contact picture." The FTOW assumed that the CO was referring to all surface contacts, including new contact S-14. (Testimony of FT1 Seacrest, page 1563-64, 1603, 1631; CDR Waddle, page 1770).

Proceeding to Periscope Depth; Actions of the FTOW

165. At approximately 13:36:45, while still on course 120°, the CO directed the OOD to proceed to periscope depth. The OOD ordered the DOOW to make his depth 60 feet. GREENEVILLE started its ascent to periscope depth at 13:36:58. (Testimony of FT1 Seacrest, page 1565, 1603; Exhibit 1, enclosure 24 (Deck Log); Exhibits 4, 39, 40, 75).

166. The XO heard the CO's direction to proceed to periscope depth while still in Sonar. The XO was surprised because he thought there would be another TMA leg coming to develop further information on known contacts. However, the XO assumed that the

CO and OOD would be working with the FTOW, so "he figured they must have gotten enough input from the previous legs to develop solutions that they were comfortable with." (Exhibit 75).

167. At 13:37:18, the Sonar Room maintained two surface contacts, S-13 and new contact S-14. S-12 had faded or was lost at this point. Sonar data indicated S-13's bearing as 021° and maintaining. The fire control system solution continued to show S-13 bearing 007°, range 16,000 yards, course 024°, speed 11 knots, AOB of starboard 163°, an opening course. (Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibits 7, 40, 42).

168. In actuality, at 1337 EHIME MARU was still on course 166°, speed 11 knots, and had closed to within approximately 3,000 yards of GREENEVILLE's position. (Exhibits 4, 7, 40, 42).

169. As GREENEVILLE started its ascent to periscope depth on course 120°, the FTOW was updating fire control solutions. It was unusual for the FTOW to still be updating solutions at this time, in that high-confidence solutions are supposed to be in place before ascent to periscope depth. (Testimony of FT1 Seacrest, page 1604).

170. While the CO and OOD had not identified S-14 as a new contact, the FTOW had. Knowing there was little TMA with respect to this new contact, developing an accurate solution for S-14 was the FTOW's primary focus at that time. (Testimony of FT1 Seacrest, page 1561-67, 1575-76, 1626).

171. At approximately 13:37:48, as GREENEVILLE was ascending, the FTOW entered an updated system solution for S-13 of bearing 021°, range 4,000 yards, course 141°, speed 8 knots, AOB of starboard 061°, a closing course. This was a relatively accurate solution for EHIME MARU. (Testimony of FT1 Seacrest, page 1574-75, 1586; Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibits 7, 40, 42).

a. The accuracy of this proposed solution was driven by the raw sonar data received during the 340° leg. While S-13's high bearing rate may not have been visually evident to the Sonar operators because of the effect of high-speed maneuvers,

it was nonetheless detected and processed by the fire control computer. (Testimony of CAPT Kyle, page 549, 644, 647, 655; FT1 Seacrest, page 1599).

b. CO GREENEVILLE Standing Order 1, Appendix, requires CO permission to close any contact within 4,000 yards in the open ocean. (Testimony of FT1 Seacrest, page 1548-49; Exhibit 1, enclosure 24 (Standing Orders)).

172. The FTOW told the Court that he did not note the 11,000 yard drop in S-13's range, and did not look at the system solution portion of the visual display. The FTOW did not know of and therefore did not report the significant closing of range to the OOD or the CO. (Testimony of FT1 Seacrest, page 1575-76, 1586-88, 1591-92, 1599, 1603, 1632; Exhibit 66).

173. During this same time, the FTOW maintained a closing solution for S-14, his new and primary contact of interest. The FTOW had a fire control system solution for S-14 of bearing 350°, range 10,000 yards, course 197°, speed 12 knots, AOB of port 026°, a closing course. (Exhibit 1, enclosure 24 (A-RCI Sonar Log)).

174. The FTOW told the Court he was primarily interested in watching the fire control system's time/bearing display to see if any significant bearing rate changes were developing, particularly with regard to new contact S-14. No significant change in bearing rates occurred. (Testimony of FT1 Seacrest, page 1566-67, 1575-76, 1588-89, 1603, 1626-28; Exhibit 66).

175. During this same time, the FTOW was also busy preparing for periscope depth. This included setting up the PERIVIS and Own Ship's Data System (OSDS) displays for the Number 2 periscope. (Testimony of FT1 Seacrest, page 1568, 1575-76, 1589).

a. The PERIVIS is a visual display which, when energized, enables members of the Control Room to see what the periscope operator is viewing through the periscope headwindow. (Testimony of RADM Griffiths, page 165, 210).

b. The OSDS displays prominent ship data, such as own ship parameters (e.g., course, speed, depth), and when operating a periscope, what bearings are being visually searched. (Testimony of RADM Griffiths, page 166; LT Van Winkle, page 166).

176. The FTOW told the Court he felt rushed during this period. He did not make known to the OOD or the CO any concerns he had regarding S-14, or his rush to prepare. FT3 Brown, a qualified FTOW, was still in the Control Room; the FTOW never asked for his assistance. (Testimony of FT1 Seacrest, page 1590-91, 1603).

177. According to the FTOW, six to seven civilian guests were standing in the forward starboard section of the Control Room, in the area of the CEP. Another three or four guests were standing between the FTOW's displays and the Conn. (Testimony of FT1 Seacrest, page 1579-80; Exhibit 6).

178. The FTOW told the Court that the civilian guests did not interfere with his ability to perform his duties. (Testimony of FT1 Seacrest, page 1580).

Periscope Operations – OOD's Visual Search; ESM Search

179. As the ship ascends to periscope depth, CO GREENEVILLE Standing Order 0615 directs the following:

a. Just prior to ordering the depth change to periscope depth, the OOD is to raise the Number 2 periscope. Periscope and ESM Early Warning Receiver checks are conducted. The OOD announces, "All stations, proceeding to periscope depth."

b. The OOD is to order a periscope depth consistent with the periscope in use (which for the Number 2 periscope is normally 61 feet), and the sea state to provide adequate search capability.

(Exhibit 1, enclosure 24 (Standing Orders)).

180. Once at periscope depth, visual searches are to be conducted per the guidance of NWP 1-13.10, Submarine Electronic/Optic Sensor Employment Manual. (Exhibit 1, enclosure 24 (Standing Orders)).

181. NWP 1-13.10 directs the following be accomplished as the submarine ascends to periscope depth:

a. An underwater search, where the periscope operator holds the periscope directly in front of the ship, looking for shadows which may indicate a collision threat.

b. As the periscope breaks the surface, the operator is to conduct three, 360° sweeps of approximately eight seconds per sweep in low power, to quickly determine if there are close contacts. This is to defend the submarine against imminent collision. If safe operation is indicated, the announcement “no close contacts” is made.

c. Following the initial search, an aerial search involving several sweeps in low power, at different elevations, is conducted.

d. Following the aerial search, a continuous visual search is conducted. This involves a series of 360° horizon sweeps in low power, followed by successive 90° quadrant searches in high power. Each sweep will take approximately 45 seconds.

e. All totaled, more than 3 minutes is required for proper periscope employment when first reaching periscope depth.

(Testimony of RADM Griffiths, page 130-132; Exhibit 36).

182. The CO GREENEVILLE Standing Orders and NWP 1-13.10 make no formal distinction between tactical use and those situations where periscope employment is solely for safety of ship. However, CO GREENEVILLE Standing Order 0610 generally directs periscope operators to select a depth that satisfies visibility, sea state, exposure, and search purposes. Proper operational risk management would suggest that where a submarine is not in a tactical situation calling for stealth, it may and should spend additional time and increase height of eye to ensure ship

safety. (Testimony of RADM Griffiths, page 130-32, 399-400; RADM Konetzni, page 788-90; Exhibit 1, enclosure 24 (Standing Orders)).

183. At 1337, as GREENEVILLE started its ascent to periscope depth, the OOD manned the Number 2 periscope. (Testimony of CAPT Brandhuber, page 866).

184. While ascending to periscope depth, the CO briefed guests on the need for quiet in the Control Room. CO GREENEVILLE Standing Order 0615 requires that routine reports be held in abeyance during this period. (Testimony of CDR Waddle, page 1762; Exhibit 1, enclosure 24 (Standing Orders)).

185. GREENEVILLE arrived at 61 feet at approximately 13:38:40, some seven minutes after the CO gave his direction to the OOD to be at periscope depth in five minutes. (Testimony of CAPT Kyle, page 586; Exhibits 9, 39, 40).

186. Upon the periscope's headwindow breaking the water's surface, the OOD conducted three initial sweeps in low power, at a depth of approximately 60 feet, per proper procedures. (Testimony of CAPT Brandhuber, page 833, 866-68; LT Sloan, page 973; Exhibits 9, 40, 42).

187. During the OOD's initial sweeps, the CO was on the Conn, watching the PERIVIS. The CO requested that some of the civilian guests move out of his line of sight to the PERIVIS. (Testimony of CDR Waddle, page 1762).

188. During the OOD's initial sweeps, watchstanders directly observing the PERIVIS noted that the headwindow experienced wave hits. (Testimony of MM1 Harris, page 1272; FT1 Seacrest, page 1570, 1572; ET1 Thomas, page 1074).

a. CO GREENEVILLE Standing Order 0620 requires the periscope operator to ensure that enough periscope is out of the water to see over swells and to prevent the optics from being frequently submerged by heavy seas. (Exhibit 1, enclosure 24 (Standing Orders)).

b. Surface conditions at the time were approximately four to six foot swells. (Testimony of LCDR Meador, page 1303-04; FT1 Seacrest, page 1569; Exhibits 38, 45, 60).

189. During the OOD's initial sweeps, GREENEVILLE's Early Warning Receiver system was energized. In Radio, a U/I watchstander detected multiple radar contacts but no signal strength 4 or 5 (close) contacts. Not identifying any such contact, the U/I handed the headset to the qualified O/I ESM watchstander. The ESM Operator also did not detect a signal strength 4 or 5 contact. (Testimony of RADM Griffiths, page 139-140; ET1 Carter, page 1024-25; ET3 Bruner, page 1033-34).

190. As the OOD was finishing his initial sweeps, the XO reentered the Control Room from Sonar. The XO remained in the forward starboard section of the Control Room until the collision. (Exhibit 75).

191. After completing his initial sweeps, the OOD reported "no close contacts." (Testimony of LT Sloan, page 973; LT Pritchett, page 1360; MMC Streyle, page 1227; ET1 Carter, page 1028; FT1 Seacrest, page 1570).

192. After hearing the OOD's report, ESM reported "no close contacts." (Testimony of ET1 Carter, page 1025; ET3 Bruner, page 1034; CDR Waddle, page 1763).

193. Upon completing his initial periscope search, the OOD commenced the aerial sweep. (Testimony of CDR Waddle, page 1762).

Periscope Operations - CO's Visual Search; Effect of Abbreviated Time at Periscope Depth

194. As soon as the OOD commenced his aerial sweep, the CO interrupted him and took the Number 2 periscope. (Testimony of CDR Waddle, page 1762-63; CAPT Brandhuber, page 974; FT1 Seacrest, page 1570).

195. In taking the periscope, the CO wanted to look down the lines of bearing in the direction he believed the surface

contacts to be, and verify that the ship didn't hold the two sonar contacts visually. (Testimony of CDR Waddle, page 1763-64).

196. The CO first conducted an additional 360° sweep in low power, slower than a typical quick look sweep. He knew the height of eye wasn't high enough, and asked the OOD to raise the ship "a couple feet." The OOD ordered the DOOW to make the depth 58 feet. (Testimony of CDR Waddle, page 1763-69; LT Sloan, page 974; MMC Streyle, page 1228; LT Pritchett, page 1361; FT1 Seacrest, page 1570).

197. Once GREENEVILLE began to come up, the CO thought he was getting a good look through the periscope. He could see over the tops of the rolling swells. The CO looked at the OSDS for the 340° bearing, then started looking down that bearing in high power. He did not observe any contact. He then "flipped over" to 020°, went to 12 power, hit the doubler, and saw nothing. He then returned to low power and continued panning to the right until he ultimately ended up with the periscope facing forward (120°). (Testimony of CDR Waddle, page 1763-69, 1779-80; CAPT Brandhuber, page 833-34, 868-69; LT Sloan, page 974; LT Pritchett, page 1361).

198. The CO observed haze, a white belt along the land mass of Oahu, when looking through the periscope. He could not see buildings, but did observe a plane taking off. (Testimony of CDR Waddle, page 1765-69, 1777).

199. The CO did not ask for, nor did he receive, a cued search on specific fire control system contact bearings and ranges from the FTOW. (Testimony of CDR Waddle, page 1768-69; CAPT Brandhuber, page 869; LT Sloan, page 974; FT1 Seacrest, page 1605, 1613).

200. During the periscope search, the FTOW was focused on the PERIVIS and OSDS, to make sure that the periscope operator was looking down the bearings of the contacts. His attention was not on the fire control system displays. The FTOW believed that the CO was looking down the correct bearings to the surface contacts. (Testimony of FT1 Seacrest, page 1571, 1634-37).

201. Watchstanders looking at the surface picture through the PERIVIS did not detect any visual contacts. These same individuals noted the haze when looking at the PERIVIS. (Testimony of ET1 Thomas, page 1075, 1079; FT1 Seacrest, page 1569, 1571-72).

202. After a “high look” at 58 feet of 16 seconds, the CO stated “I hold no visual contacts in high power.” (Testimony of CDR Waddle, page 1770; CAPT Kyle, page 586-87; Exhibits 9, 39, 40, 42).

203. GREENEVILLE was at periscope depth from 13:38:40 to 13:39:46, a period of 66 seconds. (Testimony of RADM Griffiths, page 133-34, 139; CAPT Kyle, page 585-88; LT Pritchett, page 1361-62; Exhibits 9, 39, 40, 42).

204. During the time at periscope depth, the DOOW was unable to achieve optimum trim and angle (3/4° up angle). (Testimony of MMC Streyle, page 1225).

205. During the time at periscope depth, the Navigation team was unable to obtain either a commercial or military global positioning system (GPS) fix due to lack of signal reception time off the Number 2 periscope antenna. (Testimony of ET1 Thomas, page 1075; ET3 Blanding, page 1098).

206. During the time at periscope depth, the Early Warning Receiver system never indicated signal strength 4 or 5. If GREENEVILLE had remained at periscope depth longer, EHIME MARU’s radar would have increased to signal strength 4 or 5. The ESM watch attempted but was unable to use the WLR-8 in classifying electronic contacts. (Testimony of RADM Griffiths, page 139-40, 292-94, 370; ET1 Carter, page 1025; ET3 Bruner, page 1034, 1036).

207. During the time at periscope depth, EHIME MARU was approximately 2500 yards from GREENEVILLE. The AOB was approximately starboard 30°, meaning that only half the length of EHIME MARU would have been visible to the periscope operator. (Testimony of RADM Griffiths, page 136-37; CAPT Kyle, page 588, 590; Exhibits 7, 40).

208. The OOD and the CO did not visually detect the presence of EHIME MARU. The factors which combined to prevent detection:

a. Sea state;

b. White, haze conditions;

c. EHIME MARU's white color scheme;

d. EHIME MARU's angle on the bow;

e. The CO's assumption at the beginning of his visual search that there were no close contacts to be observed, and;

f. The CO's abbreviated search procedure.

(Testimony of CDR Waddle, page 1772; Exhibits 43, 47).

209. The CO denied being in any type of rush the afternoon of 9 February. The CO told the Court that he knew and had accepted that the ship would be late arriving at Papa Hotel. He did want to make sure that GREENEVILLE was on the surface no later than 1415, in order to communicate with Pearl Harbor Control regarding their inability to make Papa Hotel time. (Testimony of CDR Waddle, page 1773-74; *but see*, CAPT Brandhuber, page 832-33, 843-44, 872-75, 890, 909-910; LT Sloan, page 1014; ET1 Thomas, 1080-82).

210. The OOD and CO had no physical visual impairment that was incapable of being corrected by use of the diopter on the Number 2 periscope. (Testimony of CDR Gudewicz, page 1646; CDR Waddle, page 1777).

Emergency Deep; The FTOW's Actions As To S-13

211. At approximately 13:39:46, after 66 seconds at periscope depth, the CO secured the Number 2 periscope and ordered "Emergency Deep." (Testimony of CDR Waddle, page 1697-99; Exhibit 1, enclosure 24 (Deck Log); Exhibits 39, 40, 42).

212. The CO's order initially surprised the forward watchstanders, as well as the XO and CAPT Brandhuber. The CO then stated the emergency deep was for training, and directed the OOD to make his depth 400 feet. That this was an emergency deep for training was passed over the 1MC. (Testimony of CAPT Brandhuber, page 834, 849-50, 870; LT Sloan, page 977; MMC Streyle, page 1229; ET1 Thomas, page 1086; STS1 Reyes, page 1200; Exhibit 75).

213. The CO's rationale for the emergency deep was to conduct training, and to get GREENEVILLE down quickly for the emergency surfacing, before the surface contact picture changed. (Testimony of RADM Griffiths, page 146-47; CDR Waddle, page 1697-99; MMC Streyle, page 1239).

214. The primary focus of the watchstanders in the Control Room was shifted from the periscope operations back to ship control. (Testimony of RADM Griffiths, page 420; CAPT Kyle, page 577-78; Exhibit 75).

215. As GREENEVILLE was descending, the CO asked for the course to Papa Hotel. The NAV Supervisor recommended a course of 340°, which would also ensure separation from the shoal waters of Penguin Bank. The CO directed the OOD to come left to course 340°. This was relayed by the OOD to the Helm. At 13:40:34, GREENEVILLE commenced its turn to the left. (Testimony of LT Sloan, page 977, 991; ET1 Thomas, page 1083; Exhibits 39, 75).

216. Starting with GREENEVILLE's preparations to come to periscope depth, CAPT Brandhuber harbored concerns over the pace of events. His thoughts were that these evolutions were happening quicker than he would have done them. However, CAPT Brandhuber did not voice his concerns at the time; he felt the CO was performing within his capabilities and was actively involved in showcasing his submarine and the prowess of his team. CAPT Brandhuber decided to instead discuss his concerns with the CO after returning to port. (Testimony of CAPT Brandhuber, page 832-33, 843-44, 872-75, 890, 909-910).

217. During the emergency deep, the FTOW started to cycle through the contact solutions.

a. At 13:40:03, the fire control system solution for S-13 was bearing 022°, range 3,000 yards, course 141°, speed 8 knots, AOB of starboard 062°, a closing course. This was a relatively accurate solution for EHIME MARU. (Exhibit 1, enclosure 24 (A-RCI Sonar Log); Exhibits 7, 40, 42).

b. The FTOW told the Court that it was at this approximate time that he first noted that the fire control system solution for S-13 indicated a close range. (Testimony of FT1 Seacrest, page 1581-83, 1605-06, 1637).

c. Since the FTOW had just heard the OOD and the CO state that GREENEVILLE held no visual contacts, and since the FTOW had not seen any contacts during his own viewing of the PERIVIS, the FTOW assumed that the system solution for S-13 was incorrect. (Testimony of FT1 Seacrest, page 1581-83, 1605-06, 1637; CDR Waddle, page 1770).

d. The FTOW told the Court that based upon the results of the visual and ESM searches conducted at periscope depth, he out spotted S-13's range to 9,000 yards. (Testimony of FT1 Seacrest, page 1581-83, 1605-06, 1637; CDR Waddle, page 1770).

e. This out spot was not entered into the fire control system until approximately 13:43:48, some 30 seconds after the time of collision. (Exhibit 1, enclosure 24 (A-RCI Sonar Log)).

f. This out spot resulted in a system solution for S-13 of bearing 324°, range 9,000 yards, course 240°, and speed 99 knots. The FTOW could not explain to the Court why he did not check and resolve this obvious discrepancy as to contact speed. (Testimony of FT1 Seacrest, page 1582-83, 1605-06, 1637-38; Exhibit 1, enclosure 24 (A-RCI Sonar Log)).

218. GREENEVILLE reached a depth of 400 feet at approximately 13:41:57. (Exhibit 39, 40, 42).

219. At that time, EHIME MARU was less than 1000 yards from GREENEVILLE's position. (Exhibits 4, 7).

Emergency Surface; Collision

220. The CO invited a civilian guest to sit at the Helm, a civilian guest to operate the EMBT actuator valves at the Ballast Control Panel, and a civilian guest to sound the secondary diving alarm (klaxon) during the emergency surfacing maneuver. These guests assumed their positions when GREENEVILLE reached 400 feet on the emergency deep. While at the Helm and Ballast Control Panel, these guests were under the close and constant supervision of qualified watchstanders. (Testimony of LT Pritchett, page 1362-63; MMC Streyle, page 1229; MM1 Harris, page 1263-65; SK3 Feddeler, page 1280-83; Exhibits 64, 65).

221. At approximately 13:42:25, GREENEVILLE commenced its emergency surface.

a. This involved forcing 4500 psi high-pressure air into the submarine's forward and aft main ballast tanks for a period of 10 seconds.

b. This large volume of air forced water out of the ballast tanks, quickly creating a condition of positive buoyancy, thereby forcing the ship to the surface.

c. Submarines maintain this capability in case of casualty.

d. Once initiated, surfacing of the ship was unavoidable.

(Testimony of RADM Griffiths, page 153-55, 213-17; MMC Streyle, page 1241; Exhibit 39, 40).

222. Submarines have a maintenance requirement to conduct EMBT blows annually. (Testimony of RADM Griffiths, page 237).

223. The CO performed the emergency surfacing maneuver to demonstrate to the civilian guests the capability of a submarine to ascend in the event of a casualty. He was also mindful of a training value and benefit to the crew. The CO had confidence in his submarine that the EMBT Blow System would operate as designed. (Testimony of CDR Waddle, page 1687-91, 1702-04).

224. As GREENEVILLE was coming to the surface, the CO used the 1MC to inform the guests of what was happening to the submarine. (Testimony of LT Mahoney, page 1386; LT Pritchett, page 1363; STS1 Reyes, page 1200; FT1 Seacrest, page 1581).

225. GREENEVILLE surfaced underneath EHIME MARU at approximately 13:43:15. (Exhibit 4).

226. When the collision occurred, the GREENEVILLE crew felt a shudder and two loud thumps. (Testimony of LCDR Meador, page 1300; LT Mahoney, page 1386; MMCM Coffman, page 1333; ETCS Smith, page 1291; ET1 Thomas, page 1083; STS1 McGiboney, page 1429; FT1 Seacrest, page 1581; Exhibit 75).

227. GREENEVILLE impacted EHIME MARU just aft of the submarine's sail on the port side. The submarine's rudder then sliced through EHIME MARU from starboard to port. (Testimony of RADM Griffiths, page 147).

228. EHIME MARU immediately began to sink. (Testimony of LCDR Meador, page 1300; Exhibit 53).

II. The Search and Rescue (SAR) Operation

Onboard M/V EHIME MARU

229. At the moment of collision, Captain Ohnishi felt a lifting of the stern of the ship, accompanied by two violent banging sounds. EHIME MARU came to a halt. (Exhibit 53).

230. The collision resulted in an immediate loss of power onboard EHIME MARU. (Exhibit 53).

231. A crewmember reported to Captain Ohnishi that there was a surfaced submarine on the aft port side. When Captain Ohnishi looked to see the submarine, he noted EHIME MARU's aft portholes being abnormally close to the surface of the ocean. (Exhibit 53).

232. Captain Ohnishi told crewmembers to gather everyone at the assigned mustering station, the deck area aft of the Bridge.

EHIME MARU's Communications Chief went to switch on the EPIRB. (Exhibit 53).

233. Captain Ohnishi went to the chart room to retrieve documents, and noticed people already at the muster station. The Captain then proceeded to the mustering area to conduct a head count, but water was already washing over the deck. The Captain and others in the deck area were swept into the sea. (Exhibit 53).

234. EHIME MARU's life rafts were automatically deployed and surfaced. The survivors climbed, and assisted others, into the life rafts. From a total complement of 35, 26 individuals entered the life rafts. (Exhibit 53).

235. EHIME MARU sank in less than 10 minutes. (Exhibit 53).

236. Survivors from EHIME MARU noted considerable amounts of flotsam in the water. They called and searched for any additional survivors who might still be in the sea. No other person was ever sighted. (Exhibit 53).

Onboard USS GREENEVILLE

237. After hearing the loud noises and experiencing the shudder made by the collision, the CO stated, "what the hell was that?" (Exhibit 1, enclosures 4 & 15; Exhibits 64, 65).

238. The CO raised the Number 2 periscope. The XO raised the Number 1 periscope. Both saw a fishing vessel aft of GREENEVILLE. The CO indicated to the Control Room that the submarine had hit a ship. He asked that the guests proceed to the Crew's Mess. (Exhibit 1, enclosure (2); Exhibits 64, 65, 75).

239. The Quartermaster of the Watch (QMOW) noted the GREENEVILLE's GPS position, and marked the latitude and longitude of the collision location. (Testimony of ET3 Blanding, page 1099).

240. CAPT Brandhuber took the Number 2 periscope from the CO. He sighted what he initially believed to be a whale-watching vessel. (Testimony of CAPT Brandhuber, page 876; Exhibit 45).

241. The CO ordered the OOD to come back around to the stricken ship and prepare to surface. The CO then made a 1MC announcement to the crew about having hit a ship, and that GREENEVILLE was to prepare itself to render assistance. (Testimony of LT Mahoney, page 1386-87; STS3 Bowie, page 1153; Exhibit 1, enclosures 2 & 4).

242. At 1348, the CO formally took the Conn from LT(jg) Coen and commenced maneuvering the ship to return to EHIME MARU. (Exhibit 1, enclosures 2, 4, & 24 (Deck Log)).

243. The Engineering Officer, LCDR Meador, came to the Control Room after hearing the collision. He took the Number 2 periscope from CAPT Brandhuber. Someone asked if the name of the ship was visible. LCDR Meador read off the writing he observed on the portside of the ship, “Uwajima Fishery High School.” (Testimony of LCDR Meador, page 1300).

244. CAPT Brandhuber proceeded to the Radio Room to oversee GREENEVILLE’s initial OPREP 3 Voice Report to SUBPAC. (Testimony of ETCS Smith, page 1291).

245. GREENEVILLE opened a satellite voice circuit (SATHICOMM) with the SUBPAC Command Center at 1348. (Exhibit 45).

246. Within two minutes of opening the SATHICOMM, GREENEVILLE relayed, and SUBPAC acknowledged, that there had been a collision at 21° 05.5’N, 157° 49.1’W; that the surface vessel was taking on water and sinking; and that the U.S. Coast Guard (USCG) should be contacted immediately and requested to render assistance. At 1350, CAPT Brandhuber was in personal contact with, and relaying information and directions to, the SUBPAC Command Center. (Exhibit 45).

247. Immediately after the emergency surface maneuver, GREENEVILLE was in a half-surfaced state. Submarines normally place a low-pressure blow on the main ballast tanks for at least 15 to 30 minutes, to complete the deballasting process, prior to

manning the Bridge. (Testimony of RADM Griffiths, page 500; LCDR Meador, page 1301).

248. Given the urgency of the situation, and believing that GREENEVILLE was on the surface and holding, the CO ordered the manning of the Bridge at 1350. (Testimony of LCDR Meador, page 1300-01; Exhibit 1, enclosure 24 (Deck Log)).

249. Upon hearing the order to man the Bridge, LCDR Meador donned his harness, while FT3 Darby opened the Bridge access trunk lower hatch. The two men then accessed the Bridge, and set up required communications equipment. (Testimony of LCDR Meador, page 1300-01).

250. By the time LCDR Meador arrived on the Bridge, EHIME MARU had sunk. LCDR Meador noted an intense diesel smell from fuel in the water. FT3 Darby, acting as Lookout, counted eight life rafts. (Testimony of LCDR Meador, page 1302).

251. The Jacob’s Ladder was immediately brought to the Bridge and rigged over the port side of the sail. (Testimony of LCDR Meador, page 1301).

252. GREENEVILLE’s outboard was ordered lowered at 1351, to give the submarine greater maneuverability on the surface. (Testimony of RADM Griffiths, page 503; LCDR Meador, page 1302; Exhibit 1, enclosure 24 (Deck Log)).

253. The CO arrived on the Bridge within minutes of LCDR Meador. Using the Bridge-to-Bridge radio, the CO attempted to contact the USCG. (Testimony of LCDR Meador, page 1301).

254. At 1357, LCDR Meador formally assumed the Deck and the Conn. His immediate focus was to drive the ship to a location where the submarine could provide assistance. Two of GREENEVILLE’s divers had also reported to the Bridge by this time, and were prepared to enter the water upon sighting survivors not already in life rafts. (Testimony of LCDR Meador, page 1301-02; Exhibit 1, enclosure 24 (Deck Log)).

255. The following actions of the GREENEVILLE crew below decks were occurring in parallel:

a. The civilian guests had been first escorted to the Crew's Mess, and then to the Torpedo Room. (Exhibits 64, 65).

b. Both periscopes were manned and actively searching for survivors in the water. A Geo-plot to track the position and movement of the life rafts was initiated. (Testimony of LCDR Meador, page 1304; LT Pritchett, page 1363; FT3 Brown, page 1059; Exhibit 1, enclosure 24 (Geo-plot)).

c. The Crew's Mess had been converted to a first aid station. (Testimony of RADM Griffiths, page 501; Exhibits 64, 65).

d. Life saving equipment, such as the Jacob's Ladder, life rings and preservers, and damage control equipment had been broken out. (Testimony of LCDR Meador, page 1301; LT Pritchett, page 1363; Exhibits 64, 65).

e. Rescue swimmers were readied, and prepared to go over the side via the sail or forward escape hatch to recover any survivors sighted in the water. (Testimony of LCDR Meador, page 1302-03).

f. The forward escape hatch was readied, and could be opened upon order. (Testimony of LCDR Meador, page 1302, 1304).

g. The Radio Room had established a listening watch on frequencies for SAR, international distress, and international lifeboat. Communication lines with the SUBPAC Command Center remained open and engaged. GREENEVILLE's first hard copy situation report was sent by naval message within 15 minutes of the accident, followed by a more substantive update. At 1436, SUBPAC notified GREENEVILLE that SUBPAC had assumed responsibility for further incident reporting. (Testimony of ETCS Smith, page 1292; Exhibit 1, enclosure 37; Exhibit 45).

256. Immediately after the collision, GREENEVILLE commenced a damage assessment. The submarine did not formally execute its collision bill. Internal to the ship, no flooding was discovered. Damage to the shaft was identified, and the ship experienced shaft vibrations above a 2/3 bell. The first shaft

seal had failed, but the second shaft seal held. External to the ship, it was noted that special hull treatment tiles had been stripped from the upper part of the rudder. (Testimony of LT Mahoney, page 1386-87; LT Pritchett, page 1363; MMCM Coffman, page 1333; LCDR Meador, page 1314-15; Exhibit 1, enclosure 2; Exhibit 45).

257. Attempts to communicate with the life rafts were unsuccessful. The life rafts did not have radios. The noise of the seas against the hull of the submarine made it difficult for the Bridge team to hear, and it did not appear that anyone in the life rafts closest to GREENEVILLE spoke English. The word was passed through the submarine for a Japanese speaker, but none was identified. (Testimony of LCDR Meador, page 1303-04; Exhibit 1, enclosure 2; Exhibit 45).

258. GREENEVILLE attempted to approach and create a lee for some of the life rafts, but the sea state was too confused.

a. GREENEVILLE's first approach towards a life raft caused waves to surge into the raft, thereby frightening the survivors in the raft.

b. LCDR Meador order a back full bell out of concern for survivors in the life raft. Despite being informed that there was potential shaft damage and that this order was causing shaft vibration, LCDR Meador kept the bell on until sternway was established.

(Testimony of LCDR Meador, page 1303, 1305).

259. The CO and LCDR Meador determined that given the existing conditions and situation, it was safer to await arrival of USCG units than to try and bring the survivors aboard GREENEVILLE.

a. Sea conditions were 4 to 6 foot swells, with chop from no particular direction. The winds were at 10 knots, out of 045°. The air and water temperatures were 78° and 77° Fahrenheit, respectively. (Testimony of CAPT Angert, page 1325; LCDR Meador, page 1303-04; Exhibit 1, enclosure 2; Exhibits 38, 45, 60).

b. Because of the seas, GREENEVILLE was heaving in the water. The CO and LCDR Meador were cognizant of the considerable risk that, if they attempted to recover life rafts, the submarine might either swamp or capsize the rafts, thereby putting survivors back into the water. (Testimony of LCDR Meador, page 1303; Exhibit 1, enclosure 2).

c. GREENEVILLE could not safely open hatches or put people on deck. The submarine was still sitting low, and significant amounts of water continued to wash over the forward escape trunk. To open the hatches would have brought water into the ship, with potential flooding, electrical, and fire hazards. (Testimony of LCDR Meador, page 1304; RADM Griffiths, page 502; Exhibit 38).

d. Even if the survivors could be brought onto GREENEVILLE's deck safely, attempting to access the submarine via the Jacob's Ladder would have been extremely difficult and dangerous for the survivors and the GREENEVILLE crew. As the submarine rolled, the Jacob's Ladder was slamming against the sail. (Testimony of LCDR Meador, page 1305-06).

e. GREENEVILLE did not sight any survivors in the water or any survivors showing signs of distress in the life rafts. (Testimony of LCDR Meador, page 1303, 1305).

260. GREENEVILLE knew that USCG rescue assets were en route. Based upon all these factors, the CO decided that it would be safer for the survivors to await rescue by the USCG than for the submarine to attempt recovery. (Testimony of RADM Griffiths, page 502; LCDR Meador, page 1303; Exhibit 1, enclosure 2; Exhibit 45).

261. Upon their arrival on scene, GREENEVILLE established communications with USCG surface craft. (CAPT Angert, page 1324).

262. At some point, GREENEVILLE was requested to stand off from the immediate area of the life rafts being recovered by the USCG surface craft because of the sea's interaction with GREENEVILLE's hull. (Testimony of LCDR Meador, page 1307).

263. GREENEVILLE remained on station, conducting search operations. (Testimony of LCDR Meador, page 1307-08).

264. GREENEVILLE never sighted any survivors in the water. (Testimony of LCDR Meador, page 1308).

SUBPAC/PACFLT Response

265. GREENEVILLE's initial OPREP 3 Voice Report was received at the SUBPAC Command Center at 1348. (Exhibit 45).

266. The SUBPAC Command Center was immediately stood up and fully manned. (Testimony of CAPT Kyle, page 624).

267. COMSUBPAC, RADM Konetzni, was in Japan on 9 February. CAPT Brandhuber, the SUBPAC Chief of Staff and Acting COMSUBPAC while RADM Konetzni was in Japan, was onboard GREENEVILLE. Responsibilities of Acting COMSUBPAC had devolved to the next senior SUBPAC staff member, CAPT Kyle, SUBPAC (N7).[8] CAPT Kyle received notification of the GREENEVILLE OPREP 3 Voice Report within minutes of receipt. He proceeded to the SUBPAC Command Center. (Testimony of CAPT Kyle, page 623; Exhibit 46).

268. By the time CAPT Kyle arrived at the Command Center, SUBPAC had already established communications with the USCG and reported the collision. The SUBPAC Command Center maintained an open phone with the USCG throughout the rescue phase. The SUBPAC Command Center also had a reliable communication link established with GREENEVILLE via SATHICOMM. (Testimony of CAPT Kyle, page 623; Exhibits 45, 60).

269. By his estimate, RADM Konetzni was contacted in Tokyo and briefed within 18 minutes of the collision. Upon learning of the incident, RADM Konetzni cut short his visit to Japan and made arrangements to immediately fly back to Hawaii. (Testimony of RADM Konetzni, page 744-45).

[8] For additional discussion, *see* Part V, The Role of the SUBPAC Chief of Staff, *infra*.

270. By 1428, SUBPAC had two torpedo recovery vessels (HARRIER and ILIWAI) en route to the scene of the collision. (Testimony of CAPT Kyle, page 625; Exhibits 45, 60).

271. At 1500, USCG formally assumed the role of on-scene coordinator for the SAR effort. (Testimony of CAPT Kyle, page 626; Exhibits 45, 60).

272. Starting at approximately 1520, SUBPAC began to discuss with GREENEVILLE the question of when to bring the submarine back to Naval Station Pearl Harbor.

a. Given the fact that USCG assets where already in the area, the initial thought within SUBPAC was to bring GREENEVILLE back the afternoon of 9 February. While the submarine could assist in searching, she was of little use in attempting any recovery operations due to sea state.

b. In discussing this issue, SUBPAC and GREENEVILLE assessed the damage to the ship, number of personnel onboard for watchstanding purposes, the status of the civilian guests, current USCG SAR taskings for GREENEVILLE, and whether the ship could or should attempt to navigate the Pearl Harbor channel at night.

c. SUBPAC discussed release of GREENEVILLE with USCG and, at 1601, SUBPAC informed GREENEVILLE that the submarine had been released from the SAR effort.

d. At 1603, SUBPAC informed GREENEVILLE that CINCPACFLT had directed that the submarine remain on scene assisting the SAR efforts until additional Navy assets arrived.

(Testimony of CAPT Kyle, page 630-31; Exhibits 45, 60).

273. At 1703, two Navy H-60 helicopters, equipped with night vision goggles, were launched to assist the SAR effort. These initial air assets were later augmented by Navy P-3’s. (Exhibit 60).

274. Navy surface ships, the USS SALVOR (ARS 52) and USS LAKE ERIE (CG 70), arrived on scene to assist the SAR effort at 1820 and 2000, respectively. (Exhibit 60).

275. Rather than have GREENEVILLE attempt a night passage through the Pearl Harbor channel, SUBPAC decided to wait until the morning of 10 February before bringing the submarine back to port. RADM Konetzni concurred in this decision. (Testimony of CAPT Kyle, page 630-31).

276. GREENEVILLE remained on station, participating in SAR efforts, throughout the night of 9-10 February. At approximately 0500, GREENEVILLE began the transit back to Naval Station Pearl Harbor. (Exhibit 1, enclosure 24 (Deck Log)).

277. RADM Konetzni arrived in Hawaii at approximately 0730, 10 February. (Testimony of RADM Konetzni, page 749).

278. GREENEVILLE moored at pier S-21B at 1034, 10 February. (Exhibit 1, enclosure 24 (Deck Log)).

USCG Response

279. At 1355 on 9 February, USCG Group Honolulu, Sand Island, Hawaii, received the initial report from SUBPAC regarding the collision via channel 16 VHF FM. (Testimony of CAPT Angert, page 1322; Exhibit 60).

280. At 1356, USCG Group Honolulu diverted an already airborne USCG helicopter from the area of Kahoolawe to the collision location. (Testimony of CAPT Angert, page 1323; Exhibit 60).

281. At 1400, USCG Station Honolulu launched a 21 foot zodiac and a 41 foot utility boat to the collision location. (Testimony of CAPT Angert, page 1323; Exhibit 60).

282. At 1400, the USCG Joint Search and Rescue Coordination Center (JRCC) received a distress beacon from a registered EPIRB. (Exhibit 60).

283. At 1404, JRCC checked the ITU database and determined that the EPIRB signal was from EHIME MARU. (Exhibit 60).

284. At 1406, JRCC and USCG Group Honolulu coordinated and confirmed their information. (Exhibit 60).

285. At 1427, the USCG helicopter arrived at the collision location and began surveillance of the scene. (Exhibit 60).

286. By 1444, the USCG zodiac and utility boat had arrived on scene. They were able to establish communications with GREENEVILLE on channel 22 FM. The USCG zodiac arrived shortly before the utility boat, and began assessing the condition of the survivors in the life rafts. (Testimony of CAPT Angert, page 1323-24; LCDR Meador, page 1307; Exhibit 60).

287. At 1446, the USCG helicopter commenced vector searches, with information that 10 people from EHIME MARU were reported missing (subsequently lowered to 9 missing). (Exhibit 60).

288. By 1538, 26 survivors had been recovered and both USCG boats were en route to USCG Station, Sand Island. (Exhibit 60).

289. At 1615, survivors from EHIME MARU arrived at Sand Island. (Exhibit 60).

290. At 1708, Captain Ohnishi was debriefed. He informed the USCG that all crewmembers seen going into the water were able to make it into the life rafts. The nine missing persons were believed to have been either in the galley or engine room. (Exhibit 60).

291. Additional USCG assets, including three cutters, were launched and arrived on scene throughout the afternoon and evening of 9-10 February to continue SAR operations. (Testimony of CAPT Angert, page 1325-26; Exhibit 60).

Total SAR Efforts

292. From 9 February until 2 March 2001, surface and air assets from both USCG and USN conducted 102 separate searches, totaling

1067 hours, and covering 32,120 square nautical miles. No additional survivors were ever located.

a. Coast Guard assets included the cutters USCGC ASSATEAGUE (WPB 1337), USCGC KISKA (WPB 1336), USCGC KITTIWAKE (WPB 87316), and USCGC WASHINGTON (WPB 1331).

b. Navy air and surface assets included H-60s, P-3s, USS SALVOR, USS LAKE ERIE, and USS PORT ROYAL (CG 73).

(Exhibit 60).

SAR Limitations of Submarines

293. Submarines possess little open ocean SAR capability.

a. Submarines carry minimal rescue equipment, and have limited medical capabilities.

b. Designed for submerged transit, submarines are not easily maneuvered on the surface.

c. Putting an individual on deck, be it Sailor or survivor, in any sea state other than flat calm is a hazardous evolution.

d. Bringing an individual from the deck up through the submarine’s sail is difficult, and may be impossible if that individual is injured.

(Testimony of RADM Griffiths, page 509-11; RADM Konetzni, page 724-25; CAPT Kyle, page 631-32; LCDR Meador, page 1305-06).

III. SUBPAC and USS GREENEVILLE Implementation of the Navy’s Distinguished Visitor Embarkation Program

Introduction

294. The Department of the Navy (DON) maintains an active, multi-faceted public affairs program. Its overall objective is

to inform and engage the American public on the nation's strategy for maritime security, and to convey the nature of the resources and evolutions necessary to fulfill that strategy. (Exhibit 18, SECNAVINST 5720.44A, § 0102).

295. Embarkation of selected civilian guests for the purpose of furthering public awareness of the Navy and its mission is specifically authorized by DON directives. It is a long-standing and popular practice. Through guest embarks, the DON seeks to demonstrate to civilian community leaders:

a. That the Navy/Marine Corps team is a unique and capable instrument of national policy;

b. Resource requirements for the nation's maritime security strategy;

c. Prudent stewardship of taxpayer investments in Navy/Marine Corps platforms and systems;

d. The proficiency, pride, and professionalism of American Sailors and Marines, and the need to recruit and retain such men and women in the naval service.

(Exhibit 18, SECNAVINST 5720.44A, § 0102; Exhibits 11 through 14, 28, 30).

General DON Guidance and Policies

296. Types of Cruises. DON instructions provide for the following types of civilian guest embarkations:

a. Congressional visits. (Exhibit 11, § 0405b(5)).

b. Media orientations. (Exhibit 11, § 0405b(8)).

c. Family Dependent cruises, for relatives and civilian guests of naval personnel. (Exhibit 12, § 8c).

d. "Go Navy" cruises, for individuals interested in Navy enlisted and officer programs, including civilian youth groups

under Navy sponsorship (e.g., Naval Sea Cadet Corps), and persons who are influential in the recruiting process. (Exhibit 11, §§ 0405b(6), 0405j).

e. Joint Civilian Orientation Conference visits, for guests invited by the Secretary of Defense. (Exhibit 11, §§ 0405b(9)(a), 0405g).

f. Secretary of the Navy Guest cruises, for top-level leaders in the fields of business, industry, and education invited by the Secretary of the Navy. (Exhibit 11, §§ 0405b(9)(b), 0405h).

g. Guest of the Navy cruises, for mid-level executives with no previous exposure to the Navy. (Exhibit 11, §§ 0405b(9)(c), 0405j).

h. Distinguished Visitor (DV) cruises (or “VIP” cruises). (Exhibit 11, § 0405b(9)(d), 0405i).

The following discussion focuses on this last type of civilian guest cruise, the DV embark.

297. Eligibility Criteria for DV Embarks. DON instructions contain little specific eligibility criteria for DV cruises.

a. SECNAVINST 5720.44A, “Public Affairs Policy & Regulations,” states that individuals who may be supported for DV cruises “are the same type as those invited on SECNAV Guest Cruises.” A separate section of this same instruction provides that DV cruises are for “distinguished persons” not otherwise falling into the categories for Joint Civilian Orientation Conference, Secretary of the Navy, or Guest of the Navy cruises. (Exhibit 11, §§ 0405b(9)(d), 0405i).

b. Because of the limited opportunities for embarkation, a guest’s opportunity to communicate his or her experiences to colleagues is to be taken into account. Therefore, an important factor in guest selection is the extent of involvement in civic, professional and social organizations. (Exhibit 11, § 0405e(2)).

c. OPNAVINST 5720.2L, "Embarkation in U.S. Naval Ships," provides examples of individuals and groups who may be embarked for public affairs purposes, and includes community service clubs, civilian orientation groups, civic groups, the Navy League, or trade and professional associations. (Exhibit 12, § 8b).

298. Nominations for DV Embarks. DON guidance on how individuals are selected to participate in DV cruises is as follows:

a. The Navy's Chief of Information (CHINFO) is to maintain a list of prospective guests nominated by Navy area coordinators and high level officials of the Office of the Secretary of the Navy. (Exhibit 11, § 0405i).

b. All other requests for embarkations for public affairs purposes are to be submitted via the operational chain of command to CHINFO. (Exhibit 12, § 8b).

c. CHINFO is to periodically forward nominations to Type Commanders (TYCOMs), who advise CHINFO when embarks have been completed. (Exhibit 11, § 0405i).

299. Approving Authority for DV Embarks

a. The Chief of Naval Operations has delegated the authority to authorize embarkation of civilian guests for public affairs purposes to Commander in Chief, U.S. Pacific Fleet (CINCPACFLT), for ships under his operational control. (Exhibit 12, § 11a(1)).

b. OPNAVINST 5720.2L permits CINCPACFLT to further delegate to TYCOMs the authority to approve certain civilian embarkations (e.g., government civilian employees of non-DON agencies for official purposes; Family Dependent cruises). This permission specifically does not include civilian guest embarks conducted for public affairs purposes. (Exhibit 12, § 11a(4)).

300. Scheduling DV Embarks. DON guidance in scheduling all guest embarks is as follows:

a. Embarkations should be conducted within the framework of regularly scheduled operations. (Exhibit 11, § 0405a; Exhibit 12, § 8a).

b. Underway embarkations are not to be conducted solely to accommodate guests. (Exhibit 11, § 0405a).

c. Embarkations are not to require unacceptable adjustments to operating schedules. (Exhibit 12, § 4a).

d. Embarkations are not to interfere with shipboard operations. (Exhibit 12, § 4a).

e. Embarkations must have the concurrence of the commanding officer of the ship. (Exhibit 12, § 8a).

301. Safeguards. The following DON policies apply to all guest embark programs:

a. All guest visits are authorized on an unclassified basis. Guests will be informed of security restrictions, to include any limitations on use of personal cameras, in their pre-departure or welcome aboard briefing. (Exhibit 11, § 0405e(4); Exhibit 12, § 8a).

b. Guests are responsible for providing their own transportation to and from their residences. Participants are to reimburse the Navy for living and incidental expenses while embarked. (Exhibit 11, § 0405e(1)).

c. Guests are to be cautioned that they should not embark unless in good health, and informed regarding availability of emergency medical and dental facilities onboard. (Exhibit 11, § 0405f(4)&(5)).

d. Due precaution shall be taken for the safety of all guests, including cautioning guests that Navy ships present hazards not normally encountered ashore and require a high degree of care for own safety. (Exhibit 11, § 0405f(5); Exhibit 12, § 8a).

302. DV Embarks on Submarines. SECNAV and OPNAV Instructions do not contain any specific policy on how civilian guest embarks are to be conducted onboard submarines. The DV cruise provision contained in SECNAVINST 5720.44A only specifically addresses embarks on aircraft carriers. There is no guidance on how a submarine is to conduct DV embarks within the "framework of regularly scheduled operations," or what are "unacceptable adjustments" to operating schedules. (Exhibits 11, 12).

PACFLT Guidance and Policies

303. By CINCPACFLT OPORD 201, "Embarkation of Visitors," CINCPACFLT "strongly encourages and supports" the embarkation of civilian guests in Navy ships, since such embarkations are "instrumental in increasing public awareness of the Navy and its mission." (Exhibit 14).

304. By CINCPACFLT OPORD 201, requests for authorization for DV embarks "shall be submitted through the operational chain of command to CINCPACFLT for forwarding to the granting authority indicated in" OPNAVINST 5720.2L. (Exhibit 14).

305. By CINCPACFLT Instruction 5720.2M, "Embarkation in U.S. Naval Ships," TYCOMs under CINCPACFLT cognizance (COMSUBPAC, COMNAVAIRPAC, COMNAVSURFPAC) have delegated authority to approve visits to and embarkations in all naval ships under their operational control, "in accordance with the criteria contained in" OPNAVINST 5720.2L. CINCPACFLT Instruction 5720.2M does not further define or explain what this criteria is (procedural, substantive, or both). (Exhibit 13).

306. CINCPACFLT Instructions do not contain any specific policy or guidance on how civilian guest embarks are to be conducted onboard submarines. (Exhibits 13, 14).

SUBPAC Instructions

307. By COMSUBLANT/COMSUBPAC OPORD 2000/201, Annex F, "Public Affairs," Commanding Officers in SUBPAC are "charged with supporting the Force public affairs program." This includes

designating a qualified officer under their command to assist with public affairs. (Exhibit 28, §§ 1b, 2a).

308. COMSUBLANT/COMSUBPAC OPORD 2000/201 requires that requests for "VIP" embarks (e.g., "those coming from Namesake Committees, Navy League, Flag Officers, Government Officials, etc.") be submitted to the Parent Submarine Group for endorsement and forwarding to COMSUBPAC.

a. By OPORD 2000/201, COMSUBPAC is the approval authority for civilian embarks conducted for public affairs.

b. This is contrary to the delegation provisions contained in OPNAVINST 5720.2L.

(Exhibit 12, § 11a(1) & (4); Exhibit 28, § 5a).

309. There is no COMSUBPAC instruction containing specific guidance or direction on how civilian guest embarks are to be conducted onboard submarines. (Testimony of LCDR Werner, page 1498-99, 1506-07, 1509, 1512-13).

SUBPAC Guidance and Policies; Embark Numbers for 1999 & 2000

310. SUBPAC's public affairs program is currently focused on informing the public of the following key topical areas:

a. The growing disparity between the demands on attack submarines versus the number of actual platforms;

b. The military and economic value of converting four ballistic missile submarines to guided missile submarines;

c. The recruiting needs for the nuclear submarine force;

d. The need to retain trained and qualified Sailors; and

e. The importance of remaining engaged with the American public, Congress, other branches of the armed services, and allies.

(Testimony of RADM Konetnzi, page 755-60; LCDR Werner, page 1496-97; Exhibit 15).

311. Embarkation of civilian guests is a part of SUBPAC's overall public affairs program.

a. COMSUBPAC's public affairs guidance for year 2000 carried the message that demonstrations are a particularly effective way to convey the unique capabilities of submarines.

b. In assessing public affairs efforts in 1999, COMSUBPAC told the Force that "we'll continue to offer embarks to bolster understanding in key audiences, including media, Congressional staffers and key recruiting prospects and representatives."

(Exhibit 15).

312. In 1999, COMSUBPAC conducted 54 civilian embarks (all categories), hosting 1152 guests. Of these totals, 26 embarks for 785 guests were conducted onboard Trident submarines, and 28 embarks for 367 guests were conducted onboard fast attack submarines. Civilian embarks occurred out of all SUBPAC homeports: Pearl Harbor, San Diego, Bangor, and Yokosuka, Japan. (Exhibit 30).

313. In 2000, COMSUBPAC conducted 50 civilian embarks (all categories), hosting 1287 guests. Of these totals, 27 embarks for 895 guests were conducted onboard Trident submarines, and 23 embarks for 392 guests were conducted onboard fast attack submarines. Civilian embarks occurred out of all SUBPAC homeports. (Exhibit 30).

314. The average number of civilian guests per embark on a fast attack submarine was 13 in 1999, and 17 in 2000. (Exhibit 30).

SUBPAC Embark Program and Procedures

315. SUBPAC's embarkation program is coordinated by and through the SUBPAC Public Affairs Office in Hawaii. (Testimony of LCDR Werner, page 1502).

a. The SUBPAC Public Affairs Office is led by the Force Public Affairs Officer (PAO), a 1650 designator Public Affairs specialist. Two additional 1650 designator PAOs are assigned to SUBPAC, located at Bangor and San Diego. (Testimony of LCDR Werner, page 1494-95, 1507).

b. SUBPAC does not currently require Submarine Squadrons to appoint collateral duty PAOs. (Testimony of LCDR Werner, page 1494-95, 1507; Exhibit 29).

316. In determining eligibility for a submarine embark, the SUBPAC Public Affairs Office assesses whether the nominated individual or group can possibly influence or assist with increasing public awareness with respect to any of the five SUBPAC public affairs key topics. Examples of individuals and groups embarked by SUBPAC over the past two years include sports figures; groups from submarine namesake cities and states; corporate executives; youth groups; local and national media, to include television and motion picture representatives; Congressional, DoD, and State Department officials; Navy League and other similar organizations (e.g., U.S.-Japan Navy Friendship Association). (Testimony of RADM Konetzni, page 742; LCDR Werner, page 1499-1502, 1514-15; Exhibit 30).

317. In arranging embarks, the SUBPAC Public Affairs Office takes initial information about the individual or group being proposed for embark.

a. The SUBPAC Public Affairs Office contacts the Submarine Squadrons, relays basic information regarding proposed dates and total numbers, and asks whether submarines are available to support the embark.

b. The Squadrons review operations schedules and respond whether any of their ships can support the particular embark request.

(Testimony of LCDR Werner, page 1502-10, 1518; CAPT Snead, page 927-28).

318. The SUBPAC Public Affairs Office does not review operational schedules to determine whether a proposed embark is

"within the framework of regularly scheduled operations." Instead, the SUBPAC Public Affairs Office relies entirely upon the Squadrons to determine whether a particular submarine's operational status and schedule will support the proposed date and number of DV's. (Testimony of LCDR Werner, page 1502-10; CAPT Snead, page 927-28).

319. SUBPAC provides the following specific guidance to the submarines chosen to host embarks:

a. Embark is limited to the unclassified level;

b. Access to and disclosure of naval nuclear propulsion information is not authorized;

c. Disclosure of naval restricted data/formerly restricted data is not authorized;

d. Access to Radio Room during cryptographic operations is not authorized;

e. Access to Sonar during routine operations is authorized;

f. Access to Torpedo Room is authorized.

(Testimony of LCDR Werner, page 1498-99; Exhibit 32).

320. In conducting civilian embarks, SUBPAC policy is to leave the scheduling of events and evolutions to the individual CO's discretion. The CO is given broad latitude to schedule events based upon the time available and audience. The only guidance from SUBPAC is that submarines are encouraged to "showcase today's professional sailor" and demonstrate the capabilities of the submarine. (Testimony of RADM Griffiths, page 227-28; LCDR Werner, page 1498-99, 1512-13; Exhibit 1, enclosure 32; Exhibit 32).

321. Prior to 9 February, it was common practice for SUBPAC submarines conducting DV embarks to demonstrate an emergency surface for training maneuver. (Testimony of RADM Konetzni, page 761-65, 786; Exhibits 30, 31, 32)).

322. The SUBPAC PAO Office does not maintain any formal DV embark feedback mechanisms. Any "lessons learned," suggestions, or ideas with respect to DV embarks would only be received by the SUBPAC PAO through after-the-fact conversations with escort officers and/or submarine commanding officers. There are no formal means for disseminating feedback or otherwise sharing information regarding DV embark experiences across SUBPAC. (Testimony of LCDR Werner, page 1512-13; RADM Konetzni, page 764-65).

323. SUBPAC typically assigns an escort officer to accompany civilian guests when embarking onboard a submarine. The escort is usually selected according to the level of the visit. The escort's role is primarily to provide embark continuity for the guests, and to field questions outside the lifelines of the ship. The escort officer does not typically play a role in the safe conduct of underway submarine evolutions; that is left to the submarine CO and crew, those individuals who best know their ship. (Testimony of LCDR Werner, page 1524-25).

USS GREENEVILLE Tours and DV Embarks in 1999 and 2000

324. Under CDR Waddle's tenure as CO, GREENEVILLE supported the SUBPAC public affairs program. The ship was a popular platform for tours and embarks. (Testimony of RADM Konetzini, page 784; CAPT Snead, page 927-28; Exhibit 31).

325. SUBPAC Public Affairs Office records indicate that GREENEVILLE conducted in port guest tours on at least 20 different occasions in 1999 and 2000, hosting more than 300 visitors. These included visits by a Russian delegation, classes from the Asia Pacific Security Studies Center, the USAF War College, Make-A-Wish Foundation, and several notable people (e.g., race car driver Andy Granatelli, Robert Kennedy, Jr.). (Testimony of RADM Konetzni, page 784; Exhibit 31).

326. SUBPAC Public Affairs Office records indicate that GREENEVILLE hosted four civilian guest embarks in 1999 and 2000. Most significantly:

a. On 26 February 1999, GREENEVILLE embarked Mrs. Tipper Gore (the ship's sponsor), accompanied by the Under Secretary of the Navy.

b. On 11 September 1999, six members of the U.S. House of Representatives embarked onboard GREENEVILLE.

c. On 30 June 2000, out of Santa Barbara, California, GREENEVILLE embarked 25 civilian guests, including James Cameron (Director of the movie "Titanic").

(Exhibit 31).

327. During the 30 June 2000 DV cruise, GREENEVILLE conducted angles and an emergency surfacing maneuver. Guests were provided deep seawater samples and other memorabilia to commemorate the cruise on GREENEVILLE. (Testimony of LT Sloan, page 956-57; Exhibit 31).

Arranging the USS GREENEVILLE Embark of 9 February 2001

328. Starting about March 2000, the Navy League and certain private companies attempted to organize a golf tournament for the benefit of the USS MISSOURI (BB 63) Foundation. During meetings to discuss the proposed golf tournament, several civilians learned of the Navy's DV embark program and expressed an interest in participating. (Exhibit 65).

329. One of the individuals involved in organizing the golf tournament knew a former Commander in Chief, U.S. Pacific Command (CINCPAC), Admiral (ADM) Richard Macke, U.S. Navy (Ret.), and enlisted his support in requesting a DV embark. (Enclosure 65).

330. ADM Macke called the CINCPACFLT Deputy in September 2000, requesting a submarine tour and embark for "high-rolling CEO's." ADM Macke also apparently indicated that there was Secretary of the Navy interest in this group. The dates requested for embark were mid-January 2001. This information was forwarded by CINCPACFLT staff to the SUBPAC PAO. (Testimony of LCDR Werner, page 1528-29; Exhibit 32).

331. The SUBPAC PAO did not take immediate action on this information, in that the dates requested were more than 3 months distant. Before the SUBPAC PAO could reengage on this request, it was withdrawn because of the golf tournament's cancellation/ postponement. (Testimony of LCDR Werner, page 1528-31; Exhibit 65).

332. While the golf tournament was no longer scheduled for January 2001, some of the civilians associated with the tournament were still interested in a submarine embark. (Exhibit 65).

333. On or about 23 January 2001, RADM Konetzni, COMSUBPAC, received a telephone call from ADM Macke, requesting that approximately ten civilian guests be approved for a DV embark on 8 or 9 February. (Testimony of RADM Konetzni, page 742; Exhibit 32).

334. COMSUBPAC relayed this request to the SUBPAC Public Affairs Office, with the direction that they "don't need to break china." RADM Konetzni's intent was that submarine schedules not be rearranged specifically to accommodate embarkation. (Testimony of RADM Konetzni, page 742; LCDR Werner, page 1504, 1526; Exhibit 32).

335. With this information on desired dates and approximate size, the COMSUBPAC Public Affairs Office canvassed the Squadrons to see if submarines were available. The response from Squadron ONE was that GREENEVILLE was standing by to support the embark. (Testimony of RADM Konetzni, page 742-43; LCDR Werner, page 1504-05; Exhibit 32).

336. On 26 January, the SUBPAC PAO informed ADM Macke that his guests would be supported for a daylight trip on 9 February. ADM Macke forwarded a fax containing an initial list of 13 civilian guests to the SUBPAC Public Affairs Office on 30 January. This fax indicated that ADM Macke might also get underway with GREENEVILLE. (Exhibit 32).

337. The SUBPAC staff had very little background information on the civilian guests scheduled to embark on GREENEVILLE. The

SUBPAC PAO generally believed them to be energy executives from Texas. The SUBPAC PAO did not inquire further as to the purported interest of the Secretary of the Navy in this group, or the guests' relationship to ADM Macke. It was enough for SUBPAC that a former CINCPAC was the embark sponsor. (Testimony of LCDR Werner, page 1514, 1530-31, 1536).

338. On 5 February, the SUBPAC PAO Office forwarded welcome aboard/information packages to ADM Macke and another member of the embark group, via electronic mail and fax. (Exhibit 32).

339. RADM Konetzni was in Japan for the week of 5 February and had never planned on accompanying this group of civilian guests during their embark. The SUBPAC Chief of Staff, CAPT Brandhuber, asked the SUBPAC PAO for an update on this embark request on 5 February, and queried "should I accompany?" (Testimony of RADM Konetzni, page 741-43; LCDR Werner, page 1522-23; Exhibit 32).

340. The SUBPAC PAO provided CAPT Brandhuber with the initial list of guests, and indicated that another member of the SUBPAC staff had expressed an interest in embarking as escort officer. The PAO opined that this embark did not necessarily warrant CAPT Brandhuber's presence. (Testimony of LCDR Werner, page 1522, 1532, 1534-35; Exhibit 32).

341. After discussing the embark with the SUBPAC PAO, CAPT Brandhuber decided to accompany the civilian guests. (Testimony of LCDR Werner, page 1522-23; Exhibit 32).

342. On 7 February, the SUBPAC PAO forwarded a memorandum to the Naval Station Pearl Harbor Pass and ID Office, requesting access to the base for 14 civilians (and ADM Macke) scheduled to embark on GREENEVILLE on 9 February. (Exhibit 32).

343. On 7 February, by COMSUBPAC message 071700Z FEB 00 [sic], GREENEVILLE was given formal approval and authority to embark civilian guests on 9 February. (Exhibit 32).

344. On the morning of 8 February, CDR Waddle provided an in port tour of GREENEVILLE for two civilian guests, unrelated to the ADM Macke group. CDR Waddle invited the couple to join

GREENEVILLE for the next day's DV embark. They agreed. (Exhibit 64).

345. On 8 February, in a phone conversation with the GREENEVILLE XO, the SUBPAC PAO learned for the first time that the start of GREENEVILLE's underway period for ORSE workups had been delayed until 12 February, and that the ship was getting underway on 9 February solely for the purpose of supporting the DV embark. (Testimony of LCDR Werner, page 1509).

a. At the time, the SUBPAC PAO felt that this situation was "within the framework of regularly scheduled operations." Given the "exceptionally flexible" nature of submarine schedules, the SUBPAC PAO found this change "no more dynamic than any other embarkation." (Testimony of LCDR Werner, page 1508-12).

b. The SUBPAC PAO did not notify the Chief of Staff or anyone else on the SUBPAC staff regarding GREENEVILLE's getting underway on 9 February solely to support the DV embark. (Testimony of LCDR Werner, page 1510, 1523).

346. On 8 February, CDR Waddle visited the SUBPAC PAO Office.

a. CDR Waddle was disappointed, and said his crew would be as well, that RADM Konetzni would not be accompanying the civilian guests on 9 February. The SUBPAC PAO apologized if GREENEVILLE was under the impression that RADM Konetzni was going to get underway, since he had never planned on accompanying this group and was, in fact, in Japan.

b. The SUBPAC PAO told CDR Waddle that CAPT Brandhuber was intending on getting underway, so that the crew would be able to demonstrate their abilities knowing that the new SUBPAC Chief of Staff would be observing.

c. The SUBPAC PAO further informed CDR Waddle of what he knew regarding the civilian guests. Upon finding out that some guests were from his home state of Texas, CDR Waddle seemed enthused.

d. Approximately one hour after this meeting with CDR Waddle, the SUBPAC PAO was informed that ADM Macke would not be getting underway on GREENEVILLE.

(Testimony of LCDR Werner, page 1520-22).

347. Guests under ADM Macke's sponsorship completed SUBPAC waiver and release of liability forms. It appears that the two guests invited by CDR Waddle to embark did not complete such forms. (Exhibit 32).

Events of 9 February

348. The SUBPAC itinerary called for the PAO to meet the civilian guests at Nimitz Gate at 0715. The civilian guests arrived early. (Testimony of LCDR Werner, page 1523; Exhibit 32).

349. The guests were brought to Pier S-21B, and met by the GREENEVILLE CO, XO and COB. CAPT Brandhuber also arrived at this time. The guests received initial orientation on the pier and then proceeded into the submarine. (Testimony of CAPT Brandhuber, page 902; MMCM Coffman, page 1331-32).

350. Once inside GREENEVILLE, the guests were escorted to the Crew's Mess. At this time, the guests received basic safety and medical briefings (including which spaces were to be avoided), as well as information regarding GREENEVILLE's history. (Testimony of LCDR Meador, page 1297; MMCM Coffman, page 1331-32; Exhibit 65).

351. After these briefings, and as GREENEVILLE commenced her underway, the guests were escorted topside where they donned life preservers. They remained on deck until the approach to Hospital Point. The guests were brought into the submarine at that time. (Testimony of LCDR Meador, page 1927).

352. The guests were divided into two groups of eight. LCDR Meador and LT Pritchett were assigned to be the guest's escorts. (Testimony of LCDR Meador, page 1298; LT Pritchett, page 1356; Exhibit 65).

353. During GREENEVILLE's outbound surface transit, the guests were cycled to the Bridge in small groups. (Testimony of CDR Waddle, page 1705-06; LCDR Meador, page 1298; Exhibits 65, 66).

354. The civilian guests were involved in submerging the submarine, at all the significant controls and stations, while under the supervision of qualified watchstanders. (Testimony of LT Sloan, page 952).

355. Guests were provided tours of the forward compartments. Guests were shown the nine-man berthing area, the Auxiliary Machinery Room, the Torpedo Room, Sonar, and the Control Room. In each area, Sailors would explain their duties and responsibilities. (Testimony of LCDR Meador, page 1298; LT Pritchett, page 1356; Exhibits 64, 65).

356. While in the Control Room, guests were shown the periscope and allowed to take the planes, under the direct supervision of the Planesman. While in the Sonar Room, sonar recordings of whale sounds were played for the guests. (Testimony of LCDR Meador, page 1298; LT Sloan, page 952; LT Pritchett, page 1356-57; MM1 Harris, page 1251; Exhibits 64, 65).

357. The guests observed the shooting of water "slugs" out of the torpedo tubes. (Testimony of LCDR Meador, page 1298).

358. During the tours, the escort officers saw to any of the civilian guests needs (e.g., taking them to the restroom, getting drinks, finding racks for seasick guests to lie down, etc). (Testimony of LT Pritchett, page 1356).

359. At approximately 1045, LT Pritchett took his group of guests to the Wardroom where they ate lunch with the CO and CAPT Brandhuber. (Testimony of LT Pritchett, page 1357; CAPT Brandhuber, page 836).

360. After the first group had eaten, LCDR Meador escorted his group of guests to the Wardroom where they ate lunch with the XO, starting at approximately 1145. (Testimony of LT Meador, page 1298).

361. Between 1100 and 1130, GREENEVILLE went to test depth to obtain deep seawater samples, which were to be given to guests as mementos of the embark. (Testimony of CDR Waddle, page 1685-86, 1786; Exhibit 1, enclosure 24 (Deck Log); Exhibit 65).

362. After the lunch period, both groups were taken to the Control Room to observe angles, high-speed maneuvers, and the events leading up to and including the emergency surfacing maneuver. (Testimony of LCDR Meador, page 1298-99; LT Pritchett, page 1357; Exhibits 64, 65).

363. Total number of watchstanders, civilian guests, and escorts present in the Control Room during the afternoon evolutions was between 25 and 30 (estimated). When at Battle Stations Torpedo, GREENEVILLE stations 31 men in the Control Room. (Testimony of RADM Griffiths, page 233; Exhibit 1, enclosure 33).

364. While observing the afternoon evolutions in the Control Room, the civilian guests stood in free space in and around the area of the Conn. Specifically, two or three guests were standing at the rear of the Conn, between the plotting tables; several were located in the forward port side of the Control Room, immediately behind the Ship Control Party; several were immediately forward of the OOD stand; and, several were along the forward starboard side, between the Conn and the fire control system displays. (Testimony of CAPT Brandhuber, page 856, 865; LT Sloan, page 958-59; FT1 Seacrest, page 1555-56; YN2 Quinn, page 1374; ET3 Blanding, page 1092; Exhibit 6).

365. While in the Control Room, the civilian guests were quiet, heeded the requests of watchstanders, and conducted themselves appropriately at all times. (Testimony of CDR Waddle, page 1780; CAPT Brandhuber, page 856-72, 887; LT Sloan, page 979; RADM Griffiths, page 232-33).

366. Three civilian guests were invited by the CO to participate in GREENEVILLE’s final evolution, the emergency surfacing maneuver. Civilian guests were not involved in any of the preceding events (e.g., angles, high-speed maneuvers, ascending to and time at periscope depth, or the emergency

deep). Upon GREENEVILLE reaching 400 feet during the emergency deep, the three guests took their positions as follows:

a. One guest sounded the secondary dive alarm (klaxon), located in the area of the Ballast Control Panel, thereby indicating commencement of the emergency surfacing.

b. One guest was with the Chief of the Watch at the Ballast Control Panel. The Chief of the Watch carefully explained the procedure to the guest. Both the guest and the Chief of the Watch had their hands on the EMBT actuator valves. Their hands were intertwined and they worked the valves together at the appropriate time and in an appropriate manner to initiate the emergency surfacing of GREENEVILLE.

c. One guest sat at the Helm, with the hands of the Helmsman over the top of his. During the ascent, the Helmsman stood over the guest and they lifted the yoke together.

(Testimony of CAPT Brandhuber, page 839-40; LT Pritchett, page 1362; MMC Streyle, page 1230; MM1 Harris, page 1263-65; SK3 Feddeler, page 1280-83; Exhibits 64, 65).

367. After the collision, the Helmsman immediately retook the Helm. The guests were quickly escorted from the Control Room to the Crew’s Mess. Shortly thereafter, they were taken to the Torpedo Room, as GREENEVILLE was setting up a first aid station in the Crew’s Mess. As best they could, guests assisted the crew in breaking out and passing rescue equipment while in the Torpedo Room. (Exhibit, 64, 65).

368. The guests were kept informed, principally by CAPT Brandhuber and 1MC announcements, as to what was happening throughout the afternoon. (Exhibits 64, 65).

369. The guests were later taken from the Torpedo Room to the Wardroom. A GREENEVILLE escort remained with them the entire time. (Exhibit 64, 65).

370. The civilian guests remained onboard GREENEVILLE the night of 9-10 February, as the ship continued its SAR mission. The

ship provided berths for the guests to rest in. (Exhibits 64, 65).

371. On the morning of 10 February, at approximately 0930 as GREENEVILLE was transiting inbound, the guests were transferred to a Navy surface craft and returned to Naval Station Pearl Harbor. (Testimony of RADM Konetzni, page 749-50; Exhibit 1, enclosure 24 (Deck Log); Exhibits 45, 64).

372. Before they left GREENEVILLE, CDR Waddle spoke with the guests. He told them of the media interest in the ship's arrival. He asked that, if questioned, the guests tell the truth, not embellish or speculate, only tell what they saw and what actually happened. (Exhibit 65).

373. The guests were met by COMSUBPAC upon their arrival at the pier. In meeting with RADM Konetzni, the guests relayed two points. First, they requested that their privacy be maintained, if possible. Second, they impressed upon COMSUBPAC that GREENEVILLE had been operated very professionally. At the conclusion of their meeting, RADM Konetzni provided the guests with SUBPAC phone numbers if they required future information or assistance. (Testimony of RADM Konetzni, page 750; Exhibit 64).

IV. Propriety of USS GREENEVILLE'S OPAREA on 9 February

Hawaiian OPAREA

374. The Hawaiian OPAREA consists of a geographic grid, established in the waters surrounding the Hawaiian Islands, for use by Third Fleet ships and submarines. (Testimony of RADM Griffiths, page 220; Exhibits 62, 68).

a. The Hawaiian OPAREA is bounded by latitude 25° to 17° North, and longitude 162° to 154° West. (Exhibits 62, 68).

b. The Hawaiian OPAREA grid system consists of letter designated East-West rows (Alpha through Yankee) that are 20 minutes of latitude in height, and number designated North-South columns (1 through 24) that are 20 minutes of longitude in width. (Exhibit 68).

375. COMSUBPAC, in his role as Commander Task Group (CTG) 14.5, is the coordinator and scheduling authority for all U.S. Navy submarine operations conducted in the Hawaiian OPAREA. (Testimony of RADM Konetzni, page 727; Exhibit 68).

a. COMSUBPAC procedures for water space management in the Hawaiian OPAREA are contained in Appendix 1 to Annex C to COMSUBPAC OPORD 205. (Exhibit 68).

b. Specific grid assignments for submarine operations in the Hawaiian OPAREA are promulgated weekly in the CTG 14.5 Hawaiian Weekly OPSKED. (Testimony of RADM Konetzni, page 727; Exhibit 1, enclosure 24 (CTF 14.5 Weekly OPSKED); Exhibit 68).

376. Grid assignments within the OPAREA are described according to a letter/number code:

a. An entire row is described by a single letter code followed by the suffix XXX.

b. An entire column is described by a prefix X followed by a numeral(s) followed by a suffix XX.

c. Each rectangular area can be further divided into half areas. For example, the area north of the center latitude of a rectangle is described as NX. Similarly, the area south of the center latitude of a rectangle is described as SX.

(Exhibit 1, enclosure 24 (CTG 14.4 Weekly OPSKED); Exhibit 68).

377. A submarine’s assigned OPAREA is described by specifying the row and column of which it is composed. If the OPAREA is composed of a rectangular set of grid areas, the OPAREA description will specify the northeastern and southwestern grids respectively, separated by a slash. (Exhibit 68).

378. Submerged submarines must remain one nautical mile from their assigned OPAREA boundaries to ensure safe separation from other submarines. (Exhibit 68).

379. Information regarding submarine operations is not released to the general public. (Testimony of RADM Griffiths, page 219).

380. The Navy's establishment of the Hawaiian OPAREA does not apply to or otherwise effect civilian maritime traffic in any way. (Testimony of RADM Griffiths, page 219-220).

381. Submarines are always the burdened or give-way vessel when submerged, and bear full and complete responsibility for safety of navigation when surfacing. (Testimony of RADM Griffiths, page 219-220; Exhibit 1, enclosure 24 (Standing Orders); Exhibit 2).

USS GREENEVILLE's OPAREA on 9 February

382. GREENEVILLE's assigned OPAREA on 9 February was defined as L13SX/P13XX and M15XX/P14XX, 0000-2400. This section of ocean, located south of OAHU, encompasses an area approximately 60 nautical miles by 80 nautical miles. (Exhibit 1, enclosure 24 (CTG 14.5 Weekly OPSKED); Exhibits 62, 68).

383. It is common practice to assign submarines large OPAREAs, thereby ensuring adequate separation from other submarines that may be operating in the Hawaiian OPAREA. (Testimony of RADM Griffiths, page 219).

384. Time and distance constraints of a short underway period kept GREENEVILLE in the northwest portion of her OPAREA on 9 February. GREENEVILLE remained at least one mile within its OPAREA boundaries at all times. (Testimony of RADM Griffiths, page 222; ET1 Thomas, page 1067; ET3 Blanding, page 1090; Exhibit 1, enclosure 24 (Position Log); Exhibit 62).

385. GREENEVILLE's OPAREA on 9 February was a logical assignment in that it was close enough to Pearl Harbor to allow the submarine to get underway, conduct the DV cruise and return to Pearl Harbor in seven hours. (Testimony of RADM Griffiths, page 222-224; Exhibit 62).

386. GREENEVILLE's assigned OPAREA on 9 February had deep water, clear of shipping lanes, and was generally unencumbered

by obstructions. (Testimony of RADM Griffiths, page 224; RADM Konetzni, page 787).

387. GREENEVILLE's assigned OPAREA on 9 February was large and deep enough to facilitate the type of ship demonstrations typically conducted in support of a DV cruise, including an emergency surfacing maneuver. (Testimony of RADM Griffiths, page 224; RADM Konetzni, page 787; Exhibit 62).

Maritime Traffic

388. There are no traffic separation schemes in place in the waters surrounding the Hawaiian Islands. (Testimony of RADM Konetzni, page 725).

389. The Navy conducted informal reviews of ship traffic density in the Hawaiian OPAREA in 1963, 1970, and in 1997. (Testimony of RADM Konetzni, page 726).

390. There are no major shipping lanes that cross through the OPAREA assigned to GREENEVILLE on 9 February. (Testimony of RADM Konetzni, page 726-27; RADM Griffiths, page 221).

391. Major commercial shipping lanes around southern Oahu run in an east-west direction, and are generally north of the OPAREA assigned to GREENEVILLE on 9 February. Ships engaged in commerce with the Far East use the Kauai channel located to the northwest of Honolulu harbor. Ships engaged in commerce with mainland United States use the Kaiwi channel located to the east of Honolulu harbor. (Testimony of RADM Konetzni, page 726, 787; RADM Griffiths page 221, Exhibit 62).

392. Small steamers engaged in inter-island commercial traffic generally remain along the coast of Oahu, north of GREENEVILLE's OPAREA on 9 February. (Testimony of RADM Konetzni, page 726, 787).

393. Fishing and small pleasure boats are known to travel to and fish in the vicinity of Fish Aggregating Devices, which are found throughout the Hawaiian OPAREA. It is not possible to

predict when such craft will be in the OPAREA at any given time. (Testimony of RADM Griffiths, page 222-223; Exhibit 62).

394. Generally, ships do not transit in a north-south direction through the OPAREA assigned to GREENEVILLE on 9 February. (Testimony of RADM Griffiths, page 221).

395. Compared to other OPAREAs within COMSUBPAC's area of responsibility (e.g., California OPAREA, Puget Sound OPAREA), the waters around the Hawaiian Islands are low traffic density. (Testimony of RADM Konetzni, page 728, 787).

Submarine Test and Trial Area

396. Current National Oceanic and Atmospheric Administration (NOAA) charts (specifically chart 19340), used by civilian mariners, show a "Submarine Test and Trial Area" south of Oahu. (Exhibit 1, enclosure 29; Exhibit 17).

397. This area was designated at Navy request in the 1960's. (Testimony of RADM Konetzni, page 729).

398. This area no longer has any special meaning or relevance under the Hawaiian OPAREA system, and such designation has been removed from National Imagery and Mapping Agency (NIMA) charts used by the military. (Testimony of RADM Konetzni, page 729-30; RADM Griffiths, page 225).

V. The Role of the SUBPAC Chief of Staff

399. CAPT Robert L. Brandhuber, the SUBPAC Chief of Staff, embarked on GREENEVILLE on 9 February. (Testimony of CAPT Brandhuber, page 820).

400. During the period 1 to 11 February, CAPT Brandhuber was formally designated as Acting COMSUBPAC, due to RADM Konetzni being on temporary additional duty (TAD) to Japan. (Exhibit 46).

401. During the seven-hour period that CAPT Brandhuber was to be embarked on GREENEVILLE, CAPT Kyle, Deputy Chief of Staff for Readiness and Training (SUBPAC N7), assumed the position of Acting COMSUBPAC.

a. While CAPT Brandhuber was embarked on GREENEVILLE, he could not function as Acting COMSUBPAC. Nor was it the intent of RADM Konetzni that CAPT Brandhuber serve as Acting COMSUBPAC during a period of time when he would be incommunicado.

b. As Acting COMSUBPAC, CAPT Kyle's responsibility was to coordinate and respond to any and all issues of a level requiring COMSUBPAC attention during the absence of CAPT Brandhuber.

c. There was no formal designation of CAPT Kyle as Acting COMSUBPAC. CAPT Kyle assumed the responsibilities by verbal tasking.[9]

d. There was no formal turnover of responsibilities or briefing between CAPT Brandhuber and CAPT Kyle.

(Testimony of RADM Konetzni, page 741-46; CAPT Brandhuber, page 824-25; CAPT Kyle, page 620-23).

402. CAPT Brandhuber's stated purpose for the 9 February embark onboard GREENEVILLE was fourfold:

a. To represent the Force Commander as an escort for the civilian guests. CAPT Brandhuber thought this particularly important since the civilian guests had been nominated for embark by a former CINCPAC;

b. To evaluate GREENEVILLE's performance;

c. To observe the professional performance in an operational setting of his son-in-law, LCDR Meador, GREENEVILLE's Engineering Officer. This was to be LCDR Meador's

[9] While CAPT Kyle testified that he believed himself to be in the role of Acting Chief of Staff, vice Acting COMSUBPAC, the Court felt that RADM Konetzni, COMSUBPAC, provided the more important and persuasive interpretation as to his role. *See*, Testimony of RADM Konetzni, page 741-46.

last underway onboard GREENEVILLE before transferring to the Nuclear Propulsion Examining Board;

d. To accumulate hours at sea, for purposes of submarine pay.

(Testimony of CAPT Brandhuber, page 820-21).

403. Before boarding GREENEVILLE the morning of 9 February, CAPT Brandhuber was unaware that commencement of GREENEVILLE's operational underway period for ORSE workups had been rescheduled for 12 February, and that the primary purpose of that day's underway was to support a DV embark. (Testimony of CAPT Brandhuber, page 819; LCDR Werner, page 1511).

CAPT Brandhuber's Role: His Personal Perspective

404. When he boarded GREENEVILLE, CAPT Brandhuber believed his principal and primary role was to serve as a senior Navy escort for the civilian guests. (Testimony of CAPT Brandhuber, page 822, 882-83).

CAPT Brandhuber's Role: His Standing Order

405. In September 2000, CAPT Brandhuber issued COMSUBPAC Chief of Staff Policy Memorandum 00-1, "Standing Orders and Policy While Embarked." (Exhibit 16).

406. By the terms of his policy memorandum, CAPT Brandhuber expected the following information and reports whenever embarking on a SUBPAC ship:

a. A briefing on the operations and schedule for the ship's evolutions to occur during the embark period, to include OPAREA assigned, safety precautions and operational constraints, mutual interference considerations, navigational tracks and plans, scheduled drills/exercises/training evolutions (including internal drills), and safety briefs for exercise torpedo firings;

b. Reports on significant changes to the ship's status relating to ship control, navigation and readiness;

c. Opportunity to meet with the ship's officers and chief petty officers;

d. Opportunity to inspect spaces while underway, accompanied by the COB and Engineering Department Master Chief (EDMC).

CAPT Brandhuber's policy memorandum stated that it was not his intent to interfere with the normal practices of the Commanding Officer. (Exhibit 16).

407. In preparing this policy memorandum, CAPT Brandhuber drew upon his previous experience as Commodore for a Submarine Squadron. CAPT Brandhuber's intent was that such guidance would be applicable during embarks of significant time and/or purpose, such as those conducted for inspections, evaluations, or certifications. He believed it useful to have a formal understanding with the submarine CO as to his role under such circumstances. CAPT Brandhuber had not specifically considered or intended this policy memorandum to apply to short DV embarks. (Testimony of CAPT Brandhuber, page 823, 851, 883).

CAPT Brandhuber's Role: By Navy Regulations

408. By Navy Regulations, CAPT Brandhuber was an embarked passenger onboard GREENEVILLE on 9 February.

a. Navy Regulations, Article 1031, "Authority of Officers Embarked as Passengers," reads, in pertinent part:

> The commanding officer of a ship or aircraft, not a flagship, with a flag officer eligible for command at sea embarked as a passenger, shall be subject to the orders of such flag officer. *Other officers embarked as passengers, senior to the commanding officer, shall have no authority over the commanding officer*.

b. The second sentence of this provision makes clear that CAPT Brandhuber, as a non-flag officer, had no authority over the GREENEVILLE CO while embarked on 9 February.

(Exhibit 61 (emphasis added)).

409. While onboard GREENEVILLE, CAPT Brandhuber was neither the "Senior Officer Present" nor the "Senior Officer Present Afloat."

a. "The Senior Officer Present" is the senior line officer of the Navy on active duty, eligible for command at sea, who is present and in command of any part of the Department of the Navy in the locality.

b. "The Senior Officer Present Afloat" is the senior officer of the Navy, eligible for command at sea, who is present and with primary duty as commander of any unit or force of the operating forces of the Navy in the locality, whether afloat or based ashore.

c. CAPT Brandhuber is eligible for command at sea.

d. CAPT Brandhuber was the senior officer of the Navy present onboard GREENEVILLE.

e. On 9 February, while onboard GREENEVILLE, CAPT Brandhuber was not Acting COMSUBPAC, and thus not in command. That positional authority had, as a matter of fact, devolved to CAPT Kyle.

(Exhibit 46; Exhibit 61, Articles 0901, 0902, 0928).

410. None of the above discussion relieved the CO of GREENEVILLE of his own responsibilities under Navy Regulations.

a. The responsibility of the commanding officer for his or her command is absolute, except when, and to the extent to which, he or she has been relieved therefrom by competent authority. The authority of the commanding officer is commensurate with his or her responsibility. (Exhibit 61, Article 0802).

b. The commanding officer is responsible for the safe navigation of his or her ship. (Exhibit 61, Article 0857).

CAPT Brandhuber's Actions Onboard GREENEVILLE

411. By his actions of 9 February, CAPT Brandhuber informally indicated to GREENEVILLE that he did not expect the types of briefings or reports called for in his policy memorandum.

a. Upon CAPT Brandhuber's arrival at pier S-21B the morning of 09 February, he was met by the GREENEVILLE CO, XO, and COB. They provided him with a welcome aboard package, including the names of civilian guests, and a list of GREENEVILLE's officers and chief petty officers. (Testimony of CAPT Brandhuber, page 902; CDR Waddle, page 1695-97; MMCM Coffman, page 1331-32; Exhibit 75, 77).

b. While on the pier, CAPT Brandhuber declined the CO's offer to provide reports. CAPT Brandhuber also declined the CO's offer to join the CO on the Bridge for the outbound surface transit. CAPT Brandhuber indicated to the CO that he was there as a visitor, not an inspector, and that he would just walk around the ship and observe on his own. (Testimony of CDR Waddle, page 1696).

c. At no time prior to the collision did CAPT Brandhuber seek out the CO and ask for any of the information, briefings or reports outlined in his policy memorandum. (Testimony of CAPT Brandhuber, page 822-23, 846).

d. CAPT Brandhuber declined offers by the COB and EDMC to take him on a walk-through of spaces, preferring to do it on his own. (Testimony of CAPT Brandhuber, page 823, 903-04).

412. CAPT Brandhuber spent time in the morning touring the ship, meeting and talking with individual officers and crew, and interacting with the civilian guests. He made a trip through Sonar for a spot check. (Testimony of CAPT Brandhuber, page 831, 847, 874, 893, 903; LT Sloan, page 982-83; MMCM Coffman, page 1332-33).

413. It was only after getting underway that CAPT Brandhuber determined the ship's schedule by glancing at a POD. He felt the proposed schedule to be reasonable for a typical DV embark. (Testimony of CAPT Brandhuber, page 827).

414. CAPT Brandhuber was never informed of the material condition of the AVSDU. He discovered the AVSDU was OOC through his own observation during a walk-through of the Control Room, after getting underway. CAPT Brandhuber never made any inquiries regarding the AVSDU's status, or about GREENEVILLE's plan to compensate for its loss. (Testimony of CAPT Brandhuber, page 831-32, 852).

415. CAPT Brandhuber ate lunch with the civilian guests and the CO during the first sitting in the Wardroom. (Testimony of CAPT Brandhuber, page 836).

416. During lunch, CAPT Brandhuber learned that GREENEVILLE was at test depth. He was surprised by this fact. Because of the presence of the civilian guests, CAPT Brandhuber decided not to raise the issue with the CO at that time. (Testimony of CAPT Brandhuber, page 836, 848).

417. CAPT Brandhuber went to the Control Room with the civilian guests to observe the afternoon evolutions of angles and high-speed maneuvers. (Testimony of CAPT Brandhuber, page 826-27).

418. CAPT Brandhuber paid specific attention to GREENEVILLE's performance during angles and high-speed maneuvers. In his experience, these are evolutions that submarines sometimes have difficulty with. CAPT Brandhuber positioned himself on the forward port side of the Control Room, behind the Ship Control Party. At their conclusion, CAPT Brandhuber's assessment was that GREENEVILLE had performed these maneuvers well. (Testimony of CAPT Brandhuber, page 826-29, 833, 860).

419. After angles and high-speed maneuvers, CAPT Brandhuber moved aft in the Control Room, feeling comfortable with GREENEVILLE's performance. He did not feel the need to pay particular attention to the ship's ascent to periscope depth, as the CO had obviously taken GREENEVILLE through this evolution

numerous times. CAPT Brandhuber checked the navigation chart to determine where GREENEVILLE was in her OPAREA. (Testimony of CAPT Brandhuber, page 826, 830-31, 893).

420. CAPT Brandhuber did not observe the OOD conduct a periscope depth briefing, or hear the OOD request the CO's permission to proceed to periscope depth. CAPT Brandhuber did not hear or focus on any contact reports from Sonar or the FTOW. (Testimony of CAPT Brandhuber, page 835, 861, 864-65).

421. CAPT Brandhuber was not aware of the surface contact picture. He believed that GREENEVILLE had conducted two legs of TMA prior to proceeding to periscope depth. (Testimony of CAPT Brandhuber, page 835, 864, 893).

422. CAPT Brandhuber observed the OOD's initial periscope search. It appeared to be completed per proper procedures. (Testimony of CAPT Brandhuber, page 833, 866-68).

423. CAPT Brandhuber observed the CO take the periscope and conduct his visual search. The CO ordered the ship raised. CAPT Brandhuber was struck by the fact that the CO looked for the longest period of time in the direction of the submarine's aft port corner, from abeam to astern. CAPT Brandhuber could not see the PERIVIS display. (Testimony of CAPT Brandhuber, page 833-34, 868-69).

424. CAPT Brandhuber was initially surprised by the CO's order of emergency deep, although he understood the situation once the CO indicated it was for training. The CO had not informed CAPT Brandhuber ahead of time that he would order an emergency deep. (Testimony of CAPT Brandhuber, page 834, 849-50, 870).

425. During the emergency deep, the CO ordered the ship to come left. CAPT Brandhuber then understood that during the periscope search, the CO had been focused on that area where he intended to surface the ship. (Testimony of CAPT Brandhuber, page 834, 875-76).

426. CAPT Brandhuber thought that the time between the emergency deep and the order to conduct the emergency surface was appropriate. (Testimony of CAPT Brandhuber, page 876).

427. Starting with GREENEVILLE's preparation to come to periscope depth, CAPT Brandhuber felt that evolutions were proceeding "quicker than I would do it," yet not unreasonable. (Testimony of CAPT Brandhuber, page 832-33, 872-73, 875).

428. CAPT Brandhuber believed that the CO knew the capabilities of his ship, was actively showcasing and driving GREENEVILLE in a manner that he, the CO, thought professionally appropriate, and that the CO was performing within his capabilities. (Testimony of CAPT Brandhuber, page 844).

429. CAPT Brandhuber never felt the need to interject himself, particularly in front of the crew and civilian guests. (Testimony of CAPT Brandhuber, page 833, 843, 890, 909-10).

430. CAPT Brandhuber never expressed any concerns over the pace of operations to the CO. CAPT Brandhuber did plan on discussing his observations and concerns with the CO during a post-underway debrief. (Testimony of CAPT Brandhuber, page 873, 910).

Post-Collision

431. CAPT Brandhuber was in the Control Room at the time of collision. (Testimony of CAPT Brandhuber, page 876).

432. CAPT Brandhuber took the Number 2 periscope immediately after the CO. He observed what he thought to be a whale-watching vessel. He discussed with the CO the need to immediately execute SAR procedures. (Testimony of CAPT Brandhuber, page 876).

433. CAPT Brandhuber's was directly involved in supporting the SAR efforts, including overseeing communications and directing release of initial reports. CAPT Brandhuber talked directly with the SUBPAC Command Center concerning the situation, both onboard GREENEVILLE and ashore. (Testimony of CAPT Brandhuber, page 877; ETCS Smith, page 1291-92; Exhibit 45).

434. CAPT Brandhuber made a conscious effort to periodically assess the mental state of the CO and other watchstanders. CAPT

Brandhuber never felt the need to relieve CDR Waddle and assume command. (Testimony of CAPT Brandhuber, page 900; Exhibit 1, enclosure 19).

435. CAPT Brandhuber took it upon himself to see to the civilian guests. He provided them with periodic updates, and assessed their mental and physical condition in making recommendations/decisions as to when GREENEVILLE would return to port. (Testimony of CAPT Brandhuber, page 877; Exhibit 1, enclosure 19; Exhibits 45, 64, 65).

436. Upon returning to Naval Station Pearl Harbor on 10 February, CAPT Brandhuber reported to and debriefed COMSUBPAC. (Testimony of RADM Konetzni, page 749-51).

Subj: COURT OF INQUIRY INTO THE CIRCUMSTANCES SURROUNDING THE COLLISION BETWEEN USS GREENEVILLE (SSN 772) AND JAPANESE M/V EHIME MARU THAT OCCURRED OFF THE COAST OF OAHU, HAWAII ON 9 FEBRUARY 2001

OPINIONS

I. The Collision

1. The four reconstructions of GREENEVILLE's and EHIME MARU's track leading up to the collision are virtually identical in all material ways and accurately reflect the tracks of the two vessels from 1230 until the collision at 1343 on 9 February. (FF 15, 43).

2. No fault or neglect on the part of EHIME MARU's captain or the crew caused the collision. (FF 4, 13, 14, 379-381).

3. No equipment or system failure onboard EHIME MARU contributed to the collision. (FF 6, 7, 13, 14).

4. No equipment or system failure onboard GREENEVILLE directly contributed to the collision. (FF 45, 69, 223).

5. The three civilian guests who participated in the emergency surfacing maneuver were properly supervised and assisted at all times by GREENEVILLE watchstanders and did not cause the collision. (FF 220, 365, 366).

6. A series and combination of individual negligence(s) onboard GREENEVILLE resulted in the collision between the submarine and EHIME MARU. (FF 45, 50, 63, 65-67, 76, 77, 87-89, 92-94, 132, 138, 141-144, 149, 150, 152, 157-160, 162-164, 166, 171, 172, 176, 194, 199, 202, 203, 206, 208, 217).

7. The collision was not caused by any deliberate or willful misconduct by anyone onboard GREENEVILLE. (FF 45, 50, 63, 65-67, 76, 77, 87-89, 92-94, 132, 138, 141-144, 149, 150, 152, 157-160, 162-164, 166, 171, 172, 176, 194, 199, 202, 203, 206, 208, 217).

8. GREENEVILLE's POD contained a reasonable schedule of DV demonstrations but was not followed. Once lunch with civilian guests ran long, the ship failed to adjust its schedule to account for lost time. (FF 37, 40, 47, 55-57, 78-85, 350-360).

9. A principal cause of the collision was an artificial urgency created by the CO in the Control Room to complete all afternoon DV events and return to Pearl Harbor as close to schedule as possible. (FF 78-85, 89, 92, 101, 103, 110, 132, 136, 138, 144, 145, 157-160, 162-166, 176, 194, 196, 197, 199, 202-206, 208).

10. A principal cause of the collision was the CO's disregard of standard submarine operating procedures and his own Standing Orders. (FF 125, 129, 132, 138, 140-142, 145, 150, 157, 158, 161-163, 166, 171, 172, 179-182, 194, 196, 197, 199, 202-204, 208).

11. A principal cause of the collision was the failure of the ship's contact management team to work together and pass information to each other about the surface contact picture. (FF 45, 49, 50, 63-67, 74, 76, 77, 92-94, 101, 110, 129, 132, 138, 140-145, 149, 150, 157-160, 162-164, 166, 171, 172, 176, 194, 199, 202, 203, 206, 208, 217).

12. While managing 3 surface contacts was well within GREENEVILLE's capability, the artificial urgency in the Control Room on 9 February caused the contact management team to miss or fail to identify important contact information that would have made it clear contact S-13 was close. (FF 45, 49, 50, 63-67, 72, 74, 76, 77, 92-94, 101, 110, 129, 132, 138, 140-145, 149, 150, 157-160, 162-164, 166, 171, 172, 176, 194, 199, 202, 203, 206, 208, 217).

13. The CO ordered the primary coolant sample secured before analysis was complete because he knew the ship was behind schedule and he wanted to quickly begin the afternoon maneuvers. (FF 78-84).

14. The artificial urgency created by the CO caused him to deviate from NWP guidance and his own Standing Orders when performing TMA, the ascent to periscope depth, and his visual search at periscope depth. (FF 125, 129, 132, 138, 140-142, 145, 150, 157, 158, 161-163, 166, 171, 172, 179-182, 194, 196, 197, 199, 202-204, 208).

15. The CO's order to the OOD that "I want you to prepare for and be at periscope depth in five minutes" was unreasonable and

indicated time was a significant factor as GREENEVILLE continued through afternoon ship maneuvers. (FF 132).

16. There was no tactical reason for the CO to order the OOD to be at periscope depth in five minutes. The sole reason to go to periscope depth on 9 February was for safety of ship to prepare for the emergency surface. (FF 37, 182).

17. GREENEVILLE's high speed-maneuvers negatively effected Sonar tracking and displays during the maneuvers, and for a period thereafter. Such data was not reliable to use as a basis for contact management. (FF 115, 116, 123-125, 128, 129, 140-143).

18. Sonar failed to identify the right 6° per minute bearing rate of contact S-13 (EHIME MARU) because GREENEVILLE failed to remain on course 340° at a steady depth and at a speed of about 10 knots for about three minutes to conduct proper TMA. (FF 129, 140-143).

19. If GREENEVILLE had maintained course 340° for about 3 minutes, Sonar would have recognized a high right bearing change of 6° per minute increasing to 11° per minute. (FF 143).

20. Had the ship remained on course 340° for about three minutes as provided for in NWP 3-21.51.1 and GREENEVILLE CO Standing Order 6, Sonar would have identified S-13 as a close contact. (FF 121, 123-125, 129, 140-143).

21. The time spent at periscope depth was insufficient to accomplish normal ship functions. The DOOW was not given enough time to properly trim the ship to achieve the desired up angle at periscope depth. The QMOW could not obtain a GPS fix. The ESM Operator was not able to complete an analysis and classification of electronic contacts. (FF 179-181, 194, 196, 197, 202-206).

22. Behind schedule and presuming all contacts were distant, the CO interrupted the OOD's periscope search and performed a non-standard, abbreviated visual search that failed to emphasize

safety of own ship and surface vessels. (FF 86-89, 92, 136, 144, 145, 157, 164, 194, 196, 197, 199, 202-206, 208).

23. The CO's "higher look" at 58 feet for 16 seconds was neither high enough nor long enough given sea state and GREENEVILLE's DV mission on 9 February. (FF 37, 182, 188, 198, 202, 208).

24. Had the CO conducted a proper search in accordance with NWP 3-13.10 guidance and his own Standing Order 6, he would have detected EHIME MARU. (FF 179-182, 194, 196, 197, 199, 202, 203, 208).

25. Prudent seamanship and operational risk management dictated exceeding tactical periscope search procedures in NWP 3-13.10 and GREENEVILLE CO Standing Order 6 to ensure safety of crew, embarked civilians, and surface vessels. (FF 37, 182).

26. Given existing weather, visibility and sea conditions on 9 February and the overarching need for safety, the CO should have come shallower, or even broached the ship to get as much height of eye as possible. (FF 37, 182, 188, 198, 208).

27. Had the NAV told the OOD and/or the CO about the hazy conditions and difficulty he had picking out a light hulled contact earlier in the morning, the OOD and CO may have done a more careful, deliberate periscope search prior to the collision and detected EHIME MARU. (FF 49, 50, 63, 198).

28. Existing weather, visibility and sea conditions, and EHIME MARU's white hull and superstructure, made it difficult to detect her through GREENEVILLE's periscope. (FF 7, 48-50, 188, 198, 208).

29. GREENEVILLE's command climate and the presence of civilian guests onboard affected the performance of watchstanders, and thereby indirectly contributed to the collision. (FF 16, 57, 58, 77, 82, 85, 95, 101, 102, 110, 111, 132, 150, 151, 157-160, 162-164, 166, 176, 177, 194, 199, 202, 203, 216, 217, 220, 224, 363, 364, 366, 416, 429, 430).

30. On 9 February, GREENEVILLE's crew had not undergone rigorous training and inspection and lacked integrated operational experience. (FF 21-23, 26-29, 31-34, 37, 41).

31. The crew held a false sense of security and confidence in their own professional skills. They believed they were better than they really were, and lost the ability to critically assess themselves. (FF 16, 18, 19, 21, 23, 27-29, 32, 33, 41, 63, 64, 66, 67, 72, 76, 77, 89, 92-94, 132, 138, 140-144, 150, 152, 157-160, 162-164, 166, 176, 194, 202, 203, 208, 215-217).

32. The crew was accustomed to the CO directing actions and maneuvers on the ship in challenging operational environments. They trusted his judgement as it had brought them success. This was a factor in the crew not providing the degree of forceful backup that was required on 9 February. (FF 16, 19, 20, 101, 110).

33. GREENEVILLE's crew was complacent on 9 February. They had recently returned from a one-month training underway. They were looking forward to a weekend off after they completed a seven-hour civilian guest embark on Friday, 9 February. There was no planning of watch assignments. Watchstanding was ad hoc, based upon the assumption that the ship would return to port at 1500. Schedules were not adhered to; standard procedures were ignored. (FF 27, 30-34, 36, 37, 40, 41, 45, 49, 50, 57, 58, 60, 61, 64, 66, 67, 125, 129, 132, 138, 140-142, 145, 150, 157, 158, 161-163, 166, 171, 172, 179-182, 194, 196, 197, 199, 202-204, 208).

34. The civilian guests conducted themselves appropriately at all times while onboard GREENEVILLE. (FF 365).

35. The presence of civilian guests onboard GREENEVILLE, while not directly contributing to the collision, indirectly affected the performance of key watchstanders in the Control Room. (FF 16, 57, 58, 77, 82, 85, 95, 101, 102, 110, 111, 132, 150, 151, 157-160, 162-164, 166, 176, 177, 194, 199, 202, 203, 216, 217, 220, 224, 363, 364, 366, 416, 429, 430).

36. The large number of civilians in the Control Room created a physical barrier between watchstanders and equipment displays that hindered the normal flow of contact information among

members of GREENEVILLE's contact management team. (FF 95, 177, 363, 364).

37. The location and number of civilian guests in the Control Room interfered with the ability of the FTOW to pass important contact information to the OOD and CO. (FF 77, 95, 177, 363, 364).

38. The CO, OOD and other members of the contact management team failed to forcefully communicate and work around the civilians in the Control Room. (FF 16, 57, 58, 77, 82, 85, 95, 101, 102, 110, 111, 132, 150, 151, 157-160, 162-164, 166, 176, 177, 194, 199, 202, 203, 216, 217, 220, 224, 363, 364, 366, 416, 429, 430).

39. The CO was inappropriately disposed to entertain his civilian guests rather than safely demonstrate GREENEVILLE's operational capabilities. For example:

a. His unauthorized excursion to test depth to obtain deep seawater samples as mementos and driving the ship at flank speed needlessly exposed civilians to classified information.

b. Breaking "rig for dive" to obtain mementos inappropriately placed entertainment before safety of own ship.

c. Permitting the use of the Sonar Working Tape Recorder to play whale sounds for civilians took an important piece of equipment off-line.

d. Autographing pictures for his guests after lunch contributed to the delay of afternoon ship maneuvers.

All these actions denote an inappropriate informality regarding shipboard operations on 9 February. (FF 16, 30, 37, 47, 55-58, 82, 102, 111, 151, 184, 194, 203, 220, 223, 224, 324, 326, 327, 346, 356, 357, 363, 364, 366).

40. The CO missed important Sonar and Fire Control information that could have prevented the collision because he was focused on personally driving the ship and narrating the afternoon's evolutions to his civilian guests. (FF 86, 89, 92, 101, 102,

110,111, 132, 136, 144, 150, 151, 156-160, 163, 164, 176, 177, 184, 194, 202, 203, 217, 223, 224).

41. By injecting himself into virtually every action (i.e., effectively assuming the Deck and Conn, cutting TMA legs short and conducting a non-standard, abbreviated periscope search) to save time, the CO repeatedly marginalized key watchstanders and cut corners on prescribed operational and safety procedures. (FF 86, 89, 92, 101, 110, 111, 125, 129, 132, 136, 138, 140-142, 144, 145, 150, 151, 156-164, 166, 171, 172, 176, 177, 179-182, 184, 194, 196, 197, 199, 202-204, 208, 217, 223, 224).

42. The CO had an incomplete understanding of the contact picture based on two brief walk-throughs of Sonar and one review of Fire Control displays. He failed to use his team to verify his understanding of surface contacts. In doing so, he denied himself essential backup from watchstanders who had critically important contact information that may have prevented the collision. Further, he denied himself the opportunity to critically assess his team’s situational awareness. (FF 86, 87, 89, 92, 136, 144, 145, 157, 164).

43. Loss of the AVSDU degraded the OOD’s ability to maintain situational awareness of contacts from the Control Room. Neither the CO nor any other watchstander took affirmative action to compensate for its loss. Had they done so, it may have helped both the OOD and CO maintain better assay of the surface contact picture. (FF 45).

44. Loss of the AVSDU should have prompted the CO to take a more measured, deliberate approach to contact management. (FF 45).

45. GREENEVILLE’s chain of command should not have permitted an unqualified Sonarman to stand watch without a qualified, over-instruction watchstander present. (FF 64, 66, 67).

46. Allowing an unqualified operator to stand watch in Sonar denied the contact management team the required training and experience of a qualified operator. (FF 64, 66, 67).

47. The XO failed to provide appropriate oversight of enlisted watchbill preparations and watchstanding performance. As XO, he is responsible and accountable for the following deficiencies:

a. The watchbill for 9 February was not followed. Nine of 13 afternoon watchstation assignments were changed ad hoc without knowledge or approval of the chain of command.

b. An unqualified Sonarman was listed on the watchbill and was on watch when the collision occurred despite the fact that the 9 February POD clearly listed him as delinquent in his qualifications.

c. There was poor watchstation discipline and a general lack of communication between watchstanders in the Control Room and Sonar.

(FF 64, 66, 67, 132, 137, 150, 158, 160, 166).

48. The XO failed to discuss his concerns with the CO over the compressed time period imposed upon the OOD to make periscope depth in five minutes. The XO also failed to recommend an additional TMA leg for the purpose of analyzing new contact, S-14. (FF 132, 158, 160, 166).

49. The rapid pace of events driven by the CO, and the presence of the SUCPAC Chief of Staff and numberous civilian guests, diminished the XO’s ability to provide forceful backup. (FF 78-85, 89, 92, 101, 103, 110, 132, 136, 138, 144, 145, 157-160, 162-166, 176, 194, 196, 197, 199, 202-206, 208).

50. The COB failed to adequately perform his duties as enlisted watchbill coordinator and provide appropriate oversight of watchstanding performance. As the COB, he is responsible and accountable for the following deficiencies:

a. The watchbill for 9 February was not followed. Nine of 13 afternoon watchstation assignments were changed ad hoc without knowledge or approval of the chain of command;

b. An unqualified Sonarman was listed on the watchbill and was on watch when the collision occurred despite the fact that the 9 February POD clearly listed him as delinquent in his qualifications.

(FF 64, 66, 67).

51. The COB did not provide forceful backup to the CO because he did not man required Sonar watches with fully qualified watchstanders and did not integrate the maneuvering and underway watchbills with the POD. (FF 64, 66, 67).

52. The CO effectively assumed the Deck and the Conn from the OOD commencing at angles until the collision. The OOD became a mouthpiece for the CO to pass maneuvering orders to the Ship Control Party. (FF 101, 102, 110-112, 132, 145, 151, 159, 160, 163-165, 194, 211, 215, 216, 220, 224).

53. The OOD’s inexperience and slow, methodical approach to watchstanding, together with the rapid pace of events driven by the CO and the presence of the SUBPAC Chief of Staff and numerous civilian guests, greatly diminished the OOD’s ability to provide forceful backup. (FF 16, 18, 57, 58, 77-85, 89, 92, 95, 101-103, 110, 111, 132, 136, 138, 144, 145, 150, 151, 157-160, 162-166, 176, 177, 194, 196, 197, 199, 202-206, 208, 216, 217, 220, 224, 363, 364, 366, 399, 416, 417, 429, 430).

54. The OOD conducted a proper initial periscope search at periscope depth, but was never given the time or opportunity by the CO to complete an entire continuous search. Given the OOD’s typical methodical and deliberate approach, he might have detected EHIME MARU. (FF 18, 179, 180, 181, 183, 186, 191, 193, 194, 422).

55. In the rush to comply with the CO’s order to come to periscope depth in five minutes, the OOD did not conduct a periscope depth brief with watchstanders as required by GREENEVILLE CO Standing Order 6. By not conducting the brief, the team missed a valuable opportunity to receive and critically assess important contact and sea state information normally provided by Sonar. (FF 132, 138).

56. The OOD did not aggressively drive the ship to develop good TMA solutions on surface contacts prior to the commencement of angles. As a result, the early afternoon fire control solutions incorrectly identified S-13 as a distant and opening vice distant and closing contact. (FF 71, 72, 74, 76, 90).

57. The Sonar Supervisor failed to backup the OOD by recommending course and speed changes that would produce good TMA solutions on contacts prior to angles. As a result, the early afternoon fire control solutions incorrectly identified S-13 as a distant and opening vice distant and closing contact. (FF 71, 72, 74, 76, 90).

58. The additional burden of more closely monitoring an unqualified member of the Sonar watchteam and civilian guests coming through Sonar detracted from the Sonar Supervisor’s ability to maintain the larger contact picture on 9 February. (FF 66-68, 74).

59. The FTOW failed to backup the OOD by recommending course and speed changes that would produce good TMA solutions on contacts prior to angles. As a result, the early afternoon fire control solutions incorrectly identified S-13 as a distant and opening vice distant and closing contact. (FF 71, 72, 74, 76, 90).

60. The FTOW failed to properly maintain the CEP in accordance with NWP guidance and GREENEVILLE CO Standing Orders. (FF 77).

61. Had the FTOW reported contacts and contact information to the OOD in accordance with GREENEVILLE CO Standing Orders, it may have prevented the collision. (FF 171, 172, 217).

62. Had the FTOW and Sonar Supervisor communicated and worked with the OOD and CO to develop an accurate surface contact picture, the collision may have been avoided. (FF 45, 49, 50, 63-67, 74, 76, 77, 92-94, 101, 110, 129, 132, 138, 140-145, 149, 150, 157-160, 162-164, 166, 171, 172, 176, 194, 199, 202, 203, 206, 208, 217).

63. The FTOW was distracted from managing contact S-13 by the gain of new contact, S-14. This in no way excused him from

properly reviewing solution information for all contacts, which he failed to do. (FF 152, 170-176).

64. Had the FTOW notified the OOD and CO that his solution for contact S-13 (EHIME MARU) was 4,000 yards during the emergency deep, it may have prevented the collision. (FF 217).

65. The FTOW's action of out spotting S-13's range from 4,000 to 9,000 yards resulted in a non-sensible speed solution of 99 knots. The FTOW then inappropriately entered this solution into the fire control system without any rational analysis. (FF 217).

66. Had GREENEVILLE's CO and crew been practicing the basic tenants of Operational Risk Management (ORM), the collision may have been avoided. (FF 45, 49, 50, 63-67, 74, 76, 78-85, 89, 92-94, 101, 103, 110, 125, 129, 132, 136, 138, 140-145, 149, 150, 157-166, 171, 172, 176, 179-182, 194, 196, 197, 199, 202-206, 208, 217).

II. The SAR Operation

67. GREENEVILLE's actions were timely and appropriate as SAR Coordinator. (FF 239, 241, 244-246, 248, 249, 251-255, 258-261, 263).

68. GREENEVILLE was limited in its SAR efforts by the inherent attributes of submarines. What GREENEVILLE could do she did well. (FF 293).

69. GREENEVILLE's, SUBPAC's, and the USCG's SAR response was immediate and effective in all areas. (FF 239, 241, 244-246, 248, 249, 251-255, 258-261, 263, 266, 268-270, 272, 275, 276, 280, 281, 284-286, 288, 289, 291, 292).

III. SUBPAC and USS GREENEVILLE Implementation of the Navy's Distinguished Visitor Embarkation Program

70. DV embarks should continue to be supported as they are instrumental in increasing public awareness of the Navy and its

mission and provide value to both the Navy and U.S. citizens. (FF 294, 295, 303, 310, 311).

71. SECNAV and OPNAV guidance on embarkation of civilian visitors is vague, confusing, internally inconsistent, and conflicting. (FF 296-302).

72. SUBPAC's approval of GREENEVILLE's DV embark on 9 February violated the spirit and intent of SECNAVINST 5720.44A (which prohibits getting a vessel underway solely to accommodate guests) and OPNAVINST 5720.2L (which prohibits unacceptable adjustments to a ship's underway schedule to accommodate guests). However, it was not unreasonable to go forward with this particular embark given the personal and financial investment made by the civilian guests, and to avoid embarrassment to the Navy. (FF 299, 305, 308, 328, 332, 336-338, 344-346).

73. By the explicit terms of OPNAVINST 5720.2L, SUBPAC did not have the authority to approve the 9 February DV embark. CINCPACFLTINST 5720.2M is vague and confusing on what authority to approve civilian embarks has been delegated to TYCOMS. (FF 299, 305).

74. The unique characteristics of a submarine's mission and design make it difficult for them to comply with current SECNAV and OPNAV DV embark guidance. (FF 295-302).

75. Appropriate oversight of DV embarks is lacking within SUBPAC. There is a general lack of guidance concerning maximum number of embarkees, ship schedules, schedule of onboard events, and appropriateness of shipboard demonstrations. (FF 309, 314, 315, 318, 320, 322).

76. There is a lack of policy and guidance in SUBPAC on safeguarding classified depth and speed information during civilian guest embarks. (FF 58, 309, 315, 319, 320, 322).

77. SUBPAC does not have any formal means for disseminating feedback or otherwise sharing information regarding DV embark experiences across SUBPAC. (FF 322).

78. The civilian guests who embarked onboard GREENEVILLE on 9 February generally met the broad eligibility criteria for DV cruises under SECNAVINST 5720.44A and SUBPAC public affairs goals. (FF 328, 330, 333, 337).

IV. Propriety of USS GREENEVILLE'S OPAREA on 9 February

79. GREENEVILLE's assigned OPAREA on 9 February was appropriate for independent submarine operations. It is located south of known commercial shipping lanes in an area infrequently visited by local steamer traffic and fishing boats. (FF 382-395).

80. The Hawaiian OPAREA is critical to Submarine Force training. It provides a large amount of waterspace of sufficient depth to conduct submarine operations, to include submarine maneuvering evolutions and casualty training drills. (FF 374, 385-395).

81. That portion of the Hawaiian OPAREA immediately south of Pearl Harbor is a convenient and cost effective location to conduct routine crew training, drills, inspections and certifications, and DV embarks. (FF 384-395).

82. The "Submarine Test and Trial Area" that appears on the NOAA "HAWAII to OAHU" chart (#19340) should be removed as this designation is no longer relevant. (FF 396-398).

V. The Role of the SUBPAC Chief of Staff

83. CAPT Brandhuber was not Acting COMSUBPAC and had no authority over GREENEVILLE's CO while embarked on 9 February. (FF 401, 408-410).

84. CAPT Brandhuber's decision not to pay close attention to GREENEVILLE's ascent to periscope depth was reasonable because he had closely observed GREENEVILLE perform two difficult evolutions well and the CO had taken the ship to periscope depth many times in the past. (FF 113, 418-421).

85. Given his lack of situational awareness of the surface contact picture during GREENEVILLE's ascent to periscope depth, CAPT Brandhuber was not in a position to intervene and prevent the chain of events leading to the collision. (FF 113, 418-421).

86. CAPT Brandhuber should have questioned CDR Waddle's decision to take civilian guests to test depth and flank speed. (FF 58, 406, 416).

87. When CAPT Brandhuber discovered that the AVSDU was OOC, he should have questioned GREENEVILLE's chain of command concerning what action they had taken to compensate for its loss. (FF 406, 411, 414).

88. CAPT Brandhuber's turnover of his Acting COMSUBPAC and Chief of Staff duties with CAPT Kyle was informal and incomplete. CAPT Kyle believed that he would be Acting Chief of Staff during CAPT Brandhuber's short embark on GREENEVILLE, but did not know that he was also functioning as COMSUBPAC. There was no clear SUBPAC unity of command while CAPT Brandhuber was embarked on GREENEVILLE. (FF 267, 401).

89. CAPT Brandhuber was uncertain as to his own official role when he embarked on GREENEVILLE on 9 February. (FF 400, 401, 404-407, 411, 434).

90. CAPT Brandhuber had a poor working knowledge of SUBPAC's Public Affairs Program. As the SUBPAC Chief of Staff, he failed to provide appropriate staff and Force oversight of the program. (FF 308, 309, 315, 318, 320, 322, 403).

91. CAPT Brandhuber's failure to enforce his own embarkation memorandum contributed to the informal atmosphere onboard GREENEVILLE on 9 February. (FF 405-407, 411).

92. CAPT Brandhuber took appropriate and timely action during SAR. (FF 432-436).

Subj: COURT OF INQUIRY INTO THE CIRCUMSTANCES SURROUNDING THE COLLISION BETWEEN USS GREENEVILLE (SSN 772) AND JAPANESE M/V EHIME MARU THAT OCCURRED OFF THE COAST OF OAHU, HAWAII ON 9 FEBRUARY 2001

RECOMMENDATIONS

I. The Collision

1. That the Commander in Chief, U.S. Pacific Fleet, take GREENEVILLE's CO, CDR Scott D. Waddle, to Admiral's Mast to answer for his actions on 9 February. While mindful of the serious and painful consequences of his failures that day, the Court recommends against court-martial due to the absence of any criminal intent or deliberate misconduct on his part. While his actions were negligent and careless and represented a serious departure from the high standards expected of officers in command, they were not so egregious as to warrant trial by court-martial. In reaching its recommendation, the Court also considered CDR Waddle's 20 years of dedicated and faithful service to the Navy and country.

2. That the new Commanding Officer of USS GREENEVILLE take the FTOW, FT1(SS) Patrick T. Seacrest, to Captain's Mast to answer for his actions on 9 February. In addition, that Petty Officer Seacrest be made to requalify before standing another underway watch as FTOW.

3. That the new Commanding Officer of USS GREENEVILLE admonish the XO, LCDR Gerald K. Pfeifer, for his lack of oversight of the enlisted watchbill and failure to ensure only qualified personnel were permitted to stand watch.

4. That the new Commanding Officer of USS GREENEVILLE admonish the OOD, LT(jg) Michael J. Coen, for his lack of foresight and attention to detail in standing his watch.

5. That the new Commanding Officer of USS GREENEVILLE admonish the COB, MMCM(SS) Douglas Coffman, for his lack of forceful backup of the chain of command, lack of oversight of the enlisted watchbill, and failure to ensure only qualified personnel were permitted to stand watch.

6. That the new Commanding Officer of USS GREENEVILLE admonish the Sonar Supervisor, STS1(SS) Edward McGiboney, for poor watchstanding and backup of the contact management team and failure to ensure only qualified personnel were permitted to

stand watch in Sonar. In addition, that Petty Officer McGiboney be made to requalify before standing another underway watch as Sonar Supervisor.

7. That COMSUBPAC ensure compliance with COMSUBLANT/ COMSUBPACINST 5400.40A and NWP 3-21.22.3 standards that permit only fully qualified Sonarmen to stand sonar watches.

8. That COMSUBPAC review the adequacy of its current Operational Risk Management program.

9. That COMSUBPAC provide information and training to the Force concerning the GREENEVILLE collision.

10. That COMSUBPAC review the ability and means of Submarine Squadron Commodores and their staffs to provide meaningful oversight and objective feedback to their submarine commanding officers and crews during the Inter-Deployment Training Cycle. The review should include adequacy of Squadron Staff manning and the mechanisms and tools available to the Commodore to fulfill his responsibility to provide proper oversight and feedback.

II. The SAR Operation

11. That COMSUBPAC coordinate a review of submarine open ocean SAR capabilities and requirements with the lead TYCOM and make appropriate recommendations to OPNAV.

III. SUBPAC and USS GREENEVILLE Implementation of the Navy's Distinguished Visitor Embarkation Program

12. That the Navy DVE Program continue to be fully supported.

13. That COMSUBPAC admonish the Force Public Affairs Officer for failing to provide proper staff oversight and guidance concerning SUBPAC's DV Embarkation Program.

14. That CINCPACFLT coordinate with OPNAV and CHINFO a complete review of Navy Public Affairs policy and guidance on embarkation

of civilian visitors and issue new guidance that is internally consistent, clear and more specific.

15. That CINCPACFLT recommend to OPNAV that approval authority for DV embarks be delegable to TYCOMs.

16. That COMSUBPAC, in coordination with the lead TYCOM, forward recommendations to OPNAV for changes to Public Affairs instructions that reflect the unique nature of submarine operations as they pertain to DV embarks.

17. That the SUBPAC Public Affairs Office provide appropriate oversight and guidance to the Force concerning DV embarks.

18. That SUBPAC review what are appropriate evolutions to be demonstrated during DV embarks.

19. That SUBPAC reemphasize to the Force the operational depth and speed limits that are classified and inappropriate for DV embarks.

20. That SUBPAC establish formal means for disseminating feedback or otherwise sharing information regarding DV embark experiences across SUBPAC.

IV. Propriety of USS GREENEVILLE'S OPAREA on 9 February

21. That COMSUBPAC review Hawaiian OPAREA maritime traffic density with the USCG and other appropriate government agencies every three years.

22. That COMSUBPAC coordinate with the NOAA to remove reference to the "Submarine Test and Trial Area" from NOAA's "HAWAII to OAHU" chart (#19340) and any other nautical charts used by military and civilian mariners.

V. The Role of the SUBPAC Chief of Staff

23. That COMSUBPAC admonish his Chief of Staff, CAPT Robert Brandhuber, for failing to professionally carry out his duties

and responsibilities on 9 February. The admonishment should specifically address his failure to conduct a proper turnover of his Chief of Staff duties before embarking onboard GREENEVILLE, failure to enforce SUBPAC classification standards pertaining to submarine operating depth and speed, and failure to provide proper staff oversight and guidance concerning SUBPAC's DV Program.

24. That CAPT Brandhuber either enforce or cancel his embarkation memorandum. If he decides to enforce it, that he review it and ensure it adequately addresses all categories of embarks, to include DV embarks.

25. That CAPT Brandhuber conduct a thorough brief of Acting COMSUBPAC duties and responsibilities whenever a staff officer succeeds him to command.

26. That COMSUBPAC clearly identify to the Force who the Acting COMSUBPAC is whenever an officer succeeds to command.

JOHN B. NATHMAN
Vice Admiral, U.S. Navy
President

PAUL F. SULLIVAN
Rear Admiral, U.S. Navy
Member

DAVID M. STONE
Rear Admiral, U.S. Navy
Member

ISAMU OZAWA
Rear Admiral
Japan Maritime Self-Defense Force
Non-Voting Member

Authentication:

JOHN B. NATHMAN
Vice Admiral, U.S. Navy
President

BRUCE E. MacDONALD
Captain, JAGC, U.S. Navy
Counsel for the Court