ATTACHMENT 18 – *MARCH 11, 2008 INTERVIEW OF ROY MATHUR, DFG-OSPR*

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

OFFICE OF ADMINISTRATIVE LAW JUDGES

Investigation of:	
COSCO BUSAN/BRIDGE ALLISION SAN FRANCISCO, CALIFORNIA	Docket No.: DCA-08-MM-004

Interview of: ROY MATHUR

Westin Hotel
San Francisco, California

Tuesday,
March 18, 2008

The above-captioned matter convened, pursuant to notice.

BEFORE: PAUL STANSEL
CRYSTAL THOMAS

APPEARANCES:

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National Transportation Safety Board

PAUL STANSEL
Hazardous Materials Accident Investigator
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I N D E X

I N T E R V I E W

(10:05 a.m.)

MS. THOMAS: Okay, it's March 11, 2008, 10:05 a.m. We're at the Westin, San Francisco. This is Crystal Thomas with the National Transportation Safety Board. Today we'll be interviewing Roy Mathur with the Department of Fish and Game, OSPR. We'll go around the room now and ask that all parties identify themselves.

MR. HOLLY: Rick Holly, Department of Fish and Game, Office of Spill Prevention Response.

MR. ESTES: Kim Estes, the -- expert -- Spill Emergency Response.

MR. STANSEL: Paul Stansel with the NTSB.

INTERVIEW OF ROY M. MATHUR

BY MS. THOMAS:

Q. And Mr. Mathur, can you please just state your full name and title for us?

A. Full name is Roy M. Mathur and I'm an Oil Spill Specialist and I work for Rick Holly sitting right across the table here for the Department of Fish and Game, Office of Spill Prevention and Response.

Q. Okay. Mr. Mathur, are you aware that this interview is being recorded?

A. Yes, I am.

Q. And are you okay with that?

A. Yes, I'm okay.

Q. Okay, great. Okay, so if we can just start off talking a little bit about your expertise and background.

A. Okay. Well, I started, went out to sea as a cadet, which is commonly known as an ensign here, if you're in the military. And then as you climb up into the ranks to the rank of a captain of a ship, the ranks are as follows, from cadet, you go to third officer, second officer, chief officer and then captain. That's the normal progression of Merchant Marie worldwide and that's what I was.

So I started as a cadet, ended up as a captain and then when I left Sea Light (ph.), I came down to Los Angeles and I started surveying. Surveying is what you would normally call ship inspection for damage and causes, all accidents, investigations, on-hire survey, off-hire, off a ship, what -- you want to hire a ship, you call me, I'll tell you whether you should hire a ship or not.

Those are the kind of surveys I did, a lot for the Lloyds (ph.) and a lot for anybody else who'd pay me. That's what I did. After that, I came up to San Francisco and I worked for Stevedore, Inc. Services of America as a marine superintendent and I managed, assisted in managing the terminal where container ships come and container ships go every other day. After that, I joined State Lands Commission, it's a government agency in California. Worked there for a while before I transferred over under Rick Holly to

Fish and Game Department of Water Spill Prevention and Response where I presently work right now.

Q. And how long have you worked with the Department of Fish and Game?

A. It's going to be four years in April, this April. Next month.

Q. And you worked in the same position since you've been there?

A. Yes.

Q. Okay. The earlier experience that you just spoke about, how far back does that go, how many years?

A. 1979. So it's little more than 25 years now.

Q. And in what capacity or role were you acting in, in response to this oil spill, the Cosco Busan?

A. This is going to take a minute for me to lay the foundation. In our office, under Rick Holly, our supervisor, there are four of us. Each one has an on-call date. I'm on-call today. So in case anything happens in Northern California, oil spill response or an incident with a ship, I will be called by dispatch, quite like what you're normally familiar with, and I would respond. So I am the host responder today. That is exactly what I was on November 7, 2007, the day the Cosco Busan collided with a bridge. So I was called to respond to this incident. Two things we do in OSPR is quantification and an analysis, root cause analysis. Why did it happen? What happened? Where did it happen

-- a brief report to give to your supervisor, your department, to the responders, to the clean-up companies to give them a brief on what's really happened. So you're first on-scene and you give them a snapshot, what you call truth. What really happened. What is happening. That's what I was on November 7th, the morning of.

Q. Okay. And you mentioned that Rick Holly was your boss. What is the chain of command? How does it work?

A. I mentioned Rick Holly is my boss.

Q. Yes.

A. Not was, he is. So my chain of command is I work for Rick Holly, so as soon as I respond, to anything -- today, if I'm to respond, I would head straight to where I'm supposed to respond, but I'd call Rick Holly on the way and say I'm heading this way. This is what I'm responding for and I'll fill you up later on it. And it's a very comfortable relationship. He knows that I don't know yet what's happening. I don't really know what's happening and then I will fill him up later on. That's the way the chain of command works. There are two others in this, what you call, the FRT, close response team. One is a biologist. We call it environmental scientist. And the third person is a warden, the Department of Fish and Game warden, who works for OSPR. So this is a triangle; warden, scientist, responder, OSPS specialist. All three would respond to the incident. So for Cosco Busan, on November 7th, all three did respond to the

incident and that's normal. Each one has a sort of chain of command. The scientist would probably tell his boss; he does, just like Rick Holly, and the warden will tell his. But if there is a slightly larger incident, then they have a unified command set up. Then you work directly under that umbrella. If you really ask me, I will get into umbrellas then. The real umbrella, unified command, and a small umbrella called Rick Holly. That's me. So I definitely keep the unified command fed at all times what's happening and as soon as I get a chance, I call Rick Holly, give him a quick, you know, di-di-di (ph.), real quick shot, a snapshot of what's happening -- go back. That's the chain of command we follow in OSPR.

Q. Okay.

A. Rick, please correct me if I'm wrong anywhere along the line. You know more about this than I do.

MR. HOLLY: Can I chime in here?

MS. THOMAS: Sure, if you'd like to.

MR. HOLLY: Yeah. I think -- explained it, but basically, when you set up a unified command, everybody goes to work for that unified command. Who is keeping me cut in for reliefs and things like, where are you going, where are you headed, just small. And then if it's, like Roy will probably tell you. If it's a big thing, then I'll say go work for them and then I'll be doing backup from other places in --

BY MS. THOMAS:

Q. Okay. What sort of past interactions have you had with the Coast Guard, specifically in Sector San Francisco?

A. Lots. Over the last many years, a lot. When I was with State Lands Commission, I used to have a lot of connection with the captain -- for doing little things, you know, responding and a lot of PR and those kind of things. But in OSPR, life is a bit different. It's very busy. Very, very busy. There's very little room for PR and this kind of stuff and just driving in to the Coast Guard -- and shaking hands and saying how are you, I'm all right, you all right. Little of that. The reason I'm telling you this is that's why I don't know -- did not know Captain William Uberti well enough. We were acquainted. He knew who I was, we'd shake hands once in blue moon at meetings -- we'd leave. Didn't know each other like I knew the previous captains of the port, the last two or three or four, intimately well, you know. Dining at each other's houses kind of thing.

Not with Captain -- so I didn't really know him well, so there was that distance. We weren't really friends or something like that. But working with the Coast Guard, we work very closely with their responders to what you call, the MER, Marine Environmental Responders, and the MSO, Marine Safety Operations. We work closely with both the departments. When we are not responding to spills, we are expecting ships, all kinds. Tankers, bulk carriers, container ships, car carriers -- you name it. Coast Guard also does that. So we bump into each other very

often. Same day, same ship, we're all there. They do their thing, we do our thing and we both go our separate ways. So I know the Coast Guard people pretty well because we bump into them often. I know the Coast Guard responders pretty well, because the spills that you go to, a lot of them they respond to, as well. So you're -- you discuss and you see how to respond to things. This is an everyday thing, an every month thing.

So yeah, I know them pretty well. I know their ways, I know their regulations. They know our regulations and if they don't, we educate them on it. We definitely know their regulations. They may not know ours because they transfer in and out quite frequently, so there's always that little thing -- about California. So you see a new face, you kind of help the person out. So yeah, we work quite closely together. Did I answer your question?

Q. Yes, you did. Have you worked at any oil spills with the Coast Guard?

A. Yes, several.

Q. Any of this magnitude?

A. Nothing of this magnitude, no. One or two large ones that were together that we worked was a tanker that had compromised bulkheads, so that oil and water mix causing a rather dangerous situation at the terminal, so we discussed how to do things over there. And that was quite a big incident, made the newspapers and this and that. Yeah, we worked together there and

then the other one's -- Those are the other two major incidents that I think I've worked with -- otherwise not really -- you see them. Accidents are small. They haven't been of this magnitude in many years.

Q. Okay. But on those accidents, you would've served the same role as far as doing the quantification?

A. Exactly.

Q. Okay. Okay, so now let's go to the day of the accident.

A. Okay.

Q. Okay. How were you notified of the Cosco Busan oil spill and what were you told?

A. Okay. I wasn't (ph.) called that morning and I was out inspecting a ship in Richmond. The ship didn't quite show up because of the fog, so I turned around, went down to Oakland. While I was driving down to Oakland -- there's a fork in the road. One takes you to San Francisco, the other takes you to Oakland. I was a little before the fork, luckily, and that's when I got a call from Todd Ajari (ph.). He's a warden. He was already on the Coast Guard island for something else, I think, and he was told by his lieutenant that there's been a collision and get the FRT together, scientist, you and -- so he called me first. When he called, it was easy for me to take the fork that goes toward San Francisco where he was, they were, Coast Guard Island, YVI (ph.). So I just got there very, very quickly. Very quickly, 10, 15 minutes at the most. While I was getting there, dispatch called

me. This is the normal route. This is what would normally happen any day; today, tomorrow. And Adrian, he's our dispatch there, he called me and said Roy, there's been a collision. Don't know the magnitude, don't know what really it is, how bad it is, how good it is. But the ship has collided with a tower of the Bay Bridge.

So I told him yeah, Todd Ajari did call me. I'm headed there. I'll know in 10, 15 minutes what's happened and I'll call you back, Adrian. I'll let you know, give you an update. That's all that happened, so get straight to the Coast Guard island and Todd Ajari was right there, so was -- Rob Roberts and they filled us in, filled me in with really what they knew, which was very little except that there's been a spill; we don't know how much. The ship's anchored at this anchorage called Anchorage 9 and we got to get out there as soon as possible.

So for us to get dressed to go out in a boat, putting on a life jacket, which is always on the ready, so it takes you 10 seconds to do that and you're ready. And then now we get into this very strange part where there was no boat available. See, Coast Guard, they use so many things and you know, they've been criticized, in my opinion, quite unfairly for not providing us the boat -- they only had one or two or three boats. So you have them doing their thing and while we were very anxious to get to the ship -- 10 minutes, 15 minutes away. There was no transfer -- so we couldn't go out, so we stayed and we stayed and we stayed. We tried to get as much more information as we could before we got to

the ship, but that was several hours before we could. And all we did was stand there with life jackets waiting for a boat to come. Finally, it did come, got into the boat, get to the ship and then on the ship, it took me -- are we at the ship now?

Q. Well, just before we go to the ship, do you know around what time you got a call, got your first call?

A. This was shortly around 9:15.

Q. Around 9:15.

A. And I have a timeline here that I have -- I'd like Rick to take a look at it first. Rick, everybody's got his timeline and it's really --

MR. HOLLY: Oh, sure. You pass that around, I'm sure.

MR. MATHUR: Okay.

MR. HOLLY: Do you want that?

MS. THOMAS: Okay, yeah. I will take a copy of that.

MR. MATHUR: That's for you.

MS. THOMAS: Is this for us?

MR. HOLLY: Yeah.

MS. THOMAS: Okay.

BY MS. THOMAS:

Q. Okay, so what time did you arrive at YVI?

MR. HOLLY: You can read your notes.

MR. MATHUR: It's right in there. Let me read it to you.

MR. HOLLY: Sorry.

BY MS. THOMAS:

Q. Wednesday at 9:35.

A. 9:35 I was there.

Q. And you said that Ajari and Roberts were both there?

A. Correct.

Q. Okay. And so -- could you go over again, what did they tell you when you arrived?

A. He told me that the ship, container ship, had collided with a tower of the Bay Bridge, that it was an oil spill, they didn't know how much it was. And they weren't very sure how much it was because it was such thick fog, nobody could see, you couldn't tell. And Todd Ajari had the -- with him, and this is not really -- reports because it really didn't make any difference. He was just standing there looking and watching and listening. He kept telling me let's go around and take a look if there's oil coming into San Francisco. It's right down the road, down the corner here. So we could take a look. If there's a slick or anything like that, give us a fair idea. And they did, they did. They did. They took off and they came back very quickly and they did see quite a large slick somewhere, near a ferry building.

Q. Okay.

A. So we came back -- this is for Rob Roberts and themselves, you know. I mean, I was really anxious to get to the ship to do my thing. So yeah, this is what they were doing and

this is what -- and really, all I was doing was keeping my eyes open and ears flapping so I could catch whatever I could, you know, before I could get to the ship. So I didn't do really anything much except listen to everybody.

Q. Okay. And you were waiting for a Coast Guard boat?

A. Correct.

Q. And what was the delay? The boats were all just all out?

A. They were all out.

Q. Were there any other boats that could've been used?

A. You know, not to my knowledge. And since the incident, this has been a giant bone of contention. Some people who investigated this incident -- think that I should've commandeered a boat, you know, stopped a boat and said let's go to the ship. Somebody even said you should've show a badge. I don't have a badge. Said let's go to the ship or -- you know, they say you should've gone to Pier 39, jump on a fishing boat and say that way. I've never done anything like this and I don't know how feasible that is. But there's been a lot of thought given to this part, why couldn't you get there?

Q. Did there seem to be an urgency on YVI as far as getting you out there, getting some sort of number?

A. You know, everybody is busy. My guess is yes, they would like to have gotten me out there quicker, but even Captain Uberti, I hear, jumped on a boat and he was looking around

for a slick and -- so the Coast Guard guys are running around looking for a slick, see the damage. There was one boat that was with the ship, circling the ship to see if it's stable, is it going to -- you know, those kind of things. You have so many things that are running through your mind, it would be unfair to say that they should just break away and come and pick somebody up. I don't think that was the right -- at that time, you didn't quite think of it that way.

Q. Okay. So once you were notified of the accident, did you have any responsibility to notify any other people besides Rick Holly?

A. Not really. Apart from dispatch, who we always keep up to date, because they update the computers in Sacramento, which update their databases and everybody -- Rick Holly looks at those databases, you know, to see what's the latest, what's the update. You know, you could say you had a one-gallon spill and then you update it, say no, it's a hundred-gallon spill, so dispatch updates it. Rick Holly -- others see it. Anybody who's interested in the spill in our department, the hierarchy, gets to see that, so you constantly update them, but as far as doing any more, at that point, nothing crossed our minds, really.

Q. So no requirements to notify local people?

A. Not me. It would be the unified command and we'd do it together. But personally, I won't pick up the phone and start calling around. I wouldn't do that.

Q. Okay.

A. Is that right, Rick?

MR. HOLLY: Yeah. Unified command does that or through OES response going from the state, but as far as Roy goes, once he reports that spill, like I said before, he's working for the incident commander and he's responsible for him. As are the Coast Guard people working for the FOSC.

BY MS. THOMAS:

Q. Right. Okay. So let's go now to the -- what time did a Coast Guard boat arrive?

A. This was shortly after noon.

Q. Okay.

A. 12:00, 12:05 or so. It's on the timeline, I think.

Q. And who was on that boat?

A. On that boat were a bunch of very young gentlemen and this boat had come around to pick up lunch boxes for the other guys on the boat who couldn't come around for lunch. So I was lucky enough to get this boat and jump on it.

Q. I see 12:05 --

A. Right. So that was the time the boat arrived and we jumped on it. Now, we is Tom Ajari and his trainee. The gentleman's name was Will O'Brien (ph.). Three of us jumped on this boat -- from the Coast Guard gentlemen. I think there were two or three of them on the boat. There was one person from the Coast Guard who was dispatched specifically to take to samples on

the ship and he had a very fancy nice box of sample cans and very nice -- I have my kit, too. But it didn't look as good as that, so I looked at it, a little envious. Very nice and very organized. Very young gentleman, Lucas Martin. And I think he's a petty officer.

Q. Okay.

A. So we spoke a little bit and we got onto the boat. They stopped and distributed the lunches here and there to the other boats and then we got straight onto the ship. Once we got on the gangway, we went straight up to the captain. Captain was waiting on the bridge. So as soon as we got on the bridge, one of the first things I told the captain was let's go to your cabin now, not here, not on the bridge.

We don't want to be on the bridge. There's a reason for it. As investigators, you're very, very careful not to say anything on the bridge. You have a black box on a plane, you have a VDR on a ship. Everything gets recorded. People may be intimidated and they don't want to say things, they may not want to commit there, you know, you're basically shaking hands. It's nicer to get more comfortable elsewhere, where you're not being watched or recorded. So we went down to his cabin, introduced ourselves, sat down and I told him Captain, we're going to get very quickly down to the engine room to quantify, to see what has spilled from the ship. The reason is that we can mount a response based on how much oil you spilled. He's very agreeable to it and I said let's get the

chief engineer together. Chief engineer came within minutes. A chief engineer's the one who really keeps all the tabs, how much oil is in there or not. He has the whole -- always, always.

So he came up and I said Chief, let's go down, take a good look at what you've got, what spilled and we'll come back up here, Captain, and then I'll talk about cause analysis and what really happened. So we went straight down to the engine room. This is Todd Ajari, Will O'Brien, myself and the gentleman from Coast Guard, Lucas Martin, and we went down there. We started dipping the tanks, sounding the tanks that had oil that had been compromised with this collision. And in about 15, 20 minutes, we had a fairly good figure of what had spilled from the ship.

Now, at this point, remember, the ship was down by a head, by three feet. Down by a head, I mean all ships are built to be down by stern in a normal state and upright, not listed this way or that way. This way and down by stern. Because of this collision, because of the location of the tanks and the oil being jettisoned out, she was down by a head three feet. That was very significant for the sounding. And she had listed to the starboard by one and a half degrees. This was also very significant. This is the way she was.

Q. Okay.

A. Why? Because the oil from the left side was in the water, so she became light on the left side, heavy on the right side. That's the way she was. Now, the reason I'm saying this is

because when you sound and you look at the strapping table -- strapping tables are really designed for upright condition.

Q. Okay.

A. So there's a lot of interpolation to be done. You look at the numbers and you interpolate between them, for -- for the trim, and then come to the correction and then apply that to your real sounding. Sounding is the measurement of oil in the tank. So there was a bit of work to be done towards that end, so that took us a few minutes, it would happen normally, it did this time. So we took the soundings of the tanks that are compromised and we came up, chief engineer and me, and we calculated very quickly how much had spilled and we came to a figure of 219 cubic meters.

I must stress, at this point, it's very important for all us to understand that internationally, nobody knows barrels and gallons. They do not know what barrels and gallons are. They know what cubic meters and metric tons are. Vice versa. The Coast Guard here are not very good with the metric system and they're very good with the gallons and barrels. So it's up to us, at this point, to kind of multiply the figures. You know, when you're talking to the ship, you're talking cubic meters and tons and when you're talking to the -- you're talking barrels and gallons. So this constantly -- multiplication sign in your head, to tell them. So we came up with this calculation very quickly and -- 219 cubic meters. Now, once I had this figure, I went straight up to the captain's cabin and we talked about what

happened very quickly. When we were up there, we made a call to the Coast Guard dispatch to send a boat back to get us back ashore so we could get this figure, this calculation, so that they could mount a response based on this figure.

Q. Do you know around what time that was?

A. This was around 1:15, I think.

Q. Around 1:15 you requested a boat to get back to give the figure?

A. Yes.

Q. Okay. And just going back a second. You said within 15, 20 minutes, you had a pretty good idea of a figure?

A. That's it, yeah.

Q. Okay. Fifteen to twenty minutes after you talked to the chief --

A. No. After we sounded the tanks.

Q. After you sounded the tanks.

A. Correct.

Q. So how did you know, when you arrived on board, which tanks were affected?

A. I asked the chief engineer.

Q. And he knew?

A. He knew. He knew exactly which were compromised. So he told me 3 Port and 4 Port, these are the oil tanks, and 5 Port oil tanks, as well. So he thought that was not -- and was quite right. So when he was -- when he told me that, I said you know,

you got to keep a sharp eye on 5 Port just in case it is. So we get one oilman standing on the sounding pipe. We anchored and -- in the engine room. Don't move -- sounding tank. Keep taking the sounding.

Even if it's by one centimeter, one half an inch, we want to know right away. So all he did, poor guy, was every three minutes dip, take a look, still -- It's like a dipstick, you know, and he just kept doing that. So we were sure 5 Port is intact. Two Port is not an oil tank. It's a water ballast tank and that was compromised, as well. It -- entire qualification, this ballast water -- no big deal, really.

So although we did discuss very quickly, chief engineer and I, in case -- we didn't know at that time -- the bulkhead separating to water, water tank, and three, oil tank, in case this had crumbled and water migrated into -- that could pose a problem. We did discuss it at that time because water goes to the bottom, pushes the oil up, so you have more oil being jettisoned out of the tank. It was a very quick discussion with the chief engineer. We didn't really do much more after that because we didn't have to really do much more after that, but this. But see, all these things are going through your mind, through his mind, and you're talking about these things continuously between the two of you while you're sounding the tanks, so there's a lot of discussion that's going on between the chief engineer -- we come up, we got the soundings, we open up the strapping tables, interpolate, come

up with a figure, 219. Let me see if it's the right -- before I give it to you.

MR. HOLLY: You can give it directly to -- just one of the -- here.

MR. MATHUR: Okay. So there was a lot of -- done on the site, with the chief engineer -- strapping tables and all that. And this was what we finally came up with before, after --

MR. HOLLY: Do you want to explain that to Crystal?

MR. MATHUR: Okay.

MR. HOLLY: We were looking at them the first time. You may want to -- just talk about the pieces of paper.

MS. THOMAS: I have that on the copy there.

MR. HOLLY: You have that? Okay.

MR. MATHUR: I think you have it, too.

MR. HOLLY: Yeah. Yeah, why don't you just --

MS. THOMAS: Yeah. No, that's perfect. I was going to ask --

MR. HOLLY: Go ahead. Explain what --

MR. MATHUR: So if you go to page -- second to last page. Yes, that's the right one. That's the right one. Yeah, that's the right one. These are the figures that the chief engineer gave me as initial quantities. Before the ship collided, this was what was in each tank. Right?

MR. ESTES: These are the soundings that --

MR. MATHUR: Correct. Exactly. So what you have is ROV, those -- every time you depart from port, you give these figures to everybody, your owners, your operators, your charters. Everybody wants to know. Oil is $450 a ton. It's all expensive. Everybody wants to know. So this is what he had e-mailed, faxed, given out to everybody. So these are really the figures before he took off. Then they collide. And two of the tanks, oil spills out into the water. The next, the third to last page, the one that I have my handwriting on, the -- full port stands before -- and these are the before quantities. 871.54 is before the collision. Same thing, same three tanks after the collision. It's really very simple, you know. I mean, all the sounding and all, it appears to sound complicated. It's really very simple stuff. It's not really difficult, at all. It's really -- it's easy to do, really. So you subtract the two and you get this figure. That's what's missing from the ship. If it's missing from the ship, it's in the water, right? So this was 219.63 cubic meters, which translates to 58,020 gallons, is what I reported as the spilled quantity. But here I was very careful to tell Rob Roberts -- he knows us very well, Rob, that at least -- and he was very quick to ask me that evening, when I got -- why do you keep saying this at least, at least? And we'll get to that a little later. So this is what I quantify, then I went to the captain and we spoke about what caused -- What really happened, what went wrong? And he was very anxious, at this point, to tell -- you

know, you have that -- clarify, you know, to explain yourself. So he was very forthcoming and he told me exactly what happened, in his -- how the collision happened, what went wrong and stuff like that. Once we were done with that, we were ready to come back to the Coast Guard island to give this figures and we did. That was my evening. And then I talked to Rob Roberts, briefly -- the Coast Guard person, who is right under Captain William Uberti. And then there was a unified command meeting. There were about 20 people from all agencies, everybody, and I explained, on the blackboard, exactly how I sounded, what I did, what the figures are and I repeated exactly these soundings. I said this is what's --

BY MS. THOMAS:

Q. Okay. So at twelve -- according to your timeline, at 12:30 you were onboard --

A. Yes.

Q. -- and then you interviewed with the master and chief mate?

A. Correct.

Q. Chief engineer.

A. Yes.

Q. What time did you start doing the soundings?

A. 1:15. I think I told you I finished at 1:15. I finished shortly after 1:15. Started at about 1:15.

Q. Okay. So that's 1315, that's --

A. Yes.
Q. -- when you started sounding the tanks?
A. Right.
Q. Okay. And you said that took about how long?
A. I'd say, at the most, 20 minutes.
Q. So that around 1:35 you would've had the figures?
A. I'd say that.
Q. And then once you had the figures, did you call anybody on the phone --
A. No.
Q. -- or the radio back?
A. No. And that is my mistake and I am to blame for that and nobody else is to blame for that. I now, in hindsight, know I should've called everybody, Rob Roberts, Rick Holly and told them about this, but I didn't. I waited for the boat to come, which I thought would come right away to take us back and I'd go and give these figures. One of the things we are very careful about is in slightly high profile cases is not to give a figure to anybody, you know. You don't want it to be leaked to the wrong people. We don't want it exaggerated out of proportion and things like that, so we were very careful to give it to the unified command and only to the unified command. So now that I have it, really it's my fault. I just waited to give it to the unified command, which now, we know, was a little late.
Q. What time did you request a boat to come back to YVI and

who did you request it through?

A. This was Coast Guard dispatch. While we came up from the engine room, I told Todd Ajari, the warden, let's get back, call the boats. He called on his phone, he had the phone number on his speed dial. He called dispatch, Coast Guard, and said hey, we need a boat. We want to come back and finish quantification. We're ready to come back to the UC and talk about the figures.

Q. Who would he have called?

A. This is Coast Guard dispatch. This is Coast Guard dispatch who dispatches the boats. They know the -- boats that are out in the water. The Coast Guard, they have a command center, operational every day, all the time. So they're the ones who would coordinate, you know, you boat, go there; you, go there, that kind of stuff.

Q. Okay. So not the command center?

A. No, it's not the command center. That's a different thing.

Q. Okay. So he called them around 1:35 and said that you had completed --

A. Right.

Q. And nobody asked what the figure was? That's not their part?

A. No, it's not their part. We're just coordinating the boats and they're really -- they're to -- for safety.

Q. Okay. So you requested the boat around 1:35?

A. Right.
Q. On the timeline it says 2:30, ready to disembark. Waiting for boat. What is that?
A. 2:30. I take it back. 2:30 is when we were ready to get off the ship with our samples, with our quantification, with our root cause analysis and get back to YVI.
Q. Okay. So is that -- is 2:30 when Ajari called the Coast Guard?
A. No, earlier than that.
Q. Okay.
A. Much earlier than that. I don't have that exact time, so --
Q. Okay. Because then according to this timeline, disembarked the Cosco Busan at 1500 hours, so 3:00 p.m.?
A. Right. And since we had this time, you know, standing out there waiting for the boat to come, we continued the investigation. You keep having more questions well up, you keep asking and you keep clarifying things, so that's what we used our time for.
Q. Do you feel that the boat got there in a timely manner?
A. No, it could've -- should've gotten there earlier. See, I don't want to blame the Coast Guard because they have so many things to do, but in hindsight, yeah. I wish they'd --
Q. Did Ajari express an urgency when he called and requested the boat?

A. We called more than once.
Q. Called multiple times?
A. Yeah. And we -- you know, at this point, you don't want to push anybody to do anything because, you know, you know that they are doing important things, too.
Q. Okay. So you got back at --
A. 3:00, I think, is when we got onto the boat. And by 4:00 we had given the figure to the UC.
Q. So it took an hour to get back?
A. It takes a little more than half an hour.
Q. Okay. And then what happened?
A. Then I came back, gave the figure to Rob Roberts right away and essentially, the -- my handwriting there, showed him this and I said this is the figure that is -- has spilled from the ship, at least. And then we went straight into the unified command room, command center, at VYI and you know, there were animated conversations between him and others there, which was Captain Uberti and -- and others. And I really was talking to my -- you know, my colleagues here -- this is what I think it is. And you know, what I did think, at that time, that's what it -- so they kept -- they were talking amongst themselves and that took quite a while, you know. There was -- a QI, you know, there were a lot of people who were kind of anxious to hear this figure. When they did hear what it was, 58,000, I could some of them were not very sure that this was real and they expressed it quite

openly, you know, this can't be. And there were others who were kind of taken aback that it was so much. So you know, I was just watching the reactions, really. I wasn't doing much after that. Not much, really.

Q. Okay. So from the time you disembarked, it took -- but you -- did you tell Rob Roberts before you told the unified command?

A. No, to the -- I told Rob Roberts.

Q. That would be 1600 hours is when the unified command --

A. Correct.

Q. -- knew your figure?

A. Correct.

Q. Okay. Can we go back to the boat real quick, as far as the soundings? We had heard that the sounding tubes were bent. Were they not bent?

A. One tank was bent. That is 3 Port.

Q. Okay.

A. And there are many ways to sound a tank. This one was totally mangled.

Q. Okay.

A. It was mush, right? So we tried to get through the sounding tube and we saw very quickly, we -- you know, you take something that looks like a knitting needle. It's really a sounding rod. It's very heavy. And you kind of throw it down and see if it goes past the choke point. It didn't. So this tube was

either bent, mangled or completely twisted. You couldn't do anything about it. Open up the manhole, you know, something you can walk right into the tank. Got that opened, that manhole is looking straight into the ocean. It was so badly bent. So all this thing was done very quickly. Doesn't need much time.

And there was no way you could dip the tank at all. The other way is this. Air (ph.) point. That is another thing. You couldn't do it, either. The whole tank was complete mangled. This has an automatic gauge, the tank, and it's really suspended on two wires and it's like a -- box, like a little steam box and that floats on the oil, where -- floats on, gives you the measurement and it reads it out. These are very good, but they're not very, very accurate, so you always refer to them, but you never really swear by them. You would still do your manual sounding. We have to go with this sounding, with this measurement for 3 Port.

Q. Okay. So that's how you arrived at the measurement for 3 Port?

A. Correct.

Q. Okay. Now, 4 Port, the sounding tube was intact?

A. Yes.

Q. And how were you able to sound it?

A. Sound it with the sounding tape.

Q. Okay.

A. Just normally.

Q. And we had heard that they needed to heat the oil, the chief engineer was heating the oil. Were you aware of that?

A. Yes.

Q. Okay.

A. He was. Because he wanted to transfer the oil from the tanks that were compromised into good tanks because you never know. You have a little -- or something, oil might spill out -- lighten the tanks as quickly as possible in order to pump the tanks out. See, this is a very heavy, thick oil.

Q. Right.

A. This is one step removed from shoe polish, right? It's literally -- so you have to heat it. And with the sea water temperature, which is very, very cold, 40, 45, 50 degrees, it cools the oil, so it becomes thick like molasses. So you got to heat it in order to transfer it out, pump it out. That's what he was doing.

Q. Okay. So how do you account for that when he transferred the oil to another tank and that you sound the tank, how do you account for what he transfers?

A. At the time you sound, everything -- all transfer stops.

Q. Okay.

A. Nobody transfers anything. You make sure about that.

Q. So how much had he transferred before you had sounded the tank?

A. He transferred a little bit, very little bit. He just

about started transferring. His transfer pump, I think the capacity's seven tons an hour, I think, which is very little. So he barely started transferring, you know, just to get from where the break was, he was just barely under that.

Q. Okay.

A. Barely under that.

Q. And this is transferring out of the 4 Port tank?

A. 3 Port and 4 Port into double bottom.

Q. Okay. So does he know how much he had transferred and did you incorporate that into your calculation?

A. Yes, we did. Yes, we did.

Q. Okay.

A. And that's why you see a third tank called DB, double bottom. That's the third one that he transferred into from the two broken tanks.

Q. Okay. So this is the one he transferred into?

A. Yes.

Q. So it started at 26.86 --

A. Correct.

Q. -- and then after it was at 354.3, so --

A. Right.

Q. -- you just take the difference of that.

A. Exactly.

Q. And that's the oil that's onboard, okay. Okay. All right. When you were first told about the spill and you had

arrived at YVI and you were waiting, did you hear anything about the report of ten barrels lost or 146 gallons? Were you aware of those figures?

A. No.

Q. Okay. Oh, sorry. Go ahead.

A. Since I'm part of this investigation -- now I do know where this came from, but I don't think it would be right for me to say it.

Q. Okay.

A. At that time, I didn't know. Now I do. But I don't think it would be right for me to disclose -- because it's a whole different investigation, you know.

Q. Okay.

A. The ten barrels and the 140 gallons, both are -- both the figures, I know, are real, but at that time, I didn't really know.

Q. Okay. So you were not aware of those figures --

A. No.

Q. -- before you went out?

A. No.

Q. So they didn't affect your --

A. No. And Crystal, I -- to know the figures, either. You know, really. I mean, the way I work, the way we work. You don't want to ask. You know, I know, I guarantee you, if I'd walked in and asked the chief engineer how much oil have you spilled, he

would give me a ballpark at 12:05 when I got there because I know he would calculate -- any chief engineer would know, would want to know how much oil is spilled, right?

But I didn't ask him, purposely, because you don't want him to put words in your mouth, you don't want him to skew the figures, you don't want him to work towards whatever he told you. You do the right thing, the right calculations, come up with the right figures and then take it from there. So you don't want, you know, how much have you spilled, how much do you think you spilled? You do not want any of that at that point. You want to keep it very clean, very straightforward, very quick.

Q. Okay.

A. That's your aim at that point. So no, I didn't know.

Q. Did you have any interaction with the Coast Guard pollution investigator, Anderson?

A. No. None, whatsoever.

Q. Okay.

A. So they were onboard. When we got there at 12:05, they had already left.

Q. Okay.

A. So we knew, from the register, that they were onboard and they were already gone. Now, you have the Coast Guard investigators and then you have the pollution investigator. They were onboard. And I remember a young lady, Revis (ph.) was her name. She was the first one to tell me, when we walked in, and

that was the only conversation we had. We literally passed each other. I was up, she was going to take the same boat -- out from the ship. She said you can't call quantify because all the tanks are broken. That's the only conversation we had as we passed each other. Okay.

Q. She told you you couldn't quantify because they were --

A. Yeah, because the tanks -- you know, too damaged. Something like that. Okay, all right. We do what we can.

Q. Do you feel that the Coast Guard has qualified personnel that would be able to quantify the spill?

A. Well --

MR. HOLLY: That's a tough one. I don't think he'd know.

MS. THOMAS: Okay.

MR. HOLLY: I mean, compared to --

MS. THOMAS: Correct.

MR. MATHUR: Let me tell you why I'm hesitating on this one. We've been on -- Rick has been on ships for years. I've been on ships for years -- crew, these kind of guys, so you have a very good feel. It's like if you were a rock climber, you know. You know exactly what he's talking about when somebody talks about rock climbing. I don't. Or I can wing it a little bit, but I can't really do the same thing, you know.

Same thing here. When we're on a ship, we're at home. It's like jumping into a warm pool of water. It's really easy. You

know, you can anticipate, you can ask the right questions, you're thinking clearly, your experience comes in. You're talking the same technical language as the chief engineer, as the captain, as the ship's crew. Everybody knows what you're asking for, so it's very easy, very quick. That part I don't think the Coast Guard has because they don't have the experience.

See, they're very motivated, very sincere, very hardworking, extremely honest. All great stuff with experience. Unless you've done this for years, how can you do this? How can you quantify it in minutes? How do you know which tanks and what to do, what you're supposed to watch out for, what more can happen? All these things come with experience. There's no way you can do this. You cannot send a 22-year old boy up there. I don't know if -- 22. And expect him to do this. Poor guy. You know he's trying his best.

BY MS. THOMAS:

Q. Sure. Did you have any sort of communication problems or was there any language barriers to overcome with any of the crew?

A. See, this is a very important question, you know. I didn't have any problems. I did not. But I know the Coast Guard gentleman did. Now, we are talking very technical language, the captain, me, the chief engineer. We're talking 3 Port, 2 Port, 5 Port, sounding, oilage (ph.), strapping table. There's all other terms -- you can -- it's the same terminology. So you're not

really -- you know, when I say something, it's quite easy for him to understand -- you know, so I didn't have any problems with the chief engineer, at all. In fact, they're still in town.

If you ever get a chance to talk to him, I don't think you'd have much of a problem. Captain speaks pretty good English. Others didn't think so. You know, my interview with the captain on root cause analysis runs into 16 pages, that brief interview, whereas the other interviews run into barely half a page with other people because of language problem. No, there wasn't any language problem, really. I don't think so, no. But again, let me clarify, I'll sit with these guys so it's easy for me to understand the diction, the way they talk, the terminology they use, so these things make a big difference, especially when you're in a hurry.

Q. Right. On your way out to the Cosco Busan, did you see any patches of oil anywhere?

A. No, I didn't see any oil slicks. I did not. But I did see -- yes, I did see large sheening. Yes, I did see sheening.

Q. When you were going out to the Cosco Busan, was it still very foggy?

A. Yes, it was.

Q. How was it compared to the morning?

A. Less foggy. In the -- you could see at least 200 yards. No, you could see half a mile, at least, and in the morning, from what the captain told me, you could barely

see 50 feet, big difference.

Q. Was there any product coming out of the vessel when you arrived?

A. Just -- you know, because when we approached the ship, we came from the good side on the boat, so all I could see was the good side. I couldn't see the damaged side. And we didn't want to waste time in taking the round -- just to see the damaged side, so we went straight there and I could see streaks, sheening and blobs passing by with the current, yeah.

Q. Okay. But nothing substantial?

A. No.

Q. Okay. How would you think -- you saw the damage to the ship?

A. Yes.

Q. Based on the damage to the ship and the fuel tanks that were affected and the quantities that were loaded in the tanks upon departure, how long would you say, just a guess, that the fuel would've taken to come out of the tanks?

A. Minutes.

Q. Minutes?

A. Within minutes, yeah, it would be out. It's like -- it's liquid and you just slice it open, right? It's just going to come out and -- it's just going to cascade out. It's going to be like a waterfall.

Q. The Coast Guard had calculations done and they came up

with about 10 seconds. Would you say that that would be accurate? Based on your experience.

A. Because -- not to be -- that's pretty close. Because this was 12 feet broad, big gash, and was 70, 80 feet wide, 90 feet. It was good, yeah. I tend to agree with 10 seconds be quick enough, yeah.

Q. The bulk of it. And then could there be more pouring out --

A. Yes. Yes, since this was so thick. And you see, when everything shoot out initially, the ship takes a slight list starboard, so either way, when it does that, it automatically stops the oil from leaking out because it's leaning on the better side, right? But it -- so all the oil behind -- it's still going to keep pouring out. You will see quite a large trickle and that's what I heard from the ship, that they could still see oil trickling up from the end up each tank. So you'll see a little rivulet still. Most of the time when even I was up there.

Q. All right. But the majority would've come out immediately?

A. Yes, absolutely.

Q. But then that's not to say that there's only a couple gallons that are coming out after, it would be more substantial than that?

A. It will be more substantial, but the bulk could've come out, 90 per cent would've come out, bang, about 10, 15 seconds,

whatever that is. That is true.

Q. Okay.

A. And then it'll just gently keep seeping, you know, trickling out. Makes a mess.

MS. THOMAS: Right. Okay. I'm going to move on. I'm going to let some other people ask some questions and then I'll come back for a second round. Did you want to --

MR. : Okay.

MS. THOMAS: Just identify yourself.

UNIDENTIFIED SPEAKER: Yeah, I just wanted to do a couple of things. Could we go over -- Crystal was asking you some different times and could you just go over, maybe, with Crystal's notes and your notes right there, just so we can get the times straight?

MR. MATHUR: Okay, okay.

UNIDENTIFIED SPEAKER: I just wanted to make sure that we were all on the same --

MS. THOMAS: Sure.

UNIDENTIFIED SPEAKER: -- page. Now, could we go over some of the questions that you had because I think you were trying to do it from memory and you were maybe contradicting your notes sometimes.

BY MS. THOMAS:

Q. Okay. So let's go from the notes here, from your timeline that you provided us. Says at 9:20 you were informed by

Ajari --

A. Yes.

Q. -- of the oil spill?

A. Yes.

Q. 9:35 you arrived on-site at YVI?

A. Yes.

Q. 9:45 you got a call from dispatch?

A. Yes.

Q. I believe you said it was Adrian?

A. That's right, Adrian.

Q. Okay. And it says here 10:02 -- coordinator informs QI and MSRC?

A. Yeah.

Q. So that would be Lieutenant --

A. Roberts.

Q. Rob Roberts and --

A. And Todd Ajari, because they're in the unified command together and while, you know, I was hearing what they're saying, I could hear them call MSRC and all that.

Q. Okay. Did you hear what they were telling MSRC or the QI? Did they give any sort of numbers?

A. No. I can't recall anything.

Q. Okay. Then you have 10:06, OSPR dispatch notified the first response team, so that would be yourself, Ajari and O'Brien?

A. Right.

Q. Then we have 12:05.
A. We have 12:05.
Q. 12:05, there we go. OSPR first response team for U.S. Coast Guard boat headed for the Cosco Busan.
A. Right.
Q. 12:30, the first response team is onboard the Cosco Busan. 12:30, interview with master, chief mate, second mate, third mate, chief engineer.
A. Boson.
Q. And boson. Who is boson?
A. He is what we call the boss of the crew.
Q. Okay, got you. And then 1315, quantification of oil spill from Cosco Busan completed, samples drawn from breeched fuel oil tanks. And that was when you said that you began sounding the tanks?
A. No.
Q. Or you started --
A. Calculating.
Q. So at 1315, it says quantification of oil spilled is completed.
A. You know, by this I'm pretty sure what I mean is we dipped the tanks, we came up, started the calculations and in about five, ten minutes, we must've -- see, these calculations are quite simple. They're not that complicated. And only three tanks, really.

Q. Okay. So is it 1315, is that when the sounding happened or did that happen before?

A. Yes, sounding.

Q. So sounding began at 1315?

A. No, finished at 1315.

Q. Finished at 1315, okay. Write a note here.

UNIDENTIFIED SPEAKER: So by your notes, when you say quantification complete, you're saying soundings complete?

MR. MATHUR: That's right.

UNIDENTIFIED SPEAKER: Okay.

BY MS. THOMAS:

Q. Okay. Soundings, okay. And then once the soundings were complete, that's when you said that you wrote up your calculations, which was very quick?

A. Yeah, it's quite --

Q. And then at 14 -- oh, and we have one for that, that you had just told us about. You said around 1:35 you had the figures, but you didn't call them back at that point?

A. No, I did not.

Q. You're waiting to give them --

A. I wish I had, now looking back.

Q. And then you had said that -- which isn't on the timeline, you had said that Ajari called back looking for a Coast Guard boat around 1:35?

A. Yes.

Q. That's not on the timeline.
A. It's not on the timeline.
Q. But we have that on record, okay. And then 4:30 you have an entry that says ready to disembark from --
A. 2:30.
Q. 2:30, I'm sorry. 2:30. And that's just while you were waiting?
A. While we were waiting. We just continued the investigation.
Q. And then at 1500 hours, at 3:00, you disembarked the Cosco Busan?
A. Correct.
Q. Then at 1600 hours, 4:00, you advised the unified command --
A. Yes -- had the figure.
MS. THOMAS: Okay.
UNIDENTIFIED SPEAKER: Okay, I'll pass for now.
BY MR. ESTES:
Q. Okay. Hi, my name is Kim Estes. So I just have some -- just a couple of questions and there are not going to be any -- because I was going off of Crystal's notes and writing on your conversation. Where are the double bottoms on that ship? Do you know if they're -- the only reason for the question is because the trailing -- you said it was down by the -- when you arrived?
A. Right.

Q. So that means that any input -- when the ship left, it was -- it had -- it was down by the stern?
A. Correct.
Q. Then the ship left dock.
A. Correct.
Q. So when you bust open 4 Port --
A. Right.
Q. -- and the ship loses --
A. Oil.
Q. -- oil and it creates the list --
A. List, yes.
Q. -- so unless the oil moves, whatever he was transferring move forward, that's going to make it down by the head.
A. No, no. If this were the ship and you have the tanks here, they're more aft than forward.
Q. Okay.
A. 4 Port is pretty far behind.
Q. How many tanks are on the ship? Is it six?
A. Six.
Q. Okay, all right.
A. It's a mid-ship space.
Q. A little after mid-ship?
A. Little after mid-ship.
Q. Okay.
A. So when the oil comes out of the mid-ship area here, the

ship becomes lighter here.

Q. So the double bottom must be a little bit forward?

A. When you say double bottom --

Q. Yeah, where is that? Where is the double bottom?

A. Right at the bottom of the ship, double bottom.

Q. The whole ship is a double bottom?

A. Right.

Q. On the bottom?

A. Right. So that's along there. And then you have the sides --

Q. I understand.

A. -- and in these side compartments are the -- tanks.

Q. I understand that.

A. Right. So when these tanks bust open, the ship becomes lighter here so the forward becomes heavier, so the forward dips down.

Q. Okay.

A. So now you're down by head. Also, since you're down by head here and oil has come out of the left side, it becomes lighter.

Q. So you get a list?

A. So you go -- you know, that's the way the ship is.

Q. Okay. So you know, I was just -- so the double bottom is the -- runs the whole -- usually they're compartmental double bottom.

A. Here, too. But --
Q. Here, too?
A. Yes.
Q. So that means -- but does that mean that you have --
A. The separated -- bulk heads and there are 14 tanks --
Q. So where was the transferred oil going to? Which --
A. It's called -- this is called third double bottom tank on the ship.
Q. Okay.
A. Yeah. It's called the DB.
Q. All right.
A. That's what they call it.
Q. All right. Just trying to --
A. Right. These --
(Cross talk.)
Q. So it's one, two, three, four, five, six double bottom --
A. Right.
Q. So oil didn't go to the aft double bottoms, it went forward? Because how you're down to the head.
A. Well, you're down to the head because you lost oil from behind --
Q. Okay.
A. -- and you made the behind lighter, so your head is

heavier.

Q. Oh.

A. That's -- down by head.

Q. Okay.

A. Oil really didn't migrate anywhere. 3 Port, 4 Port, it went straight into the water.

Q. But he transferred?

A. Then he transferred. And he transferred --

Q. Yeah, you're right.

A. Doesn't bring her upright or anything. He was just trying to save any more from going into the water. That's why he was transferring --

Q. And my -- because I just didn't know the ship's structure, usually in vessels they're compartmentalized --

A. Yes.

Q. Because you don't know if that type of free service --

A. No, you don't. Exactly.

Q. Okay. So just -- and maybe I'll look at a ship's diagram so I can actually figure that out and why the double bottom had that much free surface area to make the ship do what it did and just go forward, other than the loss of cargo in those tanks. Okay, the interview process with the master, chief mate, second mate, third mate and chief engineer as per your interview at 12:30, were those separate interviews or all together?

A. They were initially separate. Initially, it was just

the captain and me.

Q. Okay.

A. Then we finished the quantification, come back, there's no boat. Now I get into this a little more.

Q. So you had an interview with the master, which was separate?

A. Correct.

Q. And then you had an interview with the chief engineer for calculation purposes?

A. Correct.

Q. Down in the engine room?

A. No. Well, sounding in the engine room, but we come up. It was office where the books are, strapping tables and all that.

Q. Okay.

A. And calculate in his cabin on the deck, his office.

Q. In the chief's cabin?

A. Correct. In the ship's office, really.

Q. Okay. And then the interviews with the chief mate, second mate, third mate were --

A. That was next.

Q. That was while you were waiting on a boat?

A. Right.

Q. Okay. And then also, I just got a note here. The Coast Guard guy, the fellow that came on the boat with you on the way out --

A. Yes. Lucas Martin.
Q. Lucas?
A. Lucas Martin, M-a-r-t-i-n.
Q. Where was he?
A. You know, he was with me all the time.
Q. He was with you?
A. Yeah.
Q. So he was there -- I mean, if you granted -- because you're pulling out of the same -- he -- sample to the sounding --
A. Yes. We both had exactly the same --
Q. So you pulled it up and then you guys were able to share samples?
A. Right, correct.
Q. And if he was with you the whole time, did you get any indication of what -- and they may have been just a sample, but I don't know this, but did you get any indication from him when you -- was he with you when you did the calculations?
A. Yes.
Q. Did he -- did you notice that he thought there might have been quite a discrepancy between the initial figure and the figure you gave? Did he mention that at all?
A. No, he didn't.
Q. He didn't, no?
A. No.
Q. Okay. And the other question about that was did you ask

him to call a boat? Okay. Because I figured if he would've known there was such a gigantic discrepancy, there was an urgency to get that number back to people, he might've got on his phone and called his people, as well, to express that. Okay. The gauging system on the vessel --

A. Um-hum.

Q. -- do they have remote gauging system?

A. Yes, they do.

Q. And then they have -- then you also have the sounding tubes?

A. Correct.

Q. The sounding tube -- the numbers that you sounded mechanically, with your tapes -- right?

A. Images.

Q. Images. Those numbers that you got off of your tape -- and this is the tape you use all the time, I imagine?

A. It was the ship's tape.

Q. Okay. And they have MNC (ph.) tapes?

A. Exactly.

Q. Okay.

A. MNC tape. And you know, there's a way to see that the tape is good. Initially, you take one meter, you make sure that it's exactly the same.

Q. Um-hum.

A. I can see you've done this. You make sure the tape is

good.

Q. Um-hum.

A. Make sure the bulb is, you know, rightly calibrated. All this takes --

Q. Yes. Okay. Comparatively, the MNC tape versus the --

A. Um-hum.

Q. But did you look at any type of discrepancy there? Did they pretty much jive? Did they match up?

A. They did.

Q. Okay.

A. This is a good ship, I'll tell you that.

Q. Okay.

A. It's a good ship, things went very well. It's really a very good ship.

Q. Okay. And the sound tubes are in the engine room, is that correct?

A. Yes, they are.

Q. Okay. And not on deck?

A. Not on deck.

Q. Okay.

A. Well, yeah. They're not on deck, the tanks that we sounded, no.

Q. All right. The conversation with the chief engineer --

A. Um-hum.

Q. -- that you had seems to be a little bit different --

when we were talking to people in the past and according to notes that we've had, it appears to one of cooperation with you. More than willing to talk and decipher information of the tables --

A. Um-hum.

Q. -- and also what was there, what wasn't.

A. Um-hum.

Q. And with the calculation in-between and actually even to the point where you were getting the transfer -- numbers from --

A. Yes.

Q. Okay. So that was pretty much even-keeled. There was not -- it was just --

A. Not much, really.

Q. -- plus, minus and we're down to what you transferred?

A. Yeah, right.

Q. Okay. You also mentioned and I just want to make sure I get this right, the normal protocol for relaying information when you board a vessel and there's -- how does that usually transpire?

A. Of relaying --

Q. Relaying information. So whether it's -- and you can take it out of this scenario. It doesn't have to be amount of oil. It could be casualty, it could be drug -- it could be whatever you're there for, how does that usually work?

A. See, usually -- this is all -- well, this is one of the first ones that we really had to go out there and then usually, I call in --

Q. Okay.
A. This is what I would do.
Q. Okay.
A. I definitely will call on the cell phone from now on. But -- yeah, I didn't call anybody on the cell phone.
Q. All right.
A. We thought we'd get back really quickly and you know, when we did call -- said yeah, boat's on its way, so okay. So we're getting right to the boat station and then we just waited and waited and waited and every time you called them, they said yeah, boat's on its way, so we should've called. I should've called. It's really my fault. I should've called.
Q. Okay. Let me get back to quantification method. Are there a set of protocols you use for quantification other than just the sounding tables and the tubes and the sound tables for the vessel? And is there a step-by-step outline or is this because you've done this for so long?
A. I've done it so long.
Q. I understand. And so this is not any different than any other ship, you used the same method?
A. Exactly the same.
Q. Okay.
A. In fact, let me add here, if you go one page further, you see this one?
Q. Yeah.

A. This is the whole ship.
Q. Okay.
A. The next day, you know, you want to pull your --
Q. This is the next --
A. Not on that. Not that, no. That. So this is the whole ship next day.
Q. Um-hum.
A. See, initially you do your quantification. You want to do it so that they can respond.
Q. Sure.
A. That's the urgency, quick. Next day you want to go and get the real good precise figure.
Q. Um-hum.
A. So you do the whole ship --
Q. Um-hum.
A. -- entire ship and these are all the tanks on the ship, each and every one.
Q. Okay.
A. And then you come up with a quantity and see whether there's a discrepancy with yesterday or not.
Q. Right. And you're not that far off?
A. You're not that far off at all.
Q. No, because -- asking questions. I don't know. Even though you do the -- you use the tables and you use the MNC tapes or any other method, whether it's -- your quantity would be

estimate given, not real?

A. The first day?

Q. The first day.

A. Yes, yes. Very much so.

Q. Right. And then your reality day is the day where -- I mean, whoever comes on to actually do the delicate measuring to the -- amount that they can, the --

A. Yeah, you can see I'll attach that one. They came out a week later.

Q. Yeah.

A. And you can see they're very close to my figures on the second day. Very, very, very close. Very close.

Q. Okay. So -- okay. You had a specialist, another specialist, with you who was part of your team? The scientist.

A. Yes, a scientist.

Q. A scientist.

A. Yeah.

Q. And what did your scientist report or did he -- does he report to you? Are you the leader of the team or does he have another boss?

A. No. No, he has another boss. Essentially, in this case, he reports to the unified command.

Q. Okay.

A. At this time.

Q. Was his boss inside the control -- in the command

center?

A. When I came back, yes, he was.

Q. So was there information between that specialist and his boss inside the unified command about what had transpired on the ship?

A. He didn't come on the ship with me.

Q. Oh, your scientist did not come?

A. No.

Q. So you were by yourself? The trainee. Warden and his trainee. So the warden has the same boss as you?

A. Rob Roberts was his boss. It was the unified command, who had set up the unified command. So when we came back, he went and he spoke to him.

Q. Right. So was there a decision on the ship that only one person would relay the information to -- about what had happened? Did he call?

A. No, he didn't call.

Q. He didn't call, okay. So no one called?

A. Nobody called.

Q. Okay. And just to note, that was -- I mean, basically you got a group of people together and you guys decide who's going to make the phone call or if anybody should make a phone call?

A. Right. But from now on, we know. At that time, we did not.

Q. All right. You mentioned, also, that part of the

analysis or part of the reason why you were out there for quantification and -- based on what you knew and your snapshot of the truth, your snapshot which is of truth, as you see it, currently, was there any type of analysis done, was there any type of conclusion at the time? Were you able to give somebody root cause at the time or was a probably cause at the time? Was that part of it? Was this quantification -- So probable root cause --

A. Yes.

Q. We'll put the word probable on there --

A. Yes.

Q. -- because nobody knows --

A. Correct, correct. Exactly.

Q. But was there anything -- was that information also relayed to somebody, anybody?

A. No. I did speak to the unified command about what I thought happened on the voyage out and the collision --

Q. Okay.

A. -- why it happened and I did express an opinion. But remember, that time it was very quick.

Q. Sure.

A. Without any analysis, without any background information, this is something that you want to -- everybody has this question why did it happen?

Q. Um-hum.

A. You know, right after they hear the figure, how much

spilled? Next question's why did it happen?

Q. And I'm sure it's carefully addressed.

A. It is. It is.

Q. -- answer.

A. And you answer very carefully and you definitely -- that this is an opinion, this is what I gathered in those short few minutes, so that's all I know. That's all I can tell you right now. And that's what I told the unified command.

Q. Okay. One more question. You're a licensed officer in the Merchant Marines?

A. Yes, I am. Yes.

Q. What -- United States Merchant Marines?

A. No, this was -- see, the United States is United States by itself and they don't really -- Why solicit two?

Q. Um-hum.

A. So --

Q. Well, some of the officers do. They're doing it, especially now, because of the lack of shipping bodies and now they're starting to --

A. To be a part of the union here.

Q. Right.

A. There's a whole procedure, itself. The answer is no. We sail a foreign flag.

Q. So you -- is issued by which --

A. By the government of India.

Q. India, okay. All right, that's what --
A. And this is under IMO.
Q. Um-hum.
A. International. So everybody is under IMO.
Q. Okay.
A. Right. And what do you call, STCW, you mentioned?
MR. ESTES: Yeah. Crystal, that's all for now. I think I'm done.
MS. THOMAS: Okay. Paul?
BY MR. STANSEL:
Q. Paul Stansel, NTSB. I just have -- follow-up questions. You said you would get back with us later, but I'm not sure we touched upon it, when you were discussing that you had conversed with Lieutenant Roberts that this was the minimum amount spilled.
A. Right.
Q. Could you elaborate a little further on that?
A. Yeah, yeah. This is important. See, the ship has 14 tanks, right? And this will hold heavier oil, what you call, bunker oil. It's really thick. Now, you take the -- Los Angeles, like the ship did. Before that, she bunkers in Cusan (ph.), which the ship did. But wherever you take bunkers, you take bunkers wherever you are. In China, that's where you take bunkers, right? Quality of bunkers is different anywhere. This is all bunker oil, but as you keep mixing different grades of oil and loading on top, loading on top, there's a lot of waxiness that occurs with this

oil, lot of thick waxiness which settles to the bottom. This is natural, every ship. And as it settles to the bottom, it forms a thick or waxy residue and you call it un-drawable because you can't really use it. You cannot draw it.

It just settles to the bottom. In dry dock, you open up the plugs and drain it out. You literally squeegee it out, you clean all the tanks in every dry dock. But you've got this stuff in the tank that you can't do anything about it, can't use it -- un-drawable. Now, when you have 14 tanks like this, large tanks, how much do you think is un-drawable in each tank? Easily, three tons, four tons, five tons. Right?

So -- I've got X amount of oil on my ship. Really, the un-drawable amount is -- five tons. He's got 50 tons he's got that he can't touch. He says he has it, but he doesn't really have it, because when push comes to shove, he can't use it. He can't draw it out -- the ship. So what he does is he keeps a little extra. He may keep a little extra, you know, just keep a little extra just to make up for this. So the ship was headed for San Francisco -- to Seattle, right? The policy, I think, -- was two days extra fuel on board, literally, right? Officially. That's all he has. Now, if he needs for another few -- where is he going to get this line from? So he keeps a little extra. Everybody keeps a little extra because of all this un-drawable. Now, this little extra, could it be in 3 Port? Could it be in 4 Port on the Busan? I don't know. Chief engineer's not going to

tell me this. This is something that you have to keep in the back of your mind on every ship that you investigate.

Maybe there wasn't any extra, maybe there was a little extra. I don't know. This is not disclosed, this little extra. Now, if you -- quickly around of the ports here, you go to Seattle or Los Angeles and all that, some chief engineers are friendly enough, they'll tell -- a hundred tons extra, I've got 80 tons extra, I've got 50 tons extra. That's pretty common, it's pretty normal, in my opinion. Now, Cosco Busan, she consumes, remember, 219 tons a day in a day, in one day. So she keeps a little extra, like you keep a little extra in your car, right?

Two gallons in your fuel tank doesn't mean it's -- you know, you don't go below that. That's your reserve. If he keeps a little bit, if he did keep a little bit, which tank was it in? Or which tanks was that in? I don't know, but as an investigator, I should keep this in the back of my mind and I should also tell my unified command that maybe there was a few more gallons in this tank and this tank, so when you mount your response, please bear that in mind. And that's the only reason I kept that it's at least 58,000. It could just be -- exact, but it could be one gallon more or ten tons more.

Q. Okay. And you interviewed the chief engineer for a period of time in his office or his ship's office. Can you elaborate a little further on the content of that conversation? How did that go?

A. Essentially, my conversation with him was about calculation and sounding the tanks and little else, very little else. Most of my conversation was with the others, with the captain and the others to find the root cause analysis and the mistakes in navigation, what could have led to such a collision. But with the chief engineer it was essentially the sounding, the configuration of the tanks and just simple questions like, you know, you ask him what is your factor of error, what happens every time you take bunkers -- bunkers and you sound the ship. You might get a few less each time. You know, that's called the ship's experience and you usually take the last six ports to see whether the experience is positive or negative. My questions were along those lines. So they were very technical, very sounding, very much for the sounding, nothing really else.

Q. Okay. And I believe you indicated that you felt that he had a good handle on how much oil had been lost?

A. Yes.

Q. Did he give you any figure or --

A. See, again, now I know the answer to that.

Q. Um-hum.

A. At that time, I did not. Now I know that he did calculate between somewhere after -- and that's natural. If you're the chief engineer on a ship, you'd like to know, quickly, how much oil -- so he must have calculated and now I know he did.

Q. Between the time Anderson left and the --

A. I arrived.

Q. Okay.

A. So when my figure of 219 came up, you know, one of the first things you do is as soon as you get that figure, you look up for expressions, you know? Does it make him jump out of his skin or you know, everybody's very --? So I got the feeling that this was -- they knew this. But that was just a feeling. They didn't tell me anything, really.

Q. And when you departed to do to the ship, you didn't receive any briefing at all from the Coast Guard collision investigators?

A. Nothing.

Q. You returned to the ship the second day to complete the other soundings?

A. To confirm my own sounding. This is quite a normal thing on a case like this.

Q. Um-hum.

A. You go back the next day just to -- and make sure that you haven't left any stone unturned, you haven't made any major mistakes. If you have, you like to correct them or you know, tell people that, you know, it's maybe a little worse than it is, things like that. But you really want to finalize the figures the next day.

Q. So that was the total scope of your involvement the second day was to go back and --

A. Yes.
Q. -- confirm your soundings --
A. Correct, correct.
Q. -- and check the other parts aboard the ship?
A. Correct. And the second day, the Coast Guard investigation team led by Lieutenant Hopper, I think is his name. Yes, Hopper. He and his team and his team of interpreters were on the same boat, so we all got onto the ship together and I started my re-quantification, entire ship, and they started their investigation.
Q. So you basically retraced your steps --
A. Correct.
Q. -- from the previous day and then carried it further --
A. Exactly, exactly.
Q. And you came with, on that day, 203 cubic --
A. Correct. And that is quite normal because she was upright that day. By then she'd corrected herself and they had gotten -- everything was a lot better.
Q. And how long were you onboard that day?
A. A long time. At least four or five hours just to do this -- and then after that, when I finished this and I was quite satisfied that there's nothing to be alarmed about --, then I went back with the captain and continued my investigation, you know, the points that I wanted to clarify the next day. How the collision -- the human factors of the collision, what really went

wrong. Why did things go wrong? So I continued my investigation with the captain quite separate from the Coast Guard. And they had finished and gone from the ship by the time I finished my calculation. The -- ship. By the time I finished this, they had already gone from the ship.

Q. The Coast Guard?

A. Yeah. And I did ask them to stay for a while, you know, because you see my signatures here and the captain's signatures here? I would have loved to have the Coast Guard signature. You -- control. That makes it a very official document. But they weren't there. They had already gone.

Q. And what, if anything, did you do after this concerning the oil quantification, just the sum of it? The calculations that were done by Intertech --

A. Yes --

Q. Cal --

A. Yeah.

Q. That was done a week later?

A. Yes.

Q. November 15th --

A. Yes.

Q. -- 2007? Were you present for that?

A. No, I wasn't. In fact, I was not even aware that they had been summoned a week later. Well, there's no reason for anyone to tell me that, either, so it's okay.

Q. So after the second day, you continued with the human factors investigation, but as far as this matter was concerned, you were done?

A. Nothing was done.

MR. STANSEL: I don't think I have anything else.

BY MS. THOMAS:

Q. Okay. Did you go back to the -- or work out of the unified command after Day 2 at all?

A. Yes, I was there. Yes, I was.

Q. And what was your role?

A. I was assisting Rob Roberts and essentially, I was there for another two or three days in the unified command with them. And I don't -- I'll have to look back and see what I did with them, but essentially assisting them in the unified command and being a part of this -- command.

Q. Okay.

A. Can't remember right now. It's been three months, but --

Q. Okay.

A. I know I did a lot of research -- you know, we all have our -- here and there at sea, you know, because lots of things went wrong in the bridge and this and that, so -- a lot of things and already started writing a report on what went wrong.

Q. Okay.

A. How the collision occurred, so I know I was frantically

doing a lot of research.

Q. Do you generally participate in drills and exercises that the Coast Guard holds?

A. I do participate, not the Coast Guard holds, but drills and exercises in the Bay area, yes, we do participate in those.

Q. Okay. In what capacity?

A. Usually, in the operations section. In the operations, usually could give a response, but always the quantification and the root cause analysis. That would be almost something that we would flung ourselves into right away. Do that in the -- drill and then after that, is done and will continue with the operations, of actually cleaning up the oil, cleaning up the oil and you know, there's so many positions to fill. But essentially, the operations section or the planning section, as well.

Q. So are you pretty familiar with -- operations?

A. Yes, I am.

Q. How did you feel that the OSROS, MSRC and NRCS did as far as recovery?

A. I wasn't a part of the recovery operation because right after this, next two, three days, I got dragged into the criminal part of it.

Q. Oh, okay.

A. And then we were very busy and I really wasn't a part of this recovery. I couldn't answer that.

Q. Okay. And then just back to when you were notified of

the accident --

A. Um-hum.

Q. -- you were notified by Department of Fish and Game, correct?

A. -- are. Yes, Department of Fish and Game.

Q. Okay. So is that pretty standard? Would the Coast Guard have requested from him that they call you or is it pretty standard that any sort of -- any time something like this would happen, you would be called in to do quantification?

A. From our side? Yes. From OSPR side, Fish and Game? Yes, I would. But remember, I wasn't called that day.

Q. Right.

A. So I got the call naturally. Somebody else wasn't called, you know, I --. If they weren't called, they would've been doing exactly what I did.

Q. Okay. So the Coast Guard didn't request that you go?

A. No.

MS. THOMAS: Okay. I think that's all I have. Does anybody else have any follow-up?

BY MR. ESTES:

Q. Yeah, one more thing. When you were doing the -- when you were doing the soundings and he -- were you aware that he had started to heat the tanks?

A. Yes.

Q. Okay. So there's usually a --

A. Yes.
Q. Did you use it or was it --
A. We didn't use it. We purposely didn't use the -- this is heavy oil. You know, the -- is you're talking .994, heavy oil. So we didn't want to use the -- at this point. You know, you would've got a correction of what, three tons or five tons?
Q. Yeah. Okay, I'm just checking notes. So the next day, did you --
A. No. Again, we did the gross again.
Q. Okay.
A. See, because --
Q. He had taken the steam off by that time and everything had been --
A. Yes, it was all cold.
Q. All right.
A. Yeah, unless you take a sample and you take it to the lab, tell us what's the gravity then apply the co-efficient --
Q. Um-hum.
A. -- then it would, but for this heavy bunker oil, you want to know how much is spilled for the response. Our attention is on the response rather than -- exact quantification.
Q. Understand. And I know that there's a table for that based on the temperature of the oil.
A. Correct. And the source of gravity, cubic meters and metric tons.

Q. You add the co-efficient and then you got --
A. The chief engineer decided not to go do that.
MR. ESTES: Okay, that's fine. I understand. That's all I have.
BY MR. STANSEL:
Q. So that the -- Paul Stansel again. The figure that you reported, would that have been -- how much higher or lower could that have been --
A. No, it's still accurate. It's accurate. What you're talking about is cubic meters -- we're talking about gross versus net.
Q. Um-hum.
A. Gross is when you measure something without temperature correction, so you can load oil in very cold -- you load it in Finland. It's absolutely cold.
Q. Right.
A. So the volume appears to be less and then as you get into warmer temperatures, it expands.
Q. Right.
A. Right? So your sounding there is going to be quite different from the sounding here because the oil's expanded. The gravity remains the same, but the volume has changed. So you apply this co-efficient -- gravity, which you can get at the lab very quickly and your temperature and your -- and you can change that and make it net. So --

BY MR. ESTES:

Q. And it's not harmful if everybody's talking gross?

A. Correct. That's the most important part.

Q. As long as everybody's on the same page --

A. Yes. Yes

Q. But as soon as somebody throws in that co-efficient --

A. Right.

Q. -- and then the numbers don't --

A. Right. So we will do a gross and did a quick -- gross from the beginning to the end.

BY MR. STANSEL:

Q. Captain Mathur, is there anything else that you wish to add that you think might be helpful to the investigation?

A. No, I don't think I have anything to add except that I'm glad I have Rick Holly here. I'm glad he's our boss because it's so easy for me to talk to him and it's so easy for him to talk to me. You understand? See, it's like him and the Chinese chief engineer? You know, he could talk to him just like that. I think Rick Holly wouldn't have had any problem at all with anybody on the ship. You got to do this -- through the years. You can't just send, you know, inexperienced people. It gets a little difficult.

MR. HOLLY: Well, thank you very much. I appreciate it. This is Rick Holly. One thing for some clarification here, because I think -- I don't want put words in anybody's mouth, but

there's been more conversation about quantification than I personally have seen in 10 or 15 years and for good reason. What Roy and the rest of the people that work for me do on spills of this nature, bigger ones, smaller ones, particularly in the first 24 hours, we're looking for -- when Roy calls me, is it 50 gallons, is it 50,000 gallons, is it 500,000 gallons? That's what I'm looking for. Or if we're not sure and somebody says well, there's been an allision with a bridge, to me, having been around for a while, an allision with a bridge and somebody says it's a hundred foot gash, I'm thinking that's a quarter of an inch of steel. There's got to be fuel tanks, there have to be ballast tanks in there and that's a lot of fuel in the water. So what I'm looking for from him -- I don't even think I even waited in this case -- to me, this was a state-wide response. So I'm on the phone doing what I do to get release and things like that, but I think we all know how to calculate the temperature and specific gravity and things like that, but we're looking for is it 10,000 --

MR. MATHUR: Right.

MR. HOLLY: -- 50,000, 100,000. So I know it's important and I'm glad that -- I think he did pretty well with what he did here, with his expertise, but for our purposes, it's all related to spill response.

BY MR. STANSEL:

Q. You brought up a very good point and I was just curious,

did anyone bring up the maximum potential spill based on the --

A. No, but since you ask it --

Q. Um-hum.

A. -- when somebody tells Rick Holly or me that a ship has collided, that question immediately is in the back of your mind, in the front of your mind, because you know, when she did collide with the tower, when she cut herself open, at what point, mid-ship, at the bottom? If it is the bottom, everything would've come out. The worse case scenarios would be all true. So these are the questions that are going on in the back of your mind when you hear something, when you arrive on-site, that's why we were in such a hurry to try and get to the ship and that's why we were -- get us a boat, get us a boat, get us a boat. Because you know, we know, it can be very, very bad. Others may not, kind of, you know, have the gravity of the situation, you know, again, because of lack of experience. But here, we know that. This can be very bad and at best, it's going to be pretty bad.

Q. Were those questions about the potential amount of spillage being asked in the unified command?

A. Not of me. But I did tell -- I remember telling Rob Roberts that the largest tank on the ship was -- and one of the larger tanks did spill, so -- and that was quite easy to see what it was.

BY MR. HOLLY:

Q. One last follow-up. From your time in the unified

command -- I know you weren't involved with the recovery, but what was your impression of the magnitude of how people were taking this?

A. Not the way they should have taken it and if I can explain that a little better, you know, 50,000 is quite a bit of oil. I think there was a fair amount of disbelief in the unified command and it was very frustrating to see this disbelief on many, many faces there. And some people, you know, to be actually convinced that no, this couldn't be right because now you start hearing these -- barrels and all that. So I understand they had those figures and then they hear my figure and you know, it's polar opposite, so they were a little worried, which one is really the right figure. But to me, we've done this for decades. This is it. This is it, I'm telling you this is it. Go with this. But there was a lot of disbelief in the room there, so the response really, to answer your question, wasn't really what I expected and hoped it would be, which would be let's throw everything, including the kitchen sink, at this and get cracking on the response. It was not really a feverish response as I think it -- as I hoped it would have been at that time. It wasn't.

BY MS. THOMAS:

Q. This is Day One?

A. Day One.

Q. Okay.

A. The time -- unified command right after the ship, right

after the figures were presented.

BY MR. HOLLY:

Q. But you didn't personally see who was responding or not? It was -- in the water?

A. No. But I saw little groups -- and I saw other heads shaking saying no, no.

BY MS. THOMAS:

Q. Is it pretty standard to stop recovery operations at night?

A. It's entirely on the safety here. Entirely on safety, how they feel and how much they feel they can recover at night. Night operations makes everything so much more difficult, you know, to be out in a boat collecting oil and all that, so no, some people do it. Most of the times, they stop at night. But in this case, the fact was very -- accept this figure or not. Even the acceptance didn't seem to happen.

MS. THOMAS: Okay. Well, thank you very much for your time.

MR. MATHUR: You're welcome. Rick, just one thing about this report here, is anybody here -- this report?

MS. THOMAS: Yes.

MR. MATHUR: Because there's some things that aren't right here. My title, chief engineer; I'm not a chief engineer.

MS. THOMAS: Okay.

MR. MATHUR: I'm a captain. You're so right about that.

Have you been a chief engineer?

MR. ESTES: Yes.

MR. MATHUR: Oh, boy. Oh, boy. Oh, boy. I'm glad I found out at the end of it. But that's the only thing that's here. But you know, it makes a very big difference when you put in the report. And there's one more thing about a hundred questions here, Page 99. The hundred questions that I had is, you know, it's an audit. You know, you -- happening all the time. We all try to keep in touch with the latest of what's happening on ships worldwide. And I have the latest questionnaire that you audit a ship for, so I keep in my -- we all keep it in our -- so when I heard that a ship had collided, obviously because of a navigation error, so I kept that list in my pocket. It's a sort of a road map to ask questions of a captain. That's all that hundred questions was. It had nothing to do with quantification, nothing. Right, it had questions to do with lapses in navigation and did you do this right, did you do that right, entirely for myself.

MS. THOMAS: Okay. All right. Well, thank you very much.

(Whereupon, the interview in the above-entitled matter was concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	The Investigation of the Cosco Busan/Bridge Allision San Francisco, California Interview of Roy Mathur
DOCKET NUMBER:	DCA 08 MM 004
PLACE:	San Francisco, California
DATE:	March 18, 2008

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

_____

Karen D. Martini
Transcriber