

I N D E X

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2:35 p.m.

Whereupon,

EDGARDO FERRER

having been first duly sworn, was called as a witness herein and was examined and testified as follows:

MR. ROTH-ROFFY: Okay. The time is now about 35 minutes after 2:00 in the afternoon and the date is the 5th of June 2003. We are here to interview Mr. Edgardo Ferrer, a third engineer on the Norway. Good afternoon, Mr. Ferrer.

THE WITNESS: Good afternoon.

MR. ROTH-ROFFY: I'm an investigator with the National Transportation Safety Board in Washington, D.C. The National Transportation Safety Board is a United States Federal Government agency responsible for investigating accidents, transportation accidents in the United States.

We are here to investigate the accident that occurred on the SS Norway on May 25, 2003. Our investigation is strictly a safety investigation, not a legal investigation. We are interested in determining what caused the accident, if we can, and also to make a recommendation to prevent a similar accident from coming again.

1 what you heard, what you saw, what people told you and
2 what you might have told other people and give us as
3 much detail as you can of everything that you did, from
4 the time you were awakened on Sunday morning until
5 after the emergency was over.

6 I'd like you to go ahead and please talk
7 freely and just keep talking, okay?

8 A Okay. I just finished my duty, 12:00 to 4:00
9 on watch, and I was in my cabin when I heard a little
10 bit explosion, because that is very far, the boiler is
11 very far from my cabin, and I feel shaking, you know,
12 of the ship. I thought (inaudible) and then black out
13 and then I wake up, because if there is a black out,
14 you have an assignment.

15 Every engineer has an assignment down below
16 if there's a black out and I'm assigned in the main
17 engine, but I found that the boiler explode. That's
18 it.

19 Q Okay. I'd like to ask a little more details
20 of what you just told us about. Let's even go back to
21 midnight on Sunday. Tell us about your watch. Where
22 do you stand your watch?

23 A When I came 12:00 midnight, I changed the
24 other watch, 8:00 to 12:00 and then he (inaudible) me
25 about the situation and that it's normal and then after

1 that I go around in the engine room checking and the
2 television screen, if there is an alarm and also
3 checking the sump pump and the engine, checking on the
4 (inaudible) and also around the boiler checking and
5 then (inaudible) in order to checking this generator.

6 Start on the upper deck, I receive a call to
7 begin at number 11, because there is (inaudible) on
8 board, so before the (inaudible) on board came, I
9 started to begin turbo generator number 11.

10 Q Did you have trouble starting turbo generator
11 number 11?

12 A No. There's no trouble in turbo generator
13 number 11.

14 Q You didn't have to call the staff chief
15 engineer down to help you start the turbo generator?

16 A No. I start my own self, because I know that
17 procedure.

18 Q We talked to Magnus, the staff chief, and he
19 told us he came down and had to help the watch raise t
20 speed on one of the generators. Do you recall that?

21 A Yes. I recall that.

22 Q Which generator?

23 A That is only minor. It was the regulator of
24 this in the -- the regulatory, you know. When you put
25 on the knob to the (inaudible) the generator was

1 running normally.

2 Q So you did have a little bit of problem
3 getting it started?

4 A Is not a big problem.

5 Q Not a major problem?

6 A No, is not major problem.

7 Q Okay. About what time did you start the
8 turbo generator?

9 A Around -- before 3:00 in the morning.

10 Q Did you make a round into the boiler room,
11 the aft boiler room during your watch?

12 A Yes.

13 Q What did you see back there?

14 A Well, it's normal. I don't see anything.
15 There is no leaking from the fuel I don't see.

16 Q Did you talk to the stoker?

17 A Yes. That is my -- after I go around, we
18 talk inside there and I checking also these TV screens.

19 There is an alarm and we check also the pressure
20 (inaudible) and the level of the boiler. Everything
21 was normal.

22 Q During standby, where were you located?

23 A On standby, if it's standby, I go in the aft
24 engine room. (Inaudible) if the RPM is going to 60,
25 falling down, they we open the steam turbine and that

1 is put (inaudible). Then when reduced to 60 RPM we
2 open the steam for the main engine. The drains.

3 Q Oh, the drains?

4 A The drains, yes.

5 Q The drains below 60?

6 A Yes, below 60. And we just alter the make up
7 for the main condenser.

8 Q The make up and the --

9 A For the main condenser for the starboard.

10 Q Okay.

11 A And we close also the bleeder. If the RPM is
12 100 going down, we close also the bleeder, but if the
13 RPM is to 80, that remains closed. We use only if 100
14 above.

15 Q Which bleeder? The --

16 A That is the bleeder for the main turbine.

17 Q But what pressure does it --

18 A Is SB 1 and SB 2.

19 Q Was there anybody in the aft boiler room
20 during standby?

21 A I'm alone.

22 Q Were you in the aft --

23 A In the aft engine room during standby.

24 Q No, I'm sorry, the aft boiler room.

25 A There is Bong Venezuela is there. He is in

1 charge in the boiler room and one of the engineers
2 during that time, standby.

3 Q Which engineer was back there during standby?

4 A Dan Fleseland (phonetic).

5 Q I'd like to go ahead in time and go into
6 after you got off watch. You went up to your state
7 room after watch? After 4:00 in the morning?

8 A After 4:00, yes.

9 Q You went up to your room and --

10 A No, after my watch, 4:00, Bong Venezuela, one
11 of the men died on that (inaudible) we go together and
12 go into the Viking Deck, relaxing and getting fresh
13 air. After that one hour we go back to our cabin.

14 Q You went to the Viking Deck?

15 A Yes.

16 Q And then you went to your cabin?

17 A Yes. Because Bong told me we need to go back
18 because (inaudible). Then I was in my bed when I heard
19 some shaking and then one of my friends, he's on his
20 bed and that is the side of the boiler room and there
21 is a door there and there is an explosion and I see
22 going out and break the wall and the door and then the
23 accident (inaudible) and he killed. Three person there
24 died in the (inaudible) there is leaking.

25 Q Right. So you heard the shaking?

1 A I heard.

2 Q Were you asleep when the --

3 A You know, I'm just lay on my bed, but I just
4 starting sleeping about. And then I wake up right away
5 and then blackout and then I got to my station.

6 Q About how long after the shaking did the
7 blackout occur?

8 A I think it's only -- it's not too long, only
9 minutes. Maybe one minute. When I saw blackout, the
10 shake and blackout, according to my watch it's around
11 6:38, but I don't know if it's later, I don't know,
12 because I checked my watch, that is 6:38 when I feel
13 this shaking.

14 Q What time do you have now?

15 A 6:45 and 34 seconds -- 2:45.

16 Q That's about what I have. Did you put your
17 clothes on, your coveralls?

18 A Yes. I put my coveralls on and I go right
19 away to the forward engine room and then I heard Alpha
20 and then after that Code Bravo and then when I heard
21 that Code Bravo, I go to my station right away, number
22 11.

23 Q Where is your cabin located?

24 A B Deck, 1181.

25 Q So you left your cabin. Did you go down --

1 A Yes.

2 Q That's on the starboard side, right, 1181?

3 A Yes, that's right.

4 Q You went down C Deck on the starboard side?

5 A Yeah, but I see that the sprinkler, there is
6 water, and then I go ahead in the forward engine room,
7 because I see that the door is open and some steam and
8 then I head to forward engine room so that I can pass
9 down there, but I see that the watertight is closed and
10 then I heard Alpha Code and then they follow Code Bravo
11 and I go right away back to B Deck and go to my station
12 and await orders.

13 Q Let me get this down. Which watertight door
14 was closed? Was it on B Deck?

15 A That is in the engine room. The forward
16 stabilizer.

17 Q Okay. So you went down into the forward
18 engine room?

19 A Yeah, but the watertight was closed.

20 Q To the forward --

21 A And then I saw one of the watchmen there,
22 Milo (phonetic). He told me that the boiler explode
23 and then I did not try to enter, because I know it is
24 very dangerous.

25 Q So you were in the forward engine room and

1 you tried to get into the --

2 A Yeah, I tried to get in there because I did
3 not realize that the boiler is explosion.

4 Q Sure. I understand. You were trying to get
5 into the -- the watertight door was to the forward
6 stabilizer?

7 A Yes, forward stabilizer.

8 Q And it was closed already?

9 A It was closed already.

10 Q Do you know what the watertight door number
11 is on that?

12 A I think -- four. I think four. Something
13 like that.

14 Q And about that time you heard Alpha and
15 Bravo?

16 A Yeah, I heard that.

17 Q When you were standing there by the
18 watertight door?

19 A No, in the forward engine room.

20 Q In the forward engine room?

21 A Yes.

22 Q Were you leaving when you heard it or --

23 A I leaving and -- but (inaudible) then I go to
24 my station when I heard this Code Bravo.

25 Q Where is your fire station?

1 A Fire station number ten. (Inaudible) is in
2 the crew gangway.

3 Q It's by the crew gangway?

4 A Yes.

5 Q It's on Bravo Deck or --

6 A B Deck.

7 Q B Deck?

8 A Yes.

9 Q Then what happened?

10 A I await orders and then the (inaudible) and
11 they told all the fire things in the mid-ship, on the
12 port side.

13 Q What are your duties on that fire team?

14 A They assign me search all the cabin on this
15 all around, from aft to forward, port and starboard,
16 and checking if there's some people inside the cabins.

17 Q What part of B Deck were you searching? I'm
18 sorry.

19 A From aft to forward, port to starboard. All
20 the cabins.

21 Q All the cabins on the B Deck?

22 A Everything.

23 Q Did you find anything?

24 A I find only one man inside the cabin and I
25 wake him up and then you must go to your station,

1 because there is an announcement that all the crew
2 members (inaudible).

3 Q Who did you find and where did you find him?

4 A One man.

5 Q Where?

6 A In the starboard side, but I cannot remember
7 the cabin number.

8 Q Do you remember who it was?

9 A A little bit forward. I did not take the
10 name, because I tell him go right away to your station.

11 Q So you found the man about the time they told
12 you to go to the other --

13 A Yes. That's only one man.

14 Q He was on the starboard side?

15 A The starboard side, yes.

16 Q Then they told you to go up to the -- to
17 where, to the mustering station?

18 A They did. To the mustering station.

19 MR. ROTH-ROFFY: I think probably we've had
20 enough on the morning activities. Does anybody need
21 any more clarification or detail?

22 MR. CURTIS: Brian Curtis. I just have one
23 question regarding the shake vibration. You said you
24 recall one; there wasn't more than one? You recall one
25 vibration?

1 THE WITNESS: I think only one. I feel only
2 one vibration like that.

3 MR. CURTIS: Okay.

4 BY MR. ROTH-ROFFY:

5 Q Edgardo, could you tell us what your duties
6 are on the vessel, your standard 12:00 to 4:00? Which
7 equipment are you responsible for maintaining?

8 A Actually, as an engineer the first we do is
9 we checking all these generators, we check all the
10 pressure boiler and the (inaudible) tank of the main
11 engine and the (inaudible) take water from and also the
12 turbo generator, everything. We check that.

13 But my AMOS, my maintenance, I assigned in
14 the main engine and I am responsible for the main lube
15 oil cooler, main lube oil separator, main condenser and
16 main extraction pump and (inaudible) and I'm in charge
17 for that.

18 Q You're in charge of the main engine, the main
19 lube oil cooler.

20 A Main lube oil cooler, main lube oil separator
21 and --

22 Q Main lube oil pump?

23 A Main lube oil pump. Extraction pump for the
24 main condenser.

25 Q What pump?

1 A Condenser pump.

2 Q The condensate pump?

3 A Yes. Main circulation pump for the main
4 condenser, cooling. This is cooling this thing. Main
5 heat pump and also (inaudible).

6 Q During your watch you also go back to the
7 boiler room; is that correct?

8 A Yes.

9 Q And check around there?

10 A Check around, yeah.

11 Q Were you aware of any problems in the boiler
12 room before the accident?

13 A When I went there is no -- we don't encounter
14 any problem.

15 Q How about in the days before the explosion?

16 A No.

17 Q You weren't aware of any problems --

18 A No. We don't have any problems.

19 Q -- in the boiler room?

20 A In the boiler room, yes.

21 Q The fuel oil pressure, did the watch standers
22 have a problem controlling the fuel oil pressure to the
23 boilers? Do you know about that?

24 A I don't see any problem on the oil, because
25 is it not stated in the -- they didn't say there is

1 fuel oil failure or whatever.

2 Q How about pressure, high pressure or low
3 pressure?

4 A No.

5 Q Did you have to manually adjust the
6 regulator?

7 A No, because the stoker, he's one to operate
8 the boilers, the stokers. They are the ones to adjust
9 if there is something wrong. But on our watch there is
10 no problem on the fuel that I encountered from 12:00 to
11 4:00.

12 That is on top of the evening that it starts
13 to fall and (inaudible) because every time we are busy
14 on that day because (inaudible) and then he told me to
15 start the turbo generator, because on that time we are
16 busy and almost approaching the standby, so all the
17 time I was in the aft engine room on that day. Every
18 Saturday, keeping the water level, the main condenser,
19 you need to adjust the (inaudible) I stay in the aft
20 engine room every Saturday. Only a short time in the
21 boiler room. Because there is a watchman in the boiler
22 room all the time.

23 MR. ROTH-ROFFY: I'm going to ask Brian to
24 ask his questions now.

25 MR. CURTIS: I'm Brian Curtis.

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EXAMINATION

BY MR. CURTIS:

Q In the previous weeks before the accident there were no fuel oil pressure regulator problems, as far as regulating the fuel pressure to the boiler?

A Well, I don't know the other watches, but in my watch I don't encounter this problem with the regulator, you know. Maybe you can ask the other one in charge for boilers, because there is an engineer in charge for the boilers. He can give you that details if there is a problem with the regulators.

Q If the stoker was having a problem with his fuel pressure, regulating it, would he adjust it himself or would he have the engineer assist him?

A If there is a problem, the stoker is the one to adjust that and also the engineer, because I think one of the -- in charge of the engineers is working on it if there is a problem in the boiler room or what happens in the boiler room. He will definitely know.

But actually, I don't know what is, because I don't encounter any problems. Because in the boiler room there is engineer in charge and two stokers in charge in the boiler system, so they are the one to operate all the time the boiler, synchronizing, firing the boiler. They is in charge. Synchronizing the

1 boiler the engineer is in charge and also the stokers.
2 They are the ones to operate (inaudible) and
3 everything adjusting the fuel. They are the one to do
4 that, because we have also others on assignment in the
5 engine room.

6 But just in case, we know how to adjust, you
7 know, how to operate. I know. But if there is no
8 people, then I can operate the boiler, but there is a
9 man that always operates the boilers.

10 Q I just want to clarify too from a previous
11 question. When you open the bleed, at what RPM? Or
12 close the bleeds, rather.

13 A We open the RPM, the bleeder, starting 100
14 RPM.

15 Q You open then at 100 RPM?

16 A Open when going up. Then RPM starting 100 to
17 go down, RPM going down to 80 and then starting 100 and
18 then we close the bleeder and change all the -- because
19 it also supply steam to the evaporator, you know, and
20 then we change over to (inaudible).

21 Q When you're all done with standby, how does
22 the bridge notify you? I'm familiar with "finish with
23 engines," but do they have a term that they call down
24 and tell you they're done using the turbines or how do
25 they notify you when done with standby?

1 A What do you mean? Before standby or after
2 standby?

3 Q After. When you're all finished and tied up.

4 A After finish standby? After we finish
5 standby, you mean?

6 Q Yes.

7 A If they call us?

8 Q You're all done maneuvering into -- you're
9 all tied up. How does the bridge notify you?

10 A No. The controller will notify, because I'm
11 in the engine room.

12 Q How does the bridge notify the engine
13 controller?

14 A The controller will notify that finished
15 standby, because we are not assigned in the control
16 room, we are only assigned permanently in the engine
17 room as an operator, so I don't know what is going on
18 in the controller.

19 Q Do you ever stand watch in the control room
20 or you don't, you just always --

21 A No.

22 Q You're never assigned to the engine control
23 room?

24 A No. Never. Only operating in the engine
25 room. The controller, he informs us if standby is at

1 3:00 and the engine must be ready at a quarter to 3:00,
2 so we are now there and being ready, then I call the
3 control room, the engine is ready. Like that.

4 Q Mr. Rosal, he was on the watch after you?

5 A Yes. He's the one to relieve me in the aft
6 engine room.

7 Q Do you know him reasonably well?

8 A I know very well, because he has been here
9 for more than 16 years also with me, together you know.
10 We have a good team work with Rosal.

11 Q Had he mentioned any problems he encountered
12 with the boilers or the fuel pressure or anything like
13 that?

14 A No, he did not say anything, because when he
15 coming down to replace me, he is very quiet and then I
16 just say this is open because we are now going down to
17 60, this is open for the turbo and for the drain is
18 opened and (inaudible) is open. So I turned over to
19 Rosal everything and then just only waiting for the
20 control room to turn off this safety. Turning off the
21 safety release. When finish standby you turn off the
22 safety.

23 Q Were you aware of any problems that they had
24 a high chloride reading in the plant, in the
25 condensers?

1 A What is that?

2 Q Recently.

3 A Problems for --

4 Q Were you aware there were any high chloride
5 readings?

6 A High salinity you mean?

7 Q Salinity, yes.

8 A Yes. There is high salinity in the
9 condenser.

10 Q One condenser, both condensers?

11 A No, on starboard side, because we fix already
12 on the port side. It fixed already. We shut down and
13 I fix already.

14 Q When did this start, the high salinity?

15 A I can't remember. I can't remember, but all
16 the time we put some sawdust through so that the
17 salinity was falling down.

18 Q How often did you have to add sawdust to hold
19 the salinity down?

20 A When you put sawdust and cinnamon, then the
21 salinity will coming down, then it stop like that. If
22 it's alarm, then we fill it up again. If there's no
23 alarm, we don't fill up the condenser.

24 Q At the time of the accident you still had
25 some high salinity readings?

1 A No. I think -- yeah, we have on the
2 starboard side.

3 MR. CURTIS: That's all I have right now.
4 Thank you.

5 MR. OLSEN: I have just got a few.

6 EXAMINATION

7 BY MR. OLSEN:

8 Q After the accident, did anyone ask you what
9 happened?

10 A No, nobody.

11 Q Did you ask anybody what happened, to try to
12 find out what occurred?

13 A Somebody?

14 Q Did you ask any of the other engineers?

15 A No, I did not ask, because when I saw the
16 blackout, I ran away down to the engine room and only
17 the watchman, he told me that the boiler exploded.
18 Only that.

19 Q I see. But I mean like during the following
20 days, during this last week did you find out what
21 happened? Did you talk to anyone about what could have
22 happened during this last week?

23 A After explosion?

24 Q Yes.

25 A Yeah, I talked to the filipinos, because I

1 need some advice, counseling. That was on Friday. I
2 talked to (inaudible) and I need some private room so
3 he give (inaudible). We meet there and then I had some
4 -- because they have prayer/fellowship, they call it
5 prayer/fellowship and then after I stayed (inaudible)
6 can understand each other and I did an hour of comfort
7 and encouragement to my fellow filipinos.

8 Q Are you one of the more senior filipino
9 persons on the ship?

10 A Most -- what's that?

11 Q Officers?

12 A Officer?

13 Q Are there other filipino officers on the
14 ship?

15 A Yes.

16 Q Many?

17 A No, only two. They are assigned in the
18 generator. Only generator. Motor generator.

19 Q How long have you been on board?

20 A More than 15 years, sir.

21 Q During that time, did you ever see people
22 working on the boilers, particularly the water or oil
23 drums and the drums?

24 A For clean up, because before I am a bosun,
25 you know, and I was just promoted and then I'm the one

1 to clean up the boilers.

2 Q Inside the boilers?

3 A Inside the water drum and also the header, I
4 go inside because I am very small.

5 Q Yes.

6 A So I just clean up there.

7 Q When you were cleaning there, did you ever
8 notice welds or anything unusual that you noticed?

9 A No. What do you mean, "weld"?

10 Q Where the seams are. Do you remember how the
11 seams of the two halves might have looked?

12 A There's no welding there, inside the boiler.
13 No, no welding there.

14 Q Do you know if anybody might have welded in
15 there some time?

16 A No.

17 Q In all your time on the ship, the 16 years,
18 did you ever hear anyone talk about problems with
19 cracks in the boiler?

20 A No.

21 Q No?

22 A We only -- these tubes, you know.

23 Q Problems with tubes?

24 A Tubes, yes. And then with plugs. Plugging.
25 Only that. But weldings in the boiler, no. We don't

1 have any welding job in the boiler, in the drums,
2 because there is no problem. We only repairing these
3 tubes.

4 Q Only the tubes.

5 A And then put some plug and then that is dead
6 already, you know.

7 Q That is what?

8 A Dead. Dead pipe.

9 Q Oh, yes. In the last maybe month did you see
10 anybody weld piping outside of the boiler, in the
11 boiler room?

12 A Pipe?

13 Q Any piping outside the boiler room.

14 A They make a welding, but not in the drum, is
15 only the plug and the pipe. The dead pipe, they are
16 welding there, around, but not in the drum.

17 Q I see. How about outside of the boiler on
18 the piping, steam or water piping outside of the
19 boiler. Did you ever see anybody welding?

20 A No, I don't see it.

21 Q Do any of your -- do you know of any of your
22 filipino friends that might have worked in the boiler?

23 Is there any particular person who maybe used to work
24 in the boiler?

25 A For maintenance in the boiler?

1 Q Yes.

2 A Mostly I went, when I was a bosun, because I
3 just got promoted, I told you.

4 Q Yes.

5 A Just March 16. For many years I've been a
6 bosun and I'm in charge for clean up, for cleaning the
7 boiler every 3,000 running hours.

8 Q You were the ship's bosun before?

9 A What?

10 Q You said bosun?

11 A I'm a bosun before.

12 Q Is that a deck department job?

13 A No, no. Because I'm a day man and then I'm
14 the one supervising the filipinos and the person
15 (inaudible) and then I have order for my own man.

16 Q So you --

17 A I'm the one to supervise the number one,
18 because in the past is another thing, another term.
19 When I was in the tanker, they called number one, you
20 know, like that, you're number one oiler, number one
21 motor man, like that. But in the passing years they
22 call bosun.

23 Q I was thinking bosun is a deck term. How did
24 you become an engineer?

25 A I have a license.

1 Q You have a license?

2 A Yes. I have training and certificate,
3 because you will not be qualified as engineer without
4 that certificate, like advanced fire fighting, that
5 kind of thing. That is a requirement of our
6 government.

7 Q Did anyone talk to you about talking about
8 the welds?

9 A No. Welds?

10 Q Yes. Did anyone talk to you about talking
11 about welding in the boiler?

12 A No.

13 Q No?

14 A No. No.

15 Q Did you know Mr. Rosal?

16 A Yes, I know very, very well.

17 Q For 16 years?

18 A Also Venezuela. They are both stoker.

19 Q You mentioned that when he came down he was
20 very quiet.

21 A Yeah. He look so sad, you know. I don't
22 know, maybe that is a sign that he will pass away.

23 Q Did he seem slow and sad?

24 A He's sad, but I don't know if he have a
25 problem, because maybe just the attitude of that man,

1 because he is very quiet, but I don't know.

2 Maybe, you know, even in the Philippines if
3 you look so sad and then sometimes after that the man
4 dies, you know. I don't know. Only God knows.

5 Q Before that did he seem sad or was he normal?

6 A He's a normal guy.

7 Q Was he having any problems with --

8 A No.

9 Q -- his family?

10 A No. No problems, no. No, no problem in the
11 family.

12 Q Did he have any health problems?

13 A No.

14 Q Was he working a lot of hours before that?

15 A Yes.

16 Q A lot of overtime?

17 A Yeah. He doing -- he assigned in the bilge
18 system and the ballast system.

19 Q Was he working a lot?

20 A He working, he doing his normal job.

21 Q Normal job, not more than normal?

22 A Not more than normal job.

23 Q About how many hours per day?

24 A He work all the time two hours a day after
25 his duty.

1 Q No more than two?

2 A No more than two.

3 Q When he relieved you, you said he seemed
4 quiet.

5 A Yes.

6 Q Is he normally a quiet guy or is he more
7 outgoing?

8 A Normally he is a quiet guy, but his face, you
9 know, is not like before.

10 Q He didn't say much?

11 A He didn't say nothing. I told him this is
12 open, this is open and this is closed and then okay,
13 everything is fine and then I go to my bed and just
14 only wait for the orders from the control room.

15 Q Do you think maybe he was just tired? Had
16 just maybe woken up?

17 A No, he's not tired.

18 Q No, I'm saying did he maybe just wake up and
19 he was just --

20 A No, no. Not like that. He have presence of
21 mind.

22 Q But he was just quiet?

23 A Yes.

24 Q Did Mr. Rosal drink alcohol?

25 A No.

1 Q Ever?

2 A Never.

3 Q Never?

4 A No. He did not. I don't see.

5 Q But on the beach. Do you have a bar on the
6 ship?

7 A I'm not sure, because I'm not go with him and
8 because I'm not drinking, you know. I don't smoke.

9 Q You don't drink with him?

10 A I don't smoke. I have no vices, so I don't
11 go with the other filipinos that are going ashore and I
12 don't know if they are drinking there or not.

13 Sometimes I stay on board for eight months, I don't go
14 ashore when I was a bosun. I am only thinking of
15 myself and my family.

16 Q But you don't know of Mr. Rosal drank alcohol
17 when they would go ashore?

18 A Sometimes maybe they did, but not -- maybe
19 only one bottle of beer or two.

20 Q You never saw him come back drunk?

21 A No, no. He's not drunk on his duty, no.
22 Every time he's not drunk on his duty. Every time.
23 Because they are aware of that, you know. You are not
24 allowed to drink any alcohol when you are on duty.

25

FURTHER EXAMINATION

1 BY MR. ROTH-ROFFY:

2 Q When did you get your license?

3 A What?

4 Q When did you get your engineer license?

5 A It was 1982.

6 Q What license do you have?

7 A It's a fourth engineer license and after that
8 we going to third engineer license, because third
9 engineer here and fourth engineer is the same salary.
10 They're the same.

11 Q But your license is fourth engineer?

12 A Yes.

13 Q Is that a Bermuda license?

14 A Huh?

15 Q Bermuda?

16 A I applied --

17 Q I'm sorry, Bahamas.

18 A Bahamas, yes. I applied at Bahamas. The
19 company will apply there.

20 Q And you also have a Philippines license?

21 A Yes.

22 Q When did you receive your engineering
23 training? When?

24 A When?

25 Q Yes.

1 A Engineering?

2 Q Training. Education.

3 A Education. I just finished 1978.

4 Q 1978?

5 A School Piata University in the Philippines.

6 Q What was the name of the university?

7 A Piata University.

8 Q Piata?

9 A Yes. Piata University in Technology.

10 Q In 1978?

11 A I just graduated I think October 1978.

12 Q Have you had any other training or education
13 after that?

14 A Only this advanced fire fighting certificate,
15 I have (inaudible), I have an auxiliary machinery and I
16 take also steam simulator and MEFA.

17 Q What is that?

18 A That is medical emergency first aid. And
19 engineering control -- control engineering. That was a
20 requirement in our government to get this kind of
21 certificate.

22 Q And where did you get that training?

23 A Here. I have it.

24 Q This is the name of the school?

25 A Yes. That's right.

1 Q ECTC?

2 A Yes.

3 Q That's Excellence and Competency Training
4 Center. It's ISO registered with ENB and it's located
5 in Manila?

6 A That's right.

7 Q Manila, Philippines.

8 MR. ROTH-ROFFY: Okay. Does anybody have any
9 other questions? Brian?

10 MR. CURTIS: No.

11 FURTHER EXAMINATION

12 BY MR. OLSEN:

13 Q When you're in the boiler, have you done any
14 other work besides just cleaning inside the drums?

15 A When I was a bosun.

16 Q Yes.

17 A Yes. Only clean up.

18 Q Did you ever replace the tubes?

19 A No, no. It's not my job.

20 Q No?

21 A It's not my job. The job is filipino day
22 man. As a bosun, we are only clean up all boilers from
23 atomizer and super heater and generators.

24 Q Auto wash?

25 A Yes. Scraping and washing.

1 Q But you never had to plug the tube and weld
2 it?

3 A No, it's not my job.

4 Q How do you know that that's the only thing
5 that they did there --

6 MR. ROTH-ROFFY: We just switched over the
7 tape that had run out mid-sentence. Ken, could you re-
8 ask your question?

9 BY MR. OLSEN:

10 Q You indicated that you only cleaned inside
11 the boiler and that you never did any plugging work and
12 I'm just curious, how did you know that that's the only
13 type of work that had been done in the boiler?

14 A Plugging?

15 Q Yes.

16 A If there is a leaking in the --

17 Q But now do you know that that's the only type
18 of work that was done in the boiler?

19 MR. LEHRER: This is Rich Lehrer. He just
20 said that what he did was to do some cleaning up inside
21 the boiler. He didn't say that's the only work that
22 was ever done there. You asked him what he did.

23 MR. OLSEN: Oh, okay.

24 BY MR. OLSEN:

25 Q Do you know of any other work that's been

1 done inside the boiler?

2 A No, only clean up.

3 Q You only did clean up?

4 A Yes, only did the clean up.

5 Q How about others?

6 A Yes. It depends on the (inaudible) if they
7 are cementing the fructuary, you know.

8 Q Refractory?

9 A Yes. Refractory, put some cement and then I
10 guess there are about two men to assist the repairman
11 and the repairman is the one to make the cement in
12 there with the blue ram. Some broken cement is falling
13 down and then we build it up with another cement.

14 Q Okay.

15 FURTHER EXAMINATION

16 BY MR. ROTH-ROFFY:

17 Q Just to follow up on the cement work in the
18 boiler, did we call it refractory?

19 A Mm-hmm.

20 Q Did you have to do that every time, every
21 3,000 hours?

22 A Yes. Every time after finish washing and
23 then (inaudible) and normally some cement is falling
24 down and broken and then we fix it.

25 Q Where was that cement normally falling down?

1 Did you actually go inside the furnace to look, to
2 inspect?

3 A Yes.

4 Q And where was the --

5 A It was inside the air resistors and there is
6 cement and it sometimes is falling down.

7 Q Sometimes or always?

8 A No, I mean not sometimes, but every 3,000
9 hours when we go there there's normally some falling
10 down and we build it up with new blue ram.

11 Q About how many boxes of blue ram would you
12 normally use to build it up?

13 A It depends on the -- you know.

14 Q Right, but on the average?

15 A Average maybe 30, something like that.

16 Q Thirty boxes normally?

17 A Sometimes less, sometimes more.

18 Q What is the most you've ever done, do you
19 know?

20 A Maybe 50, something like that. It's only
21 small bag, you know.

22 Q Could you describe the dimensions of the box
23 for the record?

24 A That is 50 pounds weight.

25 Q How about dimensions?

1 A Dimensions is around 10 inches, 10 to 12
2 inches square.

3 Q Cube maybe?

4 A Yes.

5 MR. LEHRER: Cubic, one foot in all
6 dimensions.

7 BY MR. ROTH-ROFFY:

8 Q So you worked about 16 years as a bosun, is
9 that right?

10 A No. I started as a stoker and then I promote
11 as a bosun, then I promote to second engineer.

12 Q How long were you a bosun?

13 A Maybe eight years.

14 Q And about seven years as a stoker,
15 approximately?

16 A Approximately, but is more longer as a bosun.
17 Stoker is only a short time, only four years, three
18 years.

19 Q After they would plug a tube and you went in
20 to clean up or your men went in to clean up, what kind
21 of clean up did they do? What was cleaned?

22 A Before we opened the drain in the super
23 heater, primary and secondary, and you take out the
24 soot and put in the soot collector. After it is coated
25 and then they put bulkhead and then we transfer to the

1 ground and then we take out the generating tube,
2 (inaudible) and we clean up there.

3 Q The slide?

4 A Yes, because there is smoke going out to the
5 chimney from the burners, so we need to clean that.
6 That is very important. And also we clean up the soot
7 collector and the (inaudible) we clean up there,
8 because some soot is going down there. Then I send one
9 man to both sides to scrub the soot and then we clean
10 also the generating tube. Sometimes the carbon is
11 getting thicker and thicker and we have to scrape. We
12 use also high pressure, high pressure water pressure
13 for cleaning the atomizer from top to bottom, washing.

14 After finished with that, take all the soot
15 and we washing the boiler and then we washing also the
16 super heater from top to bottom. (Inaudible) to see
17 that we have good pressure in the (inaudible) and then
18 the smoke can freely pass in there.

19 Q You said you washed with water. What did you
20 pressure water?

21 A It is the normal water.

22 Q You didn't have a pump to --

23 A We have a pump, yes. But that is for the
24 high pressure.

25 Q Right.

1 A But in that super heater we use high pressure
2 and then we use the copper tube and then we put a
3 hammer and then a plaque and scrape the hose, then we
4 have a flashlight and then we washing so that all the
5 soot is rolling down on the floor, then goes into the
6 soot collector and then somebody clean up again and
7 then is -- the soot on the floor that came from the
8 super heater.

9 Q Where was the pump that you used, the high
10 pressure pump?

11 A In the (inaudible). It is connected.

12 Q You have a hose that you run?

13 A Yes, we have a hose. Yes.

14 Q Is that like a hydro pump? Do they also use
15 it for hydro testing?

16 A No. Maybe, but this pump is only used for
17 clean up the boiler.

18 Q For washing?

19 A For washing only.

20 Q You've never seen it used for hydro testing?

21 A No. We use only for cleaning up or sometimes
22 the (inaudible) for the oiler. It's only that, but
23 nothing less.

24 Q After you do the clean up, who inspects
25 normally?

1 A The first engineer.

2 Q First engineer?

3 A First engineer normally and also the engineer
4 in charge in the boiler. The engineer in charge.

5 Q The second engineer in charge?

6 A The second engineer in charge, yes.

7 Q Which first engineer would normally look at
8 it, the senior or junior?

9 A Sometimes both of them. Sometimes the
10 junior, sometimes the senior.

11 Q Normally who would do it?

12 A And also sometimes the chief engineer.
13 Sometimes they call chief engineer to check also.

14 Q Sometimes?

15 A Not -- because it depends on the situation.
16 If there is a problem, they call chief engineer, but if
17 it's only no problem, is only for clean up, is not
18 necessary, because the first engineer is there. Only
19 if there is a problem, like let's say there is falling
20 down plenty cement, then they are checking, the chief
21 engineer will want to check it.

22 If there is leaking on the tube, chief
23 engineer want to see this also. But if there is no
24 problem, it's only clean up, it's not necessary, the
25 first engineer is there.

1 Q Right.

2 A And the second engineer is there.

3 Q What about into that header, who would
4 inspect that header? Do you remember who goes inside
5 the header?

6 A No, I don't remember that.

7 Q Did you see anybody ever go in that header?

8 A I don't see anything, but they check the
9 boiler, you know, but -- because I'm not in charge, I
10 don't know who is doing it.

11 Q You said that you're small, so you can go in,
12 right?

13 A Mm-hmm.

14 Q Have you ever seen anybody else going in?

15 A Some of my men also, and also repairman.

16 Q The repairman?

17 A If there is damage in the tube, they put
18 plugging, that's the job of the repairman to put
19 plugging. That's not my job.

20 Q Sure. Can he weld in there?

21 A He welds the plug in the pipe, but not the
22 boiler.

23 Q Not the header?

24 A Not the header.

25 Q After they weld, who checks that normally?

1 A First engineer.

2 Q The first engineer goes inside the header?

3 A The first engineer and the second engineer.

4 Q Go inside the header?

5 A No, they looking.

6 Q They don't normally go inside the header?

7 A Is very fat.

8 Q That's what we though.

9 A Only my body is very small. Only looking
10 inside.

11 Q Have you ever seen the second engineer go in
12 the header?

13 A I don't seen.

14 Q You've never seen him go in?

15 A He's checking also.

16 Q Checking from outside?

17 A Outside only, because he is too big also.

18 Q How about the chief engineer, have you ever
19 seen him go in the header?

20 A He check also.

21 Q Does he go inside?

22 A No, no way. He is too big. Is fat. But
23 there's no problem in the header. There's no crack
24 there.

25 Q There's no cracks, so why go in there, right?

1 A No, nothing. Only the tubes, because it is
2 dead pipe, you know. The plug will not moving out,
3 because that is already dead pipe to secure that the
4 plug will no going out.

5 Q Right. And you're fairly certain you've ever
6 seen a second inside that header, right? I'm not
7 trying to put words in your mouth. Have you ever seen
8 a second engineer inside that header?

9 A No. He is always checking, but not going
10 inside, because he's too big. I told you.

11 Q I understand.

12 A It's bad to put a man inside and cannot get
13 him out. The second is too big.

14 Q Sure.

15 A His stomach is coming out, he cannot go in
16 there.

17 MR. ROTH-ROFFY: Okay. I'm going to go
18 around one more time and I think we're almost done.

19 MR. CURTIS: I have no questions.

20 MR. LAMBERT: Michel Lambert.

21 EXAMINATION

22 BY MR. LAMBERT:

23 Q When you wash the tubes, do you protect the
24 refractory, the bricks?

25 A Huh?

1 Q When you washing the tubes, the pipes, do you
2 protect the refractory to --

3 A No. The water will go to the cement, it will
4 not go in there. Because we are washing the super
5 heater, it's only -- you know. This is generating tube
6 and this is a passage here also and there is the window
7 and there is the super heater, the primary and the
8 secondary. We are washing this, so water only like
9 this is the wool and this is the air register for the
10 burner.

11 So the water will not go in here, so we are
12 washing only in this and then it's falling down and
13 going down to the soot collector and there is a drain
14 there. So we need to clean these tubes, super heater
15 and also the primary. There is only the flat tubes we
16 handling and flattening them so they can spray the soot
17 between the tubes in the super heater, so it's falling
18 down on here, so the water will not go in here, because
19 the water is straight.

20 And the water blocking the generating tube,
21 so we washing here also, rolling down to the soot
22 collection.

23 MR. LAMBERT: Okay. Thank you.

24 MR. RILEY: No questions.

25 MR. OLSEN: No questions.

1 MR. ROTH-ROFFY: Okay. Edgardo, thank you
2 very much. You've been very helpful. The time is
3 about 35 minutes after 3:00 and that will conclude our
4 interview of the third engineer, Mr. Edgardo Ferrer.
5 Thank you, sir.

6 THE WITNESS: Thank you, sir.

7 (Whereupon, at 3:35 p.m. the interview was
8 concluded.)

9

10