

NATIONAL TRANSPORTATION SAFETY BOARD  
OFFICE OF MARINE SAFETY  
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Major Marine Accident      :
Interviews of Investigation:  :
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JAPANESE FISHERIES TRAINING VESSEL, :
  EHIME MARU                :
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  AND                        :
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U.S. NAVY NUCLEAR ATTACK SUBMARINE, :
  USS GREENEVILLE           :
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Sunday, February 18, 2001

INTERVIEWS OF INVESTIGATION

INTERVIEW OF LT MAHONEY

INTERVIEWING PANEL:

National Transportation Safety Board

TOM ROTH-ROFFY, Accident Investigator  
BILL WOODY  
BARRY STRAUCH, Human Factor Specialist

United States Navy

CDR JOHN CACCIVIO, SUBPAC  
LCDR RICH SANTOMAURO

United States Coast Guard

LT CHARLIE JOHNSON  
LTJG KEN KUSANO

[TRANSCRIPT PREPARED FROM A TAPE RECORDING.]

## P R O C E E D I N G S

1  
2 MR. ROTH-ROFFY: [In progress] -- officer of  
3 the watch during the time of the accident.

4 Good afternoon, Lieutenant Mahoney. My name  
5 is Tom Roth-Roffy, and I am an accident investigator  
6 with the National Transportation Safety Board. I and  
7 several other investigators are here to investigate the  
8 accident that occurred between the USS Greeneville and  
9 the fishing vessel, Ehime Maru.

10 For your information, the NTSB is a U.S.  
11 Federal Government agency responsible for investigating  
12 transportation accidents in the United States. The  
13 Office of Marine Safety is a division of the National  
14 Transportation Safety Board, and it is responsible for  
15 investigating marine accidents on the waterways of the  
16 United States.

17 The purpose of the Safety Board's  
18 investigation is to determine the cause of the accident  
19 and to make recommendations aimed at preventing future  
20 occurrences of similar accidents. In our  
21 investigation, we make no effort to assign blame for  
22 the accident, nor do we have legal authority to  
23 penalize any person involved in the accident. Our  
24 investigation is strictly a safety investigation and  
25 not a legal investigation.

26 If you desire, you may have another person  
27 assist you during this interview. Would you like to  
28 have somebody assist you with the interview or do you  
29 feel you can make it through on your own?

30 LT MAHONEY: No.

31 MR. ROTH-ROFFY: No what?

32 LT MAHONEY: No, I don't need anybody to  
33 assist me.

34 MR. ROTH-ROFFY: Okay. Also joining me in  
35 the interview will be those seated at this table. We  
36 have representatives from the United States Coast  
37 Guard, the U.S. Navy, and I would like to at this time  
38 ask that they introduce themselves.

39 MR. WOODY: Bill Woody, NTSB.

40 MR. STRAUCH: I am Barry Strauch from the  
41 NTSB.

42 LTJG KUSANO: Lieutenant JG Ken Kusano,  
43 United States Coast Guard.

44 LT JOHNSON: Lieutenant Charlie Johnson,  
45 United States Coast Guard.

46 LCDR SANTOMAURO: Lieutenant Commander  
47 Santomauro, United States Navy.

48 CDR CACCIVIO: Commander Caccivio from U.S.  
49 Navy.

50 MR. ROTH-ROFFY: Okay. We normally ask for  
51 an interview -- I am sorry -- a narrative description  
52 of all the actions, but in this case since you were not  
53 really involved and did not witness a lot -- most of  
54 the incidents occurring forward, however, I guess we  
55 need to just clarify that point.

56 What was your station on board the vessel

1 during the time of the accident or, say, within two  
2 hours preceding the accident?

3 LT MAHONEY: I took the watch at about 12:00,  
4 about ten minutes before 12:00, and was back in the  
5 engine room in the maneuvering spaces for the entire  
6 time until -- from that time until the accident  
7 occurred, and also until I was relieved at 1800, I  
8 believe.

9 MR. ROTH-ROFFY: Okay. And prior to the  
10 accident, were you on watch in the control room?

11 LT MAHONEY: Before we went out for the  
12 maneuvering watch I was on watch as the control room  
13 supervisor. During maneuvering watch, when the  
14 maneuvering watch was secured, I stood watch briefly as  
15 contact coordinator for about 25 minutes, and that was  
16 before lunchtime. It was about 10 o'clock.

17 MR. ROTH-ROFFY: Contact coordinator, could  
18 you describe your duties as a contact coordinator?

19 LT MAHONEY: As a contact coordinator, I am  
20 the assistant to the officer of the deck to help him  
21 identify contacts, and if they are going to be a  
22 problem, so you are looking out the scope constantly,  
23 and if I see a contact, I will determine if we have a  
24 sonar contact on him, and I will still do periscope  
25 observations where I determine how far away the contact  
26 is, what his angle on the bow is, what direction he is  
27 going, and if we need to make any actions to avoid  
28 coming close to that contact. I make recommendations  
29 to the officer of the deck on those facts.

30 MR. ROTH-ROFFY: So, you provide bearing  
31 information to the officer of the deck?

32 LT MAHONEY: I provide bearing speed --

33 CDR CACCIVIO: Hold on. This is Commander  
34 Caccivio. Before we go forward, I just want to make  
35 sure he understands, it is a surface only watch  
36 station.

37 MR. ROTH-ROFFY: Okay. That is actually  
38 going to be my next question.

39 CDR CACCIVIO: Only on the surface when the  
40 submarine is on the surface, running on the surface,  
41 you will have a contact coordinator. Typically, an  
42 officer, doesn't have to be, stationed in the control  
43 room who is responsible for developing the tactical  
44 position, tactical solutions for the officer of the  
45 deck, to integrate quartermaster's navigational  
46 constraints and sonar, all the other sensor inputs to  
47 provide him recommendations as to how to maneuver the  
48 ship.

49 But it is only in a surface condition, so it  
50 would have been secured sometime about 10:30 in the  
51 morning or something, whenever the dive time was, and  
52 it would have been reposted obviously after the ship is  
53 back on the surface.

54 MR. ROTH-ROFFY: So, you relieved as  
55 engineering officer of the watch around -- did you say  
56 about 1200?

1 LT MAHONEY: About 1200.  
2 MR. ROTH-ROFFY: And when you relieved the  
3 watch, were there any significant engineering problems  
4 that were noted to you by the person you relieved?  
5 LT MAHONEY: No, there was no significant  
6 engineering problems at all.  
7 MR. ROTH-ROFFY: Was the vessel fully  
8 operational when you relieved the watch?  
9 LT MAHONEY: The vessel was fully  
10 operational, no propulsion limitations.  
11 MR. ROTH-ROFFY: During the maneuvering that  
12 was performed, we have heard about these high speed  
13 maneuvers, do you also -- were there any problems in  
14 responding to the orders from the control room?  
15 LT MAHONEY: No, there were no problems at  
16 all, just the -- I coordinate with the throttleman to  
17 make sure we answer the bells quickly and just how we  
18 normally answer bells. All worked just fine.  
19 MR. ROTH-ROFFY: What is your duty, just in  
20 general terms, what was your watch duty as engineering  
21 officer of the watch?  
22 LT MAHONEY: I am the senior person in charge  
23 in the engine room, so I coordinate all engine room  
24 evolutions that are going to occur. I kind of look  
25 ahead to see what is going to happen, and I am also I  
26 guess you would call the safety observer for the  
27 reactor plant and the electrical plant, so if there is  
28 any sort of problems, I immediately inform our  
29 communications to the officer of the deck, I  
30 immediately inform what the problem is and what my  
31 actions that I am taking to fix those problems, but  
32 most of the time there is not too much going on, but I  
33 am going to be communicating with the officer of the  
34 deck besides if he gives me exact bell orders, I will  
35 repeat those back to him and just answer bells, and if  
36 there is certain evolutions, let's say that we need  
37 permission of the commanding officer, I will coordinate  
38 with him to the commanding officer to get those  
39 permissions and then I will coordinate those evolutions  
40 back to the engine room.  
41 MR. ROTH-ROFFY: From the time you took the  
42 watch around 12 o'clock until the time of the  
43 collision, did you report to the officer of the deck  
44 any significant problems that you were having regarding  
45 the ship's ability to maneuver?  
46 LT MAHONEY: No, I didn't report any problems  
47 at all, and there were no problems at all.  
48 MR. ROTH-ROFFY: I think that is about all I  
49 have for now. I would like to pass the interviewing to  
50 Mr. Bill Woody.  
51 MR. WOODY: Do you keep a record of the bells  
52 in the engine room?  
53 LT MAHONEY: Yes, I do.  
54 MR. WOODY: Do you recall what the RPM was  
55 the ship was making during the emergency surface?  
56 LT MAHONEY: The emergency surface, we were

1 10 knots.  
2 MR. ROTH-ROFFY: Let's not write those  
3 numbers.  
4 LT MAHONEY: Oh, we can't write those down?  
5 Okay.  
6 MR. ROTH-ROFFY: Can we go off the record.  
7 [Off the record.]  
8 LT MAHONEY: We were answering the two-thirds  
9 bell when we came up for the emergency blow.  
10 MR. WOODY: Can you give me the sequence of  
11 the bell? What speed was before the emergency surface  
12 alarm?  
13 LT MAHONEY: Let's see -- take a look. We  
14 were doing a bunch -- before we were doing the  
15 emergency surface, when we did all the angles and  
16 dangles and the high speed maneuvers, so let's see --  
17 13, the greater than 20 here was the emergency deep --  
18 1324 to 1330 were all the high speed maneuvers. We  
19 were doing high-speed turns, so we were maintaining our  
20 depth, constant depth, and doing high-speed turns, it  
21 looks like --  
22 MR. WOODY: I don't need all the --  
23 LT MAHONEY: What exactly do you want?  
24 MR. WOODY: What speed was the ship at before  
25 the emergency -- before the diving alarm was sounded  
26 for the emergency --  
27 LT MAHONEY: Emergency surface?  
28 MR. WOODY: Blow, right.  
29 LT MAHONEY: We came to periscope depth and  
30 did an emergency deep, so had full down and then as  
31 soon as we got down to 400 feet, they slowed down to 10  
32 knots, and we came up at 10 knots.  
33 MR. WOODY: So, there was no speed change  
34 with the emergency surface bell then.  
35 LT MAHONEY: Well, when the emergency surface  
36 occurs, you have, you know, a lifting effect from the  
37 air, and the speed increase on the way up.  
38 MR. WOODY: I am talking about the engine  
39 RPM.  
40 LT MAHONEY: Oh, no, engine RPM didn't  
41 change.  
42 MR. WOODY: No change in bells, in other  
43 words?  
44 LT MAHONEY: No, no change in bells.  
45 MR. WOODY: Did you remember hearing  
46 anything?  
47 LT MAHONEY: When we --  
48 MR. WOODY: When the ship surfaced?  
49 LT MAHONEY: Oh, when the ship surfaced,  
50 well, I remember the captain on the IMC saying that,  
51 you know, the ship is about to surface, and then you  
52 can always -- you always feel kind of an airy feeling,  
53 you don't feel it maneuvering too much when the ship  
54 comes up and then lays back in the water, kind of like  
55 a weightlessness just more up forward, and then we felt  
56 this -- the wild shudder, which is the collision, and

1 we all maneuvering were kind of dumbfounded, we thought  
2 that it was like we hit a big wave or something because  
3 there was a little bit of a shudder that occurs when  
4 you have an emergency surface.

5 This was like an excessive shudder, so we  
6 just kind of sat around like what the heck was that,  
7 that was the biggest wave I have ever felt in emergency  
8 surface, and about 30 seconds later, the captain came  
9 over the 1MC and said that we had had a collision with  
10 the -- he misread the name when we first got it, but  
11 the Ehime Maru, and we could read the Japanese high  
12 school fishing vessel on the side immediately, so we  
13 knew what we had hit, and he immediately said we were  
14 going to render assistance and do whatever we could and  
15 contact the proper authorities that we had had this  
16 collision.

17 MR. WOODY: Were you asked to make a check of  
18 your spaces?

19 LT MAHONEY: There was no request to make a  
20 check of the spaces, but the watchstanders immediately  
21 did that and called up to maneuvering and gave us  
22 information about it, and it was wrong. We had no hull  
23 breaches, no water coming into the ship.

24 The only two problems that occurred, the  
25 first shaft seal had a high differential pressure  
26 reading, and so that failed, but we have two shaft  
27 seals, so the aft shaft seal picked up and it was  
28 observed when we had bells, over two-thirds of the  
29 shaft wobbled a little bit, and it was just a little  
30 bit out of round, so I made a recommendation to the  
31 officer of the deck that he limit his bells to less  
32 than standard two-thirds if he had to in order to  
33 minimize the wobbling of the shaft, because it was  
34 getting worse with the higher bells.

35 MR. WOODY: Was this something visually or  
36 something that you could feel or hear?

37 LT MAHONEY: It was visual if you looked  
38 really closely with the shaft guards, you can visually  
39 see it, but we measured it only it was like 40,000ths,  
40 so still the -- you can stop me whenever I get --

41 MR. WOODY: I will stop you before you do.  
42 If you have questions, just --

43 LT MAHONEY: Specifications, no. So, it was  
44 determined it was far out of specification by, I think  
45 it was about 3,000ths it was supposed to be.

46 MR. WOODY: And the rest of the power plant,  
47 the nuclear portion of it, the electrical portion of  
48 it, everything remained normal?

49 LT MAHONEY: We had no breaker shift in the  
50 electrical plant, we had no indications of anything  
51 wrong in the reactor plant, and we immediately checked  
52 for all those things, and no indications of any breach  
53 of watertight integrity, no binding in the steering and  
54 diving plant, those sorts of things. So, we really had  
55 relatively minor damage once we came up.

56 MR. WOODY: Did you have any -- going back to

1 the time of the -- I think you described the vibration  
2 --  
3 LT MAHONEY: It was a loud shudder.  
4 MR. WOODY: A loud shudder.  
5 LT MAHONEY: It was a -- it was a sustained  
6 shudder for about I would say two to three seconds, and  
7 just everything shook in the engine room, and, you  
8 know, everything in the engine room is on sound mounts  
9 or rubber mounts, so I got a couple of reports when I  
10 walked around the engine room to check logs and things,  
11 that they had seen pipes just visually shaking all over  
12 the place, it was pretty violent, but nothing --  
13 nothing was damaged really.  
14 MR. WOODY: Or at least developed except for  
15 the shaft seal or anything like that?  
16 LT MAHONEY: Except for the shaft seal, and  
17 that tended to reseal itself afterwards.  
18 MR. WOODY: No brackets carried away or  
19 nothing like that?  
20 LT MAHONEY: No.  
21 MR. WOODY: No repairs were required in the  
22 engine room.  
23 LT MAHONEY: Well, there are going to be  
24 repairs required for the shaft.  
25 MR. WOODY: The shaft, besides the shaft.  
26 LT MAHONEY: Besides the shaft, no, and the  
27 shaft seals.  
28 MR. WOODY: Okay. After the captain  
29 announced that the ship would be giving, rendering  
30 assistance, did your duties change?  
31 LT MAHONEY: No, my duties did not change.  
32 MR. WOODY: You stayed in the engine room on  
33 watch.  
34 LT MAHONEY: I stayed in the engine room on  
35 watch, I continued to answer bells, and I continued to  
36 inform the officer of the deck of any status of  
37 propulsion plant, so he can, you know, be informed and  
38 order bells accordingly.  
39 MR. WOODY: I think that is all the questions  
40 I have on the event, but I would be interested in  
41 getting in the record how long it takes a person to --  
42 what is required to become a nuclear -- I mean a watch  
43 officer in a nuclear plant, I mean engineering officer  
44 of the watch.  
45 LT MAHONEY: Starting from the -- in the  
46 beginning, we go to nuclear power school for six  
47 months, which is right after you get out of college and  
48 join the Navy, and then after the six months of --  
49 which is -- this is basic, anything from calculus to  
50 physics, retrodynamics, the whole nine yards about how  
51 a nuclear power plant works and how steam systems work,  
52 and then we go for another six months of nuclear  
53 prototype training.  
54 We actually work in a nuclear reactor. We  
55 stand watches in that engineering plant. We learn  
56 about all the systems of that plant and learn to

1 operate it and get hands-on observation of how a  
2 nuclear power plant works after we learn all the theory  
3 of how it works.

4 Before we come to the ship, we get another  
5 three months of submarine school training, which is  
6 pretty much non-nuclear side training, but it gives us  
7 an idea of how the forward side of the boat works, how  
8 to stand officer of the deck, how the sonar stations  
9 work, the more tactical watch stations, and then when  
10 we come to the ship, we have to requalify as  
11 engineering officer of the watch in that specific  
12 plant, because when we are on our prototype training we  
13 qualify as engineering officer of the watch there, and  
14 then that gave us kind of a base knowledge, so that we  
15 can come to our ship and qualify quickly.

16 Normal qualification time is four to five  
17 months for an engineering officer watch once he gets  
18 his submarine, and that's the first watch station, we  
19 qualify. Major watch stations are because we are so  
20 close to the nuclear sub, we have had all the  
21 schooling, we want to go straight and stand the  
22 engineering officer watch.

23 MR. WOODY: Then, qualification takes how  
24 much time after -- this would be running concurrently  
25 with time on board, an officer has to go on board and  
26 qualify in the nuclear plant, how long would it take  
27 that officer to qualify in submarines?

28 LT MAHONEY: In nuclear submarines?

29 MR. WOODY: Uh-huh.

30 LT MAHONEY: Normal time is about 12 months.

31 MR. WOODY: Twelve months. So, in 12 months  
32 you become qualified as the officer of the engineering  
33 watch, as well as qualified in submarines?

34 LT MAHONEY: Qualified in submarines, and we  
35 qualify diving officer of the watch, officer of the  
36 deck, and then there is a separate submarine  
37 qualification card also.

38 MR. WOODY: Separate submarine qualification  
39 card.

40 LT MAHONEY: Right.

41 MR. WOODY: I thought that would be what you  
42 would use for getting your dolphins.

43 LT MAHONEY: Right, there is a dolphin, well,  
44 I mean not to get into the nuts and bolts of the  
45 qualification card, but there is a -- let's see, I  
46 guess we have engineering watch, then, the in-port is  
47 engineering duty officer, officer of the deck, the in-  
48 port version of that is ship's duty officer, a couple  
49 different -- then, diving officer of the watch where we  
50 learn basically the ship systems and learn how to stand  
51 the diving officer of the watch.

52 We don't normally stand it, but it is  
53 qualified kind of, so we get the feel for all the  
54 systems of the ship. Then, auxiliary ones, like  
55 battery charging line-up officer to learn how the  
56 ventilation system works, and the battery works, and we

1 qualify.  
2 Am I missing anything? Contact coordinator,  
3 yes. Contact coordinator also is the watch I talked to  
4 you about before. We learn to give recommendations to  
5 the office of the deck, so it is kind of a watch that  
6 you stand to learn about being officer of the deck. It  
7 is a good predecessor to it.  
8 MR. WOODY: I have heard about this auxiliary  
9 power plant that you lower down for -- I forget the  
10 name of it --  
11 LT MAHONEY: The outboard?  
12 MR. WOODY: The outboard, the outboard,  
13 right.  
14 LT MAHONEY: Okay.  
15 MR. WOODY: What kind of horsepower are we  
16 speaking about for something like that?  
17 LT MAHONEY: I think it is 325 horsepower.  
18 MR. WOODY: 325 horsepower, okay. I was just  
19 interested.  
20 I think that is all the questions I have.  
21 Thank you very much. So, you weren't involved in the  
22 search and rescue except for the -- in the rescue  
23 portion except just stayed on watch.  
24 LT MAHONEY: No, I stayed on watch until it  
25 was all over at 1800, I mean until we were just given  
26 tasking to be part of the search and rescue, continue  
27 searching all night.  
28 MR. WOODY: Were you participating in any  
29 part of that?  
30 LT MAHONEY: No. I came up forward and I had  
31 to stand watch again, in the mid-watch, so I went to  
32 bed pretty much.  
33 MR. WOODY: Now, your executive officer  
34 prepared a form. Did you get a form to fill out, your  
35 72-hour history? We will be happy to take that if you  
36 do have it with you.  
37 Thank you very much.  
38 I think that is all the questions I have at  
39 this time.  
40 MR. STRAUCH: This is Barry Strauch.  
41 Lieutenant, you got your degree, your college degree?  
42 LT MAHONEY: Yes, electrical engineering.  
43 MR. STRAUCH: From what school?  
44 LT MAHONEY: The University of Colorado at  
45 Boulder.  
46 MR. STRAUCH: Thank you. I have no further  
47 questions.  
48 CDR CACCIVIO: This is Commander Caccivio.  
49 For the existing conditions in sonar with the towed  
50 array retrieved, how many qualified sonar operators  
51 should be in sonar and what positions should be manned?  
52 LT MAHONEY: Are you talking to me?  
53 [Laughter.]  
54 LT MAHONEY: This is kind of off the -- what  
55 is the purpose of this questioning?  
56 CDR CACCIVIO: Let me just go back. For the

1 purposes, are you the sonar officer on board the sub?  
2 LT MAHONEY: Yes, I am the sonar officer.  
3 CDR CACCIVIO: So, I am asking questions  
4 about sonar manning.  
5 LT MAHONEY: If we are going to be -- towed  
6 array supervisor --  
7 CDR CACCIVIO: No, no, no, what I am saying  
8 existing conditions with the towed array already  
9 stowed, so towed array not in use --  
10 LT MAHONEY: Towed array not in use, yes.  
11 CDR CACCIVIO: I am asking how many sonar  
12 operators are required to be in sonar.  
13 LT MAHONEY: Oh, how many sonar operators are  
14 required to be in sonar. We are going to have a  
15 broadband operator, a workload share operator who works  
16 with the broadband, the sonar supervisor, and we also  
17 have an auxiliary operator who operates extra auxiliary  
18 sonar equipment.  
19 CDR CACCIVIO: Would all those watchstanders  
20 be on the watch bill?  
21 LT MAHONEY: Yes, all those watchstanders are  
22 on the watch bill.  
23 CDR CACCIVIO: Did the watch bill for that  
24 day have a designated broadband operator and workload  
25 share operator?  
26 LT MAHONEY: I did not go and exactly look at  
27 it, but I am sure it had designated broadband and  
28 workload share.  
29 CDR CACCIVIO: Would you be surprised if I  
30 told you that there was only one qualified operator in  
31 sonar?  
32 LT MAHONEY: I would be surprised.  
33 CDR CACCIVIO: Okay. Let me tell you there  
34 was a qualified sonar supervisor, there was a qualified  
35 broadband operator, and the operator on the workload  
36 share station was an unqualified operator.  
37 Is that a routine way of operating a sonar  
38 shack for USS Greenville with the towed array  
39 retrieved?  
40 LT MAHONEY: This was at the time -- that's,  
41 no, to my knowledge, that's not routine.  
42 CDR CACCIVIO: Do you normally provide an  
43 input to the sonar watch bill?  
44 LT MAHONEY: No, it is normally the weapons  
45 officer who signs the watch bill for the sonar.  
46 CDR CACCIVIO: Let me correct that. It is  
47 actually the XO that approves the watch bill.  
48 LT MAHONEY: Right, but the weapons officer  
49 signs the portion approving his portion of that.  
50 CDR CACCIVIO: That is what I asked, do you  
51 provide an input to the watch bill.  
52 LT MAHONEY: No.  
53 CDR CACCIVIO: Does your chief provide the  
54 input to the weapon officer's or does he provide it to  
55 the combat systems department chief? Surely the  
56 weapons officer doesn't draft the watch bill himself.

1 That is what I am asking you --

2 LT MAHONEY: No, I mean the [inaudible]  
3 drafts the watch bill, and the chief gives the input to  
4 the COB, and then it is passed through all the chain of  
5 command.

6 CDR CACCIVIO: When you do sonar supervisor  
7 interviews, do you routinely ask questions of your  
8 sonar supervisors about what the required watchstander  
9 requirements are in sonar?

10 LT MAHONEY: To tell you the truth, I haven't  
11 done a sonar supervisor qualification.

12 CDR CACCIVIO: Okay. How long have you been  
13 a sonar officer?

14 LT MAHONEY: On the Greeneville, I was sonar  
15 officer since I have been there, for about a year, but  
16 we haven't qualified anyone sonar supervisor except for  
17 -- we had a requalification of two personnel that came  
18 on board, but I wasn't involved in that. I don't know  
19 why that happened.

20 CDR CACCIVIO: Okay. That is all I have.

21 MR. ROTH-ROFFY: Okay. I guess we will make  
22 a second round. Does anybody have any further  
23 questions? Bill Woody? Barry?

24 MR. STRAUCH: This is Barry Strauch. I would  
25 just like to follow up on some of Commander Caccivio's  
26 questions.

27 What is the normal manning of sonar stations?

28 LT MAHONEY: The manning is broadband and  
29 workload share and auxiliary operator and a sonar  
30 supervisor.

31 MR. STRAUCH: And as you understand it from  
32 what Commander Caccivio said, what was the manning at  
33 the time of the event?

34 LT MAHONEY: As Commander Caccivio said, we  
35 had a broadband operator, workload share who wasn't  
36 qualified, and a sonar supervisor.

37 MR. STRAUCH: So, you had half the qualified  
38 staffing that you would have expected?

39 LT MAHONEY: Yes

40 CDR CACCIVIO: That would be incorrect. You  
41 have two-thirds - sonar supervisor is qualified,  
42 broadband operator was qualified, workload share guy,  
43 auxiliary operator is not a required watch station per  
44 the employment guidelines.

45 MR. STRAUCH: I am sorry, what is not a  
46 required --

47 CDR CACCIVIO: The auxiliary operator is not  
48 a required watch station per the operational  
49 guidelines, promulgated policy for watchstanders.

50 MR. STRAUCH: Okay.

51 CDR CACCIVIO: So, he needed two operators.  
52 He needed a broadband operator, he needed a broadband  
53 workload share operator, sonar supervisor. So, I guess  
54 -- so that there is three qualified guys in there or  
55 two, so I mean really it's not half, it's 67 percent.

56 LT MAHONEY: I was mistaken. I thought it

1 was an auxiliary operator.

2 CDR CACCIVIO: We do. Boats have an  
3 auxiliary operator. It's an additional way of doing  
4 business to make sure we have the guys, we can get  
5 things done.

6 MR. STRAUCH: Lieutenant, you appeared kind  
7 of surprised when Commander Caccivio told you what the  
8 manning was. Had you ever seen that manning level  
9 before in sonar?

10 LT MAHONEY: I mean to tell you the truth, I  
11 don't go in there all the time to go -- particularly go  
12 check on exactly what the manning is. I go in and see  
13 there is -- I would just expect to have a qualified  
14 workload share and a broadband operator at all times,  
15 and when I go in, I usually see two people sitting  
16 there as qualified operators, so, yeah, I was  
17 surprised.

18 MR. STRAUCH: And you said you would expect  
19 to see them filled, that expectation is based on what?

20 LT MAHONEY: On what is required.

21 MR. STRAUCH: What effect, in your opinion,  
22 would this have on the ability of the crew to detect  
23 surface vessels?

24 LT MAHONEY: Detection of surface vessels,  
25 this probably wouldn't have any effect on it because  
26 you have one broadband operator who is listening to the  
27 stack and listening for surface contacts.

28 You also have a -- the sonar supervisor who  
29 is wearing headphones and listening at the same stack  
30 for what he is going through, and then at this time we  
31 are -- it was right after coming down from periscope  
32 depth is when everyone was kind of attuned to sonar  
33 contacts and right before you are coming to the  
34 surface.

35 This is a very -- a time when everybody has  
36 their senses heightened, so I would expect the sonar  
37 supervisor to be looking right over the shoulder at the  
38 broadband operator and assisting, and I also know the  
39 executive officer was in sonar at this time, so, you  
40 know, the level of supervision for looking for contacts  
41 was heightened very much, so I would expect this  
42 wouldn't really hinder the ship's ability to detect  
43 contacts at all.

44 MR. STRAUCH: The role of the exec in the  
45 sonar room, how would that have affected things?

46 LT MAHONEY: The executive officer and all  
47 officers were trained to look at -- like on the control  
48 room we have a repeater of the sonar screen, so we see  
49 the raw data all the time.

50 As an officer of the deck, I am looking at  
51 that, just checking to see if I see anything that there  
52 might be a contact that they have missed, so we have a  
53 lot of -- and whenever we go to periscope depth, we are  
54 looking at that raw data, also looking at the fire  
55 control raw data to understand what the contact picture  
56 is along with what our watchstanders are giving us

1 input on, so we are always interpreting that data.

2 The officer of the deck is like an  
3 independent check to make sure we feel comfortable to  
4 go up to the surface as long as all our watchstanders  
5 feel comfortable, so the executive officer has been  
6 department head, engineering officer, so he has  
7 extensive experience in doing those things.

8 MR. STRAUCH: This repeater that you  
9 mentioned, is that something known as the ASVDU?

10 LT MAHONEY: Yes, that was the repeater that  
11 was not working.

12 MR. STRAUCH: Okay. So, where would the  
13 reduction in manning affect the sonar capabilities of  
14 the ship?

15 LT MAHONEY: The reduction in manning would  
16 probably affect it if we had several contacts, and they  
17 are designated to -- let's say if the broadband  
18 couldn't keep track of all the contacts, the workload  
19 share is generally like a more -- I can't remember --  
20 the workload share is going to help him out and keep  
21 track of the contacts that you can't keep track of,  
22 especially when you make a turn and you have to take  
23 the trackers out of, and then reassign the trackers  
24 after the turn.

25 MR. STRAUCH: Have you ever seen the  
26 situation where sonar had contact with a vessel,  
27 maintained contact with a vessel, but for some reason  
28 the operators misinterpreted the contact and lost  
29 awareness of it.

30 LT MAHONEY: Normally once you have gained a  
31 contact, you are not going -- you are not going to just  
32 lose contact with it, because they put an automatic  
33 tracker on it, and the only reason the automatic  
34 tracker would track off is if the sound level of the  
35 contact was so insignificant it couldn't even pick it  
36 up.

37 The only times I would see that they have  
38 mistakenly not seen contacts is when they are masked by  
39 biologics, by whales, by fish, shrimp, those sorts of  
40 things, and a lot of times you will see a trace which  
41 looks just like a contact, but it may be a school of  
42 whales coming by or some shrimp.

43 So, they have to listen quite attentively to  
44 listen through that shield to make sure there is not a  
45 contact behind it, because sometimes there may be, and  
46 they may think -- they may hear right away the  
47 biological noise, but they are not looking, listening  
48 exactly for the mechanical noise if they listen.

49 So, when you track that, sometimes the  
50 tracker can't pick up on just the mechanical noise, and  
51 they have to manually track that, but normally, you  
52 will see the ship break out, the trace break away from  
53 the biological trace, then, you can pick up which one  
54 is the ship.

55 MR. STRAUCH: Thank you, Lieutenant.

56 LT JOHNSON: I have one. Have you ever sat a

1 sonar watch?

2 LT MAHONEY: I did it when I was --

3 LT JOHNSON: I am sorry, this is Lieutenant  
4 Johnson with the U.S. Coast Guard. I am sorry, go  
5 ahead.

6 LT MAHONEY: When I was in sub school, I sat  
7 some sonar watches, and every now and then I come into  
8 the shack and listen a little, but not an entire watch.

9 LT JOHNSON: Have you ever sat a watch on an  
10 operational submarine underway?

11 LT MAHONEY: Not an entire watch, no, just I  
12 have gone in and listened.

13 LT JOHNSON: During a routine trip or in a  
14 day, let's just take a routine day being the sonar  
15 officer, how many times in a routine day do you usually  
16 go into sonar?

17 LT MAHONEY: Go into sonar? Probably once or  
18 twice.

19 LT JOHNSON: But you do make it a point to go  
20 in, okay. That's all I have. Thank you.

21 MR. ROTH-ROFFY: Actually, I have a couple of  
22 follow-up questions based on some of the other  
23 questions.

24 Are you a qualified officer of the deck on  
25 the Greenville?

26 LT MAHONEY: Yes, I am.

27 MR. ROTH-ROFFY: Can you describe the normal  
28 procedures for going to periscope depth regarding a  
29 brief, a safety brief?

30 LT MAHONEY: Normally, the brief for  
31 periscope depth is to get a contact picture. Normally,  
32 it is just for the evolutions that we are going to do.  
33 A normal brief is I call the watchstanders in the  
34 control who have an effect, I am going to periscope  
35 depth, my radio operator, my ESM operator, my sonar  
36 supervisor, a diving officer of the watch.

37 We will talk about, you know, where we are  
38 geographically, what kind of contacts we are going to  
39 expect, what contacts we have been seeing in the past  
40 few hours or as long as I have been on watch or the  
41 last officer of the deck has turned over to me.

42 We will talk about what the ESM picture is  
43 going to look like, what kind of emitters we are going  
44 to see, what we are going to expect when we get up  
45 there, ESM watch, the radio watch will talk about what,  
46 you know, messages we need to send off, what time I  
47 need to be up to get my message traffic, those sorts of  
48 things, and the diving officer watch, we may discuss if  
49 -- let's say the profile, how that is going to affect  
50 us in our ballast on the way up before we go to  
51 periscope depth, and then the sonar, in respect to the  
52 sonar supervisor, is that what you are looking for in  
53 particular?

54 It is mostly like, what I try to do is get a  
55 feel for things before you go up, but you also know  
56 that, let's say I have been sitting at 400 feet for a

1 long time, I may have a layer where I am not going to  
2 hear things, and if you look at the SVP and the layer  
3 is fairly steep, we are going to expect to see a lot  
4 more contacts when we come up to 150 feet before we  
5 come to periscope depth.

6 If the layer is not that significant, then,  
7 we shouldn't expect to see too many more contacts, and  
8 we will discuss those things, and then make the -- that  
9 is the brief side of things. Would you like anything  
10 else?

11 MR. ROTH-ROFFY: No, that's fine. This  
12 brief, so-called safety brief, is this held as a group  
13 meeting or do you go around individually and speak with  
14 each watch --

15 LT MAHONEY: No, this is held as a group  
16 meeting.

17 MR. ROTH-ROFFY: And how often would you  
18 conduct this brief before going to periscope depth, is  
19 it once in a while or is it something you regularly do?

20 LT MAHONEY: It is done every time.

21 MR. ROTH-ROFFY: Every time. Is that by  
22 ship's instruction or personal preference or why would  
23 you do that safety brief?

24 LT MAHONEY: It is just how I have been  
25 trained as good operating procedure. It also helps to  
26 orchestrate everything when you go to periscope depth  
27 to make sure you go smoothly, and it is also per the  
28 commanding standard -- I think it's in the commanding  
29 officer standing orders.

30 MR. ROTH-ROFFY: Okay. And returning to the  
31 sonar manning levels, you stated that you didn't  
32 believe there would be any degradation in the sonar's  
33 ability to track targets with an unqualified person at  
34 the workload share position, is that what you --

35 LT MAHONEY: Yes, as long as there is, you  
36 know, a good person at broadband, there weren't more  
37 than one or two, maybe three contacts, and the sonar  
38 supervisor is right behind him, there is no  
39 degradation. I think it only is hard when there is  
40 more than two or three contacts.

41 MR. ROTH-ROFFY: And who would normally do  
42 the classification of targets after they are acquired?

43 LT MAHONEY: Classification targets is  
44 handled by the sonar supervisor. There is a -- well,  
45 also, it's done by an operator, but he will report out  
46 to me what the classification is, but he has to approve  
47 based on what the operator tells him, based on what the  
48 -- what it sounds like, how fast the RPM is.

49 MR. ROTH-ROFFY: And who does the logging of  
50 the acquired targets and what they are doing?

51 LT MAHONEY: The logging is normally done by  
52 the auxiliary operator keeps the logs.

53 MR. ROTH-ROFFY: And if there wasn't an  
54 auxiliary operator on watch, who would do that logging?

55 LT MAHONEY: I am not sure. Usually, there  
56 is, but I am not sure.

1 MR. ROTH-ROFFY: Have you ever been involved  
2 in an emergency main ballast blow, emergency main  
3 ballast tank blow evolution?  
4 LT MAHONEY: Not as officer of the deck.  
5 MR. ROTH-ROFFY: All right. I think that is  
6 all the questions I have.  
7 Anybody else?  
8 [No response.]  
9 MR. ROTH-ROFFY: Okay. That being said, the  
10 time is about 1709. That concludes our interview with  
11 Lieutenant Mahoney.  
12 I am sorry. Stay on the record. Sorry,  
13 Bill.  
14 MR. WOODY: We have a few personal questions  
15 we ask everybody who we talk to, such as your age, for  
16 example.  
17 LT MAHONEY: Twenty-seven.  
18 MR. WOODY: And your height and weight?  
19 LT MAHONEY: 5 foot 11, 175.  
20 MR. WOODY: And would you describe your  
21 health as good?  
22 LT MAHONEY: Excellent.  
23 MR. WOODY: Are you taking any kind of  
24 medication prescribed by a physician?  
25 LT MAHONEY: No.  
26 MR. WOODY: Any self-medication, over the  
27 counter things like --  
28 LT MAHONEY: Ibuprofen occasionally, and that  
29 would be all.  
30 MR. WOODY: That would be for headache or --  
31 LT MAHONEY: That would be for headache every  
32 once in a while.  
33 MR. WOODY: Okay.  
34 LT MAHONEY: And -- oh, yeah, and seasick  
35 medicine every -- if I haven't been to sea in a while,  
36 I will take a --  
37 MR. WOODY: I see. And glasses, do you wear  
38 glasses?  
39 LT MAHONEY: No, I don't wear glasses.  
40 MR. WOODY: Are you eyes 20/20?  
41 LT MAHONEY: Yes.  
42 MR. WOODY: Have there been any events in  
43 your life the past month, past few weeks that have had  
44 a depressing effect on you, such as any sadness or, on  
45 the other hand, anything that has been very good news,  
46 anything exhilarating, any kind of ups and downs in  
47 your life the past month?  
48 LT MAHONEY: In the past month? I guess the  
49 best news is I got accepted to grad school a couple  
50 days ago.  
51 MR. WOODY: Good. Congratulations.  
52 LT MAHONEY: But that was after the accident.  
53 MR. WOODY: That was after the accident.  
54 LT MAHONEY: Yes.  
55 MR. WOODY: Okay.  
56 LT MAHONEY: So, it really had no bearing on

1 that, but nothing else I can think of.  
2 MR. WOODY: Okay. That is all we have.  
3 MR. ROTH-ROFFY: Okay. We will try to close  
4 out again. The time is now about 1711, and that  
5 concludes our interview of Lieutenant Mahoney.  
6 [End of interview of Lieutenant Mahoney.]  
7  
8  
9