

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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FIRE AND SINKING OF THE *CONCEPTION*
WITH LOSS OF LIFE NEAR
SANTA CRUZ ISLAND, CALIFORNIA,
SEPTEMBER 2, 2019

Accident No.: DCA19MM047

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Interview of: MARC C. CRUDER
Senior Marine Inspector
United States Coast Guard

Wednesday,
December 11, 2019

APPEARANCES:

CAPT JASON NEUBAUER, Chairman, Marine Board of
Investigation
United States Coast Guard

ANDREW EHLERS, Marine Accident Investigator
National Transportation Safety Board

MARCEL MUISE, Marine Accident Investigator
National Transportation Safety Board

ADAM TUCKER, Investigator in Charge
National Transportation Safety Board

BART BARNUM, Marine Accident Investigator
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United States Coast Guard
(On behalf of Mr. Cruder)

<u>ITEM</u>	<u>I N D E X</u>	<u>PAGE</u>
Interview of Marc Cruder:		
By Mr. Ehlers		5
By Mr. Muise		20
By Mr. Tucker		30
By Mr. Barnum		58
By CDR [REDACTED]		63
By CAPT Neubauer		76
By Mr. Ehlers		85
By Mr. Tucker		103
By CDR [REDACTED]		112
By Mr. Tucker		114

I N T E R V I E W

(11:30 a.m.)

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3 MR. EHLERS: Good morning. This is Marine Accident
4 Investigator Drew Ehlers with the NTSB. We're at Coast Guard
5 Headquarters. It's December the 11th at about 11:30, 11:30 a.m.
6 And we're conducting an investigation and interviews into the
7 accident involving the dive vessel *Conception*.

8 Sir, if I could ask you, number one, are you okay with
9 recording this conversation?

10 MR. CRUDER: Yes.

11 MR. EHLERS: Okay. And can you state your name and spell
12 your last name, sir?

13 MR. CRUDER: Yes. Marc Cruder, C-R-U-D-E-R.

14 MR. EHLERS: Okay. And your position, sir?

15 MR. CRUDER: I'm a traveling senior marine inspector with the
16 Coast Guard Headquarters traveling inspection staff.

17 MR. EHLERS: Okay. Now I'm going to ask everyone else in the
18 room and then on the phone to state your name. Again, this is
19 Drew Ehlers, marine accident investigator with NTSB.

20 MR. MUISE: Marcel Muise, also NTSB investigator.

21 MR. TUCKER: Adam Tucker with the National Transportation
22 Safety Board.

23 CAPT NEUBAUER: CAPT Jason Neubauer, the Marine Board
24 Investigation, chairman for *Conception*.

25 CDR [REDACTED]: CDR [REDACTED] [REDACTED], a traveling

1 inspection staff assigned to the Coast Guard Marine Board.

2 MR. [REDACTED]: LT [REDACTED], legal representative for the
3 witness.

4 MR. EHLERS: Okay. And on the phone?

5 MR. BARNUM: Good morning. This Bart Barnum with the NTSB,
6 Office of Marine Safety.

7 MR. EHLERS: Okay. Is there anyone from NCOE, Captain?

8 CAPT NEUBAUER: No.

9 MR. EHLERS: Okay. All right. Okay, so I should -- it goes
10 without saying, but I'll say it. We'll ask you several questions.
11 If there's any question that's beyond your purview or anything
12 that you don't have an answer to, just say so.

13 And we don't ask you to speculate. If we ask you an opinion
14 question, we'll try and phrase it that way and answer to the best
15 of your knowledge. Okay?

16 MR. CRUDER: Yes.

17 MR. EHLERS: All right. What I'd like to do is start out
18 just with some background questions.

19 INTERVIEW OF MARC CRUDER

20 BY MR. EHLERS:

21 Q. Could you describe what your position is or what you do for
22 your position, sir?

23 A. Well, the traveling inspection staff in general does non-
24 routine inspections on a national, sometimes international basis.
25 I have -- we're broken down into different areas of expertise. I

1 like to say that I do things that nobody wants to touch, so that
2 is -- those are things like steam and historic vessels, riveted
3 constructions, sail vessels, wood and composite construction, and
4 small passenger vessel plan review. So, those are my areas.

5 Q. Okay. How long have you been in this position?

6 A. In this position as a civilian for 18 years.

7 Q. Okay. And can you describe your experience previous to this
8 position?

9 A. I did 21 years in uniform in the Coast Guard. The last tour
10 I had, the last 4 years, I was a traveling inspector as a
11 commander on active duty. I retired in 2000, and I worked for
12 Horn Blower Marine Services for about a year. They civilianized
13 the traveling inspection billet, and I competed and came back to
14 the Coast Guard.

15 Q. Okay. And you've been in this position, again, 18 years?

16 A. Yes.

17 Q. Okay.

18 A. Since October of 2001.

19 Q. Okay. When you say, non-routine inspections, what does that
20 mean?

21 A. It could be, instead of a routine -- I wouldn't go out to do
22 routine annual inspection, certification inspection. It's usually
23 a vessel with a problem, either from the industry side or the
24 Coast Guard side. It's usually something unusual.

25 So, I'll give you the example of my work this past year. The

1 last vessel I was on was a 1938 lap-welded steel type ship in New
2 York that wants to be an attraction vessel. It's unique because
3 it's one of the last bell boats that used to run around -- little
4 coastal tankers that used to run around New York. So I was asked
5 to come assess the hull in the water and help the unit determine a
6 course of action to move it towards a moored attraction vessel
7 status.

8 Before that, earlier in the year, I went up to the Great
9 Lakes to look at deteriorated rivets on a laker, which was built
10 in -- well, I guess the hull built maybe '52. Right? So it was
11 an issue of deteriorated rivet heads and whether or not to replace
12 them.

13 And before that, I went to look at the 105-year-old steam
14 stern wheel *Bell of Louisville* in Louisville. And in between
15 there was the 1940 wood skipjack *Wilma Lee*, which had a keel
16 timber issue that we eventually assessed and then took out on a
17 sea trial last month just to see if the hull was suitable to
18 continue certificated service.

19 So, you see, it's a piece of whatever's wrong with the vessel
20 based on some focused experience that the unit -- the traveling
21 inspectors work to support the field technically. So if
22 something's a little bit unusual or something they haven't seen,
23 it's likely somebody in the traveling staff may have that
24 experience.

25 Q. Okay. So when the traveling inspectors do an inspection, is

1 it always, generally most of the time at the request of the unit
2 in the field?

3 A. Historically it was always at the request of the Coast Guard.
4 When Congressman Oberstar had his hearings in 2006, about 5 years
5 after 9/11, and when the Coast Guard went way focused on security,
6 we lost some of our focus, so there were hearings about that.

7 At that time, they changed the focus of the traveling
8 inspection staff so that we would be the honest broker even if the
9 industry called. So what happens now or since that time is, if
10 things are not going right on some type of unusual project in the
11 field, I might get a call. The staff might get a call or be
12 contacted by somebody in the industry, or something could come in
13 through Congressional Affairs if it's elevated and it's political
14 to that level. So that would make me then look in our database,
15 see what's going on with that vessel, call the unit.

16 It wouldn't always result in a trip. But I could be called
17 by either side. And then it's about trying to facilitate the
18 problem and move to solution.

19 Q. Okay. Do the traveling inspectors have any role in oversight
20 of the quality of inspectors in the field?

21 A. The quality of the inspectors or the quality of the
22 inspection?

23 Q. The quality of the inspection.

24 A. Well, I would say we do have a role because you could be
25 called in because there's a -- without using the appeal process

1 and ahead of the appeal process, there may be some disagreement
2 about interpreting a regulation or looking at an installation that
3 may be existing that, you know, is -- so that's a possibility.

4 And although internal affairs is not our primary job, if in
5 unraveling the issue -- because there's always an issue, right,
6 and it's always more than the technical issue that you're called
7 for. There's always a people component. There's a communication
8 component. So, you know, we do -- we would get involved in issues
9 that are related to the quality of the inspection.

10 Q. Okay.

11 A. And make recommendations back to the program, to the sector
12 CO, to the chief of inspection. It depends on where you're
13 working in the continuum.

14 Q. Do the traveling inspectors have any oversight of the
15 inspector training program?

16 A. We are frequently involved in different aspects of the
17 inspection training program. For instance, one of the jobs that I
18 had, is I'm the technical consultant to the wood and FRP course
19 that we teach. I do that on behalf of the Office of Commercial
20 Vessel Compliance. And as I said, wood boats, wood and composite
21 are one of the things I get called for as a traveler. So, in
22 overseeing that third-party contractor who teaches that course, I
23 have had a part in helping develop that curriculum, monitoring the
24 course critiques feeding back to the program.

25 MR. EHLERS: Okay.

1 LT [REDACTED]: But to clarify, that's not oversight?

2 MR. CRUDER: I would consider it oversight because if the
3 course critiques say something that's a little -- that shows that
4 there's a gap or something that needs to be taken care of, that --
5 I would provide feedback to work that problem or to improve the
6 course. I mean, that's what I consider as oversight. It's not a
7 direct -- I don't know. I don't understand -- I would ask you to
8 clarify that.

9 LT [REDACTED]: I don't want to take up NTSB's --

10 MR. EHLERS: Yeah. Yeah, I think I have a --

11 MR. CRUDER: In other words, if we came to the field and the
12 root cause of the problem at hand included a training component,
13 we would look into that.

14 MR. EHLERS: I see. Okay. I think I understand. So thank
15 you.

16 BY MR. EHLERS:

17 Q. With your knowledge of the training program, is it -- is the
18 training program for inspectors, is it focused on a type of vessel
19 like T-boats or barges, or is it a broad training?

20 A. Well, probably both. There are different specific
21 qualifications by vessel type, but the training program starts by
22 teaching some of the basic vessels that are in large number. So,
23 T-boats, you know, there's about 6,000 small passenger vessels, so
24 we certainly teach that. It's certainly all domestic, largely
25 domestic. There are some small passenger vessels that run the

1 coast. I have SOLAS that do run to foreign countries, but that's
2 very small.

3 So you get trained broadly, and then once they go to the
4 field, they pursue -- based on what types of vessels are prevalent
5 in that port, they pursue those qualifications based on what they
6 have access to.

7 MR. EHLERS: Okay. As I understand it, there recently in the
8 wake of the *Conception* accident, there was a reinspection or a
9 broad inspection program of all T-boats. Did the traveling
10 inspectors participate in that, that -- what was the term for it?

11 UNIDENTIFIED SPEAKER: Yep. It was overnight -- T-boats of
12 overnight accommodation.

13 MR. EHLERS: T-boats for overnight.

14 MR. CRUDER: No. We were not asked to do -- to participate.

15 BY MR. EHLERS:

16 Q. Okay. Did you participate in any way in that?

17 A. I was called by the 11th District when they were -- when the
18 11th District took a team out to look at the other vessels that
19 belonged to this company, I was just asked general questions about
20 things that they found, you know, related to regulatory
21 interpretation. But I was not directly -- I don't have any
22 firsthand knowledge of the boat that went down or the sister
23 vessels. I mean, I understand what category they are and what
24 type of vessels they are because I was stationed on the West Coast
25 in my active duty career. So I know they were overnight sport

1 fishing boats that, you know, are in this less than 49 overnight
2 category like these guys are.

3 Q. Okay. Have you had the opportunity at all to review the
4 results of that inspection push that happened since this accident?

5 A. I have not looked at it any detail. I know that there's a
6 list of what they found. I am on the small passenger vessel that
7 was called the reform team. It's changed its name now. It just
8 -- the admiral finally signed it. It's called something else.

9 So, in other words, I have access to that, I have access to
10 that data, but the Office of Commercial Vessel Compliance is
11 compiling that and analyzing it. I think I'm on it just because
12 it's one of my areas in the travelers, and if there's some anomaly
13 that they find or that they want to discuss.

14 Q. Okay. And the reform team, was this formed after the
15 *Conception* accident?

16 A. Yes. It was formed specifically for that.

17 Q. Okay. All right. I have a few questions related somewhat
18 specifically to *Conception*, and I know you're not specific -- you
19 don't have direct knowledge of the boat, but I'll explain. One of
20 the questions is, the *Conception* was a -- classified in the
21 certificate of inspection as a wood boat. But it was plywood boat
22 with an FRP coating, or FRP --

23 A. Sheeting.

24 Q. -- sheeting. Thank you. Various considerations, a wood boat
25 that doesn't have that sheeting on it, you can pull fasteners.

1 How does -- when you have this FRP sheeting, how does that change
2 an inspection for a boat? Does that cause any, should I say,
3 difficulties in conducting an accurate inspection?

4 A. If your question, how does the FRP sheeting, how does that --
5 is your question is, how does it affect --

6 Q. Does it --

7 A. -- that fastening inspection or how -- what specifically is
8 the question?

9 Q. Does that create any difficulties as far as conducting an
10 accurate inspection of the seaworthiness, fitness for duty of that
11 vessel?

12 A. Not any more than a boat that's built all out of fiberglass.
13 You have to take the sheeting into account. As a matter of fact,
14 well, your question is -- I'm sorry. Ask the question one more
15 time so that I answer the question instead of talk about plywood
16 boats and fiberglass boats and wood boats.

17 Q. Well, I guess the question is this: Is a wood -- a
18 fiberglass over wood boat, do you approach it as a fiberglass boat
19 or a wood boat or something different?

20 A. You need to have some understanding of how its constructed
21 and what's holding it together.

22 Q. Okay.

23 A. Whether you look at it from the outside or from the inside.
24 So from the outside, it's obvious it's got a sheeting. All right.
25 But if you go inside and it's wood -- so, you know, you're looking

1 for, you're looking to understand that the sheeting is intact,
2 that there's no problem under the sheeting and that internally
3 there's no problem with the structure. That has nothing to do
4 with the sheeting.

5 Q. Sure.

6 A. And you have to understand whether the mechanical fastenings
7 are holding it together or whether it's glued, whether it's all
8 glued together. So, yeah, there are composite boats, co-molded
9 boats. Glass over plywood is a composite hybrid of more modern
10 technique than traditional plycon frame.

11 Q. Okay. Is the considerations -- or is that part of the
12 inspector training?

13 A. Yes.

14 Q. Okay.

15 A. All of those different variations are covered in that wood
16 FRP course. It's a week of wood and a week of FRP, and somewhere
17 in the wood one, you have to talk about what happens when you
18 introduce more modern materials into wood construction.

19 Q. Okay. Now as I read the T regulations, both the old and the
20 new, there's a requirement for, I think its fire resistant or
21 fire-retardant glass. If you have a -- for an FRP-constructed
22 vessel, is that fire resistant or fire-retardant glass required
23 for a glass over wood boat?

24 A. No.

25 Q. Do you understand the nature of my question?

1 A. Yes. And I would even -- yes. An all fiberglass boat is
2 required to have non-fire retardant -- or fire-retardant resin.
3 Those -- that criteria doesn't apply to vessels that are a mix of
4 wood and composite. If I call fiberglass a composite, because you
5 know, definitions are --

6 Q. Sure.

7 A. There's some places -- we have a lot of definitions. There
8 are some things we don't define. Right? But if you put, if you
9 -- your question was, does a boat that has a fiberglass sheeting
10 on it, have to have fire retardant resin?

11 Q. That is my question.

12 A. And the answer is no. And that -- I'm not supposed to offer
13 information. Do you want to know where that -- you can find
14 information on that?

15 Q. Yes. Where --

16 A. Well, so there were public documents that everybody has. So
17 a place that's easy to see that is in -- we have Navigation and
18 Inspection Circulars. So NVIC 887 is the fiberglass NVIC, which
19 predates the regulations.

20 And there's two places when we talk about sheeting. So this
21 is 887, and in the highlight, you'll see that it says that
22 sheeting does not have to be fire retardant. A second place that
23 sheeting became -- in other words, I'm volunteering information
24 but I think it's relevant. When the *El Toro II* went down '93,
25 that was a deadrise cross-planked hull, and one of the -- then

1 what we did is we rewrote the wood NVIC. So, that 887 is the
2 fiberglass NVIC; 795 is the wood boat repair NVIC. So those are
3 both things that are in the public domain, so you guys can get
4 that.

5 Q. Okay.

6 A. But in the 795 is a section on sheeting, traditional plank-
7 on-frame vessels. Not plywood vessels, but plank-on-frame
8 vessels. And there's no discussion about fire retardant resin
9 because we never considered the sheeting to do that.

10 So there's -- there are approved methods to sheet wood boats,
11 and they don't require fire retardant resin. There are vessels
12 that are built cold molded or composite where frames and planking
13 are glued together, planks are edged glued, fastenings don't mean
14 anything. The boat is still wood structure, but it's glued
15 together, and those boats also do not have fire retardant resin.

16 So, in general, I would say to you that fire retardant resin
17 doesn't apply to a vessel with a wood structure.

18 Q. Okay. Thanks. On the COI for the *Conception*, there is a
19 specific -- in the roots and condition, there is a specific
20 condition that -- let me see. I don't want to paraphrase too much
21 here.

22 A. Let me read it.

23 Q. You have it?

24 A. I do.

25 Q. So they're requiring the master to designate a roving patrol

1 when passengers are in bunks.

2 A. That's essentially what it says. Do you want me to read it?

3 I can read it into the record.

4 Q. Please, for the record.

5 A. A member of the vessel's crew shall be designated by the
6 master as a roving patrol at all times, whether or not the vessel
7 is underway, when the passengers' bunks are occupied.

8 Q. Okay. So something similar, not of the same wording, is in
9 the regulations. It says that a patrol has to be manned when --
10 at nighttime, and there's an actually a statute as well.

11 My first question is, there are lots of regulations in
12 Subchapter T that don't appear in the roots and conditions on a
13 COI, yet every COI we reviewed had that, a similar phrase about
14 having -- why is that? Why is there, why -- is that a
15 requirement? Is that a -- where does that come from, to have that
16 requirement, to have a -- in the COI? Why does the COI have a
17 regulation that, while it doesn't have all the other regulations?
18 Do you know why?

19 A. Okay. You're not asking me where the watchman requirement
20 comes from; you're asking me why is it on the COI, where it is on
21 the COI?

22 Q. Yeah. Why is it on the COI if, you know, every other
23 regulation is not on the COI? Why is that particular regulation?
24 Is it a requirement under Coast Guard manuals, directions,
25 guidance?

1 A. I would tell you that that's outside my wheelhouse.

2 Q. Okay.

3 A. And that the, there are -- it's probably guidance on how to
4 fill out a certificate, and that's done through the MISLE
5 database. Right? So there are probably guides that tell people
6 that fill out their certificates what should be in that block.
7 That block is the vessel -- it's a VFOD, is how I remember it.
8 It's something -- Vessel something Field, maybe, Operating
9 Details. So that's a particular MISLE product. Right?

10 Q. I see.

11 A. So there's probably guidance someplace that tells you what
12 should be in that, in that block. I'm trying to stick to
13 regulations and policies. I just -- I don't know why that and not
14 something else, which is really what you're asking.

15 Q. Okay. All right. Fair enough.

16 I'd like to talk about that, and there's some other -- this
17 is a good example of a regulatory, also COI requirement that's an
18 operational requirement. It's not something that, like a hull
19 inspection would find.

20 How or can an inspector verify that an operator is following
21 that regulation, either -- or COI condition?

22 A. So, you know, there's probably another regulation someplace
23 that says that the operator needs to follow the conditions on the
24 certificate of inspection, which is probably tied to why something
25 operational is on there.

1 But your question really was, okay, so it's on there; how do
2 you know the captain does that when you walk off the boat?

3 Q. Exactly.

4 A. In this particular case, without riding the vessel and being
5 on there for a 24-hour period to see that happen -- you know,
6 there's also a requirement for the certificate to be posted where
7 the public can see it so that they know what the scope of the
8 master's responsibility. That dates all the way back.

9 So, there is no direct way to know. The master of the
10 vessel's responsible for operating the vessel within the
11 parameters on the certificate. But there's no way during an
12 inspection to know, because the inspection is conducted dockside,
13 and even if you took the vessel out to do a -- to do drills, it
14 wouldn't be with passengers. And unless you had an opportunity to
15 be on a vessel -- you know, for instance, I wrote the last report
16 on the *Delta Queen* in 2008. In my report, which is in the public
17 venue, I walked around with the watchman that night. And that's
18 like 55 minutes of punching tickets and then 5 minutes to sit
19 down. So I got to see that it was done, but I happened to be
20 there at night underway.

21 So, to answer your question, in the normal way that we
22 conduct an inspection, there would be no way to know if the master
23 is paying attention to the certificate of inspection. It's just
24 assuming that's what would happen, that's what he's responsible
25 for.

1 MR. EHLERS: Okay. All right. Thanks. That's all I have
2 for now. I may have some follow-up questions, but I'm going to
3 turn it over to my colleagues.

4 MR. CRUDER: Sure.

5 MR. EHLERS: Thank you.

6 MR. MUISE: Thanks, Commander. I'm Marcel and my role in
7 this is the survival factors. I'm looking at lifesaving and
8 firefighting.

9 BY MR. MUISE:

10 Q. So, and I have some, a little bit more specific questions
11 about T, because I understand you had a role in rolling out new T
12 sometime in your career?

13 A. I was the -- my name is on the supplemental notice, the
14 proposed rulemaking from 1994.

15 Q. Okay.

16 A. So '89 notice, then a supplemental, then an IFR, and then a
17 final rule.

18 Q. The specific about detectors, it talks about independent
19 modular smoke detection.

20 A. Right.

21 Q. Is there anything in that verbiage or in the UL standard that
22 goes with it, that would preclude me from installing intra-
23 connected detectors that are common today in households, you know,
24 either wireless or connected, as opposed to these -- I mean, a
25 single, a single unit? So, in other words, does independent

1 modular smoke detection mean it has to be a standalone by itself?

2 A. I would read that to say that modular smoke detectors are
3 allowed. And the smaller the vessel and the less complex it is,
4 that is the go-to choice. If an owner of a smaller vessel wanted
5 to put a more sophisticated system on, they could, but it wouldn't
6 -- that would be beyond the minimum requirement.

7 Q. Okay. And that would still be okay with the UL -- I think
8 it's 217, is the --

9 A. Well --

10 Q. Or would it?

11 A. I think -- this makes me want to look at 177, because I think
12 you could put a system -- I think the regulation reads that there
13 -- that detection system in accordance with a reference in
14 Subchapter H, which is large passenger vessels.

15 Q. Okay.

16 A. Right. But it allows for T, that modular --

17 Q. Is okay?

18 A. -- is okay. So, you know, not thinking the way you're
19 thinking, which is the other way, how could I make it better?

20 Q. Right.

21 A. They would say, okay, I have to have a detection system
22 because I have overnight passengers. Then you go from -- and let
23 me just, just so I go, just so I -- because I did a little bit --
24 okay. So 181.405(c) --

25 Q. (c), right.

1 A. -- tells you that you have to have detection.

2 Q. And then it refers to --

3 A. And that throws you to 181.450, which refers you to the
4 modular UL217.

5 Q. Right.

6 A. Right.

7 Q. Okay. Good. As far as you know, 217 would allow you to do
8 something --

9 A. I think if you read UL217 -- I would tell you this. I don't
10 know --

11 Q. I haven't seen 217, but --

12 A. -- the details of what's in UL217, but my guess is that would
13 be written specifically for a modular unit versus an integrated
14 system.

15 Q. Okay. On the lifesaving side, the life -- I'm sorry.

16 MR. EHLERS: Hold on, just to find out --

17 CAPT NEUBAUER: Yeah. I'm sorry. This is CAPT Neubauer.
18 Who just joined the line?

19 LT [REDACTED]: Good morning, Captain. This is LT [REDACTED] from
20 the NCOE.

21 CAPT NEUBAUER: Okay. Are you joining the interview for
22 Mr. Cruder?

23 LT [REDACTED]: Yes, Captain.

24 CAPT NEUBAUER: Okay. I just wanted to note that.

25 MR. EHLERS: Thank you.

1 MR. MUISE: Okay. Thank you. Thanks.

2 BY MR. MUISE:

3 Q. On the life floats, for storage these boats had a cover.
4 They were in a box with plywood and glass covers that were
5 designed to float free, which I had never seen before. Have you
6 come across that before? They weren't exposed to elements.

7 A. And so, I don't have firsthand knowledge of this vessel.

8 Q. So let me describe it for you. It was a box on the sundeck
9 with four life floats in it, and the weak links, everything else
10 was in -- everything that's supposed to be there was there. But
11 on top of this is a plywood cover with fiberglass sheeting. And
12 it's designed to float free, as opposed to having the life floats
13 in a cradle, you know, with PVC pipe or some sort of piping --

14 A. Right.

15 Q. -- which I had never seen before. Is that -- have you come
16 across that before on your --

17 A. If you're asking me have I seen something like that, I'll say
18 yes or maybe. And because -- now again, remember, the regulations
19 will not address covering the life floats. The regulations would
20 just say they need to be rigged with a weak link and that it's got
21 to be able to float free. So, of course, what's the biggest issue
22 with life floats? They're exposed to UV, right? So operators may
23 do things like that, and the local OCMI may allow it.

24 Q. Okay. That guidance may or may not be in a local CMI --

25 A. There will be -- I think you --

1 Q. -- prevention model?

2 A. -- would not -- I would say you wouldn't find anything in
3 writing.

4 Q. Okay.

5 A. It would be the operator asking the local OCMI, look, I want
6 to keep these things from deteriorating; I'll make sure it's float
7 free. There would be no particular guidance that I would think
8 of, of how to build that box or put that box because technically
9 you could argue that it's not part of the regulatory requirement.
10 Matter of fact, we'd spend more time trying to figure out if that
11 defeats the regulatory requirement or not, right?

12 Q. Sure.

13 A. By doing anything. For instance, the first question I would
14 have, is that box secured; can it float free, right? And you're
15 making the assumption that it can float free. You can't do an
16 actual test, right? But you have to assume that if the water
17 comes up that it would probably --

18 Q. It would float free.

19 A. -- float off of there. There's no guidance. I think that
20 was your question, right?

21 Q. Yes, sir. Yes.

22 A. Right.

23 Q. And back to the new T rollout. Do you -- I can't find the
24 docket anywhere. Do you know? Because the regulations -- this is
25 before we had online regulations.gov. Where could we find the

1 docket for that rulemaking project?

2 A. You know, I almost brought my second binder that had the
3 actual copy of it. But --

4 Q. I have the Federal Registers, but I'm looking for the
5 rulemaking --

6 A. Okay. So the --

7 Q. I'm looking for the --

8 A. You're looking for the --

9 Q. -- actual docket, you know, all the comments that came in and
10 the public forums that you did that would tell us, hey, why did we
11 do this, why did we do that, or what was the comments on it.

12 A. Okay. So --

13 Q. As opposed to today, a rulemaking, I can go online, I can see
14 every comment that every industry person makes and the transcript
15 of every (indiscernible).

16 A. Oh yeah, well, that -- okay, so now we have to understand
17 that, that's now how they did it then.

18 Q. Right. True.

19 A. Okay. So what they did do -- I mean, the only way to -- I
20 mean, I'm sure the docket must be someplace and the docket number
21 must be in the different preambles. Remember when I said there's
22 a notice, then there's a supplemental notice, then there's an
23 interim final rule, and a final rule. So before you read whatever
24 they did during that evolution of each one of those four things,
25 there's got to be a docket number, right? So, if you have the

1 Federal Register --

2 Q. I have the docket number. I'm just looking for the physical
3 docket because it looks like a lot of work went into this
4 rulemaking project and --

5 A. Oh, you want to know where can I read what's actual gotten
6 written --

7 Q. Yes.

8 A. -- versus what the Coast Guard said?

9 Q. Yes, sir.

10 A. Oh. I --

11 Q. And things did change. It was a long -- an 8-year project, I
12 think.

13 A. Well, it wasn't -- what I would say to you is it wasn't
14 online. So the -- all the letters came in hardcopy, right, and
15 the Coast Guard went through them and those were put in the docket
16 that was kept, I want to say in Legal someplace.

17 Q. Sure.

18 A. Right. And so, if you're asking me where is the actual --
19 because the discussion of what came in and what the comments,
20 summarizing what the comments said, that's in every one of those
21 preambles.

22 Q. Yes.

23 A. Okay. If you're asking me where is that, where is the actual
24 -- where's the actual original information?

25 Q. Original information, because there's some transcripts of --

1 there was some public hearings, things like that.

2 A. There were public hearings.

3 Q. There were some studies done, some elaborate studies, I
4 believe.

5 LT [REDACTED]: So, to clarify, the question is the actual
6 physical file?

7 MR. MUISE: Yeah, the actual physical file, where would that
8 be?

9 LT [REDACTED]: If you know.

10 MR. CRUDER: The last time I saw physical files, we would --
11 originally, they would have been in NVI2, which was the standards
12 development section of the Office of Compliance. It's
13 complicated. But it moved around. The file moved around, and
14 then I would say if you went looking for it now, I'm not sure you
15 would find those files anymore. Because they went to operating
16 standard -- you know, now there's a whole reg writing section of
17 the Coast Guard headquarters which didn't exist at the time.
18 After OPA 90, that happened.

19 So things went, but I don't know what -- the easiest thing
20 for me to say is, I remember being the custodian of it. I
21 remember years after the rulemaking seeing where it was, where the
22 physical stuff was, and I wouldn't know where it is now.

23 BY MR. MUISE:

24 Q. Okay, sir. And then just one question about egress. In the
25 rulemaking they talk about -- they refer to the NFPA rules and

1 even can and even Canadian rules. Do you know, was there any kind
2 of testing down for how quickly we can get people out of certain
3 size, or was there any performance criteria for these egress
4 rules? They settled I think on 32 inches or .3 inches per person.

5 A. I'm not aware of any testing specific to that.

6 Q. That you would do -- and I think aviation would do something
7 like that. You know, there's a criteria you have to get so many
8 people out through this --

9 A. Well, you know, I mean, it's easy for us to look with the
10 technology. I can remember when those programs started to become
11 available as cruise ship numbers went up. And I can remember
12 somebody showing me, pushing a button, and the ship has got this
13 many people on each deck, and then all the little dots start
14 moving, right, you can see how many They can actually do that
15 now.

16 Q. Right.

17 A. So your question was, did we do any specific testing to come
18 up with that number? I don't know. The process in general was
19 that different sections of the regulations were farmed out to
20 those areas in headquarters where that expertise was.

21 Q. Okay.

22 A. So the -- hard to say where escape, you know, who was looking
23 at that. But it could have been survival systems. It could have
24 been the people that did, you know, fire detection and primary
25 lifesaving and that kind of thing. But I really don't know. I

1 can't remember.

2 Q. Okay. Along the lines of egress, too, do you know of any
3 existing T-boats or old T-boats that have successfully managed to
4 modify their vessels to comply with new T when it comes to egress
5 and escape?

6 So there's no -- ladders are no longer required. I think
7 that's the biggest thing. And then there's a new threshold. So,
8 while still maintaining subdivision and all the other rules, I
9 guess my question would be, how do I take an existing T-boat and
10 make it comply with new T egress rules? Is that even possible?

11 A. Okay. So I'm going to say it depends. And like everything
12 else, the analogy that I could give you is, just like the
13 Americans with Disabilities Act, which as been going on forever,
14 as vessels get smaller there's only so much you can do. Right?

15 So I think you have to look at the difference between old T
16 and new T, right, where there was no requirement originally for
17 things to be widely separate. I mean, you really have to look at
18 the space you're dealing with and really see what you can do. A
19 vertical escape might be the only thing that you can do, right,
20 whether it's incorporated as part of the bunk structure. Right?

21 So the question of can you modify an existing vessel? Can
22 you improve it? Yes, but what the cost is to improve it and
23 whether you lose some bunks -- you know, it's all about the
24 arrangement. I would say anything's possible, but I don't have a
25 -- I don't have firsthand knowledge of telling somebody that had

1 an existing T-boat that their escape is insufficient now or I
2 wanted them to meet the new one, you know, what would they do.

3 So just reiterate your question again so I make sure I
4 answered it.

5 Q. I guess I was looking for an example of an existing T-boat
6 that's successfully --

7 A. Made that transition?

8 Q. -- made that transition.

9 A. So the answer is no, I don't have any knowledge of that.

10 MR. MUISE: Okay. Adam?

11 MR. TUCKER: Yeah.

12 BY MR. TUCKER:

13 Q. All right. Thanks again for talking with us. My name's Adam
14 Tucker. I'm with -- also with the National Transportation Safety
15 Board. I have a couple follow-ups and likely a couple of follow-
16 ups after this.

17 Since we're in the same ballpark, so as I understand for --
18 you made reference to the old T-vessels and there's not really a
19 lot for the egress routes specified in the old T.

20 A. Well, I would say it's different.

21 Q. Different.

22 A. It's worded differently, so that what you see in the current
23 reg might be what you see on an old T-boat.

24 Q. Okay. So, I was just wondering, could you again, I don't
25 have in depth knowledge of regulations. Really my only experience

1 to date has been this accident.

2 A. Um-hum.

3 MR. TUCKER: So, as applied to an old T-vessel, what is, what
4 are the egress or the pathway requirements?

5 LT [REDACTED]: Could you clarify the question?

6 MR. CRUDER: Yeah, what is the question?

7 LT [REDACTED]: What is a --

8 MR. CRUDER: Because we could open up 177 and read it because
9 it's short.

10 BY MR. TUCKER:

11 Q. Sure. Yep, let's do that.

12 A. If that's, if that would help. All right. So, it's 177.15
13 in the old, in the existing regulations. Except as otherwise
14 provided in this section, all vessels shall be provided with not
15 less than two avenues of escape from all general areas accessible
16 to passengers or where the crew may be quartered or normally
17 employed, so located that if one is not available, the other may
18 be.

19 At least one of the avenues of escape shall be independent of
20 watertight doors. Windows and windshields of sufficient size and
21 proper accessibility may be used as one avenue of escape. When
22 the length of the compartment is less than 12 feet, one vertical
23 means of escape will be acceptable under the following conditions.

24 There is no source of fire in this space, such as a galley
25 stove, heater, et cetera, and the vertical escape is remote from

1 the engine or fuel tank space, or the arrangement is such that the
2 installation of two means of escape does not materially improve
3 the safety of the vessel and those onboard.

4 Q. Okay. Thank you. And you said it was worded different. Do
5 you have new T there? Would you be able to go to that one and --

6 A. Yep. It's a little longer.

7 Q. Okay.

8 A. But yeah.

9 Q. Or would you be able to give us the condensed version as
10 applied to the *Conception*, the vessel of 75 foot, 97 gross tons
11 and 49. And if not, that's fine. We have it. But my curiosity
12 is this, is if the *Conception* was a new T-vessel, would the
13 criteria for the egress routes be different?

14 A. I would say that the criteria in the, in the current
15 Subchapter T is more prescriptive.

16 Q. Okay.

17 A. There are dimensions. The performance criteria is in there
18 about escaping with a lifejacket on. The words widely separated
19 are in there, versus, if one is not available, the other may be.

20 Q. And is there anything in new T that specifies that, you know,
21 and you mentioned widely separated, but is there anything in new T
22 that states that, that prevents both egress routes going into the
23 same space?

24 A. In new T?

25 LT [REDACTED]: Would you like to refer to new T, to the record?

1 MR. CRUDER: If you go past the threshold where this vessel
2 is and go more than 49 or more than 150, some other break points,
3 you would have requirements for a protected escape route to an
4 area of refuge. Those requirements do not exist for Subchapter T.

5 MR. TUCKER: Okay.

6 MR. CRUDER: So, there's nothing --

7 MR. TUCKER: So, --

8 MR. CRUDER: There are things in new T that talk about,
9 there's a definition in 175, so we might as well just go there
10 about means of escape, because that was discussed in the
11 preambles. Means of escape means a continuous and unobstructed
12 way of exit travel from any point in a vessel to an embarkation
13 station.

14 A means of escape can be both vertical and horizontal,
15 including doorways, passageways, stairways, stair covers, public
16 spaces, cargo spaces, machinery spaces, restrooms, hazardous areas
17 as determined by the OCMI may not be part of an escape.

18 I think your question was, so correct me, is there anything
19 that would prevent you from going, from both escapes coming up in
20 the same space?

21 MR. TUCKER: Correct.

22 MR. CRUDER: No.

23 BY MR. TUCKER:

24 Q. Okay. And that's what ultimately, I'm wondering if there are
25 newly constructed vessels or not, new T constructed vessels that

1 could potentially have the same problem of egress routes going
2 into the same space? I shouldn't say problem, but --

3 A. Remember now, in this particular instance, you're asking for
4 my opinion. So, each vessel, each vessel, the general arrangement
5 of the vessel, which is what this would come under --

6 Q. Yep.

7 A. -- is not an item that's planned reviewed by the Marine
8 Safety Center. That would be in the OCMI hands.

9 Q. Okay. You may have mentioned in that definition, just
10 wondered since you've got the book open --

11 A. Yeah.

12 Q. -- is there a definition of embarkation station? I've heard
13 that in my past life, but I thought in T-boat world it was --

14 A. Right. It --

15 Q. -- there were other --

16 A. -- makes, in the cruise ship world --

17 Q. Yeah.

18 A. -- that's a major deal even in, even in the deep traffic ship
19 world. So, embarkation station means the place on, actually so
20 the answer to the question is, yes, there is a definition in
21 175.400, which are the Subchapter T definitions.

22 Embarkation station means the place on the vessel from which
23 a survival craft is boarded. I could continue but I'm going to
24 stop.

25 LT [REDACTED]: We can wait for the next question.

1 MR. CRUDER: That's right.

2 BY MR. TUCKER:

3 Q. So, that's new T. Was there anything in old T? Any
4 definitions in old T?

5 A. Definitions in old T are limited but we can easily just flip
6 over to see, look for the same two definitions --

7 Q. Okay.

8 A. -- if that's what you're interested in.

9 Q. Yeah. Because, and again, I'm thankful that you have the
10 books in front of you as that helps.

11 A. It's generational. And Captain Edwards comes this afternoon.
12 He'll have an iPad. I get old Technology 1. He'll search it.

13 UNIDENTIFIED SPEAKER: And an attitude.

14 MR. CRUDER: This is how I learned on it, and this is how we,
15 okay. So, there were definitions in 175.10, so there is not a
16 definition for embarkation.

17 MR. TUCKER: Okay.

18 MR. CRUDER: And there's not a definition for means of
19 escape.

20 BY MR. TUCKER:

21 Q. Okay. Because again, I'm thinking aloud here. *Conception*,
22 we mentioned specifically embarkation station. It was an old T-
23 vessel, but egress routes come up through the salon. Their muster
24 station as they call it is on the back deck, on the dive, on the
25 open deck aft.

1 But the embarkation station is one deck above where the life
2 floats and lifejackets and everything is located.

3 A. But would that be the embarkation station? See you've got
4 get --

5 Q. Just curiosity, yeah. Yeah.

6 A. You've got to get some T thinking here.

7 Q. Yeah.

8 A. So, stowage, this is where I was going to go before. The
9 stowage of the primary lifesaving gear is generally where you see
10 it on a, on a boat of *Conception's* size, that's normally where it
11 is. What would probably happen in an emergency is the crew would,
12 if the boat sank, it would float free.

13 Q. Yeah.

14 A. But the crew would deploy the primary lifesaving. Passengers
15 would embark from the main deck --

16 Q. Okay.

17 A. -- where they could get to it.

18 Q. Okay. Signage and lighting, in general, is there any, so
19 staying in the same pathway of egress routes, emergency escapes,
20 and again, pardon me for not using the correct verbiage that's in
21 the CFRS.

22 But is there anything more prescriptive in new T regarding
23 signage and lighting with respect to emergency escape and egress
24 routes? For example, if the lights go out, do you need, is there
25 anything, any emergency lighting or anything that is, needs to

1 identify that behind this door is an escape hatch?

2 Or we're aware that in Sub, in old T, it's just a sign with
3 one-inch lettering and that's adequate. But in new T, is
4 anything, anything above and beyond that?

5 A. I would like to look at new T, but the -- but I'm going to
6 say, generally speaking, both new T and old T require the
7 emergency escape to be marked. Right? I'd be looking to say, old
8 T and new T require emergency lighting when below deck. Right?

9 Q. Okay.

10 A. But not something that connects, you know, the escape path
11 like on an airplane, there's a lighted path that they're using
12 that now on cruise ships. Right? There's no requirement for that
13 embarkation or debarkation in an emergency path.

14 Q. Okay.

15 A. But I said, so let me just, let me just look at the marking,
16 because I think --

17 Q. Sure.

18 A. -- I figured, what I said, and what I'd like to hold to is
19 that both require, both Sub Ts require marking. Okay. So, in new
20 T, 185.606 requires escape hatches and emergency exits marking,
21 it's under marking required.

22 So, you said, old T requires it. I'll take your word for it
23 and we'll just look at this real quick. 185.606, all escape
24 hatches and other emergency exits used as a means of escape must
25 be marked on both sides in clearly legible letters at least 2

1 inches high, Emergency Exit, Keep Clear, unless such markings are
2 deemed unnecessary by the cognizant OCMI.

3 So, easy to go to the same place in old T and compare it.
4 Let's see if Captain Edwards can do it as quick as this. All
5 escapes, 185.30-15, escape hatches and emergency exits, all escape
6 hatches and other escape exits shall be marked on both sides with
7 one-inch letters.

8 So, you're correct. So, the difference is size of lettering,
9 unless such markings are deemed unnecessary. Now let me just look
10 for one more thing that you asked about.

11 Q. And deemed unnecessary is, that's to the --

12 A. OCMI.

13 Q. -- OCMI?

14 A. Right. Okay. So, I'm just drawing a blank for the purposes
15 of right now on emergency lighting. I told you what I thought.
16 Without looking a little further, emergency lighting might be in
17 another section that I'd just have to look, and you can compare.

18 But I, but I believe you'd have the same requirement.

19 Q. Yep. That's fine. I mean we've got the regs and we can --

20 A. Right.

21 Q. -- do our homework. But again, for me personally, I'm just
22 trying to capitalize on your extensive knowledge and background,
23 and just you working in this. So, I'll back up and --

24 A. And remember, what I generally don't do is compare one to the
25 other when I'm out there. Right. I'm going to look to what

1 applies to that vessel.

2 Q. Yeah.

3 A. Right. Correct.

4 Q. So, here comes a dumb question. So, like a traveling
5 inspector, when someone says, you're a traveling inspector, my
6 layman's assumption would be, you spend a lot of time on the road,
7 bouncing around from place to place, or sector to sector, or MSD
8 to MSD, whatever, traveling and, is that correct?

9 Do you travel a lot, or do you spend most of the time here or
10 --

11 A. Well, it's a traveling staff because it, the problem that
12 you're going to work on is not here, unless it happens to be one
13 of Baltimore's boats at the Washington Marina.

14 Q. Right.

15 A. And so, we're going to travel to the issue, and that's what
16 the traveling is. And the travelers, depending on what is going
17 on, you know, the travelers are involved in vessels that are on
18 the targeted list under the ultimate compliance program.

19 That's, they're busy looking at different vessels. I gave
20 you my examples because I'm doing something different.

21 Q. Yeah.

22 A. I'm doing, I'm traveling, I personally am traveling less than
23 they are because that's a fixed project that, you know, so
24 sometimes we run around to do stuff. In my past I've been
25 involved in a project that maybe you have to ride five ships in a

1 row. You know what I mean?

2 So, it just depends what's coming in the door.

3 Q. Okay. So, would you say that just ballpark, sometimes you
4 see it on job descriptions, so are you traveling, are you on the
5 road like 40 percent of the time, 30, 50, 100?

6 A. I think our standard, I think the standard that we tell
7 people that apply for jobs in the travelers as civilians, is 50
8 percent.

9 Q. Fifty percent. Okay. And so, you mentioned targeting, are
10 you just able to, you know what, I'll get to this in a minute.
11 But there's an area out there, and I know there's a couple
12 problems or maybe a couple new inspectors.

13 I'm just going to go show up and help them out, or do you
14 need to be asked to show up at that area?

15 A. Well, with the travel ceiling right now --

16 Q. What's that?

17 A. With the travel budget ceiling right now, you know, we're not
18 going anywhere that's not, that can't be justified.

19 Q. Right.

20 A. So, I would say at one time, if you're asking me in the
21 context of being a travelling inspector, if you're aware of an
22 area that needs some help or that we're looking to fill a gap or
23 do something that we could learn and take back to the program,
24 that would not be beyond the scope of the travelers to do that.

25 They would not have to be asked. Sometimes the traveler's

1 job is line of sight direction from the admiral, I need to know
2 what's really going on unfiltered. I need you guys to go look at
3 this.

4 Q. Right.

5 A. That could happen, too.

6 Q. Okay. And to that point --

7 A. We are his tool, I mean if you want to look at it that way.
8 We're, we report directly to the G-, CG-5(p). So, the marine
9 safety admiral.

10 Q. Okay. And that was going to be my next question, so how does
11 it work? Number one, how many traveling inspectors are there?

12 A. Okay. So, there are one, two, three active duty commanders.
13 The staff is supervised by a captain. And there are one, two,
14 three, right now civilian inspectors. And in addition, that's the
15 headquarters traveling inspection staff.

16 Q. Okay. And is there, and so all three, you said, you report
17 to the admiral. All three report to the admiral or are there
18 other supervisors?

19 A. We report to the captain and the captain reports to the
20 admiral.

21 Q. Captain?

22 A. Captain Todd Howard.

23 Q. Okay.

24 A. And the travelers also have control of several national
25 centers of expertise. There's one for cruise ships in Miami.

1 There's an offshore one. There's a liquified natural gas.
2 There's, a gas carrier is one. Did I hit them all [REDACTED]? Let's
3 see, what's left?

4 CDR [REDACTED]: You might want --

5 MR. MUISE: Towing vessel.

6 MR. CRUDER: Yeah, thank you.

7 CDR [REDACTED]: Towing vessel, yeah.

8 MR. CRUDER: So, those --

9 CDR [REDACTED]: I don't know if I was going there.

10 MR. CRUDER: Yeah. Sorry, [REDACTED]. [REDACTED] works on the staff
11 side, so I just --

12 MR. TUCKER: That's fine. All right.

13 MR. CRUDER: Yeah. So, there were four centers of expertise
14 and before Congressman Oberstar retired, there was one for vintage
15 vessels, you know, for the vessels on the lakes, which were mostly
16 older steam ships and that kind of thing.

17 So, I say that because those guys, although they are not
18 traveling inspectors, they work for the traveling inspection
19 staff. Those are staffs that are small. They have focused
20 expertise, just like the travelers do.

21 I don't do pollution. I don't do ports and waterways. I
22 don't do buoys. I do ships, boats. I do what's regulated in the
23 commercial vessel industry.

24 BY MR. TUCKER:

25 Q. And so, we spoke of the traveling inspectors. Now I have an

1 idea so the three of you report to a captain and the captain
2 reports to the admiral?

3 A. Yes.

4 Q. So, if there's like a, if there are any, we spoke of targeted
5 areas again, so if there's any specific requests, that justifiable
6 that now you have to get on a plane and so somewhere and help out,
7 does that trip, does that happen?

8 Do you have to, do you get those, requests come in and that
9 you need to go and help out?

10 A. Can you define what help out is?

11 Q. Well, with the inspection process, in general.

12 A. We don't. We're not, the travelers do not have OCMI
13 authority.

14 Q. Okay.

15 A. Right. So, we're not, the difference between our job and the
16 inspector's job in the field is they're going to do an inspection
17 that results in endorsing a certificate or issuing a certificate.

18 We might go there to oversee that process or to assist with
19 that process if it's something unusual, that they need a little
20 more expertise on. But we would not make decisions that would, we
21 don't issue the paper.

22 Q. Right.

23 A. So, when the travelers go out, generally speaking, they issue
24 traveler's reports. So, the OCMI says, I need your help for this.
25 Right? I go out there and I look at that, the rivets on the

1 *Arthur M. Anderson and Delta Queen.*

2 I write a traveler's report that says what I found that comes
3 to, here's what I found. Here's what I inspected. Here's what my
4 conclusion is. Here's what my recommendations are. Those
5 recommendations could be to the local office, right, on this
6 particular job.

7 They could be to program entities back here because of
8 something, anomaly that was found. So, we could be out there with
9 people while they're doing an inspection. Yes.

10 Q. So, specific to *Conception*.

11 A. Go ahead.

12 Q. L.A., Long Beach, MSD Santa Barbara, I know you mentioned you
13 don't have any knowledge of the *Conception*, well at least --

14 A. I've never been on that boat.

15 Q. You never, yeah.

16 A. That's, that's what I would say.

17 MR. TUCKER: So, you mentioned traveler's reports. Have
18 there ever, had you ever been out to L.A., Long Beach or the MSD,
19 and had you ever generated a traveler's report during your tenure,
20 right now?

21 CDR [REDACTED]: In that geographic area?

22 MR. TUCKER: Correct.

23 MR. CRUDER: I have not, since Santa Barbara is a subsidiary
24 of Long Beach. I've been out to, I've been out to Long Beach
25 probably many times over the years. I've written reports on

1 vessels in Long Beach. I don't know that I've been to the
2 detachment in Santa Barbara for anything specific ever.

3 MR. TUCKER: Okay.

4 MR. CRUDER: I mean I know of it. I know where it is in that
5 area. I can remember going to Santa Barbara when I was stationed
6 in L.A., to do an inspection with somebody up at, for a boat in
7 their zone.

8 But I have not as a traveler written a report or went to look
9 at a vessel specifically in Santa Barbara.

10 MR. TUCKER: Okay.

11 BY MR. TUCKER:

12 Q. And just, again, just as with your extensive background
13 experience in the Coast Guard, especially in the inspection side,
14 do you interact with a lot of the inspectors? Like if they get a
15 problem, can they just come to you and go, hey, I've got this
16 problem?

17 Or I need some help here? Can they go directly to you or do
18 they have to kind of go through a multilevel chain of command?
19 How does that work?

20 A. So --

21 Q. I shouldn't use multilevel, chain of command.

22 A. Well, let's put it this way. Let's put it this way.

23 Q. Yeah.

24 A. They have a chain of command.

25 Q. Yep.

1 A. We market that the travelers are available to everybody
2 because we're field deck plate guys. So, when you need us it's
3 because it's something on the deck plate. It's not something in
4 the office.

5 We generally tell units that they can request a traveler
6 anytime. We tell them to talk to their chain of command first. I
7 don't want somebody calling, looking for the easy answer. So,
8 you're not calling me first.

9 And if you do call me first, I'm going to ask a number of
10 questions. And if I can tell that you haven't done your leg work,
11 I'm going to ask where's your supervisor, where's your chief of --
12 in other words, usually what happens in a perfect world, they will
13 have done, they will have exhausted all of their intellectual
14 property, and then say, we need some more help, and have, you
15 know, is there anything else you can add to this situation?

16 Or my boss told you to call me, call you, told me to call you
17 because we need some help with this boat or we see that you're,
18 somebody just came into the zone with a steam launch, and wants to
19 carry passengers.

20 We don't have one of those. Can you help? How should we
21 approach this? It could be an approach problem. It could be,
22 come out and see it. We just got this wood boat. It came with a
23 certificate but it's leaking like a sieve.

24 We're going to put it up on the dock and we'd like to come
25 you. You know, so, we market that we're accessible to everybody

1 but of course, we want, we want the inspectors to go through their
2 chain of command.

3 You can appreciate the fact that there'd be some people in
4 certain chains of command that might say, look, I don't want you
5 to call the travelers. What happens in house stays in house. You
6 know, so we fight coming that IG because of, I know I'm off the
7 track here, but travelers start in 1914.

8 They were established for uniform administration of the
9 program nationally after a series of accidents. So, as a part of,
10 we're not on everybody's Christmas card list sometimes. So, those
11 people come in two flavors. I know what you guys can do. I want
12 your help. Come. Or, nothing to see here.

13 But we market that we're available to anybody who wants, and
14 I expect that the junior people will be prepared. And sometimes,
15 it's the junior person who is the attending inspector, who has got
16 to make the decision and tell this his chain of command what he's
17 doing.

18 So, sometimes I am interacting at that very lowest level.
19 And I just make sure that they have done everything they can do,
20 and they've used all their resources.

21 Q. Okay. Back to L.A. Long Beach, are there any traveler's
22 reports that you've done? I may have missed your answer there.

23 A. My traveler's reports?

24 Q. Yeah.

25 A. You know, there probably are. The topics that I can think of

1 are it's the streamline inspection program.

2 LT [REDACTED]: Just to clarify, you're asking for a recounting
3 of all the reports that --

4 MR. TUCKER: Not, not all. Off the, in general, off the top
5 of his head.

6 LT [REDACTED]: In general?

7 MR. TUCKER: Yeah. Yeah.

8 MR. CRUDER: I have not written a report on a Subchapter T
9 vessel with a problem from LA/LB.

10 MR. TUCKER: Okay.

11 MR. CRUDER: I don't know if that answers the question. I'm
12 trying to think of the different things over the years, I've gone,
13 because I've been in this job so long.

14 MR. TUCKER: Yeah.

15 MR. CRUDER: I have gone out there. I have written reports,
16 short or long, but I can't remember ever being into a real big can
17 of worms with those guys on anything in particular. I think of
18 port state control interventions.

19 But I don't -- there's nothing that comes to mind that I
20 could, if you told me find one, I might find one or two. But it's
21 been a while since I've had to go out there.

22 BY MR. TUCKER:

23 Q. Well, thank you for that. Let's see, so we were talking of
24 the inspectors, so I'll stay there. The inspectors that are out
25 there in the field currently. I understand that the, they can be

1 from a diverse background, a diverse training. Has that always,
2 has that always been the case?

3 For example, these days I know that an inspector can be an
4 investigator. And inspector can be from machinery. An inspector
5 can be from the environmental side. And again, forgive me. I'm
6 not using the appropriate Coast Guard acronyms.

7 I guess there's MKs and there's, so is there, is there a
8 specific pathway for a specific background that an inspector has
9 to have or a candidate to be an inspector has? Is there, is there
10 a background that you have to have in order to be an inspector,
11 currently?

12 A. So, on the active duty side, no.

13 Q. Okay.

14 A. They come from any background. They can come from anywhere
15 within the system. Right? And we have civilian inspectors. Now
16 if you apply for a job as a civilian inspector, we're going to
17 look for, where did you come from?

18 Like, if you applied to be a traveler, we'd look at, okay, so
19 what, what school, the questions I asked you originally, what
20 school, what license, where did you sail, what experience do you
21 have in what segment of the industry. Right?

22 So, I would say the civilians, we probably, because of the
23 process is different. Right? The other people are active duty,
24 they go where they're told. Right? And there's no specific. You
25 can have people that come from, if they're prior enlisted they

1 could come big boat bosun mates, machinery technician.

2 They could, they could come from any walk of, within the
3 organization.

4 LT [REDACTED]: To clarify, that's before they go through
5 training?

6 MR. CRUDER: That's correct.

7 BY MR. TUCKER:

8 Q. For a candidate, yeah. Right.

9 A. Yeah. Once they're in the program, yes, then there is a
10 training program. But I mean you're asking where did they come,
11 where did they come from? Where can they come from? They come
12 from anywhere on the blue suit, on the active duty side.

13 Q. And historically based on again your extensive time in the
14 Coast Guard, has that always been the case --

15 A. Yes.

16 Q. -- or is, okay.

17 A. Yes. We're multi-mission.

18 Q. I have a question here, garbage cans on T-boats.

19 A. Waste receptacles.

20 Q. Waste receptacles. Yes.

21 A. There you go. Yeah.

22 Q. All right. So, I got a little confused in that, and I
23 understood from what I read in the regulations that waste
24 receptacles are supposed to be metal and covered. Is that
25 correct?

1 A. The verbiage differs in different places. So, where --

2 Q. (Simultaneous speaking) --

3 A. What are we talking about old T, new T?

4 Q. Old T, yeah. There were, or, let's just take our vessel the
5 *Conception*.

6 A. Okay. So, --

7 Q. So, that'd be what T?

8 A. -- 177.30-7, I have summaries here, you know, but I'm going
9 to the source because you're asking --

10 Q. Yep.

11 A. I understand what you're asking, so I'm just going to go with
12 177.30.

13 Q. The time that it takes you to do that, versus the time it
14 takes me, I'm very happy. Thank you.

15 A. I appreciate that. What did I say, 177.30-7? Okay.

16 Paragraph D. This is in new T. No, this is in old T. Sorry.
17 Sorry. This is old T, 177.30-7, Paragraph D. Covered metal trash
18 containers shall be provided in lounge areas and the spaces shall
19 be maintained to minimize fire and safety hazards and to preserve
20 sanitary conditions.

21 So, the answer to the question is covered metal trash
22 containers in lounge areas.

23 Q. Okay. And is there anything more prescriptive in the new T
24 or anything more defining in the new T?

25 A. Well, in the same section, first of all, I'm going to go

1 back. I want to stay with old T for a minute because there's
2 another little fine point here that's not, it's not obvious. I
3 went right to Paragraph D, to your covered containers, but in
4 Paragraph A of the same section, which is titled, lounge
5 arrangements.

6 The specific requirements in this section apply to passenger
7 lounge areas located below the main deck. So, in the context of
8 an existing T-boat, that mean metal, covered metal trash
9 containers in lounge areas below the main deck, only.

10 Q. Okay. Did, now back to new T. Did that, is there anything
11 more prescriptive or is that pretty much the same?

12 A. Well, --

13 Q. Where covered metal containers below deck?

14 A. Okay.

15 Q. Because on the, what we found is on, at least the sister
16 vessel is there were no covered metal containers below deck. And
17 I say, sister, similar.

18 A. The other vessels that belong to that company?

19 Q. Yep.

20 A. All right. So, well let's go to the new T cite. Let's see
21 if I can find it. I should have had it written right here. So,
22 that was in 177, right? All right. Let's see if I can, let's see
23 if I can find the same, waste receptacle.

24 So, 177.405(f), this is under general arrangement and
25 outfitting. Unless other means are provided to ensure that a

1 potential waste receptacle fire would be limited to the
2 receptacle. Waste receptacles must be constructed of non-
3 combustible materials with no openings in the sides or bottom.

4 Q. Okay.

5 A. So, --

6 LT [REDACTED]: Could you ask the question again?

7 MR. CRUDER: No, he asked. Yeah, I don't want to ask, I
8 don't want to -- I'm about to answer a question he's not asking.
9 That's what's stopping me. All right. Because you asked what is
10 new T say.

11 BY MR. TUCKER:

12 Q. So, is anything retro from new T that applies?

13 A. Well, so if you go to new, if you, the way you have to think
14 about this is that, so you go to T, that's published, not old T.

15 Q. Right.

16 A. And in the beginning of every section there's applicability
17 of things that are retroactive. Right?

18 Q. Yep.

19 A. So, regardless of the date of build, right, you'd go to the
20 new, you'd go to applicability. And there's always a section that
21 says, applicability to existing vessels. So, except as otherwise
22 required by Paragraph B, which talks about modifications and major
23 modifications and this and that.

24 An existing vessel must comply with the construction and
25 arrangement regulations that were applicable to vessel on March

1 10th, 1996. So, this vessel was built in what, '80, '81. Right?

2 Q. '81, right.

3 A. So, in '80, '81, it doesn't have to comply with what I just
4 read.

5 Q. Okay.

6 A. Right? It has to comply with what we read before, which is
7 lounge areas below the main deck.

8 Q. All right.

9 A. All right? And then of course, it says, as an alternative,
10 the vessel may comply with this section. You can always upgrade.

11 Q. Right.

12 A. Right, to the --

13 Q. Okay. So, that's what threw me off is the construction and
14 arrangement. Okay.

15 A. Because that's what the title is under new T where you find
16 the waste basket. Under old T it was lounge arrangements.

17 Q. And my last question before we cut loose to everyone else, it
18 looks like maybe, you think that we need a break?

19 A. No. Go ahead.

20 Q. Is again, just capitalizing. You mentioned, we spoke of it
21 briefly but, it sounds like you were part of the old T to new T,
22 and the rulemaking, and it was mentioned that your name was even
23 on the NPRM, I believe?

24 A. It is. It's on the NPR.

25 Q. So, I was just wondering, what was the trigger to, for new

1 regulations from old T to new T? What started that? Why did that
2 come about? Was an accident? Was it a series of accidents? Did
3 some, did your boss just tell you to start working on this? Why?

4 A. I would, well --

5 Q. Why new T regulations?

6 A. Well, I would tell you that this took a long time, so I came
7 to headquarters in 1990.

8 Q. Okay.

9 A. The NPRM went out in '89. The project probably started
10 around 1985. It was probably time, and without going back, I
11 would go back to the preamble of the notice to proposed rulemaking
12 in '89 to read why are we doing this.

13 Because that's our announcement to the public that we need to
14 do it. So, there's nothing in my head particularly except
15 Subchapter T, which didn't always exist came into effect in 1958
16 after some accidents. Right?

17 Like everything, that's how we work. When there's, when
18 people die, stuff happens. And enough people died on small boats
19 that 1958 there were new rules. So, there had been on revision,
20 or I think one revision in '63, and I think that's all covered in
21 the history of the regs in that preamble. So, I don't want to
22 lecture you off the cuff

23 Q. Yeah.

24 A. So, that information is documented in the preamble of the
25 notice to proposed rulemaking.

1 Q. Okay. So, but you mentioned as well, you hit on the point
2 that it takes an accident for new regs to come out. Was there
3 any, so there's not one particular accident or a few accidents
4 that triggered the NPRM, and I, as you mentioned it's back to
5 1989. So, if nothing sticks out in your head, that's fine.

6 A. I can remember what might have triggered the 1958, but I
7 can't, I would read, I would read that preamble because --

8 Q. Right.

9 A. -- if there's, if there's some vessel names involved.

10 Q. Yeah.

11 A. And you know, they did, and I would point you to this, in the
12 beginning of the NPRM, the '89 NPRM, there's a table. They did a
13 casualty study from 1980. They took, they hand culled data from
14 1981 to 1986 because the MSIS system didn't come online until
15 about '84. Like if you go in the computer, the first entry you
16 might have on every boat is 1984. And they list in there
17 everything, fires, collisions, whatever, right.

18 Q. Right.

19 A. So, and then they mention something like six specific vessels
20 in there by name, you know, that were casualties or loss of life.
21 But not always with loss of life. But I mean, so there was a --
22 there was something I was going to say, I believe.

23 Q. And now pre-*Conception*, have there been any further activity
24 to enhance or modify the existing T-boat regulations? Have there
25 been any activity on that side?

1 A. Everyone --

2 LT [REDACTED]: Do you mean with respect to a rulemaking
3 process?

4 MR. TUCKER: Rulemaking, correct.

5 MR. CRUDER: Yeah. So, well, I don't work where the rule
6 makers work. And I would just say that I believe that around 2016
7 -- they sometimes, we would sometimes revise regulations, but not
8 substantively. Right?

9 It's like little updates and, you know, we would have things
10 that are incorporated by reference, and maybe they were using a
11 different, we're using a different document now. There's been on
12 substantive rulemaking since the TK creation, which I believe the
13 final rule is 1997.

14 MR. TUCKER: Okay. All right. I'm going to give you a break
15 from listening to me. Thank you again for answering my questions.

16 MR. CRUDER: You're welcome.

17 MR. TUCKER: I'll have a couple more, but we'll turn it loose
18 I guess to --

19 MR. EHLERS: Maybe we should just take a 10-minute break?

20 MR. TUCKER: Yep. Yep. Bio break. Yeah, okay with me.

21 MR. CRUDER: Great.

22 MR. EHLERS: Okay. We're pausing the recording now.

23 Recommending the recording. It is now 1256. Adam, you ready?

24 MR. TUCKER: No, I was done.

25 MR. EHLERS: Okay. Hey, Bart or Marcel, do you?

1 MR. MUISE: I have a final question later, but it's --

2 MR. EHLERS: Okay. Bart, go ahead.

3 MR. BARNUM: Yeah, Bart Barnum here, NTSB.

4 BY MR. BARNUM:

5 Q. Mr. Cruder, real quickly, yes, thank you for your time. Just
6 a quick question about the, you mentioned your travelers' reports
7 that you complete. Could you elaborate a little bit on those? Is
8 that something that's required for you for every trip? And then
9 also, other inspectors, are they required to complete these as
10 well?

11 A. That's generally, in the traveling inspection staff, that's
12 the general way that we document what we do. It's not always the
13 travelers report. Sometimes it's an email of a page or two back.
14 It depends how detailed it needs to be and what you find. So, --

15 Q. Okay. All right. Are these reports public documents or is
16 it all internal?

17 A. They are not in the public, they are not in the public
18 domain. They are, they are generally internal documents although
19 one of my reports is out in the public domain because it was a
20 political vessel and I wrote the report carefully so that it could
21 be that way.

22 But generally, they are not. I would say because they are
23 usually scanned into our MISLE database, if you knew of a report
24 that you wanted, and you put a Freedom of Information Act request,
25 then you could probably get one.

1 But they generally don't go out publicly, except to the
2 people involved, the owners of the vessel and the Coast Guard
3 people involved.

4 Q. Okay. You had mentioned that you personally hadn't completed
5 one of these reports for a T-boat similar to the *Conception*. Do
6 you, are you aware of any of your fellow traveling inspectors that
7 had completed one for a T-boat similar to *Conception*?

8 A. All right. So, first I think I would correct what you said.
9 I don't think I have done one on a T-boat like the *Conception*. I
10 can tell you the last one I did that was on a wood T-boat, but it
11 was not a T-boat like *Conception*. By that I mean, not an
12 overnight dive boat. Not that --

13 Q. Okay.

14 A. Not that it wouldn't have been a wooden boat, or it wouldn't
15 have been, you know.

16 Q. So, has there been any other, from your colleagues has there
17 been any other reports done, particular in T-boats similar to the
18 *Conception*? Is there any other issues that have been, have you
19 guys been called in for issues on dive, T-boats similar to
20 *Conception*?

21 A. So, the answer, two things. I'm the small passenger vessel
22 guy, so if somebody got called for the last 18 years, it would
23 have been me.

24 Q. Okay.

25 A. And I have never done a report or had to go out to a vessel

1 that was a dive boat. Since you're focused on the dive part.
2 I've done wood vessels, but I have gone out on a, I haven't had to
3 go out to a dive boat.

4 Q. Okay. What are generally the issues when you come out to the
5 wood vessels?

6 A. The average age of the plank-on-frame fleet is over 50 years
7 old now. So, the same boats that were kicking around that were 25
8 years old when the El Toro went down and we rewrote the wood NVIC,
9 some of those vessels are still out here.

10 So, sometimes I get called because it's an old vessel, it's
11 an unusual construction, it's an operator that doesn't want to
12 spend money to repair the vessel and the project is stuck.

13 Q. Okay. You mentioned the MSC earlier. What is your
14 relationship with them as far as, you know, plan reviews?

15 A. Okay. So, the Marine Safety Center is in charge of plan
16 review. The travelers are not. But plan review is in my
17 wheelhouse so to speak when there are issues with it.

18 So, I would just give you -- I'll give you an example.
19 They're building a replica vessel at the Chesapeake Bay Maritime
20 Museum of the *Maryland Dove*. It's going to be built out of wood
21 traditional. It's a vessel from the 1600s. They want to fasten
22 the frame futtocks with trunnels. Our standard for construction
23 is Lloyd's for yachts. Trunnels -- a trunnel, which is a wooden
24 peg, is typical for the construction of that period, but nobody's
25 every approved it.

1 Well, the Marine Safety Center reviewed it. I got involved
2 with them because I showed them other vessels that are already out
3 there that are approved. We appreciate it's not in Lloyds, but
4 they wrote a letter that said, that approved using the technique
5 because it's good marine practice for that period of build.

6 So, my relationship with the MSC is unusual circumstances in
7 T-boat construction and certification.

8 Q. Okay. Okay. Just one last, one last question. You had
9 mentioned earlier that you were contacted by, you know, District
10 11 regarding their concentrated inspection campaign, that
11 reinspection campaign for the overnight vessels similar to
12 *Conception*. Do you remember what they asked you?

13 A. They were looking at, they were looking at the two other
14 vessels that were, that belonged to that owner. So, they were,
15 they were talking to me about things they, could be things they
16 found on board the vessels and, you know, how to interpret those
17 conditions in the context of the regs that were applicable. I'm
18 going to guess here, and I shouldn't do that, the two --

19 Q. Okay.

20 A. -- boats were also existing vessels. Right?

21 UNIDENTIFIED SPEAKER: Yes.

22 MR. CRUDER: Yeah.

23 BY MR. BARNUM:

24 Q. Do you remember specifically what questions they asked?

25 A. Well, at, well at one point they wanted us to come out there

1 and help them with those boats. And we decided not to do that so
2 that we would stay out that fray. You know, if I had to, if I had
3 to characterize the discussions, they were, the things that you
4 guys are looking at now. Right? Fire detection, escapes,
5 electrical installations.

6 Q. Do you mean specific questions regarding the electrical
7 installation?

8 A. I think they asked me about it. We talked about designations
9 that were on UL listed boat cable that they found onboard, and I
10 just explained what that, what that was and that, that was within
11 the specification of what's in the regs, those kinds of things.

12 Q. Did you, did they indicate to you anything that they found
13 that was not allowed or not within regulation?

14 A. So, here's what I don't have. They didn't, they didn't send
15 me a list of stuff to rule on, if that's what you're asking me.
16 They were, they asked general questions.

17 Q. Okay. Do you remember who called, who contacted you
18 specifically?

19 A. Sure.

20 Q. Was it the, was it an inspector or the commander?

21 A. Well, the district, the D-11, D-11, I think inspection
22 investigation, DPI is the staff symbol, Commander Kevin Broyles.

23 Q. Okay.

24 A. See I think they --

25 Q. Who --

1 A. Am I right? They put together a team and they had, you know,
2 he had several inspectors that he, that he was working with.

3 Q. Who ultimately decided that you guys would not go?

4 A. Well, I think a request was put into the chief traveler, and
5 I think the chief traveler decided not to, not to engage knowing
6 that there would be other investigations and that we wanted to be
7 objective and separated from that.

8 Q. Okay. You had mentioned Captain Edwards will be able to
9 provide us with a list of their findings. Is that correct?

10 A. A list of what?

11 Q. Any findings that they found on their CIC reinspection
12 campaign.

13 A. They have, they have information of what, I think what they
14 have is requirements written based on a targeted inspection, if
15 that's a fair way to put it.

16 MR. BARNUM: Okay. Great. Thank you. That's all I had.

17 MR. CRUDER: Okay. Thank you.

18 MR. EHLERS: CAPT Neubauer?

19 CAPT NEUBAUER: Okay. CDR [REDACTED].

20 CDR [REDACTED]: All right. Marc, thanks for answering all
21 of our questions. I just have some follow-ups on the NTSB
22 questions.

23 BY CDR [REDACTED]:

24 Q. Earlier we spoke about smoke detector requirements in UL217.
25 That regulation in new T is in 181.450. What I wanted to ask you

1 in general on that, though is whether you know if the smoke
2 detector requirements in UL217 was a requirement that was in
3 existence when *Conception* was built? Is that something you know?

4 A. Old Subchapter T doesn't refer to fire detection.

5 Q. Okay. And does this requirement apply to *Conception*, and are
6 you aware of that or --

7 A. Okay. So, we're in new T, and we go to the applicability.
8 And let's go to 181's applicability, which probably is not a place
9 we've been yet this morning. So, applicability, it's interesting.
10 This is written different than the other sections, but it says,
11 applicability preemptive effect.

12 But it reads the same. Except as otherwise required by
13 Paragraphs B and C of this section, B and C, an existing vessel
14 must comply with the fire protection equipment regulations
15 applicable on March 10th, 1996.

16 Q. Okay.

17 A. And then there's, it says, except as Paragraph B and C. Do
18 you want me to go into --

19 Q. Right. That's what I was going to --

20 A. Okay.

21 Q. I guess I'm kind of, maybe I'll just lead, lead you. Like in
22 the exceptions, it mentions 181.400. Do you see that in B?

23 A. Okay. So, let's go there.

24 Q. Right.

25 A. Paragraph B, an existing vessel with a hull or machinery

1 space, boundary, bulkhead or deck composed of wood or FRP, or
2 sheathed in the interior in FRP plastic must comply with 181.400
3 before March 1999.

4 Q. And so, --

5 A. An existing, all right, let me, yeah, let me read that. It's
6 good, [REDACTED]. You've got me, you've got me in a place I haven't
7 read. So, it's good. Okay. But this does not say, it says,
8 sheathed on the inside, and we talked about hull sheeting already,
9 which wouldn't apply.

10 Q. So, so --

11 A. So, I would say, I would say, no.

12 Q. Okay. So, when it says, an existing vessel with a hull
13 composed of wood or fiberglass reinforced plastic, do you not
14 categorize or anything?

15 A. Oh, composed of wood.

16 Q. It's more --

17 A. No, no. I got you. I didn't, I didn't read it carefully. I
18 was focused on, I was focused on the fiberglass. All right. So,
19 let's, this says, an existing vessel with a hull composed of wood.

20 Q. Right.

21 A. Or, all right. I take that back. The answer is yes.

22 Q. Okay. And then if you go to 181.400(e).

23 A. Okay. I'm still looking for it. B, 1, 2, 3, 4. You said,
24 B?

25 Q. E, echo.

1 A. 181.400?

2 CDR [REDACTED]: Yes.

3 UNIDENTIFIED SPEAKER: I don't have it.

4 MR. CRUDER: A, B -- you mean, 181.405(e)?

5 CDR [REDACTED]: Do I? I didn't think I did, but --

6 MR. CRUDER: Well, here's my book. Find that, find that

7 paragraph, unless I'm reading the wrong thing. 181.400 --

8 BY CDR [REDACTED]:

9 Q. I mean 405(c) then. Yeah, it's the same write up but my book
10 is a little different. Sorry.

11 A. All right. So, what's the cite that you're looking at?

12 Q. 405(c) on yours.

13 A. 405(c)?

14 Q. Yeah.

15 A. Okay. So, this 405 is spaces required to have fire
16 detection. Right? Each overnight accommodation space on a vessel
17 with overnight accommodations for passengers must be fitted with
18 an independent modular smoke detection and alarm unit in
19 compliance with 181.450.

20 Q. Right, so --

21 A. Which, and 450 is the reference that gives you UL, so the
22 connection is, thanks for leading me, [REDACTED]. So, the answer is,
23 yes.

24 Q. So, that's how we get there. So, would you have expected
25 that the *Conception* would have installed this after the new T was

1 brought in? Is that --

2 A. Yes.

3 Q. Okay. And --

4 A. By 1999.

5 Q. So, that kind of leads to my second question, which is, I
6 think you've reviewed the MISLE for *Conception*, and have you seen
7 the special note that's in there that refers to, it says, in year
8 2000 OCMI waived the requirements of 46 CFR 181.425 galley vent
9 hood and fixed fire extinguisher requirements in accordance with
10 GMSE for policy letter 199. Those are the words of the special
11 note.

12 A. Yes.

13 Q. Okay. So, are you familiar with that policy or what they
14 were doing there even --

15 A. I have not -- I would say I was aware that there was a policy
16 letter that modified the requirement for existing boats. I
17 haven't read it recently. I don't know what it says. I refer you
18 to what is now page 4.

19 Q. Okay. When they, having looked at the policy myself, right,
20 it appears that they OCMI was trying to deal with retroactive
21 requirements from new T.

22 A. On existing vessels.

23 Q. On existing vessels. Right.

24 A. Right.

25 Q. And so, this is, this case of the UL217, smoke detector,

1 would be a requirement that was put in new T and *Conception* would
2 have to do it afterwards. Do you know if there is any policies or
3 anything, that you're aware of that would allow a similar waivers
4 or changes to smoke detection?

5 A. Nothing specific to smoke detection, but Subchapter T
6 regulations allow the OCMI to give special consideration to any
7 piece of regulation in the Subchapter T. They can make exception
8 locally to any of those regulations.

9 Q. Okay. Thank you. Also, I wanted to lead us one other place.
10 We were talking about emergency lighting and markings before for
11 escapes.

12 A. Right. Yep.

13 Q. I may have misheard or not heard but I think we never got to
14 where we found the emergency lighting in old T.

15 A. I said I couldn't find it. Sorry. I said, I'd have to look
16 for it.

17 Q. Okay. Could you, could you look in old T at 46 CFR 184.30?

18 A. Yep.

19 Q. And tell me if that's the emergency lighting requirement you
20 were looking for?

21 A. You mean the one where the whole section is labeled emergency
22 lighting?

23 Q. Yeah. I was just trying to help out.

24 A. Thanks, [REDACTED]. So, 184.30-1, this is under old Subchapter T.
25 Vessel shall be equipped with a suitable number of portable

1 lights. Now, I would keep going here because I should, because if
2 I turn the page, lights for lounge areas below the main deck, and
3 what I had said before I believe was that I thought that there was
4 a requirement in both places.

5 So, it says, again, lounge area seems to be more of the focus
6 in old T versus accommodation space. Adequate emergency lighting
7 automatically actuated upon failure of the main lighting system
8 shall be fitted along the line of escape in vessels having lounge
9 areas below the main deck, as per 177.30-7.

10 Geez, we were in there. So, I want to look back at that.
11 Vessels not equipped with a single source emergency lighting
12 system shall have individual storage battery powered,
13 automatically operated lights at strategic locations.

14 These shall, these lights shall have an automatic battery
15 charger, shall not be readily portable and shall have sufficient
16 capacity for 6 hours of continuous operation. So, that would be
17 an emergency lighting bank plugged into AC power that would, if it
18 lost main power, those lights would come on.

19 Can I look back at 177.30-7, which should have brought us
20 that?

21 Q. Yes.

22 A. All right. All right. So, I did say the first paragraph
23 said, this is for lounge areas below the deck. The second
24 paragraph is about bunks where installed with dimensions,
25 mattresses, construct freed obstruction, each bunk immediately

1 attached to an aisle means of escape, aisle widths, head room.

2 I hate to say it, but there's nothing in there that talks
3 about emergency lighting.

4 Q. Yeah. Okay. So, with regard to the emergency lighting issue
5 though, so we have an old T and a new T requirement. Right?

6 A. Right.

7 Q. And so, what, which regulation would have applied to
8 *Conception*? Do you know?

9 A. All right. So, we'll go to, we'll go to new T and we'll look
10 at applicability. So, could you give me the cite in new T?

11 Q. Yes, I can.

12 A. For the emergency, for the emergency lighting?

13 Q. New T is 183.432.

14 A. Okay. Each vessel had emergency light fitted along the line
15 of escape for all passenger and crew accommodations. Emergency
16 lighting required. It must be automatically actuated. Battery
17 powered is a performance spec. Okay. So, 183.432.

18 So, we'll go to the beginning of 183. Applicability to
19 existing vessels. Except as otherwise required by B and C, an
20 existing vessel must comply with the regulations on electrical
21 installations, equipment and material as of March 1996 or comply
22 with these.

23 Paragraph C says, an existing vessel must comply with the
24 requirements of 420 and 430. 420 is nav lights. 430 is portable
25 lights. New installations, which are completed to the

1 satisfaction of codes in OCMI after '96, have to meet it. I
2 don't, I don't see reference to 432.

3 Q. Right. That's what I see, too, right. So, it looks like --

4 A. Because this, but this, this is worded completely different.

5 Q. It is.

6 A. This talks about the line of escape.

7 Q. It is. It is. And I think that's important, right, to
8 recognize that perhaps the lighting along the entire route to the
9 escape that's required here might not be there.

10 A. It is not, it's not applicable because in '96 it wouldn't
11 have been applicable.

12 Q. All right. And then my next question is just a follow up a
13 little bit on another topic. We talked a little bit about the
14 training of marine inspectors with regard to T-boats. And I
15 wanted you to discuss briefly the T-boat plan review course.

16 And what that course of instruction consisted of and does it
17 exist anymore?

18 A. Okay. So there was a T-boat plan review course from 1999 to
19 2009 that was -- I was one of the contributors that helped put
20 that course together. It was taught at Yorktown. It was taught
21 as a level two course.

22 T-boat inspectors that were already qualified. It was before
23 9/11, and that has some bearing. So, let's talk about the world
24 before 9/11. In the world before 9/11, there was no billet for a
25 plan review officer in the field.

1 And although the Marine Safety Center stood up in 1986, in
2 the field in that time period vessels 65 feet and less were done
3 by local plan review in the field. And that depending on how big
4 the office was.

5 There was always a plan review office in New York where I was
6 stationed with one or two people in it. There was always a plan
7 review office in L.A., where I was stationed with two people
8 rotating through.

9 There was never any formal training on plan review. You
10 could always call the Marine Safety Center after '86. Before '86,
11 there were field merchant marine technical officers that you could
12 contact if you were reviewing something and it was over your head
13 and you needed to get help with that.

14 So, we created that course. It was really a T-boat new
15 construction project management course. Right? It was how to set
16 up the six-part folder. It was a checklist of going through the
17 regs the first time with a vessel.

18 It was to identify the go, no-go places because, you know,
19 with T-boats, you get everything from, I'm going to build it to
20 Subchapter T, to I have a 1947 Trumpy and I want to make that a T-
21 boat.

22 And it wasn't built to our structure, but there was some
23 issues you've got to go through. Right. But we certificate boats
24 that are not necessarily built to the regulations. And so, we
25 actually taught every section of the regs in, say from 175 to 185.

1 And we taught them how to, how to project management that
2 project. But it was specific to Subchapter T vessels. In the
3 context of *Conception*, even though 65-foot was the breakpoint that
4 you were supposed to send it to the Marine Safety Center, if you
5 had the right talent in the office doing a 75-foot monohull would
6 not be much different from doing a 65-foot monohull. Right?

7 After, when 9/11 happened and we shifted, because I talked
8 about pulling everybody back with Oberstar's hearings, there was
9 a, there was a message put out that told the field to send
10 everything to the Marine Safety Center.

11 So, that means, a guy that wanted to certificate a 30-foot
12 boat in the smallest things. So, historically the smaller boats
13 and the history of Subchapter T was vessels less than 65 feet.
14 Then in '63, there was another revision and it was TS and TL,
15 Subchapter T-small, Subchapter T-large.

16 It was based on, based on just the length of the vessel.
17 That changed in new TK. But that's what that course was about.

18 Q. Okay. And so, during that time that the *Conception* was
19 built, in 1981, would you say at that point in time local plan
20 review was more common?

21 A. Even though the, I'll say, I'll talk out of both sides of my
22 mouth. I would say, it's over 65 feet. I don't have firsthand
23 knowledge first of all. It's over 65 feet, technically, it should
24 have went to a merchant marine technical office. It's likely that
25 it could have been reviewed locally.

1 Q. Also, we have something called the marine inspector course,
2 MIC, a lot of us call it. So, could you tell us a little bit
3 about MIC, and does it teach anything with regard to T-boats?

4 A. MIC teaches, that's, that's the primary training course for
5 marine inspectors, so among other vessel types, they definitely
6 had a T-boat module. They definitely teach how to inspect a T-
7 boat.

8 It's not particularly focused to plan review, but it's
9 focused to inspection. And currently, most of the time of the
10 year except for one, they do exercises on a three-masted gaff
11 schooner down there.

12 So, they actually get them on a boat. The school has a
13 Subchapter T vessel that was retired up on the hard (ph.). So,
14 they actually run scenarios and inspection exercises on both of
15 those boats, one operational and one not.

16 Q. All right. Thank you. Now I'm going to switch topics a
17 little. We did talk about the egress issue on *Conception* and
18 specifically some differences between old T and new T. So, I
19 won't rehash that completely.

20 But you had mentioned to us that in new T there's some
21 verbiage that wasn't there in old T for egress. Specifically,
22 I'll give you some of those types of words. Rapid evacuation,
23 emergency for the number of persons served and easy movement of
24 persons wearing lifejackets.

25 I think you even said some of that right?

1 A. Yes.

2 Q. So, when you, in your experience, when you reviewed emergency
3 escapes for an old T-vessel before this verbiage was there, did
4 those types of discussions, the rapid evacuation and easy movement
5 of persons wearing lifejackets, is that something that would have
6 been in your mind at all when reviewing those escapes, or is it
7 simply that there is those two means. I was just wondering what
8 you thought on that.

9 A. I would have followed the direction that was in Subchapter T
10 for two means of escape out of every compartment, unless you
11 couldn't do that. I would tell you that I don't think I have ever
12 been in charge of a plan review of an overnight boat.

13 Q. Okay. Have you seen the means of escape on the *Conception*?
14 Pictures or, I know you haven't been on it.

15 A. I've seen pictures. If I recall, the main escape is on, is
16 a, I'll call it a stairway, you know, we use the term ladder for
17 stairways on vessels, but it looks like a conventional stairway.
18 And the second means of escape was through a deck access to the
19 next deck above over a bunk.

20 Q. Okay. And in your experience, have you ever similar means of
21 escape on a vessel that you inspected? The one above the bunk.

22 A. The short answer is no. Firsthand, no.

23 Q. Okay.

24 A. And I don't, I don't want to make an opinion about what the
25 rest of that dive fleet might be.

1 Q. Sorry.

2 A. So, I have not seen that personally.

3 Q. All right. Then one last question. We spoke about fire
4 retardant resins.

5 A. Yes.

6 Q. And one of the things I just wanted to touch on a little bit
7 is I believed that you answered that with the FRP sheeting over
8 the wood boats that you wouldn't expect there to be fire retardant
9 resin used in that FRP sheeting. Is that correct?

10 A. That is correct.

11 Q. Would that answer have changed if you referred to the new T
12 version of that regulation? Could, would that change your
13 thinking on that at all, or not?

14 A. No.

15 CDR [REDACTED]: No? Okay. That answered my question.
16 Thank you.

17 MR. EHLERS: LT [REDACTED], do you have any questions?

18 LT [REDACTED]: Good morning everyone. This is LT [REDACTED],
19 national technical advisor at the Coast Guard Investigations
20 National Center of Expertise. I do not have any additional
21 questions for Mr. Cruder. Thank you.

22 CAPT NEUBAUER: Okay. Thank you. Well, this CAPT Neubauer.
23 I have some follow-up questions.

24 MR. EHLERS: Go ahead.

25 BY CAPT NEUBAUER:

1 Q. In your experience, do marine inspectors have the experience
2 to conduct electrical inspections on T-boats, currently?

3 A. Do they have the experience to conduct electrical
4 inspections?

5 Q. Right. Do they have --

6 A. For compliance with the regulations that apply.

7 Q. Yes. And also --

8 A. Yeah.

9 Q. Okay.

10 A. Yes.

11 Q. Do they have the experience to detect anomalies, changes that
12 may have occurred on the vessel? Are we providing inspectors
13 adequate training to detect issues that are outside of the
14 regulations?

15 A. Well, let's put it this way. If you go down to a, in the
16 context of the average inspection office, it would be rare that
17 the same person would go down to the same boat twice, even within
18 a tour.

19 You know, unless, I mean, look, I'm going to, I'll qualify
20 that. Santa Barbara's a small port. Right? If you were
21 stationed there for 3 years and there's only x-amount of boats,
22 maybe you're going to see it twice.

23 In my experience, being at big ports, you would probably
24 never see the same boat twice. So, part of what you have to do as
25 an inspector is look for anomalies. Right? You can ask somebody

1 if you've done anything since the last time somebody was on there
2 a year ago, and you might get an honest answer.

3 You might not. The person you're dealing with might have
4 just been hired and not know. Have I been on vessel where, I can
5 remember the first time I asked, told T-boat operator I was going
6 back down in the engine room, and he was used to a deck inspector,
7 and he said, why are you going back down there?

8 I said, I just want to look around. And there was orange SO
9 cable, portable cable like you find on extension cord and it was
10 permanently wired and went right to the main distribution panel.
11 I said, that's no good. So, there's an anomaly.

12 I didn't ask. I just saw. So, I would say that, you know,
13 part of the inspector's skillset is to look for things that are
14 out of place or not consistent. Right?

15 Whether you're looking at a wood boat for construction or
16 you're looking at an electrical installation for the quality of
17 the install, as soon as you see new wires, different wires,
18 different clamps, then the question would be, when did this go in?

19 Was it planned reviewed? And if it really was questionable
20 like it was the wrong material, like the SO cable or hard
21 conductive Romex that you'd see in a house, that definitely
22 doesn't belong on a boat. Right?

23 It depends on what you would see, how far you would peel that
24 onion back. Because then the next question of course is, is the
25 circuit protection correct, 14-gauge, 15-amp, 12-gauge, 20-amp.

1 Right?

2 You'd, you'd peel that back. So, they should be looking for
3 that kind of stuff. I would say it takes some experience but
4 it's, electrical is no different than any other piece. They could
5 modify lifesaving equipment.

6 They could modify, if the firefighting equipment doesn't look
7 right, you're going to ask questions. Right? Okay. Just added a
8 plastic piece of bilge pipe. Well, it's not supposed to be
9 plastic. Okay.

10 Q. Have you ever seen a T-boat that used the watertight door to
11 the engine room as a secondary means of escape?

12 A. I'm aware of vessels that have watertight doors separating
13 the engine space from the --

14 Q. This would be like accommodation space below the decks.

15 A. It's usually, it's not, so that you'd have to go out through
16 the engine room. Is that what you mean?

17 Q. Right.

18 A. No.

19 Q. Or egress out of the engine room. Either one.

20 A. Well, remember, T-boats don't have manned engine spaces. So,
21 technically there would be nobody in that engine room to egress
22 out of there. Right. So, it's not a space that would require --

23 Q. I mean not normally.

24 A. Not normally required two means of, it doesn't come under
25 that same criteria. And it's very rare to have a watertight door

1 on a Subchapter T because the regs don't allow that. There are
2 exceptions. Right?

3 That there were always these that came from the oil field
4 that had them that were Sub T-boats, but most of the time those
5 doors open up to crew space, not to an accommodation, a passenger
6 accommodation.

7 So, off the top of my head, I can't think of that. The regs
8 would tell you not to do that. So, I can't think of a boat that
9 would have that. If it had it, it would be something that a local
10 OCMI would have approved based on the configuration, putting an
11 alarm on the door to make sure it's closed or whatever.

12 Q. Now I'd like your opinion on this next question. The
13 *Conception* had an open stairway between the berthing area and the
14 upper passenger accommodation space. There was no, there were not
15 doors, no fire boundary between the spaces.

16 In your opinion, does that make the two spaces the same space
17 because there's no boundary?

18 A. Well, I'm going to answer it a different way. If you read
19 through the preambles and follow the discussion on escapes, you
20 will find that one of the -- it's probably in the SNPRM. The
21 protected escape routes are not required on Subchapter T, only
22 Subchapter K and Subchapter H.

23 Your question really is does it make it the same space, I
24 suppose yes, but it's not required to have a protected escape.

25 Q. Then the reason I ask that is would the rest of the passenger

1 space need technically fire detection if there's no fire boundary
2 between the berthing area and the upper deck? If the berthing
3 area is required to fire detection and it's --

4 A. Would, then would, does the space that you exit to have to
5 have to have it? Is that what you're asking?

6 Q. Well, because there is no barrier between the berthing area
7 and the upper deck to stop smoke or flame spread. Is that, would
8 that whole entire space normally need some kind of detection in
9 your opinion?

10 A. Well, the next space was not an overnight accommodation
11 space. Right? You're making, you're connecting them now?

12 Q. I am, I'm trying to make a connection like, because, my real
13 (Simultaneous speaking) question --

14 A. The galley would have something because that's what was on
15 the next deck, as I understand.

16 Q. The galley was on the next deck but --

17 A. But there's a, but there's the rest of the space that's not
18 galley space?

19 Q. Right. And the stair, open stairway connected everything
20 together between the galley, the passenger accommodation space and
21 the berthing area.

22 A. In my experience, I would not require the modular detector on
23 the next space because the regulations are specific to the
24 overnight space.

25 Q. In your experience would there be some kind of door or a fire

1 barrier between the stairway, somewhere in the stairway?

2 A. Not required.

3 Q. Okay.

4 A. Not required for Subchapter T.

5 Q. Okay. I want to talk a little bit about OCMI's. What
6 qualification does the Office in Charge, Marine Inspection need to
7 possess the primary OCMI for a sector?

8 A. You really want me to answer that question?

9 Q. Yes.

10 A. All right. What requirement is there that they, there is a,
11 now remember, I haven't been in the uniform in almost 20 years.
12 But there was a screening process for command. But there is not
13 anything specific skillset required, marine safety skillset to be
14 that sector commander.

15 Lawyers can be a sector commander. Aviation, pilots can be
16 sector commanders. Sorry.

17 Q. So, in your experience now, when you do talk to an OCMI, or
18 an OCMI representative at a port, who normally is that person with
19 the OCMI experience?

20 A. I go to the lowest common denominator where I'm going to get
21 an intelligent discussion. That is usually inspectors. That is
22 definitely in my opinion the chief of inspection. Because the
23 OCMI function can be delegated down from the sector commander, the
24 prevention chief is also sometimes in that discussion.

25 And although I will talk to the commanding officer and the

1 deputy, the way we're structured now, they are not in those, they
2 are not in those weeds usually, unless it's big and political.

3 Q. So, they don't normally have the OCMI experience that you,
4 that you need to discuss -- I'm sorry. Let me rephrase that.
5 They don't have the OCMI experience needed to discuss the issue in
6 depth that you're looking for?

7 A. I would answer that by saying, not always. And I'm going to
8 add this because this is, this is a, I'm going out on a limb here.
9 So, you shouldn't be asking that question but I'm going to answer
10 it.

11 When inspection officers were IMOs, you have to look at where
12 we've gone. IMO, marine safety, I mean inspection office, marine
13 safety office, marine safety office group activity sector. When I
14 started, I started at marine inspection office.

15 Everybody did. There all they did marine inspection
16 functions, the three majors ones, inspection, investigation and
17 licensing. There was no other influence. When the industry came
18 in to talk to the old man, it might be a 219er, that's an ex-deep
19 draft sailor.

20 He's a guy who knew the industry. You know if you went to
21 talk to that OCMI he would know, he would have the situational
22 awareness of his inspected fleet because that's all that unit was
23 responsible for.

24 The span of control is different now. I would go back to my
25 answer which is, the OCMI or the sector commander, which is one

1 and the same, may or may not have that marine safety background.

2 Q. And just one follow-up question, during earlier, NTSB
3 question. You, did you say that the travelers can do a surprise
4 inspection audit in a port, if you wanted, if you had concerns
5 about a certain area?

6 A. I don't know that we would do a surprise inspection, which
7 means nobody knowing. I think we would call and say, we're coming
8 out and we're going to look, we want to look at a few things,
9 whatever it is. Right?

10 I don't know that we would, we wouldn't do a gotcha. We
11 wouldn't do it without telling people we were coming. But we
12 could act on our own.

13 Q. And if the OCMI disagreed with you coming to the port, could
14 they require that you not attend?

15 A. If it got dicey like that, it could go a couple of ways. If
16 we were being ordered by the admiral to go do something, then we
17 would just go. If we were doing something because we were trying
18 to fill a gap, fix something -- I'll tell you what.

19 If a, first of all, it's never happened that I'm aware of.
20 But if an OCMI called me and said, you're not coming to my port,
21 I'd put them on the phone with the captain and I'd let them hash
22 it out. My boss, meaning my boss.

23 But that hasn't, I'm not aware, you know, I'm not aware that,
24 that, we've never been told you can't come.

25 Q. Okay. You personally have never been ordered out of a port

1 by an OCMI?

2 A. They haven't been happy with me, but I have never been
3 ordered out and I've always gone back. I've always gone back and
4 said, why am I here again? And now I'm here now because I need to
5 be and not because you asked me, because the owner called me this
6 time.

7 So, I mean, I think there's a relationship. I don't think,
8 I'm not aware of anybody ever, but I mean shouldn't say that. We
9 know what happened on the El Faro. I have never been ordered out
10 of a port or told I couldn't be there.

11 LN: Good. Thank you. That's all I have.

12 MR. CRUDER: Yes, sir.

13 MR. EHLERS: I have a couple of additional questions. This
14 is Drew Ehlers again from the NTSB.

15 BY MR. EHLERS:

16 Q. I'd like to go back to FRP sheathing on wood vessels and the
17 NVIC 887 you pointed out, said that sheathing on the exterior hull
18 need not be fire retardant. The next sentences I read says,
19 sheathing in accommodation service spaces, controlled spaces and
20 external vertical surfaces on the deckhouse should be fire
21 retardant.

22 I want to break this sentence down into pieces in like,
23 perhaps, excruciating detail here. But first of all --

24 A. That's a historical document, so that's kind of the source,
25 which is original, I think that, too.

1 Q. Okay. Fair enough.

2 A. So, go ahead.

3 Q. Fair enough. First of all, accommodation and service spaces,
4 would you consider a salon, a lounge and a galley as part of
5 accommodations and service spaces?

6 A. I think I would go to the definition. There's a definition
7 for accommodation, space in T.

8 Q. Okay. It's --

9 A. But it's in new T.

10 Q. Okay.

11 A. You know, accommodation space, and I don't know that there's
12 a definition. You know, some of that, well, that's a trick,
13 that's a tricky, that's a tricky sentence. And it's not
14 regulation.

15 Q. Well, we'll get into more trickiness here.

16 A. Yeah. No, I'm sure we will.

17 Q. Okay. So, it says --

18 A. So, when you, when you said, do I, would I consider --

19 Q. The, so on the, we talked about the *Conception*, it had a
20 galley and then connected with the galley was the salon or lounge
21 space.

22 A. A lounge.

23 Q. Would you consider that either within the definition of
24 accommodations, or service spaces, as an inspector?

25 A. Yes.

1 Q. Okay.

2 A. Well, yeah.

3 Q. Okay.

4 A. Both of those on the same deck. I was just going to refer to
5 the one definition, even though it's in new T, and we're not going
6 to find an applicability of definitions to existing vessels in new
7 T.

8 But I bring it up because --

9 LT [REDACTED]: Just to clarify, we're looking at, you're asking
10 about definitions as he understands it from the regulations or
11 from the NVIC?

12 MR. EHLERS: What's that? What I'd like to know, as an
13 inspector, would you consider a galley and lounge, accommodation
14 and service spaces, and whether that comes from the regulations or
15 just from experience.

16 A. It would be both. And if I was looking for a current
17 reference, so for instance, the list of accommodation spaces,
18 public spaces, hall, dining room, mess hall, lounge, cafe, public
19 sails, overnight accommodation space, conference room, washroom,
20 toilet, medical treatment room or game or hobby room.

21 That's about everything, right? So, accommodation space.
22 And I'm just going to look in old T. I don't think there's a, I
23 don't think there's a --

24 Q. In definitions?

25 A. But I think accommodation, if you, in other words, if we, in

1 the absence of a definition in Subchapter T, that would make me go
2 to other regulations. I'm sure we might find a definition in
3 Subchapter A, you know, a larger ship.

4 I don't think we're going to find something here, but I'm
5 going to, I'm going to just look. I think, but my answer to your
6 question is would I consider that an accommodation? I think the
7 answer is yes.

8 So, let's just look at definitions here just real quick. No,
9 not in old T.

10 Q. Okay. Continuing to break this sentence down. So, --

11 A. Okay. Might have to look at it with you because I did bring
12 another copy with that but go ahead, read.

13 Q. It says, sheathing in accommodation space, service spaces, et
14 cetera, on the deckhouse should be fire retardant. If the FRP is
15 on the outside, on the weather side and not on the inside, as a,
16 an inspector, are you looking for a fire-retardant sheathing then?

17 Do you understand the nature of the question?

18 A. Yeah. My experience, my experience with that is that if the,
19 for instance, it depends what you're building this deckhouse out
20 of, right? So, if the deckhouse is a composite structure that's
21 really a fiberglass layup, it needs to be fire retardant, because
22 that equates to a fiberglass, complete fiberglass structure.

23 If you build it out of wood first, and you just put glass
24 over it as a protective sheathing even though, even on the
25 external surface, just like you do on the bottom of the hull, I

1 would not expect to get fire, to see fire retardant resin because
2 the composition of that structure is not one with the FRP.

3 Not like the reinforcement and the resin. It's basically
4 made out of wood, and you're putting that fiberglass on the
5 outside to protect the wood.

6 Q. Okay. All right. And the last question with this sentence,
7 I promise, this is the last. The use of the word, should be fire
8 retardant, not shall. I mean essentially that sounds like a
9 suggestion, not a rule.

10 I mean as a, and an inspector, is that --

11 A. So, here's what I would tell you. First of all, I broke one
12 of the lawyer's rules by giving him this paper here to allow you
13 to be tedious here. But this is the source of everything because
14 the exceptions, one of the things you guys haven't talked about
15 is, you can build a vessel with general purpose resin.

16 Can't be overnight. Can't have gas engines. It's got a list
17 of things. All those things are in this NVIC, and they ended up
18 in the regulations. Right? This is '87. '89 was the NVICs. The
19 object was to take existing policy and get it into regulation.

20 But --

21 LT [REDACTED]: But just to quickly clarify, the question from
22 Mr. Ehlers is reading from a NVIC.

23 MR. CRUDER: That's true.

24 LT [REDACTED]: It's not in rulemaking, a regulation.

25 MR. CRUDER: I'm about to go there. So, as an inspector, if

1 we have to, first of all, this is a NVIC.

2 MR. EHLERS: Um-hum.

3 MR. CRUDER: NVIC is guidance. Okay. So, anything that's in
4 here is subject to negotiation. I say, negotiation. That's a
5 very soft term, but it means, there are people that will tell you,
6 as an inspector, if you can't show it to me in the regulations, I
7 don't have to do it. And they're right.

8 All right. So, this is, but in the scheme of things, this is
9 where some of that stuff comes from. This is amplification. In
10 1987, my guess is, depends who was in Legal here, what the
11 parameters were for review, should and shall have different
12 meanings in the regulations.

13 If it says, shall, as an inspector, you don't have any wiggle
14 room. They can appeal it, but it's a shall. If it's should, that
15 leads room for discretion. The inspector's job has discretion.
16 If you, if you write a requirement based on something only in the
17 NVIC, that's subject to appeal because it is not law.

18 It is something that is an interpretation of regulation. But
19 it's not law in regulation. And the Administrative Procedures Act
20 would tell you not to regulate by policy document. Right?

21 So, we're in that gray area. So, I'd have to see what it
22 was, and like I told you, if you build a deckhouse out of wood,
23 that means its 75 percent plus wood, with a sheathing on the
24 outside.

25 If I build that out of reinforcement and resin, structurally

1 that's a whole different animal and boy that's going to burn
2 completely different. Right? So, that's it. And there are also,
3 I know I'm not supposed to volunteer.

4 There's no requirements for coatings on the inside of a T-
5 boat, and in that lower tier, where this boat *Conception* is.
6 Right? So, boats can be painted on the inside. They can have
7 bright work on the inside.

8 If you go over 49-overnight, and over 150 a day, there are
9 structural fire protection requirements that say you can't put
10 accelerant on the inside of the boat, or limit that. There are
11 boats on the bay that the combination of linseed oil and diesel
12 are sprayed on the inside of the boat.

13 It's great for killing fungus. Is it flammable? Yes. Is
14 the boat below the threshold that requires structural fire
15 protection? Yes. Is it made out of material that will already
16 burn? Yes.

17 MR. EHLERS: Okay.

18 MR. CRUDER: So, the regs are structured in a tiered fashion
19 based on risk. So, --

20 BY MR. EHLERS:

21 Q. Okay. And thank you for that.

22 A. Am I good for that?

23 Q. And so that actually is a good segue to my next question
24 regarding tiered regulations. You mentioned, I believe associated
25 with K and H, area of refuge. Is that, is that a defined term?

1 A. That is definitely a defined term in structural fire
2 protection and if we were looking at a vessel that was within the
3 parameters of requiring that. So, I have my notes here that say,
4 that came from the preamble, protected escape routes are not
5 required in Sub T.

6 And if you continue to read that preamble under that reg,
7 because it's going to talk about T and K regulation in the same
8 reference. It'll tell you what's not required in T, but what's
9 required in K.

10 And you would get those definitions and you would have that
11 protected space with some exceptions.

12 Q. Okay. Are you aware of any T-vessels that you've looked at
13 that are built to that standard, have a protected escape?

14 A. No.

15 Q. Okay. All right. You mentioned the, at a sector where there
16 are a large number of inspectors, that an inspector may not a
17 vessel over and over again.

18 A. The same vessel.

19 Q. The same vessel --

20 A. Yes.

21 Q. -- excuse me, over again. And you also brought up the point
22 that a detachment, at an MSD that may be different because of the
23 low number of inspectors. On the *Conception* specifically,
24 actually, the same inspector saw that vessel every year from the
25 COI in 2014. I'm just stating a fact here.

1 A. No, that's fine.

2 Q. From 2014 up until the accident. In your opinion, as a
3 traveling inspector with a lot of experience, is there an
4 advantage or disadvantage of having the same inspector look at a
5 vessel year in and year out?

6 A. So, first of all, it's not uncommon at the detachment. If
7 you look up their vessels, if you went to the detachment in New
8 York, you'd find the same thing, right? You'd find one, you might
9 find one name.

10 And particularly, if it's an unusual vessel. Or if it's a
11 higher risk vessel. Or if it's, you know, they might be sending,
12 they might be sending the same person out for multiple reasons,
13 either because they want that person to be looking or because they
14 have nobody else. You don't really know.

15 Q. Sure.

16 A. So, it's a double-edged sword. Right? Some people would
17 say, and we are criticized for this all the time, if we're, if
18 we're consistent, we're not flexible. And if we're flexible,
19 we're not consistent. Right.

20 So, it depends which one of those arguments you want to, and
21 which side of the fence you're sitting on. So, in one respect,
22 having the same inspector go down is good for the operator because
23 it's a consistent inspection.

24 They get to know each other. He gets to know the boat. You
25 could find things that are out of place easier. You know, that's

1 one way to think of it. The other way to think of it is if the
2 same inspector goes down there and they're not diligent, they
3 could be walking past this, everybody can't know everything.
4 Right?

5 So, the, there's some validity to the different set of eyes,
6 even though it drives the industry crazy, but they'll say, geez,
7 every 3 years we have to train a new inspector. Right? But I can
8 remember the first time I went to T-boat and started looking at
9 the engineering stuff a little closer because it had been
10 inspected for years by a bosun mate.

11 Not that he wasn't good, but he wasn't looking at what I was
12 looking at. Right? So, I would say, it's a double-edged sword.

13 Q. Okay. Fair enough. Speaking of inspectors, we've learned
14 that each inspector gets a qualification based on the type of
15 vessel that they're inspecting, whether it be T, K, barge, et
16 cetera. Is there a differentiation in inspector qualifications
17 between wood boats and non-wood boats? Or is it all one
18 qualification? If you don't know then --

19 A. Well, no. No, it has come up and there have been
20 recommendations in the past based on wood boat casualties. I
21 believe right now that it's one T-boat qual and not a separate
22 wood dry dock qual.

23 In other words, there's a dry dock -- I shouldn't say it that
24 way. When I think of wood boats, I think of dry docks. But
25 there's a dry dock inspection qualification. But when you get, on

1 big ships there's a dry dock qual and a hull qual and a machinery
2 qual.

3 On T-boat, you get a T-boat qual that should enable you to do
4 everything that you need to do on a T-boat, the machinery, the
5 deck topside and the, and the dry dock. I believe there have been
6 recommendations in the past because it is getting very specific
7 like on framed vessels, but I believe it is not a separate qual
8 right now.

9 Q. Okay. The last question I had is, we went out to Southern
10 California and looked at a lot of different boats, dive boats.
11 And one of the things we found is, there's very little, actually
12 there's no new builds for overnight T-boats happening. Again,
13 this is with overnight accommodations.

14 A. Right.

15 Q. For various reasons. Is that something you have seen
16 nationwide in your travels as a T-boat, looking at T-boat or --

17 A. Now you're saying T-boats. You don't want that --

18 Q. With overnight accommodations.

19 A. All right. So, a T-boat is a small passenger vessel. You
20 don't want to include K, which is also a small passenger vessel?
21 You want to stay at that --

22 Q. Well, let me ask it in two parts. T-boats and then T and K.
23 Can we look at it from that perspective?

24 A. Okay.

25 Q. What I'm getting at, if I can interrupt you for just a second

1 --

2 A. Go ahead. Go ahead.

3 Q. -- is you mentioned that, you know, the age of, I think,
4 plank-on-frame boats is aging.

5 A. Yes.

6 Q. Have you seen that same thing with the overnight Ts, an aging
7 fleet?

8 A. I would say, I can't, I can't make an opinion about T-boats
9 with overnight accommodations because it's the bottom of the tier.
10 So, in other words, the boats that had the accident and that
11 you're looking at now are specialized. Right?

12 They're for offshore fishing, far enough away to get the good
13 fish. And they're for diving. Right? So, they're, it's a really
14 niche. Right? There's only 300 or so vessels. Right? So, I
15 can't say that I'm up on that market to know whether they're
16 building new boats or old boats.

17 But in the small passenger vessel world, there are K vessels
18 still being built for, there's a lot of activity on the western
19 rivers system, overnight boats. I mean they can, a lot of those
20 are K, not necessarily H, right.

21 And there are vessels up on the, Pacific Northwest, that is
22 Snake River and the Columbia River and, you know, so there are
23 inland vessels that do that. I know that they are also vessels
24 that do the coast.

25 And they try to build them to K, right, so that they're in

1 the least regulatory regime. Right? Non-SOLAS, domestic only.
2 There's a couple of cruise lines that, you know, do the coast,
3 come into Chesapeake Bay.

4 So, I would say that the, I think the profit, you have to
5 build a big enough boat to have enough overnight accommodations
6 for it to be worthwhile. I don't know that anybody's building
7 overnight accommodation boats out of wood, right, using that
8 construction technique.

9 All the boats in the K fleet, because they're over 49
10 overnight, and over 150 are steel alone. Right?

11 MR. EHLERS: Okay. All right. Thanks. That's all I have.

12 CAPT NEUBAUER: I just have one follow-up. If we can revisit
13 applicability for 181 just one more time?

14 MR. CRUDER: Sure.

15 CAPT NEUBAUER: Because I want to make sure I get it right.

16 MR. CRUDER: 181?

17 CAPT NEUBAUER: 181 in new T. Where it says, it sends you to
18 old T except for these specific vessels, 181.400 applies to
19 existing vessels, which is the fixed firefighting paragraph.

20 MR. CRUDER: Let me get to the right place, all right? Yeah,
21 but I, now I'm in, I'm in Applicability. This is the line of
22 questioning that [REDACTED] went through.

23 CAPT NEUBAUER: Yes, sir. Yeah. It's just a follow-up from
24 his question. So, --

25 MR. CRUDER: Yeah. And I answered it, I think the final

1 answer was yes.

2 CAPT NEUBAUER: Yes, 400. But so, what sends, what makes 405
3 applicable to existing vessels? That's where the detection is.

4 MR. CRUDER: 405 is where the detection is.

5 CAPT NEUBAUER: Or does it, or --

6 MR. CRUDER: Or wait. Wait --

7 CAPT NEUBAUER: Go ahead.

8 MR. CRUDER: Okay. Let me just take it for a second because
9 [REDACTED] took us down that path, so I want, yeah, so I want --

10 CDR [REDACTED]: I see where he's going.

11 MR. CRUDER: So, 405 would tell you that a vessel inspected
12 to new T requires an independent modular smoke detection alarm
13 unit in accordance with 450. Right?

14 CAPT NEUBAUER: Yes, sir.

15 MR. CRUDER: So, old T. And the existing vessel made of wood
16 must comply with the requirements of 181.400 before 1999. So, --

17 CAPT NEUBAUER: So, are they --

18 MR. CRUDER: -- that's the fixed, that's the fixed
19 firefighting. Right?

20 CAPT NEUBAUER: Right. Or are they including all of Subpart
21 D?

22 MR. CRUDER: No, 181.400 --

23 CAPT NEUBAUER: It's pretty specific.

24 MR. CRUDER: It's just, 181.400 is just fixed firefighting.

25 CAPT NEUBAUER: Yes, sir.

1 MR. CRUDER: Because before new T --

2 CAPT NEUBAUER: There was none.

3 MR. CRUDER: -- there was no fixed firefighting in fiber, in
4 those vessels.

5 CAPT NEUBAUER: Right.

6 MR. CRUDER: There was no fixed firefighting required
7 anyplace, I don't remember, you know. So, --

8 CDR [REDACTED]: Can I offer some --

9 MR. CRUDER: Please do.

10 CDR [REDACTED]: -- please. So, your book has 405. My book
11 has just 400 for this cite. That's why we had that confusion
12 before. Okay? So, 181.400 had the overnight accommodation space
13 is required to have the smoke detection unit and 181.400(e).

14 So, what happened, in, you have a 2016 version of the regs,
15 and I have a 2015 version. That's why we had a difference. If
16 you look really closely --

17 MR. CRUDER: I picked the wrong one. This is the year they
18 didn't get, put, get the applicability right.

19 CDR [REDACTED]: What happened is 405 got added in 2016.
20 Okay? And so, so, what I'm saying is they, it looked like they
21 took that thing from 400 and put it in 405.

22 MR. CRUDER: [REDACTED], let me see yours for a minute, just so I
23 understand what we're talking.

24 CDR [REDACTED]: Yeah. The reason that's important --

25 MR. CRUDER: Because if this is using the wrong book, I'm

1 only using what I --

2 CDR [REDACTED]: I'm not saying I was using the wrong book.

3 But I think is possible is I think it's possible that --

4 MR. CRUDER: I've heard about this, but I didn't --

5 CDR [REDACTED]: -- the --

6 MR. EHLERS: Captain has the --

7 MR. CRUDER: I didn't realize I picked the wrong book.

8 MR. EHLERS: -- details on this.

9 MR. CRUDER: I stand --

10 CAPT NEUBAUER: He has the other?

11 MR. EHLERS: Yeah.

12 CAPT NEUBAUER: Okay.

13 MR. EHLERS: That's, you know, Captain, this is the, I think
14 when they consolidated, Captain Edwards, remember he talked about
15 this, I think, and can addressed it.

16 MR. CRUDER: So, except as required by the --

17 CDR [REDACTED]: It's the right issue.

18 MR. CRUDER: -- regs section, fire protection --

19 CAPT NEUBAUER: But we all would agree that this vessel
20 needed detection?

21 MR. EHLERS: We do because --

22 CAPT NEUBAUER: Yeah, it's stated earlier. Yeah.

23 MR. EHLERS: -- it's all in old T.

24 CAPT NEUBAUER: Yes.

25 MR. EHLERS: But I think Captain Edwards will talk about how

1 the consolidation --

2 MR. CRUDER: This says the same thing. It says, 181.400.

3 MR. EHLERS: Okay.

4 CDR [REDACTED]: Right. So, what I'm getting at is --

5 MR. CRUDER: The Applicability --

6 CDR [REDACTED]: -- in Applicability refers you to 181.400.

7 But when they did the 2016 reg change, its kind of messed it up
8 where it doesn't align with the applicability anymore.

9 MR. CRUDER: Wait a minute. My applicability says the same
10 thing yours does.

11 CDR [REDACTED]: It does. But they didn't, but then yours
12 added 405, instead of, like that part that's in 405, it's in 400
13 in the regs before 2016.

14 MR. [REDACTED]: So, there was a technical error.

15 MR. CRUDER: Oh, that's what I want to see.

16 MR. [REDACTED]: Yeah. So, there was a technical error in the
17 qualification.

18 MR. CRUDER: No, no. That makes a big difference.

19 CDR [REDACTED]: That's why we had that --

20 MR. CRUDER: [REDACTED], why didn't you tell me to bring the right
21 book this morning. All right. So, that --

22 CDR [REDACTED]: I didn't even --

23 MR. CRUDER: So, let me, let's go to --

24 CDR [REDACTED]: To be honest I just found that out.

25 MR. CRUDER: Let's go to 181. So, what you're telling me, if

1 I go to 181.400 in your book in 2015, I'm going to find the
2 detector?

3 CDR [REDACTED]: Yeah.

4 MR. CRUDER: Is that you're going to tell me?

5 CDR [REDACTED]: Yeah.

6 MR. CRUDER: All right. Give me a minute.

7 CDR [REDACTED]: Look 400(e). It was --

8 MR. CRUDER: All right. All right.

9 CDR [REDACTED]: -- saying the same thing, right?

10 MR. CRUDER: All right.

11 CDR [REDACTED]: Yeah.

12 MR. CRUDER: So, if this is a mistake, wait, we've got to go
13 between 1996 and now. We could look at every book. So, that
14 means to clarify your question, this vessel, which is an existing
15 T-boat, is required to have the modular smoke detection in
16 overnight space. Right?

17 CAPT NEUBAUER: Okay. Thank you.

18 CDR [REDACTED]: Thanks. Very good. Moving on. Sorry.

19 MR. TUCKER: Oh, my turn?

20 MR. EHLERS: Yes, sir.

21 MR. TUCKER: All right. Some follow-ups again, Adam Tucker
22 with the NTSB.

23 MR. TUCKER: And a little concerned based on a couple of
24 analogies painted here. So, we spoke of the marine inspector
25 factually as Drew had pointed out, the same marine inspector went

1 onboard the *Conception*, I think three to, three times? Three to
2 four times?

3 MR. EHLERS: Four times.

4 MR. TUCKER: Four times.

5 MR. CRUDER: Four annuals?

6 MR. TUCKER: For the annual.

7 MR. CRUDER: Four annuals in a row?

8 MR. EHLERS: Right. Following, he also was a party, he was
9 one of two for the COI inspection.

10 MR. CRUDER: Okay.

11 BY MR. TUCKER:

12 Q. All right. So, we talked to rotations and we understand, and
13 we've learned that if the MSD is small, as well and you don't have
14 20 inspectors available to you. I totally understand that. But
15 what got me, is you specifically mentioned going into an engine
16 space and that was unfamiliar to a, somebody because you reentered
17 that space and normally that didn't happen.

18 And so, being a deckie that I am, I'm not really so good
19 going down in engine spaces. And I'm really, really not good at
20 looking at wires and cabling and picking out what's, what is
21 compliant and what's not.

22 The question is this, there's only one T-boat qualification,
23 and I understand that there is the MIC and the marine inspector's
24 course. So, does that, if I went to the marine inspector course,
25 does that make me effective at looking at machinery and

1 electrical, especially electrical as an inspector?

2 In other words, if I go to that course, am I good to go, or
3 what are your, what's your, that's my question. Yeah.

4 A. To be accurate, you would have to talk to the school about
5 what the current curriculum is. All right. But my understanding
6 is that they teach Part 183, as part, I mean they teach 175 to
7 185. Right?

8 I don't know, I can't answer on whether they teach, you know,
9 how good people are at picking anomalies. They will teach
10 compliance with 183, right, the electrical section, so that's what
11 they teach.

12 And I think, you know, if you need, I haven't sat in on their
13 course in a long time, but my expectation is that they go through
14 the regs in 183, and they talk about those different requirements.

15 Q. Okay. And I apologize if I put you on the spot.

16 A. No, no, no. Look, it's, there's all different systems. I'll
17 give you a different example. We have guys that are electrical,
18 they're electrician. There's an electrical route. Right? They
19 come from the enlisted ranks and their EMs, electrician's mates.

20 You know that with the Navy come T-boat inspectors. They run
21 right to the electrical. Right? So, --

22 Q. Yep. And that's, that's kind of where I was going as well
23 as, being from the deck side, my instinct would be go to head
24 straight to the wheelhouse or something like that.

25 A. So, your instinct was, well it did, before I went down that

1 engine room was, show me the engine's go ahead and disturb from
2 the pilothouse.

3 MR. TUCKER: Yeah. We had someone join the call, I believe
4 or some --

5 MR. MUISE: That was, does, anyone new on the line?

6 MR. BARNUM: Yes, this is Bart Barnum, NTSB. I was able to
7 get back on. I was dropped earlier.

8 MR. TUCKER: Okay. Thanks Bart. All right. Something else
9 that

10 BY MR. TUCKER:

11 Q. All right. Something else that got my attention, just to
12 back up is so again, I'm not a Coastie, no background, officer in
13 charge of marine inspection, but the officer in charge of marine
14 inspection does not have to have any inspection qualifications.

15 Is that correct? We, and if you don't know, you don't know.
16 But I think you mentioned they can be from any background.

17 A. I believe that --

18 Q. They can be a flyer or something --

19 A. I believe that is true. There was a screening for a command
20 process that you'd have to look into, but I do not believe that
21 there is a requirement that they have marine inspection
22 qualifications.

23 MR. EHLERS: Okay. And Captain Edwards can also answer that.

24 MR. CRUDER: Yeah, he's the --

25 MR. TUCKER: Oh, okay. I'm sorry.

1 MR. CRUDER: Yeah. No, that's all right.

2 BY MR. TUCKER:

3 Q. Metrics, do you, do you, are you, as a traveling marine
4 inspector, are you privy to any type of metrics, for example, x-
5 amount of boats have been inspected? And all of them have gotten
6 a reissuance of a COI.

7 And x-amount of boats have been inspected and they either got
8 no sails or detentions or, is there any type of that metrics
9 flowing through you?

10 A. No.

11 Q. Okay. Again, and would have led into my next question is,
12 because --

13 A. I'd refer that to Captain Edwards, as the program --

14 Q. Okay.

15 A. Yeah, we're not, you know, in the past, the travelers have
16 been involved in metrics and things too, that, you know, there was
17 a revitalization of the marine safety program, you know, after the
18 Oberstar hearings in 2006.

19 And for a while we were pushing the program and that, you
20 know, a lot of the things we do, a lot of the work we do supports
21 the Office of Commercial Vessel Compliance. So, we have on again,
22 off again over the years probably have done that.

23 Q. Right.

24 A. But that's not routinely part of what we do.

25 Q. Okay. Because my question would have been in that respect is

1 sometimes when we, when there's visual on metrics and everything's
2 good and there's nothing really wrong, that, I'm talking for
3 myself, is maybe, we should take a deeper look at this because
4 everything's good in here and we expect that there's going to be
5 wrong in here at some time. So, but I'll table that for --

6 A. Captain Edwards.

7 Q. Captain Edwards? Yep. Curious because just your background
8 and you've seen a lot of vessels, is have you seen a lot of
9 owners/operators with safety management systems for vessels,
10 overnight T-vessels similar to the *Conception*?

11 A. There's no requirement for safety management systems on
12 Subchapter T-vessels. I would say I have not been on a boat that
13 has any kind of system like that. The Passenger Vessel
14 Association is in the middle of a beta testing a program, but
15 their constituency are really the over 150 passenger boats.

16 Q. Right. Okay.

17 A. They derive from the western rivers and paddle boats.
18 Anyways, they don't have a lot of small T-boats. Right? So,
19 although there, in the past there have been, there's a streamline
20 inspection program that's national that's been applied to T-boats.

21 There is a modified version of that, that was working on the
22 West Coast, that was good for those 85-foot or so boats. But that
23 program was all about keeping track of the regulatory compliance
24 issues only, not the full umbrella of safety management.

25 So, the answer is no. I have not seen safety management

1 systems on small vessels, voluntarily.

2 Q. Okay. I'm getting down there. We spoke of rapid evacuation.
3 Is there a definition of rapid evacuation? Like a, I'll give you
4 an example. I think I have it on the -- on a commercial aircraft,
5 passenger-carrying aircraft, I think, 90 seconds is kind of the
6 golden rule for --

7 A. [REDACTED] mentioned some verbiage that's in the escape section,
8 and we can turn to it in new T. It talks about being able to, it
9 describes it. I'm not aware of a performance spec, either in
10 regulation or policy that relates to T-boats, on escape.

11 Q. Okay. And the MSC course, I understand you referenced a
12 certain, what they're training to, but you mentioned a couple of
13 vessels that they have there available to them for the marine
14 inspector to go through some --

15 A. Yes.

16 Q. -- scenarios in training. Curious, are any of those
17 overnight accommodation type vessels?

18 A. No.

19 Q. Okay. So, in, within that curriculum they're not, there's
20 not an opportunity to look at bunk spaces and bunk rooms or
21 accommodations spaces?

22 A. The boat on the hard is a day boat.

23 Q. Sorry, say again?

24 A. The boat that's on the hard is a day excursion configuration
25 boat.

1 Q. Okay.

2 A. And the sailboat is a day configuration boat.

3 Q. Day, okay. Another clarification question, is, we spoke a
4 lot of fire-retardant material, and specific, I just want to be,
5 wanted to ask, you mentioned on the inside there's no requirement.
6 What, is there any requirement for fire retardancy on the
7 interior, on the inside of the hull?

8 A. On a wood vessel?

9 Q. On a wood vessel.

10 A. And on a T-boat?

11 Q. Yes.

12 A. No.

13 Q. Okay. Background in traveling inspector is, do you, do
14 anybody reach out to you for interpretations?

15 A. Of regulations and policy?

16 Q. Yes.

17 A. Yes.

18 Q. Okay. And specific to vessels like the *Conception*,
19 overnight, built in '81, do you have, or have you made an
20 interpretation specific to that type of vessel?

21 A. Not specific to an overnight boat carrying less than 49 made
22 of wood.

23 Q. Okay. And in T-boats, in general, any interpretations that
24 would have applied?

25 A. To?

1 Q. To a vessel similar to *Conception*?

2 A. Not with, not with respect to, I haven't had anybody, I
3 haven't experiences where people have asked me to interpret
4 overnight accommodation issues.

5 Q. Okay.

6 A. If that's what you're focused on.

7 MR. EHLERS: Yeah. I've got one for the last, everyone here
8 knows what that is, but I'll save that for last. Bart?

9 MR. BARNUM: No. Thank you, Mr. Cruder. Again, I have no
10 follow-up questions. Thank you.

11 MR. CRUDER: Could I just make a point about the overnight
12 accommodation? I haven't been asked, I mean I could ask other
13 people, but I haven't been asked because it hasn't come up. It's
14 not that I wouldn't engage if I was asked. But you asked if I
15 ever had been.

16 So, I haven't. And I think that's indicative of what the
17 history is on these boats. Not that influences anything. We've
18 had an accident. We understand that, but I don't think there was
19 any over focus on that during the rulemaking. So, --

20 MR. TUCKER: Great. I just have one follow-up for you.

21 MR. EHLERS: No, you can do that. I'll ask the last one.

22 MR. TUCKER: Okay. Okay, good. Well, my follow-up is you,
23 we'd asked about would a marine inspector be ready to go for an
24 electrical inspection after MIC, marine inspector course. But
25 would there be any other requirements before an inspector would

1 start doing inspection, that you're aware of?

2 MR. CRUDER: All right, so --

3 MR. TUCKER: On their own.

4 MR. CRUDER: Well, they probably would not be prepared to do
5 a plan review of a, of a one-line AC or DC system for the purpose
6 of approving the modification. But they certainly would be able
7 to inspect the vessel.

8 But when they come from MIC, they may or may not have been
9 qualified before they went to MIC. So, they have to go through
10 the OJT portion of the training, so that they get out on vessels
11 with a qualified inspector.

12 And then they have to sit through a qualification board.
13 Well, they have to get their performance qualifications system,
14 PQS signed off, right, which means they have to have to an
15 opportunity to be questioned about electrical things, answer
16 correctly, get the verifying officer to sign it off.

17 When everything is signed off and they have a T-boat qual
18 board, they will sit through something that's at least an hour or
19 two that determines whether or not the training officer and the
20 chief of inspection feel the person's qualified.

21 Not until they get the qual letter do, they go out. So, it's
22 not, I guess what I said, that it's not just, MIC is the book
23 learning piece of the thing. Right? So, it doesn't mean, they
24 don't start doing it on their own until they had the qual.

25 LT [REDACTED]: Could you just quickly clarify for the record,

1 OJT and PQS, the terms that you just used?

2 MR. CRUDER: On the job training, so the practical factors,
3 if you will. And PQS, I think is performance qualification
4 system, PQS.

5 UNIDENTIFIED SPEAKER: I'm not exactly sure.

6 MR. TUCKER: I think it's professional qualification
7 standard, but I, we can look that back.

8 MR. CRUDER: Bottom line is that is a, if we looked at a PQS
9 booklet, it would be all the things in the regulations for a T-
10 boat and there'd be a knowledge requirement and a demonstration of
11 knowledge requirement that would get signed off.

12 And then when you went to the qual board, qual boards usually
13 focus on scenarios, and see how the person reacts.

14 CDR [REDACTED]: Okay. I just have one. Okay. This is CDR
15 [REDACTED].

16 BY CDR [REDACTED]:

17 Q. And just one question. Marc, you mentioned that you weren't
18 sure about the T-boat qual breaking down between wood boat and
19 other hull types and stuff like that. One thing I wanted to ask
20 you, do you of ports that the Coast Guard operates in that don't
21 have wood T-boats?

22 A. Absolutely.

23 Q. All right. And so, if somebody is working in that OCMI and
24 has to get a T-boat qual, which it's quite possible they'd have to
25 get a T-boat qual in a place that doesn't have wood boats. Right?

1 A. Wood boat.

2 Q. So, have you ever seen a T-boat qualification letter that
3 excludes wood boats because of that?

4 A. No, but that would be possible. And I say that only because
5 we, when I was a training officer, if we only had Subchapter D
6 barges, and I couldn't qualify somebody on a Subchapter O, which
7 is hazardous chemicals, then they would only do petroleum barges.
8 Right?

9 So, that is within the OCMI's ability to do. I'm out of
10 touch with the details of the PQS. But if you, if you had a crew
11 boat inspector from New Orleans, suddenly gets stationed in
12 Portland, Maine, he would have some difficulty with the wood boat
13 inspection.

14 Q. Okay.

15 A. And they should check that out and not let him out on that
16 boat, and I'm comfortable with that.

17 Q. And to follow on that, can you tell us what a MITO is?

18 A. Marine inspection training officer.

19 Q. And so, do we have one of those in each of the major ports?

20 A. In major ports. Not in every port.

21 Q. Okay. And to they coordinate together?

22 A. They are a network that meet and --

23 Q. Okay. So, would it be in the MITO's best interest to
24 communicate with each other if somebody hasn't been trained on
25 wood boats, that has a T-boat qual?

1 A. I think that would be a source to find out, with a training
2 background. It's always incumbent on the, when somebody goes to a
3 new port, and this happened before there were even MITOs even in
4 my time, if they came from someplace, you'd sit them down first.

5 You'd look at their qual books, their qual letters and you'd
6 ask about their experience, because if all of a sudden they were
7 in a port that a different focus, you came to L.A. before it
8 altered in compliance, you were doing tankers.

9 And so, if they never did a tanker, you weren't going to send
10 them out there.

11 Q. And just for the record, who is the MITO coordinator right
12 now?

13 A. Keith Core (ph.) in the, in commercial vessel sailing.

14 Q. All right.

15 A. Commercial vessel compliance, CVC1.

16 CDR [REDACTED]: That's it. Thank you.

17 MR. EHLERS: Okay. LT [REDACTED], any questions?

18 LT [REDACTED]: Yeah, this is LT [REDACTED]. No, no questions.

19 Thank you.

20 MR. EHLERS: All right. Well, the last question is sometimes
21 the most important.

22 MR. CRUDER: Okay. Then ask. I'm sorry, do you --

23 MR. EHLERS: No.

24 LT [REDACTED]: Please sir, ask.

25 BY MR. TUCKER:

1 Q. Yeah, this is Adam Tucker. My, I'd say it's my last question
2 but it's going to broken down into two, so it's now. Is there
3 anything that we have not asked you that you feel would be
4 important to share with us related to this specific accident and
5 this specific investigation?

6 A. That's it.

7 Q. Am I to read the entire thing or just the highlighted?

8 A. I would start with the highlighted.

9 Q. For the record, Mr. Cruder has handed us an email, paper
10 copy.

11 A. And it's a paper copy of what you would find in the final
12 rule that's the definition of why they put a definition for wood
13 vessel in the regulations after the interim final rule went out.

14 Q. So, what we're reading here is, this is an email, March 11th,
15 1997 from --

16 A. Or shares or find it in a different venue.

17 Q. -- Christenson to --

18 A. Right. He was the final project manager.

19 A. -- George Detweller.

20 A. Yeah, who was the lawyer. These were people reviewing the
21 documents. Don't focus on where it's from because I can give you
22 that verbiage exactly in a different document, which I probably
23 should do.

24 I just had that with me, so I have it convenient.

25 Q. All right. So, I'm just going to read the sentence then.

1 A. Go ahead.

2 Q. Many wood vessels that have been constructed using cold
3 molded, edge-glued epoxy FRP over flywood -- plywood, sorry, and
4 other composite construction techniques that do not rely on
5 mechanical fasteners to maintain hull integrity.

6 Next sentence. Although these vessels are constructed or are
7 considered wood vessels for the purpose of certification, they
8 will not be required to meet the additional subdivision and
9 lifesaving requirements contained in Parts 179 and 180,
10 respectively. So, can you --

11 A. So, what I wanted, what I want to do is, there's another
12 document here. I do it this way because generational. When
13 Captain Christensen was a lieutenant, he went to the Passenger
14 Vessel Association on Industry Training.

15 And it was in the middle of this rulemaking. And they
16 decided at the end of it, that the passenger vessel association
17 said, look, we need to take all the preambles and put them in one
18 place, because that is the discussion with the public all over the
19 way.

20 So, it's called the TK Guide. I have it in hardcopy here.
21 It's electronic. We can get you a copy. It's easier than, my
22 other binder is all of the actual regulations. So, let me go to
23 wood vessel in the TK Guide.

24 So, this is in the TK guide on Page IV-16. Okay. And this
25 has to do with, this beginning of this section is definitions

1 under 175-400. All right.

2 So, if you go to 175-400 in this TK Guide, or if you have a
3 copy of the notice to proposed rulemaking, and the supplemental
4 notice, and the interim final rule and the final rule, if you had
5 them all laid out in front of you when you followed 175-400, you
6 could follow the discussion of why we put certain definitions in
7 the regulations, aside from the actual definition itself.

8 So, this is all in one place so it's easy to follow. So, I
9 can start with the 89 NPRM, then there's comments about what
10 should be added. And it continues. And we get all the way to the
11 last additions, which are in the 1997 Final Rule, which starts on
12 Page IV-13.

13 The very last definition that was added was wood vessel. So,
14 Adam, I would just ask you to take a look at the sheet that I gave
15 you while you're, while I'm reading to you.

16 Q. Yep.

17 A. Number 16, the Coast Guard has added a definition for wood
18 vessel to Subchapter T to clarify which types of wood construction
19 are subject to additional subdivision and lifesaving requirements
20 presented in the IFR, the interim final rule.

21 The casualty data throughout used, used throughout this
22 rulemaking to justify the need for additional requirements for
23 vessels constructed of wood shows that the vessels involved were
24 built with traditional, using traditional plank-on-frame
25 construction techniques.

1 This type of construction requires the use of mechanical
2 fastenings to maintain the integrity of the hull structure. The
3 loss of fastener structural integrity can result in springing of
4 one or more planks and lead to catastrophic flooding.

5 It is this type of construction that the Coast Guard
6 determined requires additional subdivision and/or lifesaving
7 equipment requires to provide an equivalent level of safety to
8 steel, aluminum and FRP construction.

9 Many wood vessels have been constructed using cold molded,
10 edge-glued epoxy, FRP over plywood and other composite
11 construction techniques that do not rely on mechanical fastenings
12 to maintain hull integrity.

13 Although these vessels are considered wood vessels for the
14 purpose of certification. And if you look at the certificate on
15 the *Conception*, under hull type, it will say, wood, because
16 there's only so many choices.

17 But they do not have to meet the additional subdivision and
18 lifesaving requirements contained in Parts 179 and 180,
19 respectively. What I would like to just pass on to you is that
20 the boat is constructed of wood.

21 And I think the inspection note that [REDACTED] brought up said it
22 was a -- maybe you didn't bring that up.

23 CDR [REDACTED]: No.

24 MR. CRUDER: There was an inspection note that says it is a
25 fiber --

1 CDR [REDACTED]: I got it. Around -- do you want me to read
2 it?

3 MR. CRUDER: Yeah, read it.

4 CDR [REDACTED]: Yeah. One second here. I've got it. I
5 printed it out. Let's see. So, it says, fiberglass, reinforced
6 plastic over plywood with nonstructural bronze screws.

7 MR. CRUDER: So, that's an inspection doc. You put
8 inspection notes in if you want people to, it's something you
9 always check when you're doing inspections. Maybe there's
10 something unique about this vessel or you've made a decision, so
11 you put a note in.

12 It could last for, until the next dry dock. It could last
13 for 20 years. So, this boat, if you look at the certificate, it's
14 wood. But it's not plank-on-frame. So, if you're building a boat
15 with sheets of 4 by 8 plywood, there's a lot of boat that has to
16 come apart for you to have a breach of the hull integrity.

17 So, it's a different level of risk. Now the applicability
18 here focuses to subdivision and lifesaving. But this boat's got a
19 100-mile route offshore. It didn't get any benefit from being
20 constructed this way.

21 If it was in a lesser route, it would have to carry less
22 primary lifesaving. This boat carries 100 percent life float
23 because it has subdivision. But it has subdivision because it's
24 over 65 feet.

25 If it was less than 65 feet, it would, it would, it would

1 have got more of a break. All right. But I just want you guys to
2 understand that, this is a plywood boat. It can't come apart the
3 same way a plank-on-frame boat come apart.

4 Now there are boats that were constructed where people took
5 plywood, which by the way, has laminations of glue, that is not
6 fire retardant in it. Okay? That's why the glass on the outside,
7 if you think of the whole thing holistically, you're, you're
8 operating with a certain level of risk or not risk.

9 From a construction standpoint and a watertight integrity
10 standpoint, you're not going to pop a plank on a plywood boat. In
11 a plywood boat with fiberglass on it is going to show that it's
12 got problems.

13 The fiberglass is going to start not adhering if there's a
14 problem with water intrusion under the fiberglass. So, it's
15 actually an easier boat to inspect, but it's not going to come
16 apart the same way.

17 And this note tells me that the frames, may in fact, be glued
18 to the outside plywood. Which means that you could put any kind
19 of fastening in there. It's not fastening or pulling. So, the
20 integrity of the boat probably, thinking about this fire, that
21 probably helped you have what you have remaining because it didn't
22 sink. You know what I mean?

23 But I just want you to understand. So, a wood boat, but it
24 doesn't meet the definition of wood vessel in the regulation and
25 that's there for other reasons. So, we needed to do that.

1 The risk are the 50-year-old average plank-on-frame boats,
2 mechanically fastened because about every 30 years or so, even in
3 the best boats, it's time to refasten. And a plank-on-frame boat
4 can be rebuilt. When you rebuild a plywood and glued boat, you're
5 going at it with a Sawzall. It's not that it can't be rebuilt,
6 it's a different kind of rebuild.

7 CDR [REDACTED]: We have one follow-up on that.

8 MR. TUCKER: Um-hum.

9 CDR [REDACTED]: Can I go ahead?

10 MR. TUCKER: Yep.

11 CDR [REDACTED]: This is CDR [REDACTED] again. Marc, do you
12 have a copy of the COI for *Conception*?

13 MR. CRUDER: I do.

14 CDR [REDACTED]: Can you just take a look at it? Do you see
15 anything on there about the fasteners? I just want to --

16 UNIDENTIFIED SPEAKER: Did you get my (indiscernible) --

17 MR. CRUDER: Okay.

18 CDR [REDACTED]: Yeah. That's what, I just wanted you to
19 check. Right?

20 MR. CRUDER: Okay. So, we can't always say that the unit
21 will get the admin piece right. But this supports what I just
22 said. On the second page, you have the hull exam. Am I right?

23 And if there were, if there was fastener pulling, there would
24 be entries on that.

25 UNIDENTIFIED SPEAKER: Yeah.

1 CDR [REDACTED]: Right.

2 MR. CRUDER: When pulled, because it's basically every other
3 dry dock, the NVIC says 5 years. It's 5 to 6. I do not see
4 anything in here that has to do with fastening pulling schedule.

5 CDR [REDACTED]: That's good. And I'm going to read the last
6 part of the special note about the hull type.

7 MR. CRUDER: Go ahead.

8 CDR [REDACTED]: I mentioned before that it says, fiberglass
9 reinforced plastic over plywood with nonstructural bronze screws.
10 At the end of that line it says, last removed for examination, NA,
11 not applicable. Okay. What does that mean to you? Does that
12 mean the same thing or does that mean something else?

13 MR. CRUDER: Yes. Because if you look at the history of that
14 boat, I think there's another note in there that says, they
15 refastened the boat after a rebuild, the previous dry dock. And
16 then when the next guy got on there, he said, wait a minute.

17 This is glued and covered, and it doesn't have to have
18 fastenings pulled again.

19 CDR [REDACTED]: So, everything does line up that you --

20 MR. CRUDER: It lines up.

21 CDR [REDACTED]: Okay.

22 MR. CRUDER: On that part, yeah.

23 CDR [REDACTED]: Okay. Okay.

24 MR. CRUDER: And it lines up with the wood boat definition.

25 CDR [REDACTED]: Thank you. Thank you.

1 MR. TUCKER: Well, that was my last question was, yeah, and
2 thank you for providing that.

3 MR. CRUDER: So, I gave you that one. I want to take that
4 one back.

5 MR. TUCKER: Yes. Yep.

6 MR. CRUDER: I want you guys to -- the TK Guide, we can, I'm
7 sure we have an electronic copy. It's a public, it's something we
8 give the inspectors. If they wanted to see that, it's much easier
9 -- you know, my legal counsel here did it by going online and
10 sending me pieces of the preambles before I told him I had a TK
11 Guide, which he's not an inspector, so he wouldn't know that
12 there's such a thing. Inspectors all know that this is here.

13 So, they can go back sometimes on an existing boat and go,
14 you can get, there's more -- this is the same discussion as in the
15 preambles, but it's not likely everybody would have a copy of
16 them. I have them in a binder because I've been here for 18
17 years. But if everybody -- everybody has access to this. If you
18 want to find out what were they think on escapes, there's a really
19 good discussion in there on escapes. Unless you guys sit and read
20 every reg, you'll find it easily by looking in this guide. It
21 would help you.

22 MR. TUCKER: Is the TK Guide discussed at the MIC course?

23 MR. CRUDER: Yes. Absolutely.

24 MR. TUCKER: So, I guess, so I had a lot of time to digest
25 and I know you don't have any personal experience with the boat,

1 but just asking now for an opinion and you have the deck cards
2 what would, what would you do to make sure that it wouldn't happen
3 again?

4 MR. CRUDER: I knew he was going to do that.

5 MR. TUCKER: Yeah.

6 MR. CRUDER: This is typical of a lot of accidents. There's
7 no casualty history except in this. It doesn't make it any less.
8 Are there, are there places to improve, you know, that might have
9 prevented it?

10 You know, I think it's, I think it's hard to say because it's
11 not the boat this time, really. If one person was up that night
12 doing what the certificate said, that wouldn't have happened. So,
13 it's, it's hard to say.

14 I think there's always to improve the regulations, but the
15 operating environment includes risks. So, there's, even if you
16 did a rulemaking, there's economic analysis, otherwise there'd be
17 no economy. This is part of the economy.

18 So, there is an economic piece and there is a human element
19 piece. So, and then there's the size of the boat and how much you
20 can do and how much cost benefit there is, how much safely you
21 would make it. So, it only takes one accident.

22 So, it as safe as is, but if somebody was up, and if it
23 happened on that deck, and if it was the combustible trashcan,
24 somebody would have been up and seen that. Could you have a fire
25 detection system that's wired to a panel?

1 It's got to be where the guys are sleeping. It's got to be,
2 you know, other improvements. Yeah? Are they cost effective
3 based on the casualty analysis? Don't know. That's what a
4 rulemaking would tell you.

5 MR. TUCKER: Thank you very much again.

6 MR. CRUDER: Thank you.

7 MR. EHLERS: All right. It's not 1439. We're stopping the
8 recording.

9 (Whereupon, at 2:39 p.m., the interview was concluded.)

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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

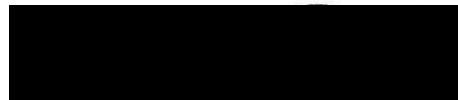
IN THE MATTER OF: FIRE AND SINKING OF THE CONCEPTION
WITH LOSS OF LIFE NEAR
SANTA CRUZ ISLAND, CALIFORNIA
SEPTEMBER 2, 2019
Interview of Mr. Marc Cruder

ACCIDENT NO.: DCA19MM047

PLACE:

DATE: December 11, 2019

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.



Romona Phillips
Transcriber

Errata

Interview of Mr. Marc Cruder

<u>Page & Line</u>	<u>Correction</u>
P.1:	Job title of Witness change to “Traveling Senior Marine Inspector”
P.12 – Line 23:	Change “sheeting” to “sheathing”
P.13 – Line 4: Line 13: Line 24:	Change “sheeting” to “sheathing” Change “sheeting” to “sheathing” Change “sheeting” to “sheathing”
P.14 – Line 1: Line 2: Line 4: Line 8: Line 10:	Change “sheeting” to “sheathing” Change “sheeting” to “sheathing” Change “sheeting” to “sheathing” Change “co-molded” to “cold-molded” Change “plycon” to “plank-on”
P.15 – Line 9: Line 18: Line 21: Line 22: Line 23:	Change “sheeting” to “sheathing” Change “887” to “8-87” Change “887” to “8-87” Change “sheeting” to “sheathing” Change “sheeting” to “sheathing”
P.16 – Line 1: Line 2: Line 6: Line 6: Line 9: Line 10: Line 19:	Change “887” to “8-87” Change “795” to “7-95” Change “795” to “7-95” Change “sheeting” to “sheathing” Change “sheeting” to “sheathing” Change “sheet” to “sheath” Change “roots and condition” to “routes and conditions”
P. 17 – Line 17:	Change “roots and conditions” to “routes and conditions”
P. 23 – Line 11:	Changes “sheeting” to “sheathing”
P.25 – Line 17:	Change “now” to “not”
P.27 – Line 11:	Change “NVI2” to “MVI-2”
P.30 – Line 23:	Change “might be” to “might not be”
P.34 – Line 18:	Change “traffic” to “draft”

P.39 – Line 18:	Change “ultimate” to “alternate”
P.41 – Line 14:	Change punctuation to: “right now civilian inspectors in addition. That’s the headquarters traveling inspection staff.”
P.41 – Line 8:	Change “G-, CG-5(p)” to “CG-5P”
P.46 – Lines 24-25:	Change “to come you” to “you to come”
P.50 – Line 1:	Change “big boat bosun mates , machinery technicians” to “be bosun mates or machinery technicians”
P.54 – Line 24:	Change “NPR” to “SNPRM”
P.57 – Line 11:	Change “on” to “no”
P.71 – Line 1:	Change “codes in” to “the cognizant”
P.76 – Line 7: Line 9:	Change “sheeting” to “sheathing” Change “sheeting” to “sheathing”
P.78 – Line 21:	Change “conductive” to “conductor”
P.83 – Line 11: Line 12:	Change “IMOS” to “OCMIs” Change “IMO” to “MIO”
P.87 – Line 19:	Change “sails” to “sales room”
p.88 – Line 3:	Change “A” to “H”
P.89 – Line 18: Line 18:	Change “ ’87” to “ ’89” Change “ ’89” to “ ’87”
P.90 – Line 15:	Change “leads” to “leaves”
P.95 – Line 7:	Change “framed” to “plank on frame”
P. 101- Line 17:	Change “qualification” to “regulation”
P.105 – Line 1:	Change “disturb” to “astern”
P.108 – Line 11:	Change “MSC” to “MIC”
P.114 – Line 7 & 8:	Change “it altered in compliance” to “the Alternate Compliance Program”
P.117 – Line 1: Line 2: Line 5:	Change “175-400” to “175.400” Change “175-400” to “175.400” Change “175-400” to “175.400”

P.119 – Line 7:	Change “doc” to “note”
P.124 – Line 20:	Change “safely” to “safer”
Line 22:	Change “it” to “it’s”