

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, DC 20594**

**HUMAN PERFORMANCE GROUP CHAIRMAN'S FACTUAL REPORT-
ADDENDUM 3
LOCATION & DATES**

DCA01MM022

A. ACCIDENT

Accident No.	DCA-01-MM-022
Vessels Involved:	USS Greenville, MV Ehime Maru
Location:	About 9 miles south of Oahu, Hawaii
Date:	February 9, 2001
Time:	1343 HST ¹

B. OPERATIONS/HUMAN PERFORMANCE GROUP

Tom Roth-Roffy, NTSB, Operations Group Chairman
Will Woody, NTSB, Human Performance Specialist
Barry Strauch, NTSB, Human Performance Specialist
Lt. Charlie Johnson, US Coast Guard
Lt. Commander Rick Santamauro, US Navy
Commander John Caccivio, US Navy
Capt. Tom Kyle, US Navy

C. Summary

On February 9, 2001, at 1343 local time, the USS Greenville, (SSN 772), a Los Angeles class submarine, collided with the Japanese Motor Vessel, Ehime Maru, about 9 miles south of Oahu, Hawaii. The Ehime Maru, engaged in teaching Japanese high school students the fishing trade, was traveling at 11 knots, on a course of 166°, en route to a fishing area. The Greenville was engaged in a distinguished visitor cruise, a Navy program that invites civilians to observe actual operations aboard its vessels. The Greenville struck the Ehime Maru as it completed an emergency surfacing maneuver from a depth of about 400 feet. The Ehime Maru was damaged and sank as a result of the collision. Thirty five people were onboard the Ehime Maru. The bodies of eight were found when the vessel was retrieved from the ocean floor. A ninth was missing and is presumed to have been killed in the accident. The Greenville was damaged but was able to return to Pearl Harbor under its own power. There were no injuries to any of the persons on board.

¹ All times are in Hawaiian Standard Time as read on a 24-hour clock, unless specifically noted.

The Crew

The Commanding Officer (CO) took command of the Greenville on March 19, 1999. At the time of the accident, he had commanded an eastern Pacific deployment, but not a western Pacific deployment, considered to be a more rigorous measure of a vessel's operational readiness.

The executive officer (XO) reported to the Greenville in October 1999. The Officer of the Deck (OOD) at the time of the accident reported to the Greenville in March 1999. His primary duties were as the Electrical Division Officer. He qualified as OOD in June 2000.

Allegations About the CO

NTSB investigators learned of three incidents that were alleged to have involved the Greenville. In one, the CO was reported to have insisted that a tour of the Greenville be conducted while it was moored near a dock, despite a rough sea state that existed at the time. The public affairs officer coordinating the tour allegedly refused to be taken to the vessel because of the danger that the sea state presented.

In another, while departing San Francisco during the eastern Pacific deployment, the Greenville took on water that had splashed over the bridge in a turbulent area near the Golden Gate Bridge. Several Navy personnel that the Safety Board interviewed reported that the CO deliberately delayed closing the hatch so that he could talk via his cell phone with a radio station that was reporting on the vessel's passage underneath the bridge.

A third incident involved the CO's deliberate call for an emergency surface to avoid being outside of an operations area during the allotted time. Except for the second incident that was discussed at the Navy's Court of Inquiry into this accident, Safety Board investigators were unable to locate material documenting these incidents. However, Navy personnel, including the CO, confirmed the latter two incidents. The Greenville did take on an estimated 100 gallons of water on departure from San Francisco, and squadron personnel who were observing the crew's performance confirmed this. However, no one whom the Safety Board interviewed confirmed the allegations regarding the CO's deliberate delay in closing the hatch. The CO confirmed performing the emergency surfacing maneuver to remain within the operations area. However, he explained that because the navigator had not properly performed his duties, he was not informed that the vessel was in danger of being located outside of the operations area until the navigator informed him of this several minutes before the change in the operations area boundaries was due to take place.

The Cruise

The Greenville had been in port for equipment refitting during a substantial portion of the CO's initial tour on the Greenville and as a result the vessel had been taken out of its scheduled deployment rotation. The refitting was completed in December 2000, and underwent sea trials in late December of that year. After the sea trials it entered a holiday stand down period, and from January 5, 2001, to February 2, 2001, it completed an eastern Pacific deployment, which served as the first part of its pre-overseas movement preparations. Two members of Squadron One, the squadron to which the Greenville belonged, rode the Greenville and observed its performance during this deployment. According to the Navy, they reported that the crew performed well, and that engineering training was also "coming along well."

During this period the Greenville stopped in Ketchikan, Alaska, and later in San Francisco. While it was in San Francisco, the staff of Squadron One asked the CO if the Greenville would support a one-day cruise of civilians on February 9. The CO said that it could.

Squadron One had scheduled the Greenville to commence an embarkation to prepare for a reactor examination on February 9, a Friday. However, on February 2 when it returned to port in Pearl Harbor, Greenville personnel asked the squadron to remain in port over the subsequent Saturday and Sunday, February 10 and 11. The Squadron agreed, but the distinguished visitor embarkation remained on the schedule, and was begun, on February 9. The Navy acknowledged that the sole purpose of the February 9 embarkation was to complete a distinguished visitor cruise.

The Sources of Data

The Greenville crew had three sources of data available to enable them to determine its proximity to surface vessels. These were passive sonar from the sounds of surface vessels, ESM (electronic support measures) or radar energy that surface vessels emitted, and visual data that Greenville periscope operators detected. Each required considerable training, experience, and skills to master. Sonar and ESM were manned by operators who received specialized Naval training to perform the task, and then had to serve as apprentices under the guidance of operators with specific authorization to supervise under instruction specialists. The OOD and CO operated the periscope, and while not a specialized assignment, periscope operation also required specialized training and experience.

Passive sonar and the periscope were equipped with devices that enabled operators in the control room to directly observe the data that the operators observed and monitored. The AVSDU-or analog video signal display unit presented the passive sonar data that sonar operators monitored. The AVSDU on the Greenville was not operating on the day of the accident. The CO was informed of this in the first hour of the cruise, but after the accident testified that

he did not remember being so informed and therefore, he did not take special steps in response, other than to rely on the XO, who closely monitored the sonar data when the Greenville ascended to and remained at PD and positioned himself in a way to communicate with the CO and OOD during these evolutions. Navy officials at the Court of Inquiry differed in their opinions on the use of the AVSDU. One officer testified that this should have warranted canceling the cruise. Another said that the mission should not have been affected, provided that the CO compensated for it by issuing specific standing orders on steps that would be taken to provide control room personnel with additional information on sonar surface contacts.

The periscope was equipped with a televised image of the visual data that was displayed in the control room, referred to as the PERIVIS. This was operational at the time of the accident.

Barry Strauch