DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF MARINE SAFETY

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In the Matter of:

MAJOR MARINE ACCIDENT,
DCA 03 MM 032
_____

May, 30, 31, 2003

INTERVIEW OF:

DAN ARTE FLESELAND

The above entitled matter came on for hearing, pursuant to notice.

PRESENT:

TOM ROTH-ROFFY, NTSB
BRIAN CURTIS, NTSB
KEN OLSEN, USCG
STEVE CMAR, NCL
CHRIS OELSCHLEGEL, USCG

P R O C E E D I N G S

MR. ROTH-ROFFY: Good afternoon. It is about 4:15 in the afternoon. It is Friday, the 30 of May 2003. And we are here with the first engineer, Mr. Dan Fleseland.

And, sir, we are here to conduct an investigation of the accident that occurred aboard the S.S. Norway on the 25 of May 2003. And the reason why we called you here is because we believe you may have some information that may assist us in our investigation.

For your information, the National Transportation Safety Board is a U.S. Federal Government agency responsible for investigating accidents, transportation accidents in the United States. I work for the Office of Marine Safety, which is a part of the National Transportation Safety Board and we investigate marine accidents of all types.

Our investigation is strictly a safety investigation. We are not doing a legal investigation. We are not trying to establish an culpability or blame for the accident on any particular person or agency or company. We are only interested in determining what caused the accident and if we can, and then making a recommendation to companies or agencies about how we might prevent similar, future accidents. Do you have any questions about that, what I just explained?

MR. FLESELAND: No.

MR. ROTH-ROFFY: Okay.

What I would like now is to have the interviewers that are seated here at the table to introduce themselves and who they work for, so you will know who you are talking to.

MR. CURTIS: Brian Curtis, NTSB, Marine Engineering Accident Investigator.

MR. OELSCHLEGEL: I am Chris Oelschlegel, I am with the U.S. Coast Guard. I am a traveling inspector with the Coast Guard and I am stationed in Washington, D.C.

MR. OLSON: My name is Ken Olsen, I work with the Coast Guard as well in what is called The Office of Investigations and Analysis. Like Tom said, we are primarily interested in safety issues and prevent this type of thing from happening again.

MR. CMAR: Stephen Cmar, Norwegian Cruise Line.

MR. ROTH-ROFFY: Okay. With that we will go ahead and begin the questions.

BY MR. ROTH-ROFFY:

Q Could you tell us where you were and what you

were doing at the time of the explosion and then what you did afterwards in response?

A I was sleeping in my cabin, which is all the way forward on Olympic Deck, under the bridge. I wake up, I don't know why, but, I did not feel any vibration on the ship, but, I heard emergency generators start and they are on crew deck, just under me, a few decks down. Then I understand there had been a blackout. So, when I run down in the control room and I come down, I see all this water in the, in the corridor, and everything was, was -- and I saw one man who was lying in the floor, and he was burnt. And I come and I see one man, one engineer, who passed away. And then I went down to the boiler room for my duties to get the power plant back in, back on again.

So, after that, normally also I have to get the steam plant on again, that was not possible. And after, I went to Immigration, because I was going to sign off. So, three o'clock in the, around two o'clock, they called me up to -- and I had to, they told me I had to stay onboard. So, that is it.

Q Okay. So, you woke up, and you ran down to, which ladder and which deck did you go to first?

A The G, down to Olympia deck.

Q Is that G, is that a letter of the stair tower or something?

A That is both. There is also an elevator there and there is stairs all the way up.

Q Okay. And that is, but, they call that G stairway or --

A G.

Q Okay. So you ran down that G stairway to where, which deck did you go to?

A Olympia.

Q To the Olympia Deck.

And then you ran aft on the Olympia Deck? Okay.

A Port side.

Q On the port side.

A So I could come in to get exit into the control room. Just to find out, I get the situation, what was actually happening.

Q Okay. So you went into the control room and what did you see?

A I see the third engineer was there on the floor, and -- was holding him, and he was asking for help. And then I ran down to the boiler room, to the forward boiler room where we have five diesel generators. So, to get them back on, first they are like, we had to switch over switches for the emergency cooling water pumps and these things. And then it started, started up again.

Q So, what did you start up again?
A Mark 12 and then Mark 18, and after we, Mark 16, I think.
Q Did you have any trouble getting them restarted?
A It restarted, but, we had some problem to get Mark 18 back on, the switchboard, due to some cable -- the boiler room. That is not my, it is not my duty to get them under, on the switchboards. Only to get them started, so.
Q Okay. So, you started the diesel generators, you called --
A And there was also some other people there, because the second engineer, who have them, he was also there.
Q And what is that second engineer's name?
A It was actually, the first engineer, who was leaving. He had been there for two months. So, they are suppose to change that day, so they was actually, both of them was, First Engineer -- and Second Engineer Trond Kristensen and also and then me, and then also Nicolaisen was there, because normally his duty is to go to aft boiler room, but that was not possible, so he was also there.
Q Okay. I am sorry, if I could just maybe get this cleared up. The Second Engineer Trond was there?
A Trond Kristensen.
Q Trond Kristensen.
A Yeah, Kristensen.
Q And also a Second Engineer Oscar Lloom.
A Yes, no, he is First Engineer. He is first. He is relieving Anvik.
Q Okay.
A But, he was going to have one week overlap.
Q I see.
A So, Anvik is suppose to go home now this Sunday.
Q Okay. And First Engineer Anvik was there?
A No. He was not there.
Q Oh, he was not there.
And Second Engineer Nicolaisen was there with you?
A He was actually in the forward engine room, but he did not, he was not able to start at all. And also the First Electrician was there.
Q What is his name?
A Elvon --
Q And so, so you started up 12, 18 and 16 and you had trouble getting 18 on the switchboard, is that right? Is that what you said?
A Yes. It went awhile, I don't know the time, because after we started, then the Second Engineer and

those people was there for watching and I go to Immigration.
Q About what time was that that you left to go to Immigration, if you can remember?
A I suppose to be there 7:30, but it was delayed, everything was delayed, so I don't know, maybe 10 o'clock. I am not sure. But, we were waiting some time before we went to Immigration, because they were not ready.
Q So when you left to go to Immigration, you had, how many generators did you have on line or running? Did you have --
A Twelve was in, that is the, that is actually that one we have to start first, because when, that one we get power enough from the emergency to start the pumps, electric pumps. And also the, also the starting air compressor.
Q So, you are saying that starting air compressor and the pumps are, for number 12, come from the emergency generator, so that is the first one you start up. And then you went to 18 and 16. Were they able to get 18 on?
A No.
Q It wouldn't go on.
A No. No, it won't go on. I don't know for a long time, but you can find out by electrician or in the logbook it should state.
Q And 16 was one when you went up to Immigration?
A It was running, but I don't know if it was on. I don't remember.
Q Okay. I would like to backup, I apologize.
You mentioned that you went by the West Indies Mess and saw somebody. Was that before you went to the control room?
A That is the only way because when I come down, that is in the forward, so when I run, I pass actually all the mess for the crew, before I come to control room. So, I saw so many people was there and I looked in and I saw one man was burned. And then I understand there had been --
Q Do you recall what the person's name was that you saw?
A I don't know. I could not see who it was.
Q Okay.
MR. ROTH-ROFFY: The tape stopped there briefly.
BY MR. ROTH-ROFFY:
Q Could you say that again?
A It was one of the people who worked with the garbage, I see only, because they use these dark blue boiler suits. But, I don't know the name and I don't

know them --
Q Okay.
A And when I come into the control room, I did, I did actually not see that it was Rosal was before I asked, because he was so burned.
Q So you didn't recognize him.
A Then I come in, but I asked who is this, and then I saw the moustache, and of course, there is only one Filipino, I saw only two Filipino -- So, when I saw it was Rosal when I ran down, before I ran down.
Q So you went from the control room down into the forward auxiliary room to --
A No, I went, the fastest way for me, I could not go, I could not go down to aft engine room, then I had to pass the boiler room, so I went, I went forward again, and we had this stairs down in forward engine room. We have the engine elevator, that was the stairs down to, to forward engine room and from there I go in boiler room.
Q So you went into the boiler room.
A Forward boiler room.
Q Forward boiler room.
A There is no boiler in the forward boiler room any more.
Q Right.
A Only --
Q Diesel generator.
A But, we still call it forward boiler room.
Q Did you see any other injured crewmen other than the two that you mentioned?
A No.
Q Do you recall if there was still steam blowing when you were in that area, did you hear any steam blowing or had it already dissipated?
A It had dissipated.
Q Okay.
A And also did not feel any heat.
Q Do you happen to recall about what time you were in the control room, the first time?
A I did not see, I did not have my watch on, I did not see, I only, I saw they have write, it is in the report, it happened around 6:40 in the morning. So, how many minutes I used to run down, I don't know.
(Pause.)
MR. ROTH-ROFFY: Okay. I paused the tape there for about two minutes. We have had another interview join us. Please, sir, if you would for the record, identify yourself.
MR. PHILLIPS: Yes, my name is Robin Phillips and the investigator for the Bahamas Maritime Authority.
BY MR. ROTH-ROFFY:

Q Okay. So you said that you did not hear any steam and you didn't feel any heat. I think that is where, the last thing I have written down. And you didn't see any other crew members besides the two that you had already mentioned.

A No, no.

Q Okay. I think I probably have enough detail of what you did from when you heard the explosion and what you did afterwards. I think now probably what I would like to do is ask you about your duties and responsibilities on the ship.

So, if you could, you know, in fairly large detail, tell me what your job is on the ship, who you work for and who works for you and what your responsibilities are?

A Well, this, my duties to supervise all the, all the engineers, second engineers, third engineers and also the other watch keeping personnel of the crew. And I have to report directly to Chief Engineer, Staff Chief Engineer. And if there is some major problem, who, the ship cannot maintain the speed, I have to also contact him directly. And I must, I must print out and give the jobs to the engineers and I am doing the overtime, these things. And I collect in the rest of us, this -- 95, who I collect and give to the secretary, so they will be -- And under blackout, my duty is to get diesel generators to run. And after, to get this one boiler on line so we can, so we can get steam plants back in business.

For the maintenance, for the day people and like that, on this ship you have two first engineers, so it is actually the other guys who, who set the repairman and doing the job, not me. On other ships there is only first and then you are doing this alone. But, I am also having a look and see how it is going. And like when the, the other, second engineers or third engineers have some problem and they need some curtailment, they also go to him, to the -- But, if there is some problem to say there is some problem with anything, then they go tell me and then I have a look. It is my problem to, it is my job to, to shutdown and put back the systems like say the, you are dropping vacuum on main condenser, for example, it is my duty to shut it down and then the day man come and clean of plug or whatever, and then again it is my duty to make it back in business, like that.

Q Anything else you can think of that is your job?

A I don't know. I don't have it in my head just now. But, anyway it is on the Sands, everything is on the Sands, Internet, on the electronic. It will stay there.

Q What do you mean by everything, your job responsibilities or --
A Yes.
Q Okay. You said everything is on the S and S, what do you mean, everything?
A The duties, the checklist for everything, all kind of --
Q Okay.
A Rules and regulation.
Q So do you use that Internet Sands frequently?
A Yes, I used to have to look and see because they used to have something new every week. Something they put on, still does. And like anything else, because like you have -- on new ship or whatever.
Q Does the junior first engineer there work for you? Are you responsible for him?
A Yeah, if I, if I, if we need to do something, some jobs and I say this has to be done, and then he, and he has all the requirements, so he would, that manager up there, that manager, like that.
Q But, is he really, are you really his supervisor or are you just --
A No, actually not.
Q Okay.
A But, if I say to him you have to overhaul this pump, then he will make sure that it will be done. Or we have to change these pipes, then they will make sure that they will prefabricate and then change when there is time. And, for example, for example, leaking, then he will make sure that it will be done.
Q Okay. When you were telling us about your duties you said that you print out and give the jobs to the engineers. Could you give us more detail about that, what that means?
A Like just coming out three month rotating for cleaning generators, for example, changing oil filters, changing oil, everything, everything, all kind of maintenance for the engine.
Q And --
A Except for the diesel generators that are under staff chief, incinerator under staff chief. So, he is the man who giving the work to the engineer in the, the day man for the diesel generators. I have my responsibilities start in forward engine room and all the way aft.
Q And what sort of software program do you use to print this, these jobs out?
A DOS Window and the program is OSMOSIS.
Q And what did you say before DOS, I didn't quite understand that.
A It is not upgraded to, to Windows. It is DOS and three -- It is DOS Windows, my computer, yeah.

Q I am not familiar with that, DOS, DOS Window, is that Windows or is it --
A Yeah, yeah, yeah.
Q It is Windows.
A Windows. DOS Windows.
MR. OLSON: It is just DOS, he doesn't have Windows 98, 95 probably application.
MR. CMAR: If I can, some ships have DOS Windows D and some are, they are all being upgraded OMOSIS Windows. The Norway still has OMOSIS right now.
MR. ROTH-ROFFY: Okay. Thank you, Steve.
MR. OLSON: It is the plain text, type interface.
MR. ROTH-ROFFY: Okay.
MR. OLSON: The command prompt style, information.
MR. ROTH-ROFFY: Got it.
BY MR. ROTH-ROFFY:
Q So, you use OMOSIS to generate the jobs, the maintenance actions, you print them out and then you distribute them to the watch engineers. Do they also go to the day workers or, I mean, the Polish maintenance guys, no, just to the watch engineers?
A There is one engineer for all systems. It is just a second engineer, and they also have one of the Filipino on the system. But, then there is bigger jobs, like cleaning condensers, then, then they need some people from the day crew. People on the day crew.
Q And would you get those work items to who, to the junior first then or would you give them to --
A I make sure that when there is time, to do it, then, then nobody go by myself and speak to Anvik. Because every week I print out the weekly and then I can see if it overdue.
Q Okay. So --
A And also monthly, also monthly, but I don't print out every Monday the monthly. It is only for that --
Q So which day do you print out your weekly items?
A Monday, Monday.
Q Every Monday you print out. And when do they return them? Do they complete them and return to you at the end of the week or --
A Everybody have one folder in the control room, one box, they put them in. So, when you are finished, they, there is the box they put them in. I take them. And then it will be, then the secretary is doing the job for me, to print, print them back in that they have been done. And then they also file onboard for at least one year. I don't know for how long time they file them. They are filing them, I know.

Q Okay. What if a piece of equipment breaks down and needs a repair, who would be responsible for doing that repair?
A Responsible to --
Q Say a feed pump for the boiler starts leaking. Who would be responsible for repairing that?
A We use Norwegian repairman to do these kind of jobs.
Q But, who would assign them?
A If it is leaking in a flange, then we will use the -- But, if it is something more mechanical, mechanic, because not everybody who can overhaul a turbine, this is a bigger job. So, we are doing like, we, we, the Norwegian repairman he know how to do this, these more complicated jobs, otherwise we need people from shore side, contractors.
Now you ask me about my duties also familiarization form I give to everybody when they, when they sign on, so they can, so I make sure that they have got one and then they have to fill it out. They are given to secretary, and they will be, they will be filed onboard.
Q Is that a test of some kind or it is just a checklist or what is that?
A It is a checklist that they know this and this and this. Things that they don't know, they don't sign for. So, and then it is filed onboard.
Q Do you also sign next to it as verifying that they know it or who would, who would initial?
A Me, me, also me and also the Chief Engineer.
Q Okay. Getting back to the repairs. If something needs repairs, the second engineer that is responsible for the equipment, would they call you or would they call --
A They call me.
Q They call you and then you would maybe talk to the junior person --
A For example, only on a bilge line, then they go to Anvik, but if there is some problem with anything pumps, you have to, because when they are running like you have one for stand-by, say for example, condenser pump, you have one stand-by and one running. If the running one have to be stopped, then it goes over to the stand-by one and then you don't have anything in stand-by, so, I need to make sure that somebody starts to overhaul it.
Q And after the work is completed, how is that documented or recorded what was done? Where would you, if you do?
A The first engineer is, junior, he is writing everything in the day, we have a day book, you write everything, every day, what kind of work the repairmen

do and also what kind of work the day man, Filipino do. And at the end of the week, then I write down the biggest jobs that have been done and they, I send them up to, I also file them in books I have for myself, so I can look back and see. But, then the staff chief, I send them to the staff chief and the chief engineer, also send it to Quinnstar(ph) Superintendent. So, whatever they are filing up there, I don't know, but, I guess they file it.

Q Okay. So for example, that you have a pump that breaks down, the second engineer that is responsible for that pump would either contact you --

A Maybe he is not on duty, on watch, so then, then they will, they will try to call me and -- or whatever they do.

Q Okay.

A Call me in my office or if I am not there, I always have walkie talkie on me.

Q So, then you would go down and look at it?

A Yes.

Q Assess, you know, what was needed to repair it and then you would get ahold of the day workers directly or you would call the first engineer to --

A If he is not there, then if I find the repairman by myself, I can, then I tell him, okay, you have to stop this work, you have to go to this pump, start overhauling and whenever I see Anvik, he also have walkie talkie, so, so, I take him at the same time. Tell him at the same time, as quick as possible.

Q Okay. So then after the work is done --

A And I also -- that this pump is now out of order.

Q After the work is done, though, the first engineer would put it in his logbook and then would you somehow write it somewhere, too?

A Yes.

Q You would write it on a separate logbook?

A No. I have in my computer, I have, I have a work document, that I write in every week and when the next week comes, I just -- the old one and I write a new one again. But, I always print it out and I have one folder.

Q Okay. And you just put the major stuff, or do you put everything?

A Not everything.

Q Okay.

A But, that one was important to know.

Q And then you print it out.

A And I always try to put as much as possible so they, so they see that we are doing something.

Q You print that out and or do you send it by e-mail to the chief?

A Both.
Q Okay. And do you have a long history of these, a lot of these documents, weeks, in your computer?
A I only have in the folder, and the folder is maybe so thick, for how many year back, I don't know, but, maybe three, three years back, I am not sure.
Q And what do you call that folder?
A Weekly, weekly work, I don't have any name on it.
Q Okay.
A But, I have it on my desk all the time. Weekly maintenance.
Q Is any of that work put into OMOSIS, the repair work?
A Yes, it is. Yeah, not all of it. Not all of it, I don't usually put in if you have to change any, anything slight or if you have to repair some leak and some, I don't usually put that in.
Q If you would --
A I write it only there, if I overhaul pumps, that is, I have only write it in, in the weekly maintenance reports.
Q Okay. Tell us about the boilers, the sort of problems you have been having with the main boilers in the past six months or so?
A Like I say from the day start, I have all these things on tubes leaking, so, whenever it happen, we have to, we have normally, we use two boilers to St. Martin, and from St. Thomas and back to the Island, we use three boilers. If we have, if we have all of the, all of the generators running, but like, no, we have knocked 17 out so we use three boilers all the time. So, when we have a leak, then we have to take the boiler out, and put another one in. So, as you can see in the, in the weekly maintenance report, you will see there have been lots of jobs by plugging generating tubes and also some -- pipes.
Q What other kinds of problems have you been having with the boilers in the past six months, say?
A I have only been there, this is my first contract as first engineer, so, I have been there for three months now, and it has actually only been this leaking. Generating tubes mostly.
Q Okay. So this is your first contract as first engineer and you have been aboard for three months.
A This contract.
Q This contract. How about before, could you tell us about your experience aboard the Norway, when you started sailing on the Norway and what ratings, what positions?
A Second engineer.

Q And when --
A I have been second engineer for more than four years.
MR. ROTH-ROFFY: I am going to go ahead and let Ken Olson ask his questions.
MR. OLSON: Thanks, Tom.
BY MR. OLSON:
Q I just have a few. I have got to talk to somebody.
Have you ever heard anyone, any of the other engineers or perhaps when you were second assistant, talk about micro cracks in the boilers or micro fractures?
A No.
Q Has anyone ever discussed the reasons behind various tube failures?
A You mean why they are --
Q Yeah, generally speaking.
A -- leaking. Why there is a leak?
Q Yes.
A The boiler is more than 40 years old, so there is --
Q Yes.
A So, the tubes, some of the tubes is not in the best condition.
Q Yes. Is there any record kept of the tubes that have been plugged or repaired?
A I don't know.
Q You don't know. Okay.
At any time during your stay on the Norway have you heard any, any discussion or have you become aware of any discussions related to the fuel pressure regulator feeding the starboard boilers? Problems associated with not maintaining a steady pressure.
A Yeah, we have sometime problem that it is not maintaining, yes.
Q Okay. Have you --
A And I know that because I always was watch keeper.
Q Yeah. Have you ever lost the fires because of that?
A No.
Q No. What happens when it gets too low, what happens to the fires?
A You can say there are two system, one is maintaining 30 kilo that is from the pump, and then you have another one that is making, when we have a change of loads, so, whenever you can take the, that one who maintains 30 kilo if it come down to 20 kilo, and the boiler are in full loads, maybe 16 kilo, so you still have enough fuel pressure.
Q To the burner front.

A Yes. And, and stand-by pump starts at around 25. And you have high speed and low speed, so --

Q So, there is a setup for the stand-by to automatically start should the fuel valve open too much or close too much. Now, forget that.

The stand-by fuel oil service pump will start based on the discharge pressure of the primary pump, not necessarily the pressure after the regulator, right, is that correct?

A The regulator, there are two regulator. That one was giving the pressure into the burners.

Q Yes.

A And the other one is only maintaining 30 kilo, so when the, just the valve is kind of a recert valve, so, if you have low load in the boiler, the recert start open more. And if you have high load in the boiler, and recert has to close, so it can maintain this.

Q Okay.

A And if we have two boiler in at the same line, we have to have the pump at high speeds.

Q Pump at high speed.

So, is there recert valve the pressure regulator that you are, or are there two devices that control the pressure?

A There is one to maintain the 30 kilo and then you have the other one that is maintaining the load for the boilers, whatever, from 10 to 15 kilo, 16 kilo.

Q If that recert gets stuck open, what happens to the fires at a low load or even at a high load?

A If it gets stuck full open, you will, the standard pump will start, but I have never tested out, I mean, if you can, if you can open the recert full, and still maintain the pressure, I never tested it out, so I cannot say exactly.

Q Okay. What will happen.

A But, you, if you have two pump running, you will, I cannot say how much, how much faster you can maintain on the boiler, with full open, I don't know.

Q Okay.

MR. ROTH-ROFFY: Let me just stop the tape here and turn it over.

(Change of tape.)

MR. ROTH-ROFFY: We have just switched the tape over. Back to Ken Olson.

BY MR. OLSON:

Q Regarding rotating the fuel filter that is done every watch typically, is that a single filter or a duplex filter?

A There is two.

Q There is two.

A Of course, because if you have --

Q Yeah, okay.
A It will start, you are out.
Q Now, have the firemen or oilers, when they switch it over, ever made mistakes like leave a drain open and drop the pressure to the boiler?
A Not that I know.
Q Not, not that you know.
Or switch over to an empty strainer.
A They are never empty.
Q No.
A If you clean it, they always, then you have to fill it up.
Q Well -- I am just wondering if, where any mistakes. How about suction strainer on the fuel oil service pumps, when do they change those over?
A How often, I don't know.
Q And are those duplex, too?
A Yes.
Q Are you aware of any time that somebody may have made a mistake changing that over?
A No.
MR. OLSON: Okay. Thank you very much. Thanks.
MR. ROTH-ROFFY: Okay. It is about five minutes after five, due to the hour, we would like to go ahead and convene this interview now and we would like to ask you come back tomorrow. Are you available to come back tomorrow?
MR. FLESELAND: Yes.
MR. ROTH-ROFFY: All right, we will talk about the time. So, this concludes Part I of the interview of First Engineer. Thank you very much.
(Whereupon, at 5:05 p.m., the interview was recessed, to reconvene, May 31, 2003.)

P R O C E E D I N G S

MR. ROTH-ROFFY: Okay. Good morning. It is about 8:25. The date is 31 of May 2003. And we are resuming our interview with the First Engineer, Dan Fleseland.

My name is Tom Roth-Roffy, and I would like to now pass the questioning to Brian Curtis.

MR. CURTIS: Brian Curtis.

BY MR. CURTIS:

Q Mr. Fleseland, regarding initially when you woke up, I understand you were asleep when the explosion occurred, when you woke up, had the vessel already blacked out or were there still lights?

A Well, when I, when I wake up, at the same time I heard a fan in my cabin for the ventilation stop, then I know there was a blackout. And then, then I feel the vibration from the emergency generator, that it starts. So, just going, only a few seconds from the blackout to those engine starts.

Q And the emergency generator starts on its own?

A Yes.

Q After --

A -- failure.

Q Regarding the combustion control, the Siemens hardware electronically, well, first, let's go back. Boiler wise, did you, when you were second, were you ever in charge of the boilers?

A No. They never had that system. But, on this ship, with older ship, you always work with this, but I not have the boiler. I have other systems.

Q On this vessel you were in charge of maintenance for the boilers, on the Norway?

A As a second engineer, no.

Q As purse, if you had a problem with the combustion control management, the Siemens portion of it, would you work on that? Have you worked on that?

A If it is electronic problems, then we used to have this electronic engineer to, to search for and repair the electronic problems. I have not, I am not an electrician, so, that is why he --

Q Was there any repetitive history that coming up that you are aware of that he was having a problem with on the combustion control system?

A Sometimes, but there was not any problem as I know, as I don't know, but -- But, they were working, my time ran out, for three months they was working with the lower plan for the boiler 24. But, sometimes you had to adjust manually from the flaps, but that was working -- on the boiler.

Q So he was having trouble controlling the fan.

A The -- to get burned, so they find out that

one of the flaps was staying the wrong way, makes it too hard for the electric -- That is all. But, they fixed it. The changed the motor and they find the problem.

Q And maintenance such as this, is this kept in AMOS or is this kept, where would that maintenance record be kept, this type of maintenance?

A In the book of, the book you saw from Nicolaisen.

Q The book kept in the engine control room.

A No, this, there are, every system, whatever it is, fuel system or the turbine lighters, all system they have a book in the control room where everybody writes also what they have done. And if it is something they have, they, if there are some jobs from the laborers, it would be put back in the AMOS, when they are done it. But, like this work, it was not there, it is only used to write in these books. And also the book to tell the first engineer -- and if it is, like I told you yesterday, if it is some, more bigger job, then I also put it in my report I send to Staff Chief and they again send it to the Superintendent.

Q Okay.

A And that, that I also have in one folder on my desk.

Q So, is there a book specifically for combustion control or --

A I don't know. You must find out from -- or the chief electrician, but they are under him, too.

Q I understand you weren't, didn't have the boilers under your direct duties, but, being first, were you ever aware of burners tripping for no explanation? Just randomly tripping off line, a burner, itself, or a boiler?

A Why it trip? You mean, if one burner fall out?

Q Shut off.

A Yes, that is, if you mean only one, and the other one is still in, then it is normally, you have this -- sensor, sometime they become dirty, or they lose the electric signal and the fuel automatic cutoff.

Q To your understanding, was that a frequent problem, for those sensors or that they had to clean them very frequently or just a very random act that the burner would trip like that?

A I cannot say exactly how often, but it happened, it happens, but it happens.

Q And the same for the boiler, could you, did you have problems with the boiler just off line or shutdown for any unknown reason?

A Not problem because of any of the automatic,

but, there was, there was one day in my time, though, that one boiler fall off because of they did not have a look after the -- temperature, so it was like the automatic, you have also manual spray valve for the --, so a temperature come up more than 1219 something, and the boiler tripped. But, that were nothing wrong with the combustion.

Q Back to the record of the boilers and condensers to basically the engine room tubes, how, how would you know as relieving first, that you got to the point that you want to, you want to retube a condenser or boiler, what record do you have to know how many tubes in a boiler or a condenser are plugged, have been plugged?

A I don't have, I don't know how many tubes are plugged, but, we have some kind of records up in the chief engineer office about the boilers, because I don't know for some time I go, I heard they had some -- about what was plugged and what was not retubed. I can remember in '99, when I joined the ship, they retubed nearly the whole boiler of 22 and also boiler 23 was nearly everything was retubed. Twenty one, 24 is, was not so much retubed.

Q So if you wanted to find out how many tubes or plug say in boiler 22, you would go to the chief engineer's office and look for the record there.

A As I know there is nothing plugged on boiler 22.

Q I am just saying as an example.

A Which is quite new. No, I would have to ask, because I don't have anything.

Q Yes.

A But, they have asked the company many times to get money on people to retube those two other boilers.

Q Which two boilers?

A Twenty one and twenty four.

Q Regarding the compliment of individuals on watch, for one given watch, I would like to go through and have you tell us how many people are on watch, where each person on watch is stationed and his responsibilities on watch? Just go through each individual and their position.

A Okay. Yeah, because that forward, in the forward engine room there is a watch keeper who have looking, for bilge in the forward engine room, and forward staff room and forward boiler room and forward auxiliary engine room, and keeping, having a look to see if he sees anything wrong, he changing fuel filters, oil filters, if necessary for the engines.

Q And this, this is one individual's responsibilities?

A Yes. And he also --
Q And his title is?
A That, normally it is motorman or, or oiler. Some of them is also stokers, because after, some of them have been here for so many years, so, they get promoted.
Q Okay.
A Otherwise their salaries are very low if you go engine -- because normally they didn't have, they stay up a long time.
Q Okay. I just want to establish a clear understanding of who is on watch and his responsibilities here. So, let's go through that individual again. He is going to be a motorman we are talking about, first, correct?
A Not necessary. Some of them are motorman, some of them are stoker, but, this is actually the same, same salary, but --
MR. CMAR: May I interject? This is Steve Cmar. Is there a minimum level at which this person must be? Maybe you could explain the hierarchy that people start as --
MR. FLESELAND: --, boiler, and motorman or stoker.
MR. CMAR: So, are motorman and stoker on the same level?
MR. FLESELAND: Yes.
MR. CMAR: Kind of, okay. So, in this particular case either a motorman or a stoker could be on watch. But, that is the minimum they should be qualified.
MR. FLESELAND: I, nobody had told me about any kind of minimum, also engine boy, who was, no, oiler had been there.
MR. CMAR: Okay.
BY MR. CURTIS:
Q So, this individual, say a stoker, his location during watch and his responsibilities, let's go there one more time.
A He is forward engine room, and forward boiler room, mostly, but he is also keeping an eye on the forward stabilizer room, if the -- is out or other bilge. And he also taking readings for the -- and also the bilge and forward auxiliary engine room. So, for example, he, if he heard anything, problem with some pumps or something, he will go to control room, go to engineer and he will just go to the, take a look to control room or to say aft boiler room.
Q Okay.
A And then you have the watch keeper, who is a stoker, who is in the aft boiler room all the time, watching the boilers. And you have a motorman --

Q Just a little more detail on the stoker in the aft boiler room, his, his details, on the boiler what is he responsible for?

A It depends on which watch, 8 to 12, 12 to 4, 4 to 8, one of them is the man who cleans the burners they have taken out. Another one changed them, and one of them is doing the -- For example, 12 to 4 was, he is doing the -- And 8 to 12, he is changing the burners. He usually change burners for one of the boiler every day, 8 to 12, night time, 12 to 4 night time, like that.

Q When they are on watch, actually on watch, what are their other responsibilities, typical, on watch, duties?

A Is to keep an eye on, they are also turning the fuel filters and if necessary they have to get a change any suction filter or they do that. And they also have responsibility for the, say the housekeeping in the boiler room, to clean the floor and make sure there is no garbage. They are not emptying the garbage drum, but they keep the boiler floor clean.

Q Now the filters, you mean, the fuel pump filters?

A Yes.

Q If they are dirty, they have to notify anybody else or is it okay for them just to go ahead and change them?

A It is okay to change them. You will hear it very, but if the pump starts to make noise, to get low suction pressure. Also if the fuel tank start to below level, then the suction pressure drop, you get a noise from the pump.

Q There is two. Now, the third individual on watch.

A There is one motorman who take care of all the transferring and filling of the water tanks and -- tanks. He is filling, the filling from the operators, and he also transferring of the water to the day tank, plus water day tank.

And the engineer, you need at least one in the control room, and two down, because of when you have standby, this would be one second engineer in the boiler room, and one in the aft engine room.

Q During standby?

A Yes.

Q One in the engine control room.

A Yes.

Q And --

A There has to always to be at least two engineers in the engine room on watch and one in the control room, that means three.

Q The duties of the engineer in the control

room, his position and his duties?
A Position is second engineer. His duties is like to, to, for example, there is possible he have to, to take care of whatever alarm that comes, and anything, if it is important he has to call down to the guys down. But, they have all the same, in the control room, for the maintenance in, they have in the boiler room, aft engine room and aft -- engine room. But, the people there are not watching all the time. It is only him.

And the other duties of his, for example, in and out of the -- zone, or 12 -- zone, call from bridge, so, it is about, bilging of a boat from the marine clock, and the sewage operating. All the time up to now, nearly up to now, maybe for three, four weeks back, they were doing this operating, but, now there is an environmental officer, who, who are open and closing and looking at the padlock -- valves for the marine clock bilge. And his is operating the sewage and they have to record everything they are doing, sewage, bilge, and also we have, yeah. This book is in the control room and then they are filled out, they get a new one and they get, they get stored upstairs, someplace, I don't know, the environmental are doing that.

And of course, they have to, to keep an eye on the loads, the generators, main engine, vacuum, boiler pressure, everything.

Q Okay.

A And of course, that is when you are steaming, but when you have standby, you have, you have the checklist and you are also calling the other people for standby, an electrician, chief engineer, staff chief engineer. They should also be there during this time. I am not involved in, in, when we have a standby. I am only, my working time is day time.

Q Okay. That is the second engineer in the control room.

A Yes.

Q Now, you said there was another second engineer as well?

A There are two.

Q Okay.

A It doesn't have to be two second, but there is one second and at least one third. We had, when I come, just after I come, they promote two Filipino stokers to third engineer and they also hire one Indian.

Q And that second individual or the third, his duties and responsibilities on watch?

A That is I can say normal watch keeping, like keeping an eye, walking around, checking rounds, make

sure that the workman are doing his duty, the stoker doing his duty, and you also have to keep an eye on diesel generators and have a look and see that the forward was doing his duty. They should also cooperate as a team.

Q Okay. So we discussed the second engineer in the engine control room. The other engineer outside of the control room. At normal sea steaming, that is all is required to bring it in. And in standby, you require an additional engineer, correct?

A No, they are always two, two down and one in control room. That is enough. But, they, when they are doing standby, they also call the chief engineer, staff chief engineer and one electrician. Chief electrician or, or the, or the first electrician. And during standby into Miami, there is also one Filipino motorman in the forward boiler room.

Q In the forward boiler room.

A Yes, for the generators.

Q And that is all the personnel required?

A As I know, yes.

MR. CURTIS: That is all I have right now.

MR. ROTH-ROFFY: Chris?

BY MR. OELSCHLEGEL:

Q Chris Oelschlegel with the Coast Guard. Good morning.

Can you describe in the, in the aft boiler room, what methods do you have in the boiler room for checking the condition of the fires? In other words, do you have any visual methods that you can check that the --

A You can open a small, what do you call it, signal with a mechanical flaps, that you can move it, there is some kind of --

Q Right.

A You can see that the flames --

Q Right.

A You can see it from there. And then you have this, and that is the only way you can see it is by your eye, but you have also this photocell on each, to indicate on the panel.

Q Right.

A For to see how strong the signal is. If it become too low, the burner trip.

Q Right, Okay.

And do you have, as far as checking the combustion, the fuel air mixture and the quality of the combustion in each boiler, do you have a periscope, do you have a means for checking the stack exhaust from inside the fire room?

A There was, originally there was a periscope, but somehow, somebody cut them down. I don’t know why.

But, that was before I come here.
Q Okay.
A But, no, you have just the analyzer in the control room, you can see that. And there are smoke detectors downstairs in the -- they have all those, and they are not working. And otherwise you have monitor on deck that you can see, in the control room you see the aft, but you can only see there in day time when you have lights.
Q Yes.
A Not at night time.
Q Now you mentioned earlier OSMOSIS, were you referring to a reverse OSMOSIS water maker?
A Yes.
Q Okay. Is that used for, is the water that reverse OSMOSIS water maker makes, is that used for makeup feed for the boilers or is it just used for potable water?
A For those directly into that fresh water day tank.
Q Into the fresh water day tank. Okay. You mentioned that earlier.
Now, for the water that is used for make up feed for the boilers, how do you produce that water?
A That is only produced from the aft operators, number 21 and 22.
Q Okay. And where are those located?
A Aft engine room.
Q In aft engine room. Okay. Okay.
All right, prior to the, prior to this incident, had you noticed any increase in the, in the amount of makeup feed water? Was there any, any notice or increase in the amount of makeup feed water that was being used in the system?
A No, not like, normally, if you have a boiler leak, you, you see -- obviously they are taking reading every watch.
Q Okay.
A So, yeah.
Q Okay. And can you tell us who is responsible for the boiler chemistry? Who takes --
A The chemical?
Q Yes.
A There is one second engineer who have that as his own system.
Q Okay.
A So he is taking boiler tests up in the laboratory in the control room, in the control room.
Q Okay. Okay. And he is, I am sorry, he is a second engineer you said? And that is his responsibility?
A Yes and that is he doing the dosing, taking t

he test, doing the dosing and then taking, and he is also keeping the records every, every week he count oil drums -- the chemicals store.

Q Okay. Okay. Have there been any, this is back on the boiler combustion control system again, any problems with, to your knowledge, of a low water alarm or a high water level, as far as the system being able to indicate either a low water lever alarm or high water level alarm?

A For the boilers?

Q Yes.

A No, they are working.

Q They are working, okay.

A Yes.

Q Okay. Fine.

Let's see.

(Pause.)

MR. OELSCHLEGEL: Okay. That is all I have for now. Thank you.

BY MR. CMAR:

Q Steve Cmar, NCL.

Earlier you mentioned, when someone had asked you about -- control and repair history and you mentioned a lower fan. Was that, what boiler number was that again?

A Twenty four.

Q It was 24. Okay. I just wanted to make sure of that.

During the 4 to 8 watch would you know, the 4 to 8 watch on the day of the casualty, would you know if any work was being done in the engine spaces, specifically in the aft boiler room?

A Yes, they was working, we had just plugged one generator in it from the day before, the pressure test after they had plugged the generator into, between steam drum and -- on boiler 21, and that was pressure tested and after that you are suppose to, to start -- in the, in the front row.

Q And that was for --

A Twenty one.

Q That was boiler 21. So, during the watch, work was going on with that during the watch, during the 4 to 8 watch that morning?

A No, no, no, no.

Q No.

A This is only day, day man is not until eight o'clock in the morning, so.

Q Okay.

A There was no day people, all day people were sleeping.

Q Okay. During that 4 to 8 watch, again, in the aft boiler room specifically, you have one person that

is there all the time.
A Yes.
Q And on the 4 to 8 watch his job is to clean the burners?
A No.
Q No. Okay. What does he do, what is his, in that rotation of stokers, what does, what is he suppose to do? One of them changes the burners, one of them blow soot, what does the 4 to 8 watch do?
A First of all, they only changing 8 to 12 in the evening, not in the morning, but in the evening.
Q Okay.
A They are changing burners on one of the boilers, every day they --
Q Okay.
A And the soot blowing is only 12 to 4, night time. Not day time, only night time.
Q Okay.
A And when 8 to 12 watch in the evening sees burner, they take them out and they are cooling and I am not sure now, but I think it is 4 to 8 watch who, and he come down again, he clean them and make them ready for use for 8 to 12 watch again, night time.
Q Okay. Now that is kind of like standing duties during the watch.
A Yes. We have, we have one who is down there, say 4 to 8 person, like that, like that.
Q And tells them what to do.
A Yes. Tells them what to do.
Q Okay.
A I don't have everything in my head, but --
Q Okay.
A But, there is a --
Q That is fine. Again, on that watch, 4 to 8 watch when the casualty occurred, was there anything else they may have been working on in the engine room?
A No, not that I can think about.
Q And if there was --
A I guess he, after standby, he, he just having a look at the alarms and combustion systems.
Q But, specifically no work on the fuel system or anything like that.
A No, no.
Q And if there was something they worked on, there would be one of the books in the control room that would, that would --
A Yeah, but, this, the stoker on this thing, they are not doing any kind of maintenance like that. And two of the guys, because there are three stokers, they have also their own system. They are under the second engineer. But, for that boilers, it was actually two guys of the stokers who is under

Nicolaisen, Second Engineer Nicolaisen his the boilers. You are doing maintenance, whatever he, he tell them what to do, changing the filter and all, whatever, greasing, or whatever. And there is also one Filipino, day man, was there, who are doing the maintenance of the, say the --

Q So most of the work of that nature is day work then because it wouldn't done on that kind of watch, is that what you are saying?

A Yes.

Q Okay.

A There was, you are not suppose to do any kind of big job except for as a watch keeper to watch.

Q Okay.

A But, over they have some overtime, they work together with the day man.

Q All right.

A Helping him with whatever it is.

MR. CMAR: Okay. I don't have anything else right now.

MR. ROTH-ROFFY: Okay. We will maybe make one more round. I have got a couple of follow up questions for you.

BY MR. ROTH-ROFFY:

Q Regarding the fuel oil suction tanks, I believe you call day tanks, for the boilers. Who is responsible for --

A Transferring.

Q -- transferring and switching tanks?

A We have a Filipino man, he was a transferring man, who is only working with the transfer work. So, so, he is the man who, who, who was doing all the transferring for diesel and fuel. Also diesel for the, for the, for the diesel generators, and normally he is always there 8 to 12 watch, morning and evening. And when we go and get three boilers, he have more work to do, we are using more fuel. So, sometime he, I guess he is down already at six o'clock at least in the morning. And sometimes he is also working longer than 12 o'clock in the noon also. Because I have seen him down there sometimes two, three o'clock. But, but, if he is off, he is sleeping, then it is the engineer on watch to exchange over the fuel tank. We have, as you say, gauge glass, to tell you what the level is. That is for gauge in the aft -- room.

Q Sorry, could you repeat that, the gauge glass is located in the aft --

A In the -- in the midway.

Q So this Filipino man, his name is?

A Just now? It was, what is the name, Ladines, Ladines is the last name, the first name is, no -- Cypro(ph) I think they call him --

Q All right, I will spell it for everybody's information. L-A-D-I-N-E-S. First name Cipriano, C-I-P-R-I-A-N-O.

Now is this, I am sorry, what was the name again, Ladines, Ladines.

A Ladines.

Q Is he as watch stand or a day worker, obviously he is not a day worker, but what is his classification?

A He is on the watch list from 8 to 12.

Q Oh, he is --

A But, he have to work some overtime when we have large consumption of fuel, then it makes more work for him. Like I told you yesterday, before when we are sailing down to St. Thomas, and St. Martin from Miami, we use two boilers, and three boilers back again. So, we have to use more of the turbine generators due to one of the big mac, it is not, it is large maintenance doing this on the generator. That means he has to work to doing this transferring more often due to, due to this large consumption.

Q Okay. So he is an 8 to 12 watch stander. He is a stoker. And does he normally also operate the boilers?

A No, no, no. Only the fuel, transferring, only the transferring.

MR. ROTH-ROFFY: Okay. I am going to have to switch the tape now. I will go ahead and pause for a moment.

Would you like to take a break? Are you okay?

MR. FLESELAND: I am okay.

(Change of tape.)

MR. ROTH-ROFFY: Okay. It is about 10 minutes after nine. We are resuming with a new tape with the First Engineer.

BY MR. ROTH-ROFFY:

Q I am little bit confused about, his job title is stoker, the fellow that does the fuel transfers. What is his counter part on another watch? There are three other un-licensed people on watch, correct? There is the water man, the engine man that works up forward and the stoker man that does the boiler.

A Yes.

Q Operates the boiler.

A Yes.

Q Now, this fellow is also a stoker.

A Yes.

Q And if he was not on the 8 to 12 watch where would he --

A Well, he is always, always doing transferring 8 to 12 watch.

Q But, is he equivalent to another stoker on another watch that is doing another duty? I don't know if you understand my question.
A He is not doing anything that watch keeping will have to do with boilers. He is only doing the transferring and he is also doing, when he, if he work overtime, he is doing the greasing of some pumps. He has a list. You know, there is more than 300 pumps on this ship, so he is doing that.
Q Okay. Does he do water tanks, too?
A No.
Q Okay. On the watch you have three engineers, one in the ERC, and two in the machinery spaces, correct?
A Yes.
Q And you have, so far you have told us about three un-licensed. You have one up forward, he is either a motorman or a stoker, an oiler, works that forward and take care of the forward spaces, the generators, the bilges, and the fuel filters.
A Yes.
Q And then you have a boiler, I am sorry, a stoker, that is strictly stands a watch on the boiler, operates the boiler, blows tubes, cleans burners, takes care of the filters. And then you have a waterman on watch that takes care of filling and transferring fresh water, correct?
A And distaline.
Q And distaline.
A And he is also doing the bilges in some of the rooms, like aft room, aft -- room, auxiliary room and the --
Q Okay. Now you have told us about another fellow on the 8 to 12 watch, that is responsible for transferring fuel.
A Transferring fuel, yes, and diesel.
Q Now, okay, so is it the case that on the 8 to 12 watch there are seven watch standers and every other watch has six watch standers? Because it is not, I don't understand how it works.
A But, did I also, that is the normal engineering, three on each watch, but, there have been also five engineers, not now, but, but it depends, sometime you have somebody who start new for training, so you put them also on watch. So, sometime there is, there can be down three or four engineers.
Q And how about --
A And on the watch with Nicolaisen, there was two, total of four people. For the watch they had, three engineers.
Q Okay. Nicolaisen is a second engineer on the 8 to 12 watch, is that correct?

A Eight to 12, yeah, he was on 8 to 12.
Q So he had three engineers and four un-licensed?
A Eight to 12, he had himself, then two more second engineers, and one Indian third engineer, and then the waterman, stoker, watch keeper, and also the fuel transferring man.
Q Okay. Is there any, does any other watch have four un-licensed watch standers?
A No.
Q Just the 8 to 12?
A Yes.
Q Okay. Thank you.
You had mentioned about an incident where a boiler had shut down because of a high super heat temperature, since you have been a first engineer. Do you recall any other incidents of a boiler shutting down or tripping in the past, well, not so much past three months, but in your previous, let's start first with your, in the last three months as first engineer, other than the time you mentioned, has there been other times boilers have tripped off?
A No, no. Not that I remember. No.
Q Okay. Can you recall any other times when you were sailing as a second engineer when the boiler had tripped off?
A No, not as failure of the boilers. But, they, as I say, if you have got a blackout somewhere, they will automatically fall out because of power failure, electrical power failure.
Q The second engineer is on watch, you mentioned that they need to cooperate, could you describe how they, among themselves, break up coverage of all the shared spaces? For example, does one of them stay in the boiler room all the time?
A No, no, no. They have their schedule to work around, and look and see if any, like when they come down, they always have, they always meet the other watch team in the aft stabilizer room, and then they talk, and they also have one, one board in the boiler room they use to write things, whatever they have done. So, and after they have, as I say, they have maybe a cup of coffee, and they, they take their work around, have a look to see, if they see something which is not normal. And normally, after they are done the second round, then they used to, maybe used to stay in the boiler room together with the stoker. Unless there is some place they have to be. They cannot walk around all the time for four hours, so, so, mostly there is someone in there. Because you also have some ventilation from the, it is not so hot, it is a good place to be and you also have the --

Q Okay. So, do you believe, with the engineers when they cooperate, would they tell each other, "look, I will take the forward machinery spaces, you take the after ones" or would they --

A They can do that. And maybe next time they change. But, if you have, when I used to be there, I used to take a round anyway, all over. At least two times in my watch, before I go and then I come on and when I go off. I cannot, I cannot say what the people are doing now, because I cannot be down in the engine room all the time. But, that is the way I used to do it.

Q Okay. You mentioned that one of the second engineers does water test and chemical treatment of the main boilers.

A Yes.

Q Which second engineer is that and how often does he do it?

A Up to this Sunday, he is suppose to go to, to take over the, the diesel engine because that man that was there, he is suppose to relieve Anvik, Junior 1st. So, he will have one week overlapping. But, the man who take them up every day up to there, was Trond Kristensen.

Q And he was a watch stander on which watch?

A 12 to 4.

Q And how often did he do the testing?

A One time a day, if everything is normal. But, you can say also, when he is on watch, he may just look at the -- down, for example, if there any salt into the condensation system, then he knows there is something wrong and you have to start to do the skimming, so, I have also had this, this boiler test and then I used to take maybe some extra tests sometime, if I know there was something. Then you are doing the skimming the boiler, take maybe six, eight hours to get the salt out. So, it is not necessary to do the skimming more than, when you come down to that, so below 16 ppm, which is the maximum, it just take a second for the salt, and then you change the next, skimming. But, they normally take only the test in the morning. Or after his watch in the morning.

Q You mentioned that two stokers work under Nicolaisen. Could you, do you remember the names of those two stokers?

A One was, one, the nickname was Bone, but the name is, that man that died.

Yes, Valenzuela. And, him and the other guy who died, these two guys who died, they was under him.

(Pause.)

MR. FLESELAND: No, that is not it. He died

yesterday.
(Pause.)
MR. FLESELAND: Ramon Villarais. Ramon Villarais and Valenzuela, they were under Nicolaisen. The stoker, watch keeper, he was -- system.
(Pause.)
BY MR. ROTH-ROFFY:
Q I am going to go back to the fuel transfers for one quick follow up.
The fuel transfer fellow, Ladines, is he also responsible for shifting suction tanks for the boilers? Does he do that or --
A He do that. If he is down at that time, when he is on watch or he is working overtime with the transferring, then he will do that. Otherwise the, the second engineer or the engineer has to keep an eye. But, also the stoker will react because he will heard the pump start to make noise when the level come too much down.
Q Okay.
A But, normally it should not happen that this goes so far down. But, the stoker on watch he is not leaving boiler room, so he is not going into the stabilizer room for changing the fuel tanks.
Q Who would be responsible for checking the fuel tanks for water? Is that something that they normally do before they shift?
A To check the fuel tanks water, that is, that is the man before he has changed the tanks, even if it the transfer man or the engineer.
Q Okay.
A Just to drain out the water, keep an eye. Maybe it drain normal, or maybe for a few minutes.
Q And I am sorry, I would like you to describe a little bit more about the plant arrangement, how it varied from Miami South and south back. You said sometime it is two boilers and sometimes it is three boilers. And I really don't understand that. Could you describe why you have to do that?
A Use three boilers, because knot 17, they have to, they have to take out the starter to, to rewinding it, so then we are and we have two -- kilowatts less with the electric power, that means that we have to start up one turbine generator, who are using steam. That means you have less steam for the main turbines. So you, so, to maintain the speed of the ship back to, back to Bahamas from St. Thomas, you need to have three, normally three boilers, but no, also you have to use three boilers down to main the speed down to St. Martin, because you are using some of the steam for the turbine generators to make electric power. That is why you are using three boilers now all the time.

Q Okay. Did you say you are running three boilers all the time now?
A Yes, for the, since I come back from vacation, yes.
Q But, before that, were you running two boilers all the time or three boilers sometimes or how was that?
A Two boilers from Miami to St. Martin, and from St. Martin to St. Thomas also two boilers, from St. Thomas and back to Straits of -- in Bahamas, you had to use three boiler to maintain the speed.
Q Okay. And that is just to maintain the schedule that the --
A Yes.
Q -- the ship is on, you have to go just faster.
A Yes, that is what they have done for the last 20 years.
MR. ROTH-ROFFY: Okay. That is all I have. Brian
BY MR. CURTIS:
Q Brian Curtis.
Just a couple of questions. You said the periscopes have been cut out at some point.
A Yes.
Q So none of the boilers have periscopes?
A No.
Q That you can check the stack.
A No.
Q And the analyzers for the stack, they are currently not working you said.
A They have one smoke detector for each boiler down in the boiler room. They was not working.
Q And is there a mechanical problem with them or why aren't they working?
A Electric. Electric.
Q And where are those, electrically where is the problem, where is the location of the box where the problem is in?
A The box, you would have to ask, I only know that, that, they told me when I come aboard, then, then the reliever told me that there was all spare parts, or new or whatever. So, we were waiting for me.
Q For all of the boilers. Now the smoke detectors work.
A I guess it was all.
Q And regarding the stoker changing the fuel oil strainers, would, if it was, he was starting and there was a problem, and you are coming into port, would it be typical for him to wait to get in port, shut down and then go ahead and change the strainer, or you would normally do right then?

A There was never any shut down.
Q Right.
A So, you change the another one and you shut off that one who was in use and you, and you open up and clean, and put back in. This is only strainers.
Q Would it be typical for him, do you know, to change that every time he arrives in port, once he is in port and things have settled down to go ahead and change the strainer, clean the strainer? Or did he do it normally as soon as he changed it over?
A I can't say exactly what, if he changed it over first and he, or they cleaned it after watch or, or it was time, and they do it there, I cannot, I cannot say. You would have to find out from Nicolaisen then.
MR. CURTIS: Thank you, sir, that is all I have.
BY MR. OELSCHLEGEL:
Q Chris Oelschlegel. I just have a couple of quick questions.
The soot blowers, can you tell us how often the soot blowers are cycled or operated when the ship is underway?
A Every day. If the boiler is on line.
Q Yes.
A Every, every 12 to 4 in the morning.
Q Okay.
A The soot blow its boiler every day, it is on line.
Q Okay. And that would be once per day?
A Yes.
Q Once per day, okay.
And one other question that and this is when you are underway and sometimes, depending on your route, you are on two propulsion boilers, and then you said when you come from, on another return route you have three main propulsion boilers on line because of the steam demand or the speed that you need to make.
A Yes.
Q Do you rotate between, is there a normal rotation between the boilers that are placed on line out of the four propulsion boilers? You are on two boilers, do you operate this boiler and this boiler or --
A They always need to have one boiler on each cycle line, because this is for safety.
Q Okay.
A If you have two boilers on the same line, because depends if they get electric power from the aft switchboard, forward switchboard.
Q Okay.
A And also say each boiler have two -- they are

not getting the power from the same switchboard. So, if it is follow forward, then there must always be one boiler plant running, and opposite for the boiler on other sides. So, you can always, if you a power failure aft or forward, you can always maintain some of it, but you have to reduce the loads, that you can manage to, to keep the boiler alive. Only one -- It would level out.

Q Okay.

A Three, four burners.

Q And the last --

A Three burners.

Q Okay. The last question I had was if there, in the control room, is there a monitor for the fire room. Can you see --

A People --

Q Yes.

A No. There is, they have not made any monitor for aft boiler room.

MR. OELSCHLEGEL: Okay. That is all I have, thank you.

BY MR. CMAR:

Q Steve Cmar, NCL.

I think this was answered already, I just, the fuel strainers are changed on which watch or are they changed every watch?

A They have this kind of, what do you call it, it is -- filters for the discharge pressure, they have to turn them, I think it is five times every watch.

Q Okay.

A The suction filter, you only clean it when it is necessary, I guess. I don't think there is any, any routine in place exactly after two days or after one day.

Q And so you do that based on, on what, when you say when necessary, how do they determine when to change them then?

A There is a kind of, kind of indicator so when you have too big pressure drop over the filter, you get some, it turn from white to red or blue to red, I am not sure of the color, but, it starts to be more and more red.

Q Okay. So, this last question, on that particular watch, the 4 to 8 in the morning of the 25th, would anybody, would it be logged or would anybody know whether or not the suction filters were changed?

A The stoker, they have a book --

Q Okay.

A -- in the, where they keep the telephone, in the aft boiler room, so, whatever they do on the watch, they write there, the soot blowing, or, yeah, whatever

it is. Whatever happened when they are on the watch there, they start firing up a new boiler or whatever, changing filters or whatever, they, they used to write it there, skimming or all this.

Q And that book is kept right at the phone?

A Yes, in the telephone box, they have it.

MR. OELSCHLEGEL: Okay. Thank you that is all I have.

MR. ROTH-ROFFY: I think we are almost done with you.

MR. FLESELAND: Yes.

MR. ROTH-ROFFY: Thank you very much for being patient with us.

BY MR. ROTH-ROFFY:

Q Could you tell us what your educational and training background is, where you went to school to get your maritime training?

A Yes. I, first I had some, what do you say, mechanical school two years, first level, second level, and then I had, then I had one year with building, steel plates, building, construction. And after that I took the second engineer school, and I start in the Navy for one year, where I was the boiler chief in, I was 12 months on the Fargate(ph) Steamship. And there I get my sailing time so I could get my lowest certificate for steam. And when I come home, after the Navy, I get the job in the Ferguson, with large tank, tank ship company. That was in the end of '91. And I was in that company for more than seven years, mostly on steamships, but I had, I had three, four contracts as engineer and also motor vessel and gas tanker. And in that time I also took the chief engineer school in '93, '94. And I joined this company, only on S.S. Norway I have been in January 1999 as a second engineer. And when I come back this time, as a first engineer.

In the, you can say, sometime I also done some job in the mechanical factory. When I have been home for vacation, otherwise I am, I am, I am there, only son, we have a farmhouse and sometimes I was working there.

Q You mentioned you are going to be going on vacation, it is the plan that you will return to the Norway?

A Yes.

Q In how long?

A Depends, this time I am suppose to come back 10 August after 11 week vacation. Normally we have 10 weeks on, 10 weeks off, but due to Christmas, then I am going to stay 11 weeks vacation and 11 weeks vacation onboard next time, so I can, so we don't need to change in, between Christmas and New Year.

Q Okay. And who is the other senior first that you will be changing with?
A That is Lokkebraten.
Q Could you spell that name, please?
A Maybe be easier if you show him the list.
(Pause.)
MR. FLESELAND: Okay. Okay. Because we have this --
(Pause.)
UNIDENTIFIED SPEAKER: It is L-O-K-K-E-B-R-A-T-E-N, first Name is spelled A-G-E.
(Pause.)
MR. ROTH-ROFFY: I think that is all I have. Brian?
MR. CURTIS: I don't have anything.
MR. OELSCHLEGEL: I am all set. Thank you.
MR. ROTH-ROFFY: Okay. Amazing, but we are actually finished now. And thank you very much, Dan, for coming down and talking to us and being so patient with us. Have a good vacation.
That ends the interview of First Engineer Dan and the time is now about 09:45.
(Whereupon, at 9:45 a.m., the interview was concluded.)