NATIONAL TRANSPORTATION SAFETY BOARD

IN RE:	
THE EL FARO INCIDENT OFF THE COAST OF THE BAHAMAS ON OCTOBER 1, 2015	NTSB Accident No. DCA16MM001

INTERVIEW OF: JAMES ROBINSON, CHIEF ENGINEER

Thursday,
October 8, 2015

Jacksonville, Florida

BEFORE

CARRIE BELL, NTSB
BRIAN YOUNG, NTSB
MIKE MILLAR, ABS
LOUIS O'DONNELL, ABS
[redacted] U.S. Coast Guard
LEE PETERSON, TOTE Services
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PRESENT ON BEHALF OF THE INTERVIEWEE:

GIL FELTEL, ESQ., Tanner Bishop

This transcript was produced from audio provided by the National Transportation Safety Board.

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

MR. YOUNG: Thank you for being here, we appreciate it. The purpose of this investigation is to increase safety. We're not here to assign fault, blame, or liability. We can and will provide you with a transcript or a summary of this interview if you wish.

We will be recording the interview, and when we do go around the table and just verify that it's okay with you that we do record it. And the reason we record it is so that we accurately capture everything you're telling us. And I cannot write as fast as you speak, and I don't want to miss anything.

You are allowed to have one representative of your choice. The representative may not testify for the interviewee. And the representative's comments should be limited to objections and not grounds for the NTSB from refrain from asking questions. But I appreciate your help all day today.

My name is Brian Young, I am an NTSB investigator in the engineering group. My group has been formed to work with technical experts to try to work together and gather information and facts to help determine the probable cause of the accident.

In my group, we have three other companies.

One of them is American Bureau of Shipping, one is the United States Coast Guard, and one is TOTE. Each one of our groups is allowed to have multiple people within it and they are having other people at this interview as well to listen in and ask some other questions.

The way the interview will work is I will kick it off, I'll ask a few questions. We will all give you plenty of time to answer, no one will interrupt you. We try to keep it where we discuss one item that we're thinking about, and then we'll go around the room, other people will ask questions, and then we'll move on so that we're not firing random questions at you left and right.

And just as a review, the NTSB, we're an independent federal agency. We are charged with determining the probable cause. We are not a part of DOT or the United States Coast Guard and we have no regulatory or enforcement powers.

If you don't understand anything, just let us know. We'll rephrase the question. And if you don't know the answer, there's nothing wrong with saying I don't know or I can't recall. Do you have any questions? Good to go? And again, thank you for being here.

So we are going to go live, if everybody's

ready. Okay. The time is 1858. It's Thursday, October 8th. We're in Jacksonville, Florida interviewing the Chief Engineer who is off duty of the El Faro.

My name is Brian Young, I'm the NTSB Group Chairman for the Engineering department.

MR. O'DONNELL: Louie O'Donnell, Assistant Chief Surveyor of Americans, ABS.

[redacted] U.S. Coast Guard. I'm here assisting with the engineering working group.

[redacted] Lieutenant Commander [redacted] from the Coast Guard assisting with the stability part.

MS. BELL: Carrie Bell, NTSB Human Performance Group Chairman.

MR. PETERSON: Lee Peterson. I'm the Director of Human Resources for TOTE Services.

MR. MILLAR: Mike Millar with ABS, and I'm also assisting.

MR. FELTEL: Gil Feltel, Tanner Bishop law firm here on behalf of Mr. Robinson.

MR. YOUNG: Great. And if you would introduce yourself and spell your last name for the record, please.

MR. ROBINSON: James Robinson, R-O-B-I-N-S-

O-N. Off duty Chief Engineer of the SS El Faro.

MR. YOUNG: Great. Thank you very much. And just before we start, we have gone through the basic set up of the engine room with the first and second engineers.

We've established the set up of the boilers and the propulsion system, the turbo generators, the emergency generator. So we have a very good account of the way those are set up, so we kind of want to just continue on and not start from scratch with all those details.

And I think we kind of discussed that beforehand, so we won't make this interview go on too long with that sort of information. But we would like to start with your background, Chief. If you would maybe give you a short description of your maritime training and your marine engineering experience.

MR. ROBINSON: I graduated Maine Maritime 1996. I worked for Dyn Marine for a seven month tour on a survey vessel. Then I came back and I shipped out of the Great Lakes as third engineer for two and a half years.

And then September of '99 I started with Sea Star at the time. I did a ten week tour as third, came back as second. Worked as second engineer for, like, a

year and a half, then moved up to first. Then 2006 I came over to the El Faro as Chief Engineer. From 2006 to 2009 I was on that ship, the El Faro.

And a job opened up on the SS El Moro because the El Faro was in between cargo going across seas. So I wanted a stateside job, so I got moved as chief engineer on the El Moro. And then when they decommissioned the El Moro and activated the El Faro, I reassumed chief on the El Faro and I've been chief since.

MR. YOUNG: That bump our date of when you assumed chief of the El Faro? About what year?

MR. ROBINSON: It was 2013 they, yes, like broke it back out. The ship died in 2013 and then --

PARTICIPANT: The end of '13?

MR. ROBINSON: Yes. Yes, it was December of '13.

MR. YOUNG: And just for the record, I forgot to say this one part in the introduction. We are recording this, and are you okay with that?

MR. ROBINSON: Yes, sir.

MR. YOUNG: Okay, thank you. And what current license do you hold?

MR. ROBINSON: Chief engineer, unlimited steam and motor.

MR. YOUNG: And way back when in Maine Maritime, can you let us know what type of steam propulsion training you received at the academy?

MR. ROBINSON: We were on a steam ship.

MR. YOUNG: Were you?

MR. ROBINSON: So it was, yes it was a steam propulsion plant. We had classes on the ship, training on the ship. During the two month school cruise, you know, you get quizzed on the boilers, the operation, you would have junior duties with actual licensed people on board that would do that. So there was training on the ship.

MR. YOUNG: Throughout your entire academy time, you did all your sea time on the steam ship, correct?

MR. ROBINSON: The school ship was steam, and I went cadet shipping with Gulf Oil. That was an old steam ship.

MR. YOUNG: Okay. Great.

PARTICIPANT: You got a noisy phone.

MR. YOUNG: Hit it with a hammer?

PARTICIPANT: Yes. How about the other end?

(Simultaneous speaking)

PARTICIPANT: Oh, gosh.

MR. ROBINSON: Actually, those are battery

operated, so it may keep running.

PARTICIPANT: There you go.

MR. ROBINSON: Done.

MR. YOUNG: Right? Okay, so when we did talk to the First and the Second, they did explain a good amount about the different propulsion systems. Getting into your daily routine as Chief, maybe you could just describe your job description and what your daily duties are as Chief aboard the El Faro.

MR. ROBINSON: Well, that was the good thing about being Chief. You didn't have a schedule. You could get your paperwork done. But on average, you know, I was always in the projects or whatever. I would be down in the engine room. If the first beat me down there, it was very odd.

But, you know, I take care of the ordering. And then I work with the first or whatever if it was time to o-val (phonetic) a pump or anything when I was on there, I wanted to have my hands on it.

So not that I did not trust my engineers, it's just I like mechanical mechanics and I would try to step back and let them get involved. But a lot of times I would get carried away. I was really active in the engine room, maintenance details. You know, the first ran the show.

I would back out of that and I would just keep track of the entries in AMOS, making sure that everything was being, you know, kept up to date. And he kept the running work log because he knew what he had this guys doing, but it was on the computer and I can see.

You know, and then any out of the ordinary things that I worked on, I would put that in the AMOS as far as if summaries and you had a pump you wanted to rebuild or whatever just for inspection, that was an unscheduled maintenance. So you know, anything like that I would always enter, reorder whatever parts I needed or whatever.

So basically hands on, take care of any of the operations, making sure that the AMOS is up. Reefer cargo, I was in charge of, you know, I would do a round with the electrician at least once a day. But if anything broke down or if he had a down reefer, it's the chief engineer's responsibility to work with the electrician who's the reefer guy. So we got involved with that quite a bit.

MR. YOUNG: And how about when it comes to, say management of the SMS system, how were you involved with that?

MR. ROBINSON: The deck bar, you mean you're

talking the safety management? You know, they have a list of activity, whatever they've got to cover each month. So each week at a drill we'll discuss this or cover, you know, our safety meeting.

So they had everything that they would go through the training. If it was something that the engine room, you know, black out recovery or flooding in a cargo hold, we would get involved and discuss during the meetings on any of the engine activities or whatever, we would be involved in that.

But a lot of the meetings or whatever, you know, like hot work permits and just that was all spread out. You had a month to cover all the topics required, and that's the way they did it each week. Take a little bit and --

MR. YOUNG: And would you hold any sort of daily, pre-work safety meetings? Was that any sort of requirement, like a toolbox talk or anything?

MR. ROBINSON: It would depend on what we were doing.

MR. YOUNG: Okay.

MR. ROBINSON: I mean, regular daily maintenance. But if we had a boiler down for cleaning, you know, it's like hey, we're going to do this, this, this and as far as so everybody was up to snuff because

it's, boiler cleaning's routine. At least once a ten week tour you go into each boiler and clean it, inspection, you know, just for yourself to see what's going on.

You know, tank entry, something you don't do normal then you would have the toolbox meeting or whatever. But for regular maintenance, the first, he would discuss, you know, this is how I want to do it, make sure they understand. And then keep dropping by and making sure they're doing whatever the project is correctly.

MR. YOUNG: And I noticed trying to read through your SMS system, your company's SMS system that you, all the engineers are required to compile turn over notes.

MR. ROBINSON: Yes.

MR. YOUNG: Are those sent into the office, or are they retained aboard the ship?

MR. ROBINSON: They're supposed to be sent into the office.

MR. YOUNG: Okay. And do you know if that has been done?

MR. ROBINSON: As far as I know, my last reliefs, and I sent it to Tim Neace (phonetic) and this when I get off first of September. So pretty well

consistent.

MR. YOUNG: Okay. So of the three engineers we're talking to, you were the most recent aboard the ship. You just got off first of September?

MR. ROBINSON: I got off as chief there at first of September. But I went home for two weeks, then I came back to the vessel to help with the conversion work, doing wire and so I come back for a month and then I got off September 22nd I believe.

MR. YOUNG: Oh, so you just got off a week ago?

MR. ROBINSON: Yes, a week before. Yes.

MR. YOUNG: Okay, so you're very recent. The other guys we talked to were beginning of August.

MR. ROBINSON: Yes. They're at the end of the ten week tour right now, vacation.

MR. YOUNG: So when you were aboard for this month of your vacation, what role were you in?

MR. ROBINSON: I was just a contractor.

MR. YOUNG: A supernumerary?

MR. ROBINSON: Yes.

MR. YOUNG: Okay. And you were assisting with the conversion work?

MR. ROBINSON: Pulling wires and whatever.

MR. YOUNG: On your time now, all right well

we'll just before I start changing to that, before I go on, we'll just go around the room. If anyone has any questions based on the Chief's experience or the daily routine or anything we just discussed before we move into anything else.

PARTICIPANT: No further questions.

MR. YOUNG: [redacted]

PARTICIPANT: I'm good.

PARTICIPANT: No further questions.

MR. YOUNG: Okay, good. And as we said before, we did get a lot of information about the equipment and how it's operated by your junior officers. But I didn't realize you had been aboard the ship so recently.

MR. ROBINSON: Yes.

MR. YOUNG: And I guess from what we understood the last two interviews, everything seemed to be working absolutely perfect. There was no problems with the boilers, the TGs, the emergency generator or the main unit. It seemed like there were no major incidents or anything to report.

Were you aware, or did you see anything different since you got off, during the time you were on there as the supernumerary. Did you see anything as you were riding back and forth with the ship at sea?

Anything --

MR. ROBINSON: No, not --

MR. YOUNG: -- operationally that could have caused --

MR. ROBINSON: Nothing that wasn't normal routine, I mean, steam ships there's always little things come up that, you know, nothing, it was nothing show stopping. It was just regular wear and tear, you know, and changing out a pump motor on one of the contaminated. But, I mean, nothing that would affect the propulsion or anything.

MR. YOUNG: Okay. The other chief that you relieved that was aboard the ship, did you guys have a good relationship on your turnovers?

MR. ROBINSON: Yes, yes. I mean, I worked side, I mean, we had the salt water line on the feed pumps that had pinholes in it, so we had to do a salt water service shutdown and I worked with him for a whole day doing that. I mean, I had a good relationship with him, you know, I could work with him. So I mean, we had no issues.

MR. YOUNG: No issues.

MR. ROBINSON: We got along.

MR. YOUNG: As chief, you're managing a whole department, engine department, licensed and

unlicensed guys, what was your general view of safety aboard the ship and the safety culture of your department?

MR. ROBINSON: It was very good. I mean, each meeting (inaudible) first day safety meeting it's like hey, is there any safety issues, does everybody have everything to make, you know, has any questions if they don't have, you know, everything's addressed.

I mean, everything for safety we have, and if it's something brought up, we don't have it, we'll get it. So yes, as far as the safety factor on the ship, that is stressed big time.

MR. YOUNG: Okay. And when it comes to the company supporting you in terms of safety issues, were you getting support from the company?

MR. ROBINSON: Oh, 100 percent, yes.

MR. YOUNG: Okay. In terms of maintenance and AMOS, was there ever any pressure for you to defer any maintenance or did they give you support to receive --

MR. ROBINSON: They, yes, the support was great on that. I mean, whatever the shortest time period, you get whatever you needed. If you didn't have it on board, you put in an emergency req and as soon as the vendor can have it or whatever, it's there.

You know, there was no --

MR. YOUNG: And in AMOS, I'm familiar with AMOS in the maintenance where the jobs come up chronologically, and if they don't get done they continue to rise to the top. Is there any way that you know of that you can defer the maintenance and just delete it from the system or defer it?

MR. ROBINSON: You can't delete it. You can take it, if you put a defer date and then if they come on and look at that because when they first started it they were deferring it but they weren't going up in the detail section and writing okay, deferred until shipyard or whatever reasoning was, deferred because waiting for parts.

And we had an audit, this was a long time ago, and they actually brought that up. You know, it's like hey, why did you defer this because it wasn't consistent. Everybody didn't put a reason why it was deferred. So you can't delete. Any changes in that system, you've got to be a system administrator.

MR. YOUNG: Okay.

MR. ROBINSON: So somebody external. If we had to add parts, we did not have access. So if I got a wicks (phonetic) filter instead of a Baldwin, I would have to send an email to have them put the part number

in just for a five minute change. So there was no way to manipulate that system and --

MR. YOUNG: Okay.

MR. ROBINSON: -- you could change due dates or stuff like that. But there was no way to take out a record that if this equipment wasn't there anymore, I would have to write a thing up. It's like hey, okay, we don't have this anymore, can you take this out.

MR. YOUNG: Okay. And did the company ever oversee your maintenance and keep an eye, keep track of what was overdue? Was there any sort of oversight on their part?

MR. ROBINSON: Yes, because I mean, that was, when we first activated the ship, the ship had been laid up for, you know, a year or whatever it was. So you've got all these jobs that are due, past due. So you had to have a start point. So they worked with us and we got everything.

So it was getting replicated for the next month or two months or whatever. So yes, no, I mean they would come on board and during discussions or whatever, they'll ask if there's any issues or everything's going good and, you know, if you've got a problem you bring it up.

But you know, as far as you just let them

know. I mean, they can see AMOS on the other end on shore. So they get in sometimes and look what we have, parts, if the other ship needs it.

MR. YOUNG: Right, right. And I know part of SMS too is evaluating your junior officers and your crew. Did you do formal evaluations of any of the people that worked for you?

MR. ROBINSON: We did. It wasn't, you know, you sail with the guys for so long, they just get the same, you know, yes. You'll give excellence because you always got room for improvement.

I don't care how good you are or who you are, you know, superior you're not, I mean, you do that and then they start thinking, you know, it's like hey, I'm already at where I need to be. It's like no, I want these guys always thinking for themselves.

So yes, they have anybody that's under when I'm on the ship, if it's new crew you're supposed to submit them each time you depart the vessel. But if it's the same guys or whatever, you know, the new people, you give them two.

But if you've given 20 evals to these people. But if you've got a guy that's not pulling his weight or not progressing like he is, you'll give, like, a mid tour verbal or whatever.

And then at the end, you know, or give him one that doesn't get submitted and that's his incentive to step it up. And you want to see a change by the end of the ten weeks. If not, don't bother coming back.

MR. YOUNG: Right, right. And some of the guys that were aboard the El Faro, and I know you were just there recently, but did you have any prior evaluations or experience with Howard, Mike Holland, or Mitchell Kuflik? Had you ever dealt with those guys before?

MR. ROBINSON: Mitch was my third on there. Yes, they all got, Howie --

MR. YOUNG: Any performance issues?

MR. ROBINSON: There was not. No.

MR. YOUNG: No, okay.

MR. ROBINSON: The new third I didn't. He came on in San Juan after I had departed the vessel so I didn't know him. Mike Holland, I mean, when they came on, yes they were fresh out of school. But they were smart kids. And it's like hey, you know, after the first week you stand six and six.

I would discuss it with the first because I don't want to get a phone call in the middle of the night. It's like you guys are going to stay six and six until I'm confident that this guy knows some of the

emergency procedures.

Get started before the rest of the engineers get down. So I've never had, over the last, these engineers have progressed up, you know, to the ability that they can stand their own watch real quick.

MR. YOUNG: So when a new engineer does come aboard the ship, he's doubled up with somebody on watch?

MR. ROBINSON: That's, yes. Right, yes.

MR. YOUNG: Okay.

MR. ROBINSON: During the daytime I don't because we're always down there, somebody's down there. But the 12:00 to 4:00, if he was on that, they would be six and six until I'm comfortable.

MR. YOUNG: Until they prove themselves?

MR. ROBINSON: Yes.

MR. YOUNG: That's good.

MR. ROBINSON: And that's what they do, they're drilling them. This happens, what are you going to do? You know, and then when they say he's ready, then I get together with them and it's like okay, what do you do if this happens right now? If I don't like his answer, they find out.

MR. YOUNG: More six and six?

MR. ROBINSON: Oh yes. The guys get really

tired of it real quick because they want, I say you guys got to get him up to speed.

MR. YOUNG: That's good incentive. And is this your own little system of qualified people, or is that a company --

MR. ROBINSON: No, I know my relief Rich was doing the same thing. But that's why, as far as I know, Mitch had stayed on to ride around just for training purposes. Am I correct on that?

PARTICIPANT: I don't know.

MR. ROBINSON: Yes. That was my understanding. But he was going to ride back to Jax. but why he rode further, I don't know.

MR. YOUNG: Okay. But this wasn't a company policy to go six and six until the chief is comfortable. This was --

MR. ROBINSON: No, it's just something we do on board so they get him up to speed quicker no matter if they know the plant or whatever.

MR. YOUNG: Got it. Okay, any other questions regarding crew aboard and evaluations and from the rest of us?

PARTICIPANT: A question on something you mentioned. It's not relevant, I guess it is. Just can you clarify, you said that there was a salt water line

that had pinholes in it that you had worked on?

MR. ROBINSON: Oh, it's just --

PARTICIPANT: What line was that?

MR. ROBINSON: It's the cooling water line for the lube oil and feed pumps.

PARTICIPANT: Okay.

MR. ROBINSON: It just was starting to have a couple rubber soft patches on it. And before it got to the point, you know, to do a salt water shutdown, you've got a lot of set up external feeds for different equipment.

And then just go down, crop it up, and raise a new one in. But that was just a scheduled maintenance job that we didn't want to take the chance of having it pop. Even if it did, you can just hook a water hose up to it as a connection right there. So that's what we did do the salt water repair.

[redacted] [redacted] This is Lieutenant Commander [redacted] Just in terms of the maintenance that you've had to do, did you see an increase in the amount of maintenance when the ship was going through rough seas ever, anything related to, you know, a lot of (inaudible) or blistering, things like that.

MR. ROBINSON: I can always say I've been on these ships since '99 and I've hit rough weather

probably a handful of times. And nothing changes. You may, you know, just latch everything down. But as far as plant efficient, I mean plant running or whatever, just hang on. Just makes your daily work a little harder. But no, I haven't seen, like I said, I've never been involved in the rough weather. So I can't say on that.

MS. BELL: I have a couple of questions. This is Carrie Bell, NTSB. For the new people that come, are you responsible for training them for safety drills? Is that something you do or your guys do?

MR. ROBINSON: You've got, well you've got a chief standing orders, then you've got an indoctrination log book. The first engineer, this is a company indoctrination book. You've got all the topics, the escape routes, what your duties are, your station bill duties, muster locations.

So when the new guy comes on board, the guy gets the book, reads through it. And then the first engineer talks through it, making sure he's understand, familiar with the whole indoctrination guidelines. And then he signs it and the first signs it. So that's --

MS. BELL: So about how long does that take, to go through all that?

MR. ROBINSON: The indoctrination, I mean,

usually they'll read it over when they're down on watch or the first maintenance they're on. So I mean, you're looking at a couple hours to read through it.

I mean, you're looking at about four hours maybe. But you know, it's sufficient for what we need there. You know, you can't cover all topics but that's what the training is for each month at drills.

You just get them started on what the duties are, muster locations. And then the training throughout, whether it's engine room training or if I'm teaching them how to do something it's covered throughout the rest of the time.

MS. BELL: And I think you answered my next question which was about how often you do the safety drills.

MR. ROBINSON: They've got, we've got fire drills, the safety meetings, you cover so many topics throughout the month. But monthly, you've got to hold a company or a ship wide safety meeting that basically anybody can bring up any concerns or whatever.

They discuss last month safety meeting minutes, whatever was brought up. This handrail was broke, and it's like next thing, yes it was repaired and it's got to be entered into the minutes. But as far as the training, that's a weekly. Each week we

have a fire drill and the training's covered each week.

MS. BELL: What about any kind of an abandon ship drill?

MR. ROBINSON: Those are scheduled. I'm not sure what the frequency, but at least once in whatever that rotation is of lists of all the different training that's got to be covered. There's an abandon ship, you know, man overboard. So they actually, northbound, will do a Williamson turn, go back and try to find the box.

MS. BELL: Okay.

MR. ROBINSON: Because northbound we don't have to, we can go slow and not meet schedules. So that's when they carry out drills like that.

MS. BELL: Okay, thank you.

MR. MILLAR: Mike Millar with ABS. When you were talking about the indoctrination, is that the familiarization form for a new person, or does every time an engineer --

MR. ROBINSON: Every time an engineer or anybody comes on board, you've got to sign the chief engineer's standing orders. Go through --

(Simultaneous speaking)

MR. MILLAR: Okay, so they're going through a familiarization about their emergency station bill,

their emergency locations and assigned duties?

MR. ROBINSON: Yes.

MR. MILLAR: And then they're getting more into the engineering side for the engineers, right?

MR. ROBINSON: Yes.

MR. MILLAR: Okay, okay. And for the abandon ship drills that she brought up, since you've been on the ship, when they did them were they actual, did they lower the boat to the water? Did they launch it?

MR. ROBINSON: That's done monthly. But as far as during the drills, you lower to the embarkation deck, run the (inaudible). Then once a month --

(Off microphone comment)

MR. ROBINSON: Yes, the lifeboat engine itself is run weekly. The third engineer goes up there and checks all the levels. Any service is due on them, you know, changes the oil and stuff. But they exercise the flooding gear, you know, each drill.

So yes, everything exercised and brought to the embarkation deck unless something happens there that it was just done for, like, we had Chad Harding on there when I was here.

MR. MILLAR: Okay.

MR. ROBINSON: So we had just lowered them

to the embarkation deck. So the next day was the drill, so we didn't.

MR. MILLAR: Is that the clutch overhauls?

MR. ROBINSON: I'm not sure. I was getting them to process when I left. They were working on that. I don't know where that ended up.

MR. MILLAR: Okay.

MR. YOUNG: All set? Back with Brian Young from the NTSB. While you were aboard the ship as a supernumerary, was the Polish riding gang on there with you?

MR. ROBINSON: Yes, they were.

MR. YOUNG: Could you give us the scope of work of what they were working on?

MR. ROBINSON: During my time we had two welders that was building frameworks for motor controllers, installing bumpers. And then there were the other four. We pulled all the new cabled set up for the new ice wenches and ramp wenches and stuff.

It was, like, 5,000 feet of cable that had to be pulled. So that's pretty much, we had the lifts on board and void out whatever areas of cargo and they would be pulling wire north and south.

MR. YOUNG: They never had anything to do with any propulsion systems in the engine room?

MR. ROBINSON: No.

MR. YOUNG: Great, okay. What we like to do, unless any question about the riding gang, anybody?

[redacted] [redacted] The scope of work, [redacted] [redacted] from the Coast Guard. Would they have any reason to be in the hold station while doing work?

MR. ROBINSON: No, everything was on the second deck. Yes, they had some, like I said, back on the stern they had a couple brackets and frameworks for a big wench controller that they were working on, platform. But it was all --

[redacted] [redacted] So anything they were welding on, any cable runs, anything they were doing --

MR. ROBINSON: That was, 99 percent of it was on the weather deck. And either Jeff Mathias or myself was around --

[redacted] [redacted] Supervising?

MR. ROBINSON: -- supervising each. We didn't just cut them loose. We had one guy that spoke English and he was the translator. You know, they could understand you, but you would find yourself talking down to people. Talk to people like you, I would be sitting here okay, you got to, it's like wait a minute. I'm not talking to somebody that doesn't speak English right now. It's like sorry.

[redacted] [redacted] That individual, that translator, do you know his name?

MR. ROBINSON: Martin. I don't remember his last name. Martin was his first name. He would be on the ship's, yes, crew list.

[redacted] [redacted] Crew list, got you.

MR. MILLAR: Mike Millar with ABS. When you were pulling the cables, were these cable transits above the weather deck, you know, above the main deck or were they --

MR. ROBINSON: No, it was underneath. You've got your second deck in your overhead.

MR. MILLAR: Okay.

MR. ROBINSON: You've got the fore and aft structures, whether they would pick an empty one and run --

MR. MILLAR: So these were cable transits coming from, like, the engine room into the cargo hold?

MR. ROBINSON: We only had one, not going into the cargo hold. We had one water tight penetration coming from the engine room up to the second deck. But the rest of them was all tied from the second deck, tying from existing refer cables that were going to be eliminated in the shipyard and relocated. So we junction box and just run the wires

from there.

MR. MILLAR: Okay.

MR. ROBINSON: So as far as penetrations in the cargo holds or anything, there wasn't --

MR. MILLAR: No changes?

MR. ROBINSON: No.

MR. MILLAR: And when you say pulling cables, were you pulling new cables or were you --

MR. ROBINSON: Yes.

MR. MILLAR: -- pulling old ones out?

MR. ROBINSON: There was a couple places that the wires were discontinued, that's what we did. They were still there for some reason, and we pulled the old wires out to make room for the new cable to go in its spot.

MR. MILLAR: All right. Would there have been any situation where you might have pulled that old cable and not plugged the transit?

MR. ROBINSON: No, nothing's penetrating the cargo hold.

MR. MILLAR: Okay.

MR. ROBINSON: Nothing was going down through the weather deck. Everything was on the overhead on the second deck.

MR. MILLAR: Okay, so if you had pulled any

of those cables, I don't know whether you did, but if you did pull those cables and the transit was refilled with the new cable, or were there any that were just --

MR. ROBINSON: We didn't make any penetrations up through the main deck or down through into the cargo hold.

MR. MILLAR: Okay.

MR. ROBINSON: Everything was all from existing power panels on the second deck. You just ran it up in an overhead back to wherever the winches were going to be mounted.

MR. MILLAR: Okay.

MR. ROBINSON: Yes, there was no penetrations into the water tight cargo holds or --

MR. MILLAR: Okay. I'm just thinking about the old kick pipe, you know, and you pulled out the old cable and there's the kick pipe.

MR. ROBINSON: Yes, no.

MR. MILLAR: And you fill the kick pipe with a cork.

MR. ROBINSON: Yes, no. There was no penetrations because all the other wires were going to be terminated going from the second deck to the main deck. So everything from the watertight, there was nothing addressed.

MR. MILLAR: Okay.

MR. YOUNG: Anyone else for the riding gang? So back with Brian Young from the NTSB. All right, so what we like to do is maybe focus more on some of the operations, parameters of some of the equipment in rough weather. All right, and the first thing I would like to kind of focus on is the fuel system.

We understand you bunker every week and typically ride in good weather. And when the ship is suspect to rough, rough weather, the fuel gets bounced around and maybe could develop some more junk in the strainers. Do you guys ever have any reports of bad fuel or any clogged strainers in the fuel system even in good weather, bad batches of fuel?

MR. ROBINSON: It's standard when you done fueling, you know, just the new fuel going into there you, I mean, you always, before you leave port they swap over the suction discharge strainer. It's just like putting in new burners in the boiler. You want boilers ready, fuel ready.

So there's no, I mean, some days you change it once a watch, sometimes you did it a couple of times a watch. But it's just some fuel, I mean, we haven't had, if you're saying a bad batch of fuel that we've had to be up all night or anything like that, no.

MR. YOUNG: Okay.

MR. ROBINSON: It's the standard one two, you know, guy comes down first thing and he's got to easily check it and change it from the first initial round. But it's standard each watch they pull it and clean it so it's ready to go for the next watch.

So in rough weather, I mean, yes we change it up a couple times, a few times. I mean, it's hit or miss. I can't say it's going to foul ten times in one watch. But some days you do have to change it a couple times. But it's just regular, routine, you know, they just automatically.

MR. YOUNG: And just to make sure we're verifying what we had received information before is there's one fuel (inaudible) over a high and a low suction. Correct?

MR. ROBINSON: Yes.

MR. YOUNG: There's not two? And do you typically burn off the low suction?

MR. ROBINSON: Yes.

MR. YOUNG: Okay.

MR. ROBINSON: Mike told me, he said I open my mouth and didn't think of it.

(Simultaneous speaking)

MR. ROBINSON: As soon as he said it it's

like can I take that back.

MR. YOUNG: Okay, so you typically burn off the low suction?

MR. ROBINSON: Yes.

MR. YOUNG: Okay.

MR. ROBINSON: Yes, in all the years on the ship I've never, the only time those get exercised monthly, greased, lubed up and I've never had to go from the low to the high because I was having issues.

MR. YOUNG: Okay. You've said you've never had to switch to high, right, in all the years?

MR. ROBINSON: Yes, in all the years I haven't. It just, those valves get secured when the ship was laid up, and regular monthly maintenance. The retrods get checked, knuckles greased. That's the only time we do go to the high. He'll open the high all the way up, shut the low, and then flip flop. That's monthly exercise.

MR. YOUNG: Okay, great. But no reports of any bad fuel, any issues with any of the fuel you've received, right?

MR. ROBINSON: No.

MR. YOUNG: Okay, especially as of late, in the last few trips?

MR. ROBINSON: Yes, no. They've been

fueling in San Juan and in Jacksonville. And, you know, the month I was on there there was nothing out of the ordinary. And when I was on there, my regular rotation, nothing was, you know, couple strainers here and there but nothing out of the ordinary.

MR. YOUNG: Okay, great. Fuel questions, anyone?

PARTICIPANT: No, none.

PARTICIPANT: I like you. No, next.

PARTICIPANT: I'm good. I think we hammered that to death with the other two crew members.

MR. YOUNG: Yes, exactly. That's why we don't want to keep beating a dead horse with that. And then coming to the boilers now. If you could, we have got a pretty good description of how the boilers operate.

But maybe you could just review some of the shutdowns and some of the weather related shutdowns that could possibly be affected by rough weather such as say water level. Give us a little description on the shutdowns. And in your experience, have you had any of these alarms triggered, either properly or falsely.

MR. ROBINSON: Yes, the shutdown alarms is the only thing at low, low. You're high, high, all

that does is lock your throttle up. Then you can manually override it if you had to. But as far as when you're rocking and rolling, you may, but there's a delay on that.

So that's what your pressure, or your level indicator or transmitter, you know, they've got a time delay in the (inaudible). So yes, if you roll and that thing goes up to plus three or whatever, and then you go the other way, you got that time delay so you don't get the alarm all the time.

MR. YOUNG: Okay.

MR. ROBINSON: But if it gets to the point that it stays there for more than, I don't know, the different alarms are set up different times. You know, it could be a five second delay, it could be a 15 second. But if it got to the point. But as far as getting to a low, low water, you're not, I mean, rocking and rolling you're not going to get that alarm.

MR. YOUNG: Okay. So in the roughest weather you've seen on this ship in your experience, you've never gotten to the point where you've hit the low, low on rough weather?

MR. ROBINSON: No.

MR. YOUNG: No?

MR. ROBINSON: No. The only time I've ever

got the low, low is when I lost a feed pump.

MR. YOUNG: Okay.

MR. ROBINSON: Boy are you tested, you know? Your boiler automation, you've got a ABS approved automation test procedure. Every year before, we'll go through, like, if we shot down to a bottom blow, okay let's test the four (inaudible) fan trip or try to piece through that.

And then we carry that out throughout the year and trip the boiler a different way. And so that way you're completing your yearly inspection and you have it on record. So when they come in for the ABS audit, it's like yes, here's the self inspection, US Coast Guard ABS improved. And then they'll look through that, see that it's been done and they'll just say okay, do this one, do this one, and spot check it and always good to go.

MR. YOUNG: And that was passed on to us how well prepared your crew is before the inspections and surveys with the pre-testing.

MR. ROBINSON: Yes, it's not very good when you've got the ABS inspector there and you're fumbling around. You kind of, it doesn't look very good.

MR. YOUNG: And in your time on the ship, I know you've been there a while, have you had any

concerns or any failures of any of the automation on the boiler that could shut her down?

MR. ROBINSON: No, I mean for as old as these ships are, I mean, we've got a NORCOM that was different than the other two ships. They had all TMS. But I mean, besides losing a fire eye here and there when you have a standard shutdown, we haven't had any issues with this stuff.

You know, lighting off a dead plant when it come on to the scrap layup yard. Well when it was (inaudible) it was scrap. But you know, you have your certain issues from being down, power supplies. But underway, I haven't had any failures that shut me down.

MR. YOUNG: If you did lose electrical power and you want them to relight off the boiler, would it be absolutely necessary to have the emergency generator running in order to relight the boiler?

MR. ROBINSON: If you lost the main generator.

MR. YOUNG: Yes, if you lost your generators and you're in the black.

MR. ROBINSON: Well, if you had, see southbound we run both generators. You've got a small window there if one of them tripped or both of them tripped, if you can get that breaker closed again, you

can relight off your boilers. But you don't have much time.

But yes, if there's no way to reestablish one of those generators back on the board, you just shut the throttle, bottle the boilers up. You got to swing the plant over to the emergency plant. You got to backfeed your emergency generators, you got to strip your main board, make room to light off.

You know, so it's not, if you've got to swing the plant, it's not a five minute, you know, like a diesel ship you can just go over there and boom. It gets hot quick.

MR. YOUNG: If the emergency generator didn't start, it wasn't running, is there any way to get a fire to the boiler without emergency power or turbo generator power? Could it be done?

MR. ROBINSON: No, if you don't have power you don't have any --

MR. YOUNG: No fuel pressure?

MR. ROBINSON: Yes. You don't have any fuel pumps, nothing.

MR. YOUNG: Okay. Okay, boiler questions? That's all I got.

MR. O'DONNELL: All right, James, I got a couple. Lou O'Donnell, ABS. You mentioned the high

high water alarm. It locks out the throttles, it's set up to lock out the throttles instead of shutting down the throttles?

MR. ROBINSON: Yes, it will limit the throttles. Throttle limiting it's called. Yes.

MR. O'DONNELL: Throttle limiting, okay, okay.

MR. ROBINSON: That way you don't get carry over into your --

MR. O'DONNELL: Yes, that was going to be my next question. Thank you. All right, you never experienced a problem when you had high high water bad enough that it started locking you out of the throttles, or you never had any carry over to the turbines on any of these ships?

MR. ROBINSON: I've been fortunate. When I bring a boiler on line after service, I bring that throttle rate to shot. I mean, yes your lowest point's your feed pumps.

MR. O'DONNELL: Yes.

MR. ROBINSON: But I don't even take the chance. I shut everything off.

MR. O'DONNELL: Now I just wanted to ask, I asked both your engineers before, when you second, when you have them do a good bottom blow, I mean, really

give the boiler a good cleaning out, he said he did go down to low, but he didn't go to low low. Do you usually do that every time, or maybe just quarterly for your PMs or for AMOS?

MR. ROBINSON: Yes. It's not every time. I mean --

MR. O'DONNELL: Okay.

MR. ROBINSON: -- it takes a --

MR. O'DONNELL: Forever, yes I know.

MR. ROBINSON: It takes forever, you know what I mean?

MR. O'DONNELL: Yes. And it's a waste of a lot of good water.

MR. ROBINSON: Yes, yes. You're dumping out five, six ton of water out of that. But you know, it would get tested usually, you know, within a month or at least once a tour that you're on there.

MR. O'DONNELL: And asking you, but maybe indirectly asking Lee, and you mentioned the ABS approved boiler automation test procedure. Do you have that? Lee, you wouldn't happen to probably have a copy of that, would you, in the office?

MR. PETERSON: We --

MR. O'DONNELL: Might?

MR. PETERSON: -- might. And if we don't,

we can get it off the (inaudible) tomorrow.

MR. O'DONNELL: Okay. We'll look at that.

PARTICIPANT: Yes, but they've got a different --

MR. PETERSON: Oh, that's right, they --

PARTICIPANT: There's no TMS. You can get Dick got it off his --

MR. PETERSON: I think we might have it. We know the guy who built the thing, so we can probably get it from him if you need it.

MR. O'DONNELL: That's all I got. [redacted] Coast Guard. You had mentioned you lost the feed pump before. Can you just tell us when that was and what happened there?

MR. ROBINSON: Yes. We had spent our lube oil filters, Baldwins. And the older style was the canister with an insert filter element. Well, within the run of a month, they bought in a brand new filter cracked. I don't know if Baldwin came out with a bad batch or what it was, I don't know.

But the feed pump, you know, when you have a crack in the lube oil filter, we didn't lose it. We made a hell of a mess and fired up the other one. But by the time -- see the other two ships have an electric, or had an electric feed pump. So that was a

lifesaver.

So if you lost a feed pump while you're trying to get the other one, you're slowing down. You hit that electric one while you're getting the steam lined up to your, you know, other feed pump. But yes, it was just something simple like that.

There was a faulty Baldwin filter and, you know, to get it swapped over, the other guy, that one tripped out and we got the other one up. So we got a low water alarm, but we didn't lose a plant or anything.

[redacted] Okay. There was an earlier mention of some third party work that was going to be performed on the boilers. Are you aware of that and can you tell us about what was going on? What was the name of the organization?

MR. ROBINSON: Walashek.

[redacted] Walashek, right.

MR. ROBINSON: Boiler, yes we were due to go to the shipyard the end of October, first of November. So they flew in, Luke, a boiler tech from Walashek just to go in and see what the work scope had to be. You know, usually a standard package, you replace the throats, refractory, patch up the fire stops. I mean, it was nothing major that they were looking at.

But he just came on when I was on there and inspected the, started the boiler when I was there. I don't know what he wrote up in his report. I did not see his report. And then I don't know if they got to the port boiler. There was schedule on that, but I don't know how far they went on that.

[redacted] So they only did the starboard one?

MR. ROBINSON: While I was there, yes. I don't know.

[redacted] That's it from me, I'm good.

[redacted] Okay. Lieutenant Commander [redacted] from the Coast Guard. We were talking about the low low. And in particular you mentioned the delay and how that's usually how, you know, it's not going to get off when you're rocking and rolling.

Would you happen to know the positioning of the low low and then boiler in times of, like, if you did have a sustained list, what --

MR. ROBINSON: Well, you're looking at your low goes off at minus nine, I'm sorry, minus six inches, which you're still in the sight gauge glass. And minus nine is your low low.

[redacted] And is it located all the

way at the outsides of the boiler? Like, where's the actual --

MR. ROBINSON: Yes, you've got your right on the, in the, yes, boiler side. Trying to picture.

[redacted] I'm just trying to picture from, like, if the ship --

MR. ROBINSON: You're in the whole scope of the boiler. I mean, the drum. So you're going from the top to the bottom on the inboard side. And I'm pretty sure, yes. Anyway, but the rocking and rolling, you know, that's a big boiler. You know, the freak surface area, maybe if you were listed over or something you may have a high --

[redacted] Right. You would have to drop the water line, like, six inches over the course of a big --

MR. ROBINSON: Yes, to get your low you would have to be losing water somewhere.

[redacted] If you did get that shutdown though, like, if that happened, would an actual list on the ship, I know it hasn't happened to you. But if that did happen to you, what would you do if you wanted to keep things running.

MR. ROBINSON: Well, the only reason you're going to get a low low, you're not going get it from a

list. Your feed water valve, well it fails open so that's not going to matter anyway. That's going to put more water in.

[redacted] Okay.

MR. ROBINSON: So the only way I've ever got the low low alarm is when I lost a feed pump. And by the time, you know, you get the other one rolling, she's down there and then you're just sitting there, come on, come on, come on now.

It seems like a lifetime when it's only a matter of minutes, you know seconds. And you can't light off because you don't have --

[redacted] A couple more small questions. Also I know this probably hasn't happened, but, like, in terms of the fire in the boiler going out, have you had anything ever happened where you got a little water in the fuel line?

I know we talked about bad fuel. Like, you never got any bad fuel, but have you ever had it happen where you actually did get water in the fuel through some other means once you got good fuel?

MR. ROBINSON: I have not. The only issue I've ever heard of was with one of my reliefs on the El Moro. You don't have make up feed meter, so he ended up using a little more make up, and it was one of the

tube bundles, I mean the tube, the heaters inside the fuel tanks. So they were transferring and then, yes, that was the only, but that was --

[redacted] How could you get water in those fuel tanks that you use? Like, I mean, what would be the --

MR. ROBINSON: You got steam coils that comes off the contamination system. So if something happened with that. But you would notice with your make up because on this ship it would come on after. So if you have a high consumption of water, you've got either an issue with your boiler or you're contaminated.

So each day at lunchtime, the chief engineer does his noon slip, or when you first go down in the morning you do a quick glance before you do your round. And it's like okay, 2.2, everything's normal for a watch. So it's just something that's monitoring so that that problem can't happen.

[redacted] Just one more question. As far as the, have you ever experienced any issues with the steam leaving the boiler in terms of it being too wet or something like that?

MR. ROBINSON: No.

[redacted] Do you ever hear of a

problem like that, or you know --

MR. ROBINSON: No because once you have steam flow, I mean, the only time you do get any condensate is when you're bringing a boiler online. You know? That's why, I mean, your feed pump's at your lowest point in it. So you float it on with the (inaudible) try to get the temperature up there.

And then yes, you're supposed to, you want a stop check time. Pop quick, but it's been working fine. You know, you get that little bit of a hit, but if that stop check's all the way open and you get that one initial bit of condensate, she bogs the feed pumps down pretty good.

But that's just bringing a boiler on. As far as once you get a boiler on line, you got superheated steam, steam flow. She's, no way you get water in there.

[redacted] Okay.

MR. YOUNG: Okay?

MR. MILLAR: Mike, ABS. Mike Millar with ABS. We talked about the boilers and you mentioned about the turbo generators and loss of power. And have you had any experiences with that occurring and having to bring them back online quickly?

And what sort of time frame would it take to

bring it online if you could catch it in time? And is this something that was normally done as part of training? Was there part of the emergency drills for the other engineers under those type of circumstances, would they have something like that?

MR. ROBINSON: Well, as far as that was part of the monthly or quarterly status quo, or was, you know, was blackout recovery. You know, to sit there and talk to a room full of unlicensed people and give, you know, we talk about it with the engineers. It's like hey, if you lose power, what is the first thing you got to do?

But during the training with the whole crew, you just do the, you know, okay you lose the generator, you're going to lose lights, emergency power comes on. You know, you don't get into details because to explain it to an unlicensed guy that doesn't --

MR. MILLAR: That I understand. They're probably not going to be the ones that's going to do it.

MR. ROBINSON: Yes.

MR. MILLAR: It's going to be the second or the thirds that are independent. The chief's going to have my head if I don't get this back on line.

MR. ROBINSON: It's nothing they would do.

By the time, if that plant goes, if you're full steam ahead and you black out, by the time I and the first get down there, their primary concern is shut that throttle off because even though it's steam, you're not going to get --

MR. MILLAR: Right.

MR. ROBINSON: The more steam you lose, the longer it's going to take.

MR. MILLAR: You got to kill the throttle and, you know, save what you got and get over there.

MR. ROBINSON: Yes.

MR. MILLAR: Have you had that happen?

MR. ROBINSON: When I was on the El Yunque, one of the wires came off. You know, we were on one generator. And just steam there.

MR. MILLAR: I guess that was on a northbound trip?

MR. ROBINSON: Yes. One of the connectors broke free and all the lights out.

MR. MILLAR: Okay.

MR. ROBINSON: And there was nothing else running, so there was no way you could, you know, try closing the other one. So yes, that was just, you know, call the bridge, they already know we lost power. Say hey, we lost the generator.

You know, we got to swap the plant over. I can do it pretty quick, but I can't give you a time because it gets damn hot down there and you don't want to be screwing around even when you have to. But I can't give you a time frame, it's all a matter of, you know, how quick you can swing the valves, get the boilers lit back off.

MR. MILLAR: But it's going to take a minute or two for sure.

MR. ROBINSON: Oh, you're looking at over an hour.

MR. MILLAR: Yes.

MR. ROBINSON: Yes, you're not, if you're lucking out. There's a lot of work involved.

[redacted] [redacted] Okay. Thanks, Brian. [redacted] [redacted] with the Coast Guard for for one follow on question. With regards to the boiler, since they brought it out of the yard and you've been on board, has there been any hydrostatic testing that you've seen or witnessed of the boiler in either of the systems?

MR. ROBINSON: We just, well we had to test safeties at, you know, shipyard. But as far as any of the piping, no hydrostatic testing, no.

[redacted] [redacted] Nothing on the tubes?

MR. ROBINSON: No.

[redacted] Okay, thank you.

MR. YOUNG: Brian Young with the NTSB. We went over to the turbo generators, we started that discussion already. Again, looking at weather and rolling and pitching, is there anything that you can think of on the turbo generators that may have caused those generators to trip in terms of lube oil suction?

MR. ROBINSON: I mean, that's sump's, you know, purified a couple times a month. So I mean, there's lube oil samples that go out, whatever the scheduling, at least twice a year on each one of them. So those sumps are clean.

So as far as strainers fouling, the third engineer changes the strainers over. Well, if they needed to, but lube oil sides never, you know, you may find a little bit of silicone every now and then. But as far as never had any issues.

And there's nothing that I can think of or has ever happened to me that, I mean, those old girls are tough, tough generators and I've never had any issues besides, like, the wire breaking. But as far as the turbine side of it, I haven't had any issues.

MR. YOUNG: Okay. And as we had heard before, the over speed trips and reverse power relays have all been tested?

MR. ROBINSON: Yes.

MR. YOUNG: As of recent as well? Any issues with that?

MR. ROBINSON: No.

MR. YOUNG: Okay. That's all I've got for TGs.

PARTICIPANT: No further questions.

PARTICIPANT: Nothing further.

PARTICIPANT: I guess I have one. Just how deep are the lube oil sumps? Do you have any idea on that? Like, I know that might be a hard question.

MR. ROBINSON: No, as far as your generator sumps?

PARTICIPANT: Yes.

MR. ROBINSON: Those are self-contained. They're only about 14 inches.

PARTICIPANT: About 14 inches?

MR. ROBINSON: Yes. They're all, each unit has got it's own sump. I can't remember the quantity in there.

MR. ROBINSON: It would be the same as the sister ship, El Yunque, or similar?

MR. ROBINSON: Yes.

MR. YOUNG: Okay, so we could look at that tomorrow.

MR. ROBINSON: The capacity, I can't remember that number right off my hand. It was all written down on a lube oil sheet.

PARTICIPANT: But you suspect that they're deep enough and substantial enough that no matter what sea conditions --

(Simultaneous speaking)

MR. ROBINSON: Oh yes. I mean, as far as when we went on the west coast run, I mean, when I was running across seas, that's what we had to discuss because they couldn't load the whole ship at once. So they would load the ship to a 10 degree list, have to take the ship and turn it around and lower it back straight. So never had any issues with --

PARTICIPANT: Yes. Thanks.

MR. YOUNG: Anything turbo generator wise?

MR. MILLAR: This is Mike Millar with ABS. What kind of governors do they have on there?

MR. ROBINSON: Woodward.

MR. MILLAR: They're all Woodward governors?

MR. ROBINSON: Yes.

MR. MILLAR: And any issues, history with the Woodward governors?

MR. ROBINSON: No. We went on a, he's our turbine, was our turbine man until he got moved up in

the world. But no, we went into a two year, or a two to three year change out on them.

MR. MILLAR: Okay.

MR. ROBINSON: But, you know, these ones here were changed out when I first got back.

MR. PETERSON: This is Lee Peterson. Yes, I was the turbine guy on those units from 2000 until about 2012 actually, I was still doing (inaudible). But they're terry turbines which are kind of unusual for a turbine generator. And we did a lot of work on those things initially.

MR. ROBINSON: Yes, over the years.

MR. PETERSON: But they've been rock solid. Watch the linkage on them, you know, that's one of those things. But these guys are very quick to let you know if there's any issues with them.

MR. MILLAR: No any, like, speed sensing and the --

MR. PETERSON: It actually had a modified drip system on it. It's the same guy that NORCOM system where they used to be a mechanical trip, which you guys are familiar with as far as just the plunger that always works the second time. These are, they've got a speed pick up on them.

MR. MILLAR: So they switched over.

MR. PETERSON: Yes.

MR. MILLAR: That was going to be --

(Simultaneous speaking)

MR. PETERSON: There's a different system. So that kind of also goes with the old Navy one, you know, with the heavy weather and everything. If you have a lot of pounding, you could actually trip the plunger type. And these systems have a, they have a backup on them also. So it's a good system.

MR. MILLAR: Did you have to change the oil on the governors frequently?

MR. ROBINSON: No, it was, like, the frequency was like a three month scheduling.

MR. YOUNG: Okay. It's Brian Young with the NTSB again. Now we look at the main unit and the reduction gear set. And one thing we were thinking of is maybe with the pitching, maybe the prop was coming out of the water a bit. Is there any sort of over speed, over protection device on there or a speed limiter that you're aware of that maybe limited the speed or shut down the throttle?

MR. ROBINSON: Being loaded to the gills like that, I mean, that prop, you're 34 feet, 33 feet down at the stern. But yes, there are, it is an over speed trip there. It's you test those monthly just to

keep the lube oil flowing through it.

But as far as in heavy seas the prop coming out of the water, I mean, I went across seas and we hit the Straits of Gibralter and we were 50 feet, you know, 40 footers coming right through the strait in the air, and we never had any issues. But I can't see how it would be, but I don't know.

MR. YOUNG: And the speed limiter, how would that be activated?

MR. ROBINSON: Well, if you broke the turbine, I mean, if something, prop falls off.

(Simultaneous speaking)

MR. PETERSON: Yes, the only time we've seen that, like I mentioned before, was when the Matsonia, the torque tube let loose on these. And that is, it's a little bit unique design on these ships compared to other ships that have a strut.

This ship actually has, they call it a torque tube, but it's the intermediate shaft going from the stern tube shaft to the propeller shaft. And on these ships, it's actually rolled steel. So it's a casting at each end and rolled steel of, what do you think, three foot diameter?

MR. ROBINSON: Oh, at least. Yes.

MR. PETERSON: At least, at least. So it's

just a heavy plate that they rolled and welded up. So there have been incidents where we've had cracks in these. So that's something that they, and we do a spark test on these things every time, they're fiberglass coated.

But they do a spark test on these things at every shipyard period just to make sure there's no breakthroughs in the coating, the fiberglass coating. And then if you do have a break through the fiberglass coating, then you're going to clean things out and look to make sure there's no damage to the shaft itself.

But that's what happened on the Matsonia is that shaft broke. And they were about 600 miles off of Hawaii, and the shaft actually broke. They figured it did a couple rotations because it holed the hull back there.

And it actually sucked all the coupling bolts on the part that was still connected, and you know, the taper coupling bolts, it sucked them right through. But it's something that they're aware of, and they look at every shipyard period on these things. They do a very careful inspection.

And they're foam filled, but they have, if you take these shafts off they actually have, like, an access plate in the coupling itself. So you'll take

that off and you can go in there and then you do a core sample of the foam just to make sure there's no water in it.

[redacted] with the Coast Guard. In the past, has there ever been a time when you found any corrosion on that shaft or had to do repairs?

MR. PETERSON: I believe so. You know, you'll get something that, mechanical damage. But then that's when you'll remove the fiberglass in that area and really get down and take a look at it. And you may do a mag particle test on it or the penetrates to make sure you don't have any issues.

[redacted] Do you guys have cracks in that?

MR. PETERSON: Not cracks. Actually they have, I don't know which ship it was on, but I have heard of them finding a crack in the torque tubes before.

[redacted] But not on the El Faro that you know of?

MR. PETERSON: No, no.

[redacted] Thank you.

MR. ROBINSON: No, just repairing the fiberglass, that's all I've ever come across.

MR. YOUNG: Brian Young with the NTSB. Any issues within the reduction gear set and the lube oil

analysis with any results of the oil analysis?

MR. ROBINSON: No, that's pretty rare. That's monitored close, you know, because there is a history in the past with ships way back when. But they never wanted it to happen again, so I mean, it's an act of Congress to get new oil because you got to send out samples. So your main lube oil is, you know, tested heavy.

MR. PETERSON: This is Lee Peterson again. Let me just, what he's talking about is there was a hydraulic oil contamination on this particular ship way back when it was still a tow ship. And that's why now, and the contamination turned out to be that the supplier used the same tote tanks for the lube oil that they had had hydraulic oil in.

And it did damage to the (inaudible) gear bearings. So they had to be machined in place and put back in. So that's why this company is extremely sensitive to making sure that that oil has gone through numerous tests.

MR. YOUNG: Wow. And we had understood part of their reduction gear set is monitored by vibration analysis. Do you know who the company is that does that?

MR. ROBINSON: No, no.

MR. PETERSON: Condition? No, that's not Condition. Balance.

MR. ROBINSON: Yes, something --

MR. PETERSON: I have to look it up. You want that?

MR. YOUNG: We'll add it to the list. Yes, just the last report. And so the name isn't that important. Lee will figure it out. But alarming results as a result of any of the vibration analysis especially around the main unit that were brought to your attention?

MR. ROBINSON: No. There was one issue on the forward pinion. And Dan McDonald (phonetic) is the other, was, well he was in partners with them. It was a turbine wrap. So it was written up as, you know, elevated reading.

And I submitted the report to Dan McDonald. He analyzed it and come back and basically it was, you know, reduction heaters are hard to do a true test on it. And a new guy will pick up noise or whatever. I'm not a vibration guy. Peaks and prods, that's all I see. But if I needed that it's, like, call Lee. But --

MR. PETERSON: I used to do the vibration analysis on the ships until about two years ago.

MR. YOUNG: But nothing out of the ordinary. No big alarms as of late? I mean --

MR. ROBINSON: No.

MR. YOUNG: Okay. And do you, or have you ever tested any of the over speed trips? Are they tested frequently on the main unit?

MR. ROBINSON: Yes. I mean, it's a monthly deal on it. But, I mean, southbound is when you've got to test it because you're up higher RPMs. You've got your lube oil flow. You just go over there an step on it and you see the throttle close and then open back up. So you're just keeping the oil flowing through the piston in there.

MR. YOUNG: And is that a PMS job in AMOS by any chance?

MR. ROBINSON: Yes, it is.

MR. YOUNG: Okay. All set with my main engine questions.

MR. O'DONNELL: So you confirmed you've been in heavy head sea weather. Have you ever been, I'm sorry, Lou O'Donnell with ABS. Have you ever been in heavy rocking and rolling weather on this class of ships?

MR. ROBINSON: I've been fortunate over the years.

(Simultaneous speaking)

MR. ROBINSON: You know.

MR. O'DONNELL: Okay. Well, you've never had any problems with lube oil suction in the rough weather you were in?

MR. ROBINSON: No.

MR. O'DONNELL: No? Okay. And then coming back to the speed limiting trip for the throttle, for your over speed, essentially speed limiting. So when you go and hit that trip, you're essentially tide rock actuating, you're closing down on the throttle, basically cutting off your steam supply.

MR. ROBINSON: You're dumping the lube oil that you're throwing.

MR. O'DONNELL: And you're dumping the lube oil. Like you said, hydraulically actuating. You're dumping lube oil. Is El Yunque the same set up as this?

MR. PETERSON: Yes. It's the same set up with all this class of ships.

MR. O'DONNELL: Okay.

MR. PETERSON: And so it was hard to get these guys to do it the first time because it does, you hit that and your throttle starts closing, it was like open back up.

MR. ROBINSON: Well that was back when I first, Dan came on because I don't know if it was that same ship but they didn't do it.

MR. PETERSON: Yes, that's what it started with.

MR. ROBINSON: So Dan came on and ripped them all down, made sure they're all clean. Or you did.

MR. PETERSON: I did.

MR. ROBINSON: Dan inspected. He was overseeing it so you didn't screw it up.

MR. O'DONNELL: Okay. Just one last question, emergency maneuvering. Did you ever do any emergency maneuvering drills with your engineers, or do you guys have anything in your SMS for emergency maneuvering drills? Like, a major casualty with the main unit possibly losing a lube oil line on the reduction gear or main turbine. And would your crew be prepared to deal with something like that?

MR. ROBINSON: Oh yes.

MR. O'DONNELL: I mean, from what I've heard they sound very competent.

MR. ROBINSON: Oh yes. Anything that goes on that, they know, you know, main thing you got to shut that frigging steam. If you lost lube oil or

whatever and you still got steam, they know get that shaft stopped no matter what you got to do.

Just keep, you know, a little bit of a stern on it and just make sure she stopped. You know, the crew knows that. We talk about it. That's another part of when a new guy comes on or, you know, if I see him sitting at the log desk, I'm usually going to, never mind, put a boot in their butt.

But you know, all right you're sitting here. If this happens, what are you going to do? You know, so I'm always throwing different scenarios out to them just so they keep the brain working and don't get complacent, you know, on the ship. So you get used to it and, you know, I don't want them to do that.

MR. O'DONNELL: I'm good. [redacted]

PARTICIPANT: I think everything I've got has been answered by the previous interviews. So I think I'm good. [redacted]

PARTICIPANT: There's too many [redacted] in here.

MR. YOUNG: Two more questions and then we'll get you out of here. What would you say your relationship is with the Captain as Chief and particularly Captain Davidson. Do you guys work together on a --

MR. ROBINSON: This is the most I've sailed with Mike. And the only reason because, you know, he was always, I would have maybe two, three weeks with him. But I mean, my, what do I want to say, interaction with the Captain, he'll stop down before I go to (inaudible) when he's on the way to breakfast, see if there's anything going on, anything he should know.

I mean, basically just have a little chat real quick and then, you know, go on about the day. But the communication, I mean, if there was anything I would always inform him, keep him up to, inform him on a regular shutdown or whatever, maintenance shutdown.

You know, and then when we get the boilers back on or whatever we were doing, he was always informed. So there was communication between the chief and the captain, you know, without any friction or anything like that.

MR. YOUNG: Okay. All right, here's the hardest question of the night. So what we understand when the guys are out there is that they had a 15 degree port list, they were in high winds, and they had water in three hold that they were pumping out.

And he said we have no main engine. That was the report that we have. We are trying to get any

more information, but that's just based on a message that was received.

MR. ROBINSON: That's the problem there. I mean, I ran scenarios ever since this happened.

PARTICIPANT: I'm sure.

MR. ROBINSON: And until I did the interview with your partner there, they played me the recorded phone conversation and then there was an email or something like that. But I was assuming that they were in 40, 50 foot seas. So it's like now, 14 foot seas, scuttle open, how did the water get, I mean, you're lower to the water.

But I mean, how much water, I can't even think of how that, I mean, 14 foot seas are nothing. I mean, that's just a walk in the park.

MR. YOUNG: Right.

[redacted] with Coast Guard. Knowing the captain, he used the word considerable amount of water. Knowing him, we don't know him, how do you think he would define that?

MR. ROBINSON: Well, in order for it to give a 15 degree list, she's got to be, I mean, but then again they lost propulsion too so that's their now in the -- so yes, it could have been a little bit of water. But you know, it's one of those things that I

don't understand it with the weather they were in.

And the way his conversation was, there was no, you know, if I'm calling up and it's an emergency, you're going to, I'm going to talk as quick as I can because, well or the captain is because I don't have time to, you know? But he was calm and collective.

MR. YOUNG: Yes.

MR. ROBINSON: So I mean, I don't know why he didn't divulge more. I mean, because as (inaudible) said, it wasn't water was contained. It doesn't, I can't remember the actual wording. But no, now I just, I cannot for the life of me think of what happened or how the water got down there with that light of seas. I don't know.

MR. PETERSON: This is Lee Peterson. I don't, where did we come up with the 14 foot seas?

MR. YOUNG: These are the notes that --

(Simultaneous speaking)

MR. YOUNG: Ten to twelve foot swells.

PARTICIPANT: Ten to twelve foot swells.

(Off microphone comment)

MR. ROBINSON: That was from his conversation, one of them with Lauren (phonetic). So whatever it's from.

MR. YOUNG: This was a follow up phone call

between the captain and John (inaudible) after the message.

PARTICIPANT: Right. I didn't catch that part, 14 foot. It's just that --

MR. YOUNG: Well, 10 to 12. There was no real 14. But 10 to 12 foot swells is what John had written down.

PARTICIPANT: It's kind of hard to believe where they were in relation to that.

PARTICIPANT: They would have done that when we were thinking they were in the eye.

PARTICIPANT: In the eye?

PARTICIPANT: Possibly.

MR. O'DONNELL: This is Lou O'Donnell, ABS. I know you know Captain Davidson pretty well. And from everything we've heard, he sounded like he and his bridge watch were very calm, cool, and collected. He doesn't seem like a guy that would be rattled very easy. And would that be a fair statement to say?

MR. ROBINSON: Oh, yes. I mean, like I said, I've never been in an emergency situation with him. But he was, I mean, if I went into his office and moved that on him, I mean, he had everything -- yes I would.

MR. O'DONNELL: Okay, you --

MR. ROBINSON: No he was, I mean, he had everything, it had to be a certain way or whatever. He was very organized.

PARTICIPANT: Very regimented.

MR. O'DONNELL: I think you fairly answered my question. No, I'm going to reserve any more questions until tomorrow. Maybe when we're on the ship I may have a few questions. That's all I have.

PARTICIPANT: I'll save everything for tomorrow when we're on the ship.

[redacted] [redacted] I guess I have one. Lieutenant Commander [redacted] again, Coast Guard. As far as general crew practice, from your awareness when you've been out with them, the water (inaudible), you know, some of the pass throughs and things like that, especially the ones that are more inconvenient with the multiple dogs and so forth. Have you noticed, did people dog them all the way? You know, what has been the practice?

MR. ROBINSON: The practice is that when they do their stow away search after cargo, they walk the decks or whatever, make sure, you know, yes the engine room, little water tight door we leave open there.

But if it comes down to a situation, we know

we're going to go into the weather, everything's dogged down. But as far as your hatches going into the cargo hold, those are just a twist, three quarter turn, four arms, dogs come down.

[redacted] But if you didn't, like, say you weren't, let's say you didn't think you were going into weather, you're just going on your regular trip. You know, are all the dogs --

MR. ROBINSON: At night time or whenever you come out of the cargo hold, it's standard procedure to shut it. Have I come around and seen them open? Yes. Then you got to climb down in and make sure nobody's down in there because the man sign's still showing personnel inside, do not shut. But it wouldn't matter even if you did shut it, you can still open those from underneath.

[redacted] And what about, like, the larger hydraulic doors and things like that, are those customarily closed all the time, or are they --

MR. ROBINSON: Oh yes. Those, as soon as they're done loading cargo, boom, boom, boom, the doors are closed, cargo's backed up to it. But at sea, if you have to open one of the big doors, A, it's not going to be rough or whatever, but yes, you notify the bridge you're going to have it open for whatever. But

you never leave them open overnight or over lunch. It's always while you're doing whatever you have to do and then they're closed back up.

[redacted] So you think there's very little chance that there would have been doors obviously open when something happened?

MR. ROBINSON: Yes, no. I mean, that's standard. With a loaded ship, as much cargo, as soon as that door shut they're backing up cargo right up to it. So the mains are right on top of that because along shore I'm going to push them to get cargo in.

[redacted] All right, thanks.

MS. BELL: Carrie Bell, NTSB. I just have a question. You mentioned when you listened to the voicemail that the captain seemed calm and collected. If you had an emergency in the engine room, how much information would you give the captain if you were in a serious emergency?

MR. ROBINSON: He gets about a ten second call and then it's I'll call you when I've got something or if I get time I'll have one of my guys give him an update. But I'll pick up the phone, there's nothing I can do, we lost whatever it is.

I give him as much of a detailed description, and then as it progresses and we're out

and we're not going to go any further, you know, it's like hey captain, we're going to be slowed down for 20 more minutes and then. You know, so I give him, I mean, depends on the situation but yes. Like, okay just let me know because they know we're down there trying to get whatever it is corrected.

MS. BELL: So he might not have had enough information, I mean, to give them anything more than what he gave?

MR. ROBINSON: Without that being recorded, you're talking on a satellite phone. There's overlap and, you know, you miss bits and pieces. You've got to say things twice. It's a hard way to communicate. So whether --

MS. BELL: You mean from the engine room to the --

MR. ROBINSON: No, no. I'm talking as far as from, like, the captain to John Lawrence.

MS. BELL: Okay, okay. Just wanted to clarify that.

MR. ROBINSON: So if that wasn't, I mean, why it, you know, what was said, if there was something miscommunication, loss of power and loss of, you know, they've, it's happened before. By the time it gets to third party it's like no, that didn't happen.

But that's why if it's something, I call. You know, when the captain gets involved he's only got as much quick. And if he jumps the gun to call without knowing more, he's done it before.

John Lawrence has misconstrued it and then when you get back in the port, and then you got to correct it. It's like no, that's not what happened. It's like captain, discuss with me before you're discussing technical or engine terms to somebody shore side because you use the wrong terminology and it's, third party is not, you know, second party. I mean, it's happened.

MS. BELL: It has happened? Is that something that happens just once --

MR. ROBINSON: No, no. It's just, it wasn't on a ship, you know, anything to do with propulsion. It was just something happened, personnel or something. And instead of talking with me before, he just gave them a heads up. And it's like I was just blown right out of Rome.

It's like, then it's like captain, you don't know what you're talking about. Wait until you talk to me and then we get it straightened out. It's not a hurry to send a message. Just, you know, they jump the gun. They like to talk.

MS. BELL: Thank you.

MR. MILLAR: Mike Millar, ABS. We talked about, like, the scuttles and a small hatch or an access into the hold or the engine room from the weather deck or someplace like that. If there were problems with those four dog catches not working, would that normally be repaired by the deck department or would it be repaired by engineers?

MR. ROBINSON: No. Any issues like that, like when they go around check fire dampers, lube up the doors or whatever, if there's an issue that involves more than tightening up a dogging nut or --

MR. MILLAR: Dogging nut.

MR. ROBINSON: -- adding grease to it, you know, they'll come to the chief. The chief may, send the chief up --

MR. MILLAR: A note saying hey --

MR. ROBINSON: -- written just so that it's on record. And then it gets --

MR. MILLAR: Would that type of, if there was something done to a hatch or a scuttle, would that be entered into a repair log in AMOS, something like that? Or would that be --

MR. ROBINSON: That would be in the deck log, I mean, the first engineer's work log for the day.

(Inaudible) if you change, like, you got to put a new rubber seal in or whatever or change a rim out or power pack, you know, broken dogs, dog and bolts, I've put that in on whichever large pipe door it is. But a scuttle hatch like that, that's not --

MR. MILLAR: Do you recall any history of having to do any significant work on the hatches or scuttles or anything?

MR. ROBINSON: Not at all. I don't understand how water, I mean, you've got a foot and a half (inaudible) around it and the water tight door. You know, with those small of seas, that's why unless they were (inaudible) I can't see how, I can't even comment on that.

The scuttles aren't in way of your openings to the second deck. So it's not like you have a, you know, a ten by ten opening here and we're using it to come over the side and go in. You're actually forward or aft of them. So for that to get to up to over that combing, I can't understand it.

MR. PETERSON: This is Lee Peterson. Jim, remind me of scuttles for going down from second deck into three, are they only on the starboard side?

MR. ROBINSON: No. This ship's got a port and starboard. The El Moro only had the one side,

because this one's got, the port side's got, like, a three foot diameter, the port's two foot.

So you can get an SCBA down through on this one. On the El Moro they just had the standard one. So if you did training, it was take the SCBA off. Somebody would pass it to you and --

PARTICIPANT: El Moro was just on the starboard side. Okay, yes. That's something that was, wasn't it misinformation for us.

MR. MILLAR: Mike Millar again with ABS. Openings between the engine room and the cargo hold, are there any scuttles or access openings?

MR. ROBINSON: No scuttles. You've got water tight doors going from three hold into the engine room and then going, any of your penetrations going into the engine room are all water tight.

MR. MILLAR: And would those normally be left open since they're interior?

MR. ROBINSON: Interior, unless we're expecting weather or everybody's aware that they're open. But that gives a nice draft down through the shops when it goes out to the cargo hold. But when we do drills or whenever we're expecting foul weather, that's when everything gets lashed down, everything gets shut. Captains, they were adamant about that.

MR. MILLAR: It sounds like Captain [redacted] was the same way?

MR. ROBINSON: Oh, yes. Yes, he was.

MR. PETERSON: This is Lee Peterson again. Back to my question. Port and starboard, which were the, you said, like, three foot?

MR. ROBINSON: I don't know the exact.

MR. PETERSON: The large one, which side is that?

MR. ROBINSON: The port side's the larger one.

MR. PETERSON: The port side?

MR. ROBINSON: Yes.

MR. PETERSON: And none of those are spring loaded or anything?

MR. ROBINSON: No. Those are just --

MR. PETERSON: You just crank them up?

MR. ROBINSON: Boom, boom, pick them up.

MR. YOUNG: That's it? I'm sorry. All right, Brian Young with the NTSB. My last question. Just going back to this voice message and then the phone call that was left.

If the ship was leaning port 15 degrees, reported no main engines, and the wind's not too bad, with water in three hold, he said he was pumping it

out. Is it possible to have any pumps on the emergency bus so that if there was electrical power loss, could he be pumping and using the emergency generator?

MR. ROBINSON: Yes. Your emergency fire pump comes off of your emergency generator, which emergency bus.

MR. YOUNG: And that could be used to pump three hold?

MR. ROBINSON: Yes.

MR. YOUNG: It is able?

MR. ROBINSON: Oh no, no. Forget it. No, these are the ballast pumps.

MR. YOUNG: Okay.

MR. ROBINSON: You can't use the fire pump. I don't know why I said, no. Your fire pump is not used for pumping out the cargo holds.

MR. YOUNG: Okay.

MR. ROBINSON: And the engine room, it's set up you can go over to the ballast. There's an emergency suction there if something happened to your ballast pumps.

MR. YOUNG: So in order to be pumping at this time, he still had to have his generator running?

MR. ROBINSON: Yes. Yes, because your ballast pumps are tied off of your main switchboard.

MR. YOUNG: Right.

PARTICIPANT: You could do your (inaudible).

MR. O'DONNELL: Lou O'Donnell with ABS. Is there any other salt water pump that he could cross over besides the bilge ballast, fire GS to pump that comes from the emergency, besides the emergency fire pump, Jim?

MR. ROBINSON: No.

MR. O'DONNELL: No.

MR. ROBINSON: Well, emergency fire pump you can't pump.

MR. O'DONNELL: But he can't, there's no crossover or anything or --

(Simultaneous speaking)

MR. O'DONNELL: -- he could swing?

MR. ROBINSON: No. No, that's tied right to the sea chest.

MR. O'DONNELL: So it's all independent then?

MR. ROBINSON: Yes.

MR. O'DONNELL: Okay. Except for the isolation, okay.

MR. ROBINSON: Yes.

MR. O'DONNELL: All right, yes. Thanks.

MR. YOUNG: Because I have sailed with

captains before who everything is called the engine whether we had thrusters, motors, or whatever they say stop the engine. But the diesel engines on a diesel electric plant, you know, they always call it the engine. It's just the way the captain's trained.

But for him to say no main engine, with the ability to still pump the hold, it's telling me more that he possibly lost the main unit but he still had steam to run the generators. Generators for power, power for bilge pump. Would that make sense?

MR. ROBINSON: Right.

MR. YOUNG: I mean, am I going down the right road at least?

MR. ROBINSON: Yes. I mean, because at that point they, he had everything under control. So that's telling me that they still had their power because it wouldn't have had time to back feed, swing the plant, back feed and establish power from the main because you've got to, once you start you've got to shed the load in order for your generator to, you know, have room to run your essentials.

And so yes, but the time frame or whatever and he wasn't, they had it contained. So it sounds like that they still had their SSGG power.

MR. YOUNG: Right, right.

MR. ROBINSON: But not propulsion. That don't, not the main engine.

MR. YOUNG: Right. Right.

MR. ROBINSON: I don't know what that means.

MR. YOUNG: Right, thank you.

MR. MILLAR: One more question.

MR. ROBINSON: Sure.

MR. MILLAR: You triggered a memory question here. Mike Millar, ABS. Is the switchboard fitted with preferential trips as part of their automation?

MR. ROBINSON: Yes. They put, that was part of the modification where they started holding excess reefers, NORCOM, Dick Norris set up as per, I can't remember the outfit that did the ABS drawings for the modifications. But they had to trip X amount of reefers to get the load to what ABS wanted.

So I can't remember what the actual number, but there's four or five breakers tied into preferential trips. If the load gets up too high, it dumps the load so you don't have the chance of dumping the generator.

MR. MILLAR: Okay. If we're heading southbound and we've got both generators on line which is typical with the 240 containers that are on board.

MR. ROBINSON: Yes.

MR. MILLAR: And we've got to kick in both ballast pumps because we're trying to pump out the cargo hold.

MR. ROBINSON: You've got plenty of room because on an average, you know, they're 2,000kw generators. And on a southbound run with 250 reefers, with both SSTGs on, you're basically a one generator load. You're 21, 20 on, 200kw, 3,200, 3,300 amps because you got a 3,200 amp rating on them and you're usually right at the 3,000 to 2,000kw.

[redacted] with the Coast Guard also. In earlier interviews you mentioned a third generator, a container generator that was up on deck separate from the provider tower.

MR. ROBINSON: Yes, that's --

[redacted] And then you could run all of them separate from the engine room?

MR. ROBINSON: Yes.

[redacted] So provided power to it?

MR. PETERSON: I don't think it provides power to all of them, Mike.

MR. ROBINSON: No, no.

(Simultaneous speaking)

PARTICIPANT: It provides about --

MR. ROBINSON: Yes, this, what 36 plugs on

them.

[redacted] Okay, 34, 36? So it would share the load also?

MR. ROBINSON: That just takes care of those reefers. That has nothing to do with the ship's power. That's all separate. They put a power pack up there and it's self sustained. You know, the electricians plug the reefers into them.

It has nothing to do with ship's power. That's just the basically modified, that bay used to be dry boxes because it didn't have reefer plug ability wired up there.

So they had more reefers on board. So they eliminated that as dry cargo, put the power pack on there so they had another source of power. But it does not have anything to do with the ship's power. That's just a little --

[redacted] But the ship's power is providing the power to the rest of the reefers?

MR. ROBINSON: Yes, the ones that are hard wired on each bay up there. And that's the same system that they've got the load shedding. And like I said, I can't give you a number right off my head.

[redacted] Understood.

MR. ROBINSON: But ABS had to improve adding

all these refers over here before Mr. Norris did. An outside guy evaluated it, made up the prints, and ABS approved it.

[redacted] [redacted] Okay.

MR. YOUNG: All set, [redacted]

[redacted] [redacted] Yes.

MR. O'DONNELL: Lou O'Donnell. Just one more question. Well no, go ahead, Brian. Go ahead.

MR. YOUNG: I was going to say if there are any other further questions, we're getting to the end here.

MR. O'DONNELL: No, go ahead. I'll wait until tomorrow.

MR. YOUNG: Okay, great. Before we end, do you have any questions for us? We've been firing questions at you. But anything for us? And we'll be onboard the sister ship tomorrow, so if there's any other opportunities to ask any questions while we're in the engine room, we would like to --

MR. ROBINSON: Yes. I'll be available.

MR. YOUNG: Great.

MR. ROBINSON: Then the other chief that's on there, I mean, he'll be there to discuss. I mean that, I can discuss my half or whatever, you know, that pretty much same equipment. Automation's a little

different but, you know --

MR. YOUNG: Yes, great.

MR. ROBINSON: -- pretty much everything's the same.

MR. YOUNG: Great. Well we very much appreciate you being here and thank you very much for all your information. Anything for us?

MR. ROBINSON: No.

MR. YOUNG: We're all set. Okay, so we'll conclude the interview, and it's 8:34 p.m., and thank you again.

(Whereupon, the interview in the above-entitled matter was concluded at 8:34 p.m.)

D

C E R T I F I C A T E

MATTER: El Faro Incident
Accident No. DCA16MM001
Interview of James Robinson
Jacksonville, FL

DATE: 10-08-15

I hereby certify that the attached transcription of page 1 to 99 inclusive are to the best of my professional ability a true, accurate, and complete record of the above referenced proceedings as contained on the provided audio recording; further that I am neither counsel for, nor related to, nor employed by any of the parties to this action in which this proceeding has taken place; and further that I am not financially nor otherwise interested in the outcome of the action.

-[redacted]

TABLE OF CORRECTIONS TO TRANSCRIPT OF INTERVIEW FOR
JAMES ROBINSON
TAKEN ON
OCTOBER 8, 2015

PAGE NUMB	LINE NUMB	CURRENT WORDING	CORRECTED WORDING
8	18	oval	overhaul
11	24	Neace	Neeson
18	10	excellence	excellents
23	2	latch	lash
26	13	(inaudible)	seapainter
26	13	--	lower boats & release
26	19	flooding gear	flemming gear
27	19	wenches (2x)	winches
28	10	wench	winch
33	15	(inaudible)	settler
34	15	retrods	reach rods
36	7	(inaudible)	shutdown alarm
37	7	four (inaudible)	forced draft
42	15	had spent	changed
45	11	freak	free
48	7	(inaudible)	superheated steam line
60	16	(inaudible)	reduction
68	6	collective	collected
68	23	Lauren	Lawrence
69	1	(inaudible)	Lawrence
72	10	mains are	mates are
72	10, 11	along shore I'm	The longshoreman are
76	2	rim out	rem out
76	4	large pipe door	large watertight door
76	11	(inaudible)	combines
81	24	SSGG	SSTG
83	8	21, 20 on, 200 KW	2000KW and 2100KW
84	17	a little --	a little extra genset
84	25	improve adding	approve adding

If to the best of your knowledge, no corrections are needed kindly circle the statement "no corrections needed" and initial in the space provided.

NO CORRECTIONS NEED. _____
Initials

James Robinson
Printed Name of Person providing the above information

[redacted]
Signature of Person providing the above information

11/11/15
Date

46816.doc