

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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ENGINE ROOM FIRE ABOARD THE  
STATEN ISLAND FERRY *SANDY GROUND*  
NEAR STATEN ISLAND, NEW YORK  
ON DECEMBER 22, 2022

Accident No.: DCA23FM010

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Interview of: ROBERT SCAMELL, Deputy Director of Maintenance  
Staten Island Ferry

St. George Ferry Terminal  
Staten Island, New York

Wednesday,  
March 8, 2023

APPEARANCES:

CWO [REDACTED], Accident Investigator  
United States Coast Guard

BRIAN YOUNG, Senior Marine Investigator  
National Transportation Safety Board

BARRY TORREY, Director of Ferry Operations  
Staten Island Ferry

ROBERT BANDEN, Warranty Engineer  
Eastern Shipbuilding Group (ESG)

DANIEL J. FITZGERALD, Attorney  
Freehill Hogan & Mahar, LLP  
(On behalf of Staten Island Ferry and New York City  
Department of Transportation)

I N D E X

<u>ITEM</u>	<u>PAGE</u>
Interview of Robert Scamell:	
By CWO [REDACTED]	4
By Mr. Young	27
By CWO [REDACTED]	33
By Mr. Young	36

I N T E R V I E W

(12:06 p.m.)

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2  
3 CWO [REDACTED] Good afternoon. This is Chief Warrant Officer  
4 [REDACTED] [REDACTED] We are here at the Staten Island Ferry terminal,  
5 the St. George Terminal. Time on deck is 1206. Today's date is  
6 March 8, 2023. And we will begin with introductions.

7 MR. FITZGERALD: Good afternoon. Daniel Fitzgerald here with  
8 the law firm of Freehill Hogan & Mahar on behalf of party in  
9 interest New York City DOT and Staten Island Ferry. Spelling of  
10 my last name is F-i-t-z-g-e-r-a-l-d.

11 MR. BANDEN: Robert Banden, warranty engineer, ESG,  
12 B-a-n-d-e-n.

13 MR. YOUNG: Brian Young with the National Transportation  
14 Safety Board, Y-o-u-n-g.

15 MR. SCAMELL: Bobby Scammel from Staten Island Ferry.  
16 Scamell, S-c-a-m-e-l-l.

17 MR. TORREY: Barry Torrey, director of operations,  
18 T-o-r-r-e-y.

19 CWO [REDACTED] Chief Warrant Officer [REDACTED] [REDACTED]  
20 [REDACTED]

21 Before we begin, I just want to get your permission to  
22 record. Do you agree that we record?

23 MR. SCAMELL: Yes, you have permission.

24 INTERVIEW OF ROBERT SCAMELL

25 BY CWO [REDACTED]

1 Q. All right. And could you just begin with explaining your  
2 maritime background?

3 A. Sure. I went to -- graduated from Merchant Marine Academy at  
4 Kings Point in '93. I sailed deep sea for a couple trips and then  
5 I started working offshore for McAllister Brothers tugboats. And  
6 I came here in -- May 1st, '95, and I've been -- this'll be 28  
7 years, May 1st of this year, with the ferry.

8 Q. And when you began your work here with the Staten Island  
9 Ferry, what position was that that you were first --

10 A. So when you start -- back when I started, you had to work as  
11 oiler for at least a full year before you could move up. So I was  
12 a oiler for a year and a half, and then I was assistant engineer  
13 on board, chief engineer on board. Then I moved to port office in  
14 operations, and then I was head of yard crew down at maintenance  
15 facility, and then deputy director of maintenance from there.

16 Q. All right. Could you discuss the engineering design  
17 considerations and some of the input you may have provided for the  
18 Ollis Class vessels?

19 A. So for the Ollis Class is kind of unique for the ferry, is  
20 that they went to all the crews and asked all input, what would  
21 you like to see in this boat? And they had a binder of everything  
22 put together that the crews would like to do. We also had a value  
23 engineering meeting early on in the process and no idea was like  
24 too far out. Like everybody threw out ideas, like different  
25 windows, different coatings, all that kind of stuff. And then

1 there was two naval arch firms plus the Staten Island Ferry, and  
2 then the ACCO's office and engineering audit was there, and  
3 everything got a score. And then we put a cut point on the score  
4 and then if you were above that score, it got incorporated into  
5 the design. So like, you know, it could be as small as like  
6 double-pane argon-filled windows to keep out -- you know, that was  
7 something I think. There was some coatings for the bottom for the  
8 hull that were out there, but it really didn't make sense for us  
9 because we just -- within the harbor it's just too much floating  
10 debris and stuff would have damaged the coatings. So that was  
11 early on.

12 And actually even before that, there was a study to see,  
13 okay, what's the passenger counts going to be and all that kind of  
14 stuff. So, and then they looked at down the road 25 years to say,  
15 okay, we think in 25 years the passenger counts going to go up 1½  
16 to 2 percent or some -- I think that was the number.

17 So we put all that in and then tried to incorporate all the  
18 designs as far as like for passenger flow. So you had open  
19 walkways, and then like the fire windows at the fire break  
20 midships, those were put in there so you can see all the way down.  
21 Just to make it easier -- it makes people walk easier and it's  
22 easier for the crew then to see.

23 Equipment, we wanted to keep as much of the equipment similar  
24 to or the same, if we could, to the equipment we had on the other  
25 vessels so that the learning curve would be -- should be lower.

1 So like the main engines we kept with EMD because for the most  
2 part they were the same Caterpillar gen sets. Even pumps, we went  
3 so far as to -- like pumps, we used Corcoran and SIMS pumps, which  
4 were used throughout the -- all Molinari Class compressors are the  
5 same models, just to try and keep that learning curve down to a  
6 minimum.

7 And then, you know, then it starts going, all right, now we  
8 want to burn as little fuel as possible so we got to get the  
9 efficient hull and -- the Voith units were chosen because that was  
10 also we had -- I think we had five different propulsion scenarios  
11 that were put up during that value engineering. So it was like  
12 one Voith unit per end or two smaller Voith units per end,  
13 controllable pitch propeller, Z-drives. But basically going  
14 through all of the -- the original thing that was pinged out was  
15 four smaller units, but then we did a cost analysis on it and in  
16 the end it ended up being that the best score -- and our score  
17 wasn't so much consumption and economics as much as what's more of  
18 a safety issue and getting in and out. So that's just because all  
19 of our transit is basically, you know, just like pilotage. It's  
20 not going to be underway where you're not really concerned about  
21 quick turns and all that. So that's kind of how we got to the  
22 point where we ended up with the design.

23 Q. And in regard to the fuel system operation considerations,  
24 design considerations, could you discuss that?

25 A. So this one's slightly different than the models we have now.

1 The Kennedy Class that just retired had a similar setup where you  
2 had the storage tanks on either side of the engine room and a day  
3 tank on either side. We use two day tanks just in case there's a  
4 fouling issue in one of them, we still can run with one day tank.  
5 And also we tried to keep things close to what they were before.  
6 I mean, with the change in layouts, you can't exactly keep them  
7 all the same, they're all slightly different.

8       And then with this one, it -- with the layout it was more for  
9 we're going to be adding different ballast tank, so that's why the  
10 kind of set up is like catty-corner on either side of the engine  
11 space. We used to use just ballast tanks all the way forward and  
12 this time we used four so we can actually trim the boat side to  
13 side or nose up and down, fore and aft. So that was part, and  
14 then we were adding a sewage holding tank, so we had to -- and a  
15 urea tank, so we had to kind of like balance the load that way.  
16 So that's the consideration on that, is that -- and this was going  
17 to be unique for us, at least the engine room layout, because  
18 you'd be able to go space to space within the engine room, so  
19 without going -- I'm sorry -- without going onto main deck and  
20 then back down. Because we had -- first boat we ever worked had  
21 doors.

22       So it was -- you know, we have redundancy in storage tank,  
23 got the two storage tanks and two day tanks. So most of our  
24 things are, you know, we want to have as much redundancy as we can  
25 and then be able to isolate any problem we have and continue



1 operation. So that's kind of how you ended up with the design we  
2 had.

3 Q. What were some of the considerations and the options when  
4 looking into the fuel oil day tank control or level, controlling  
5 the level?

6 A. Basically that was -- once you figured out where the tank  
7 locations were going to be, how you want to control the level is  
8 just a -- was a naval architecture. There wasn't an option that  
9 we looked one way, we want to be able to control it this way or  
10 that way. You know, you have X amount of equipment returning to  
11 the day tanks, so if you're running equipment that's closer to the  
12 one tank than the other, ideally -- and not ideally, but normally  
13 the case is going to be that one might fill up faster than the  
14 other, so you might be able to -- you would have to do something  
15 to either cut down the amount of fuel going to that one or  
16 increase the amount of fuel going to the other. Since we run the  
17 purifier and set it to a rate, like a burn rate, what the boat's  
18 doing, you could send more fuel to the one that's not getting as  
19 much return. That was our original thinking, was that that was  
20 going to be enough, but, you know, it's not out of the ordinary to  
21 have pinching on a return from one side to the other just enough  
22 to force water one way or the other.

23 Q. And was there some kind of guidance or, you know, more review  
24 by the engineering, by the architectures in regards to that  
25 function or those functions for the level controls? That was all

1 part of the design considerations, correct?

2 A. Yeah. So once you did the naval arch design, then it's on  
3 the engineering staff to say, okay, this is how it works once it's  
4 installed and we have to figure out how we want to run it from  
5 there.

6 Q. I see. On the engines themselves, they have return valves  
7 which are locked. The reason for locking those valves, was that  
8 part of the review process as well?

9 A. So the locks that are on the valves, it was locked by the  
10 shipyard while they were operating them, and when they came  
11 here -- usually what we do is we used to take the handles off so  
12 nobody would close them without that, but the locks seemed fine,  
13 so we just kept the locks there, left it that way instead.

14 Q. Would that be similar on other vessels in that class?

15 A. Well, there's two -- they could -- they have slide locks on  
16 them. So did they have to put them there? No. But like I said,  
17 we just -- they were there, so we didn't take them off of the  
18 *Sandy Ground*. But they all have the sliding lock. It's a ball  
19 valve return with a slide lock on it. So to actually turn the  
20 handle, you have to pull the slide lock off, turn the handle. It  
21 has -- within that slide lock there's a hole, so that's -- they  
22 put the locks in the holes. But you can put a zip tie there, you  
23 can do anything just to -- it's basically just to make you think a  
24 little bit more before you open or close that valve.

25 Q. Before the full motion or the --

1 A. Yeah.

2 Q. -- full operation? I see. And then why not operate the  
3 vessel with full day tanks?

4 A. So going forward from the Barberi Class, the Barberi Class  
5 has only 800-gallon day tanks. So they had -- when I first got  
6 here, they had a return system that if those overflowed they would  
7 overflow into the storage tanks, and that was pretty -- that's  
8 pretty normal. But within that system, they had float valves in  
9 there so if the storage tank was full -- past half fill, it  
10 wouldn't overflow into the storage tank, it would go right to the  
11 day tank -- or right to the deck and come out the sounding tube.  
12 So that's why they maintained them at like 6-, 5700 in there.  
13 We've since changed that so that there's no reason for that to be  
14 like that. So we fill -- and that was more because fuel is more  
15 expensive so they didn't want to -- they only maintain the level  
16 of those storage tanks to like half. So they were normally  
17 carrying 10- to 12,000, where those tanks hold, you know, 30,000  
18 gallons. I mean, combined, 35,000. So like 17 -- just under  
19 18,000 a piece.

20 So the normal reason we -- as we got the boats, the next  
21 class of boats, like the Molinari Class and then the Ollis, we put  
22 bigger day tanks because then that would give you more of a  
23 cushion as far as, okay, if something happened to the purifier  
24 where you broke a spindle or something like that, you could have  
25 plenty of purified fuel to get you through a rush hour period or

1 to a point where you could get somebody on to repair it, instead  
2 of just using the raw fuel out of the day tanks.

3 And that was the other thing, early on, too, when I started  
4 here is that our fuel quality was not great in like the mid-  
5 nineties, late nineties. Since then, I mean, we switched over  
6 from -- to ultra-low sulfur diesel and the quality is 1,000  
7 percent better. I mean, the purifiers are -- I mean, we've been  
8 cleaning them every other day now. If you didn't clean it every  
9 day back then it was a disaster. And even sometimes you'd be  
10 twice a day, it was so bad.

11 But, yeah, so the -- and just the thinking is that you're  
12 just leaving yourself enough cushion. So they run it about 1800  
13 and they go up to, say, about a little bit more than 2700 is a  
14 full tank. I mean, if you looked at the charts it's over 28, but  
15 the 2700 is a full day thank. So just if for some reason you came  
16 up and you had some kind of incident where the crossover go back  
17 to the storage tank, say it got fouled or something like that, you  
18 don't want to push it to the deck. So you run it at pretty full  
19 and maintain the burn level and give yourself enough cushion that  
20 if you do have a problem with the purifier, you still have plenty  
21 of time. Like at 2,000 gallons you have 7 or 8 hours of running  
22 time on everything. So that gives you plenty of time for us to  
23 get anywhere. So the need to run it pressed all the way up is not  
24 there and then you're not working against back pressure with the  
25 purifier and the like.

1 Q. Would the tanks gravitate or equalize to a steady state?

2 A. Yeah. If you're not running any equipment and leave the  
3 suction on them open, they gravitate to within an inch or two.

4 Q. Do you have an estimate of how long that would take?

5 A. It probably takes about 15 minutes or so, 20 minutes of not  
6 running.

7 Q. And then you mentioned the fuel oil purifier. In regards to  
8 the output and discharge options, you know, was that considered as  
9 well in the review and design plans?

10 A. Yeah. So what we -- like I said, we tried to get equipment  
11 that was similar or the same from class to class. So from Kennedy  
12 Class all the way -- I mean, originally the Kennedy Class had a  
13 different one, but once -- and the Barberi didn't have any  
14 purifiers when it started. Once they installed fuel oil purifiers  
15 on the Barberi Class, they went back and replaced the ones on the  
16 Kennedy with the same. So since then, we've used the same  
17 purifiers throughout all the classes so that everybody would be  
18 familiar and would know how to adjust the flow rates. So it was  
19 more -- not more of a flow rate issue as far as using similar  
20 equipment from one vessel class to the next.

21 Q. All right. And then in regards to the frequency of operating  
22 the fuel oil purifier and cleaning, what would you say is that  
23 frequency or interval?

24 A. So, I mean, ideally when you come on the watch and you're  
25 running, you start the purifier and you have it set for the burn

1 rate that you're burning. So if I'm burning 250 an hour or 270 an  
2 hour, depending what boat I'm on, basically you just adjust it so  
3 that you're looking at your day tanks and they'll pretty much stay  
4 steady like the whole day. Like you get the level you want, you  
5 get it steady there. If you stop running the mains and it's only  
6 like auxiliaries, they'll only burn like, you know, 15 gallons an  
7 hour and your boiler may run 10 gallons an hour. So you just shut  
8 the purifier off when the mains are off and then when you start  
9 the mains back up again, the normal practice would be, okay, we  
10 start the purifier up.

11 And you shouldn't -- I mean, ideally, unless it's getting  
12 close to cleaning, you shouldn't have to adjust the rate. Like  
13 once you get it set, you can pretty much -- it's got like a  
14 metering valve and a full shutoff ball valve. Once you set the  
15 metering valve, you can just leave that, shut the full ball valve,  
16 shut the purifier down, and then when you start it back up, redo  
17 the water seal, just open the ball valve, and you already got the  
18 flow rate going. You might -- more on a lube oil purifier, you  
19 have to adjust that rate as the oil changes viscosity with heat  
20 and how dirty the purifier gets. But for the most part, fuel is  
21 fairly steady.

22 Q. I see. Do you have estimated percentages of fuel that's  
23 returned back to the day tank in comparison consumed by the  
24 engine?

25 A. So, I mean, it's a rough estimate. I don't really know what

1 it is on this boat for sure, but a rough estimate is normally  
2 twice of what -- whatever you burn, about twice of it comes back.  
3 So if you burned 100 gallons an hour, you get 200 gallons back in  
4 the tank.

5 Q. And then in regards to fuel consumption per hour, do you have  
6 any average or averages?

7 A. Yeah. So roughly, like the Ollis Class, when everything's up  
8 and in operation, you burn about 270 an hour. And, you know,  
9 Molinari Class is around 250 -- 240, 250; 260 to 275 on the Ollis  
10 Class; and the Barberi around 225, 230 an hour. The little boat's  
11 75 underway.

12 Q. I see.

13 A. And usually the way we get that, like I said, because the  
14 auxiliaries don't really burn a ton, we just use the total volume  
15 of fuel that they burn in the whole 24-hour period over the number  
16 of trips they make.

17 Q. And average it out?

18 A. And just average it out. That's about right. Because like,  
19 you know, sometimes you're fighting the tide, sometimes you got  
20 the tide at your ass. You know, it doesn't make a difference.  
21 But sometimes you're slack, it's -- you know, so --

22 Q. So it'll vary?

23 A. You could look at engine load. You could look at the rack  
24 and the same trip is going to be at two different rack settings  
25 and it's doing the same speed, same everything.

1 Q. Right. So you could have a higher fuel consumption based on  
2 the prime mover --

3 Q. Yeah. So if you're --

4 A. -- you know, consuming more --

5 A. -- at pushing end or the pulling end or you're working  
6 against the tide, working with the tide, and different -- what we  
7 tried to do with the Ollis that we didn't do in the other class of  
8 boats, they have a throttle and the captain can pick what speed he  
9 runs at. What we did on the Ollis Class when we did the  
10 engineering is that part of it was vibration and noise throughout  
11 the vessel, so we had noise and vibration engineers do an analysis  
12 and then they picked out speeds that they thought would work.

13 Because you have a controllable pitch on there, right, so you can  
14 pick a running speed -- so basically we have a idle speed, a dock  
15 speed, a running speed, and what we call sprint speed, so the  
16 fastest the engine will go. So we did that whole analysis -- and  
17 also a speed of 16.3 was like the contract speed we wanted.

18 So we worked with all the different rpm ranges. So like 638  
19 to -- 738 to 750 is okay, the vibration was okay. Less than that,  
20 all the way down to 690, the vibration noise was -- a lot of the  
21 boat was going out of the range. So then we went back and we  
22 said, all right, let's go on the lower end, and we went -- start  
23 660, 670, 680, and that's how we ended up with the 670 rpm is like  
24 the running speed. So that's going to be -- once you get out of  
25 the slip and you bring it up to running speed, that's going to be



1 95 percent of your trip, is going to be at that running speed. So  
2 we picked the speed that had the least vibration and noise and  
3 still allowed you to get -- and we had like -- our average speed  
4 was like 16.8, so we came in high on the speed and we fit into the  
5 package of the noise and vibration we wanted.

6 Q. And that's the standard for the entire Ollis Class?

7 A. The whole -- yeah, it's all the same, yeah. So that's why  
8 they have four buttons and they don't have like a standard  
9 throttle that you would just bring the speeds up and then bring  
10 them down.

11 Q. So they're incremental based on the speed ranges?

12 A. Yeah. So they had -- you pick the speed range, like --

13 Q. Um-hum.

14 A. -- you know, like running speed, what we call running speed,  
15 670. And then as he moves the joystick, it just increases the  
16 pitch. So it's pretty unique in that there's no rudder so the  
17 pitch could be changing the pitch point and how much pitch you  
18 got.

19 Q. I see. In regards to the type of fuel, I know you had  
20 mentioned ultra-low sulfur diesel fuel.

21 A. Diesel, yeah, number 2.

22 Q. What's the typical frequency and the location of where they  
23 bunker or the vessel --

24 A. So we have our own fuel barges here. We have two barges. We  
25 get bulk barge deliveries, and then with each delivery you have

1 somebody from DCAS, they take a sample. It gets sampled, they  
2 test it, make sure everything's good, and -- I mean, not before we  
3 take it, but they take it and when we take it, it goes out after.  
4 But then the frequency of the boats getting it, it depends on your  
5 schedule, if you're just running during the week or if you pick up  
6 a weekend or overnight. But most boats fuel twice a week and  
7 sometimes you might have to -- I mean, you can -- if you're in a  
8 least run boat, you may be able to squeeze with once a week, but  
9 it would be -- you'd have to get it right away the next week, you  
10 know.

11 Q. I see. And then other than the testing during bunkering, is  
12 there other fuel oil testing conducted, you know, locally on board  
13 or --

14 A. We don't test fuel oil. We test all the lube oils, but fuel  
15 oil we don't always send samples out.

16 MR. FITZGERALD: Bobby, you want -- DCAS, do you want to  
17 explain who that is?

18 MR. SCAMELL: Oh, DCAS is -- they do all the -- Citywide  
19 Administrative Services. So they do the bulk purchase of all the  
20 fuel for the entire city. So we just happen to be one agency that  
21 takes fuel from them. And we have a fuel budget that gets knocked  
22 down, we get charged for significantly. But they run the contract  
23 for all the bulk oils and fuel oils throughout the whole city.  
24 I'm sorry, I didn't --

25 CWO [REDACTED] I see. Thank you.

1 MR. FITZGERALD: Did you have it? I'm sorry. No, I -- I'm  
2 sorry.

3 CWO [REDACTED] No, thank you for, thank you for --

4 MR. SCAMELL: Yeah, I did say like, you know,  
5 (indiscernible) --

6 (Crosstalk)

7 MR. SCAMELL: -- know what it is, but -- yeah.

8 BY CWO [REDACTED]

9 Q. As far as the original design for the Ollis Class vessels  
10 with the return system and that addition of that ball valve on the  
11 return side, what -- could you describe just that process of, you  
12 know, how that came up into --

13 A. Yeah. So the boat was delivered and we were running and  
14 then -- the contract design has a ball valve in it, not a check  
15 valve. So the shipyard, in changing it -- so the detailed design  
16 was part of their thing or as they were doing it, it's going to  
17 be -- it was going to be in an as-built. But when we saw it, we  
18 were like, no, we do need a return valve because if you're working  
19 in there -- and we had opened it one time while just the boilers  
20 were running to see like how much has come back and it was enough  
21 that we couldn't work in there.

22 And then before they were even installed, one of the ways  
23 that they were maintaining the level on the day tank was to  
24 squeeze in on the suction, which is not an ideal practice. And a  
25 rag was caught in one of them, so when the rag got caught, they

1 would -- this crew was operating the day tank separately so they  
2 lost a couple engines. And then when we opened it, we -- we  
3 brought it back, we opened the tank to get a look at it, we were  
4 seeing, okay, if we ever have to do this again, we got to make  
5 sure that there's a way that we can stop any fuel returning.

6       So we pushed back to the shipyard and said, you know, we're  
7 going to put in this in as warranty item that this is in the  
8 contract design and you changed it to a check valve and it's not  
9 acceptable for us. So they installed the valves for us at that  
10 point.

11 Q. And current configuration includes the check valve and ball  
12 valve --

13 A. Correct.

14 Q. -- on each return line on all the Ollis Class vessels?

15 A. That is correct.

16 Q. In regards to pressure relief valves on other classes of  
17 ferries, was that considered as an option for the Ollis Class  
18 vessels?

19 A. So, I mean, it wasn't something we were actively looking at.  
20 Like it's out to a naval architect and they do the -- the tanks  
21 are in the locations, you have the manifolds there. And then at  
22 that point you're sending them out and it gets looked at by ABS  
23 class, it gets looked at by Coast Guard. So if it wasn't like a  
24 mandatory thing at that point, it wasn't going in there.

25       If you look at the Molinari Class was originally designed for

1 ACCU for like an unmanned engine room. So it makes sense to have  
2 one on that boat because somebody could adjust the valves and  
3 there's nobody to look at it. And then like the Barberi Class,  
4 the way that that system works -- so they have two day tanks plus  
5 a day tank for the ship service generator itself, which is  
6 separate. So the design setup is all the returns come to a common  
7 header that can go to the day tank -- either day tank or to the  
8 ship service generator day tank. So three tanks are there. But  
9 because that -- so you have 800, 800, for the two day tanks that  
10 feed the all the main engines and everything. The one that just  
11 feeds the generator is just under 200 gallons.

12 So if you're running a generator and you're sitting on watch  
13 and -- or you run it pier side for some reason, you don't have --  
14 you have to constantly keep filling that because it's a small  
15 tank. So the way it's set up to run underway is that they close  
16 the two returns to the day tanks and run everything to the  
17 generator day tank. So that stays pressed up and then that goes  
18 back into the other two tanks.

19 Q. So with the --

20 A. So, oh, and because of that, so now you're forcing a lot of  
21 fuel into one spot where there is no -- there's just the crossover  
22 coming back over. So that has a relief valve at the other end in  
23 case -- because you already have two valves closed out of three.

24 Q. So with the other classes of ferries with the pressure relief  
25 valve incorporated into the system there, were those pressure

1 relief valves considered during original, you know, construction  
2 and design or were they added afterwards or --

3 A. I mean, I couldn't tell -- both of those were designed  
4 when -- like the Molinari design was underway before when I first  
5 started and the Barberi was early eighties, so I couldn't tell you  
6 design-wise at that point if they were considered or how they got  
7 considered that way. Ollis, I would say yes, that was in the  
8 consideration, because it was set up for ACCU.

9 Q. And would you happen to know some of the pressure relief  
10 settings, the parameters, on those other vessels that you operate?

11 A. Yeah. So the Molinari is real low, it's like 6 pounds relief  
12 and the Barberi is like 35 to 45 pounds, somewhere in there -- I  
13 think it's 42 or 44 design-wise, design pressure on that relief.

14 Q. Could you describe and discuss some of the maintenance  
15 performed on the engines on the *Sandy Ground* since the delivery?

16 A. Since delivery? I mean, it was only in service 6 months, so  
17 filter changes, the liner inspections. But other than that, I  
18 mean, it had less than 2,000 hours, so you didn't even -- the  
19 first service on those is 2,000 hours. None of the engines had  
20 2,000 hours on them yet. So just very minor stuff at that --

21 Q. And then in regards to filter changes, that includes the fuel  
22 oil, lube oil --

23 A. Fuel oil, yeah. And actually it -- probably be the only ones  
24 changed would be fuel oil because lube oil is usually right around  
25 the 2,000-hour mark.

1 Q. How is maintenance tracked?

2 A. So we have -- we use Maximo, which is a work order tracking  
3 system. So it has the history of every -- since -- let's see. So  
4 that went into effect I think 2008, is when we started using that.  
5 So every work order from then through now is tracked in that.

6 And so basically the way it's set up is currently right now  
7 it's handwritten from the boat. It goes to review in the port  
8 office in operations. We have a maintenance administrative who  
9 gets all the work orders. She submits them into -- inputs them  
10 into Maximo every morning. Then I get them all and I review them  
11 for -- with a trade and how much time is put to it. And then I  
12 approve them or some of them will be like we want to look at  
13 before we approve it, put it in, because it didn't sound right.  
14 So we'll either kick it back to the port office saying like look  
15 at this before we put this in, we want to make sure it's correct.  
16 And then I make sure the trades are correct, and then every  
17 morning we have a meeting with all the trade supervisors. And  
18 then we get the schedule from operations, so we see what boats are  
19 tied up. I know what boats I have down at the facility with me.  
20 So we do the work on those.

21 So a lot of times it's inspection preps, but also it's out of  
22 work -- out of service work. If we see that preventive  
23 maintenance items are getting high or we have a lot of CMS,  
24 corrective maintenance, that's getting high, we'll ask operations  
25 for the boat out of service so I can dedicate time from 8 in the

1 morning through the whole day instead of at the tie-up periods.

2 Q. I see. In regards to warranty items, are there others  
3 particular to the fuel system that have been included? Other than  
4 like the ball valve being added, has there been additional items  
5 related to that?

6 A. Most of the -- most warranty items were just replacements of  
7 current things, current pieces of equipment installed. On the  
8 coolers for the reduction gears, they had the wrong size return  
9 valve installed. They had -- so, and it was just kind of like a  
10 mix up, because they are -- the 25 psi and the 10 psi ones look --  
11 not psi -- 10 gallons per minute and the 25 gallon per minute,  
12 they look exactly the same. So it was a couple mix up on those.

13 Let's see. I'm trying to think. There was some brackets,  
14 like -- if you're talking about stuff that wasn't there, there  
15 were some brackets missing from the stanchions on the capstans  
16 that had to be welded in. And this is -- a lot of this stuff was  
17 from when we got the original drawings back from them, going  
18 through reviewing their drawings again, making any corrections  
19 that have to go back for the as-builts.

20 Q. What is the status of as-built machinery space drawings?

21 A. So right now the as-builts are under review. We got the last  
22 sets delivered to us. We're reviewing them now. And we're using  
23 our naval architect firm plus our own in-house engineers, going  
24 over the drawings. And then as we see any changes that have to be  
25 made on them, we're returning them to Eastern Shipyard and they're



1 making the corrections on the drawings, and then they're going to  
2 resubmit them. And then anything that's like changes that have to  
3 be made will get resubmitted to class and the Coast Guard.

4 Q. And that's the process for checking, you know, modifying, and  
5 then approving?

6 A. Yeah. So a lot of the stuff will be like, all right, this  
7 was -- it was installed this way, so it was checked on site by ABS  
8 and Coast Guard on site, and they're like, okay, yeah, this is a  
9 legit installation. But now we have -- they had to incorporate  
10 into the drawing and then they have to just -- so everybody has  
11 the same drawings --

12 Q. Correct.

13 A. -- and then go back that way.

14 Q. Could you explain the reason for the emergency diesel  
15 generator shutdown on the evening of the incident?

16 A. Yeah. So the emergency diesel generator started, but it has  
17 a run light that switches on the main switchboard in the control  
18 room. And the power for that is tapped off of a power line that  
19 goes to the governor for -- that senses the voltage on all three  
20 legs of the generator. So when that cable ran down into the  
21 engine room switchboard, it got melted during the fire. So during  
22 that melting, it shorted out that cable. So when that cable  
23 shorted out, it was blowing a fuse inside the emergency generator  
24 panel and it was showing up as a dead leg on the generator. So  
25 the governor saw dead leg and was like, oh, I got shut this thing

1 down. So it was shutting it down as a safety when, in essence,  
2 all three legs were good, it was just the fuse that got constant  
3 blown because you had a shorted wire on the downstream side of it.

4 Q. And that caused a shutdown, and did that also prevent the  
5 startup?

6 A. It will prevent a startup, yeah, because it -- well, it won't  
7 prevent it from starting, it'll prevent it from going online.  
8 Like if I had it lined up in automatic and I lost power, it would  
9 start up and then it would see that it had a missing leg and then  
10 it would just shut down. But if that -- if the fuse is already  
11 blown, it won't start up. So if I replaced it, I put a new fuse  
12 in, you'd see that it would start but then it would shut itself  
13 down.

14 Q. Are there any plans to modify the electrical system to  
15 prevent a reoccurrence --

16 A. Yeah. So we already -- I've already -- so those cables come  
17 off, they go into a terminal block, and then continue on down to  
18 the control room switchboard. So we're removing that control  
19 block or terminal block and putting in a fuse block there. And  
20 then having the wire tap out from the input side of the fuse on  
21 the (indiscernible) instead of the output side. So it'll isolate  
22 that whole run of cables that leaves the switchboard from  
23 affecting the governor. So we tested it out on the *Sandy* because  
24 we had the burnt wire, so we had a good test field to try it out  
25 in and it works good. We have all the parts for all the boats,

1 and then Eastern Shipyard as well is -- their buyer is -- the  
2 vendor that did the switchboards, they're modifying the drawings  
3 and they're going to send fuse blocks as well to do.

4 Q. How many modifications do you estimate would be approved in  
5 conjunction with this change?

6 A. How many? Just the one.

7 Q. Just the one?

8 A. Yeah. I mean, I don't see anything else. Yeah, I don't see  
9 any other change that would prevent that specific thing from  
10 happening.

11 CWO [REDACTED] All right. Well, I don't have any further  
12 questions at the moment. I'd like to switch it over to Mr. Brian  
13 Young.

14 MR. YOUNG: Thank you. Appreciate it.

15 This is Brian Young with the NTSB. Very few follow-up  
16 questions. You've really explained so much of what we've seen  
17 over the past few months, and we really appreciate it.

18 BY MR. YOUNG:

19 Q. Could you talk a little bit about design of the Ollis Class  
20 with having a split box, what the reasoning for that would be and  
21 if you've ever operated in that capacity?

22 A. The split box on the main switchboard?

23 Q. Yeah.

24 A. So the reason for the split box is we used to have -- all of  
25 our other boats only have two ship service generators. So this

1 one -- if you lose one ship service generator, you can't continue  
2 operation in (indiscernible). And that was a change from 1986.  
3 So like the Barberi Class built prior to '86, if we have a ship  
4 service generator down, we can continue operation with just one.

5 So the Molinari Class comes around, and this is like -- like  
6 we were talking about changes in design underway. The original  
7 design had -- was going to be AC electric drives in that boat. So  
8 the hotel load was also going come off the propulsion bus. But  
9 when you tie up next to a dock, you're like, well, I don't want to  
10 run gigantic engine as a generator, so they went back to the  
11 smaller ship service gens and then they were like, well, maybe we  
12 should just split the bus and have separate ship service bus. So  
13 we got back into the same problem again, we lose a ship service  
14 generator, now we can't run that boat, right? So that was a  
15 change from the Barberi Class.

16 So now we come to this boat and we say, all right, we're  
17 going to get out of that, we're going to have three ship service  
18 generators so if we have one down with no operation, it's not a  
19 big issue. And then in looking at it, we're like, all right, so  
20 it's further part of redundancy if we have a problem on one half  
21 of the switch gear, at least we have enough stuff that we can  
22 operate half the boat -- half the engines or like one engine and  
23 one turbo coupling on each side of the boat so we have full  
24 maneuverability. We might be at reduced speeds, but it just -- it  
25 was a margin of safety that they wanted to put in to -- so we

1 could continue operation if we only -- instead of losing the whole  
2 switchboard, we would only lose half.

3 Q. And is that something that you've ever operated in that  
4 capacity or tested or --

5 A. I have never -- no, this is the first time for me. And it  
6 wasn't a conscious decision we made on our own. It was the way  
7 they came back in design and we didn't see anything wrong with it.

8 Q. Um-hum. But has the vessel been tested in that capacity,  
9 where it's run on a half a split bus? No?

10 A. We split the bus just to -- we didn't like take the boat out  
11 and do it that way, but we did it like just to test the equipment.

12 Q. Electrically?

13 A. Yeah.

14 Q. Yeah. And the fuel system can be split as well, right?

15 A. The fuel system can be isolated one end to the other, yeah.  
16 It's got a common header that goes all the way across, that  
17 returns go and suctions go -- you can draw -- they all feed to one  
18 header and everything draws up it. But you can -- about half the  
19 equipment, you can isolate the suction side and the return side  
20 and you'll get two engines -- so like on the Staten Island end,  
21 you'll get two main engines, two generators running off it. On  
22 the New York end, you would have a generator and the boilers and  
23 two main engines. So you could actually isolate -- if you had a  
24 fuel problem, a huge fuel problem, you could just isolate one end  
25 and you would still have one end to at least have some

1 maneuverability to move the boat around, and have ship service  
2 power and, you know -- if you had that problem and you isolated it  
3 before you switch the generator over, the way we have it set up  
4 now is if you lose a generator, we have an automatic start for a  
5 ship service gen, so if you lose one and you get a ship service  
6 generator would start itself up, put it on a bus. But the  
7 emergency generator would be on as well, so you'd have to swing  
8 that back over to switch the buses. But it would operate split  
9 bus and you have everything.

10 Q. Is that the way it's set up, where a ship service generator  
11 would start prior to the emergency generator, kick on?

12 A. So as soon as it -- as soon as you lose it, they both start.  
13 Yeah, and they both -- and you end up with split bus. You have to  
14 reconnect the emergency bus and take the emergency off.

15 Q. Right. Okay. The fuel oil purifier, I don't -- you probably  
16 don't know the exact output, but is there a sufficient output  
17 where it could replenish the fuel that's being consumed at full  
18 power?

19 A. Yeah. Yeah, we -- I mean, it probably runs at like 30  
20 percent of its output to maintain the level.

21 Q. So it could easily replenish --

22 A. Easily keep up with -- yeah.

23 Q. Has anyone ever said to you operationally that you've got two  
24 tanks, you have several engines and boilers consuming, you have  
25 returns, you know, on the different tanks and you have purifier

1 filling, that there is a tremendous amount of moving parts within  
2 the fuel system? Do you feel that it's somewhat confusing the way  
3 it's being operated?

4 A. I don't think so, and it's something we've always run in the  
5 27 years I've been here, we've always run it the same way. And  
6 it's -- we've never had issues with it before. I mean, you have  
7 to have returns.

8 Q. Right.

9 A. So the return line is isolated from the supply line where  
10 you're feeding from the purifier. So ideally, if everything was  
11 great and everything was equidistant, you'd leave all return lines  
12 wide open and you'd just adjust the output of the purifier to  
13 maintain that level.

14 Q. Right. Right.

15 A. You know? But that's ideally, so -- we don't live in that  
16 ideal world, so one tank is going to fill a little -- depending on  
17 the equipment you run, one tank's going to get more return, one's  
18 going to get a little less. You know, it might draw -- if it sits  
19 a little bit closer -- this equipment sits a little closer to that  
20 tank, so it's easier to draw from there. You know, so it's going  
21 to go up and down a little bit that way, but -- if you don't run  
22 the purifier, you have to be able to adjust the returns to keep  
23 the levels on the tank.

24 Q. Right. Prior to having that ball valve installed, was the  
25 vessel operational where the crews were trying to maintain?

1 A. It was. And that's where they tried to squeeze in on the  
2 suction valve, which is a very bad idea.

3 Q. Right. If one of the supply valves were secured completely,  
4 obviously the fuel would be coming from the opposite side.

5 A. Correct.

6 Q. If you can remember the piping arrangement, if the valve was  
7 shut completely, would that affect the fuel oil level indicator  
8 signaling to the control room and sensing a low level in the tank?

9 A. So if I had --

10 Q. If you shut the valve feeding the engines --

11 A. Okay.

12 Q. -- would that also give a false signal to the alarm  
13 indicating that there's no fuel in the tank?

14 A. For the day tank?

15 Q. Yeah.

16 A. I don't believe so. For the storage tank, it does. Because  
17 the storage tank comes in lower, at a lower level, and it taps off  
18 of that line. Yeah, I don't believe so. Because I think they  
19 both come in from where it ties into the -- so the suction line  
20 that comes for the engines is separate from there.

21 Q. Okay.

22 A. Because it should tie off of the lines that go into the  
23 transfer pump, I believe. I don't have it 100 percent in my head,  
24 but, yeah, I believe so, that's what it does.

25 Q. Do you have any idea about the date of -- around what time



1 these valves were installed?

2 A. I don't -- off the top of head, I don't. It was -- *Sandy*  
3 *Ground* wasn't in service yet. So it was between the *Ollis* and the  
4 *Sandy Ground* just getting started. So *Sandy Ground* came into  
5 service in the spring of last year, so we -- acceptance for that  
6 was February 24th of last year. So somewhere right around the  
7 spring of last year. I don't remember the exact date though.

8 Q. Okay. The update on the electrical system for the emergency  
9 system, I know we had looked at it and we saw a location where the  
10 fuse is going to go and you said the drawing's going to be  
11 updated. Is that anything that has to go to class and Coast Guard  
12 for approval?

13 A. We will send that both -- back to both ABS and to Coast  
14 Guard.

15 Q. And will that change be effective across the entire fleet?

16 A. 100 percent.

17 MR. YOUNG: Okay. I really appreciate your help and all your  
18 help throughout the investigation --

19 MR. SCAMELL: Sure. Anytime.

20 MR. YOUNG: -- and bringing us on the vessel and showing us  
21 everything. Thank you for your help. I'm all set.

22 CWO [REDACTED] All right. I just have one follow-up  
23 question.

24 BY CWO [REDACTED]

25 Q. In regards to the video footage from the engine room, would

1 you just maybe discuss some of your thoughts when you first saw  
2 that video and, you know, with the crew -- the engineer and crew  
3 and their actions and, you know, what you saw in the footage and  
4 below decks?

5 A. So --

6 UNIDENTIFIED SPEAKER: Just a clarification. Which video are  
7 we --

8 CWO [REDACTED] So the engine room footage that we saw for the  
9 below deck crew at the time of the incident, from the time leading  
10 up right before the fire through the last, I guess, the last  
11 recording when it stopped.

12 BY CWO [REDACTED]

13 Q. So just wanted to get, you know, some of your thoughts of,  
14 you know, looking at that, and we have watched it together, you  
15 know, just to maybe hear from you some of your, you know, things  
16 that come into your mind as far as, you know, what might be going  
17 on or happening with the crew and the actions and --

18 A. I mean, I can only answer like, so ideally if -- and I'm also  
19 looking at it and it's not happening to me. So if I had to do --  
20 somebody came to me and said there's fuel leaking from this  
21 engine, my first thing would be to e-stop those engines, at least  
22 to get ahead of it. And go out there, assess what's going on, you  
23 know.

24 It looks like from the video that they had some kind of  
25 issues with the day tank levels and that the two oilers were

1 trying to -- I don't know whether -- it looks like, I mean, I have  
2 to -- I looked back and I was able to see they pulled the alarm.  
3 So you can see they're trying to get those levels back to where  
4 they're even instead of separated.

5 I probably would have -- like I said, I would have e-stopped  
6 those first, figured it out, and then swung over the filter. Once  
7 we saw it was swinging over -- they have a duplex, so you can  
8 swing over. Get onto the good filter to make sure you at least  
9 stop your leaking. See what's -- where you're at, and hopefully  
10 you'll be able to get to it to the point where it's just a mess  
11 and not -- you know.

12 And in looking at the levels that they were looking at, they  
13 had enough time. So if you were concerned, I would say get back  
14 in and call the office and get -- you know, I'm saying all this  
15 stuff, but I don't feel right, you know, critiquing his thing.  
16 But their reaction, what it looks like, they were trying to get  
17 the levels back. You had two people working down there at one  
18 time. They probably shouldn't have been working together, so that  
19 you couldn't get to the point where you could've closed valves  
20 and, you know, not knowing it amongst each other.

21 Let's see. Yeah, so let's see, e-stop the eng and get the --  
22 swung over to the filters, and then get back into the slip, and  
23 then ask for -- hey, let me get some time, let me get my head  
24 wrapped around this before we start loading up again. And then,  
25 you know, we can say, okay, I can't make any more trips because I

1 think something's really wrong here or, okay, we got it  
2 straightened out, don't worry about it; okay, we're back on, send  
3 me some mops, I need to get this cleaned up.

4 BY MR. YOUNG:

5 Q. If that was the case, where a vessel had a mechanical issue  
6 and was unable to complete a trip, are there other vessels on  
7 stand by that could replace that --

8 A. Yeah. So like at that point of the night, it was around, I  
9 guess, right around 5 o'clock. You probably would've just got  
10 back into a slip like that, you would've just said, all right,  
11 this one's coming out of the slip. They'd adjust the schedule,  
12 because by the time you got a boat started up and moved around,  
13 you're out of the rush period. So you're out of the point where  
14 you need all four boats. So we'll just use the remaining three,  
15 we're going to get through the rest of the rush period on a three  
16 boat schedule, and then at that point we just say, okay, we'll get  
17 this to the maintenance pier so we can look at it, and then that  
18 boat will be swung around either that night to get it ready for  
19 the next morning, or they'll just take it right from the  
20 maintenance pier to have it swung in for the morning service.

21 Q. Do you think based on looking at the alarm panel and maybe  
22 the video, once the fuel pressure rose to a certain level and came  
23 out of the duplex fuel filters, do you think that the engines  
24 would have shut themselves down based on a lack of fuel, because  
25 it was all coming out the filters? Because it does seem like a

1 few seconds after the differential alarm, on the alarm readout,  
2 that there were instant shutdowns within a few seconds.

3 A. Do I think that -- well, the generator kept running.

4 Q. The generator, yeah.

5 A. Actually, everything kept running until they pulled the fuel  
6 stop.

7 Q. Even the engines?

8 A. Yeah.

9 Q. The main engine?

10 A. Yeah. So, yeah, they didn't e-stop until they pulled the  
11 fuel stop. Because that -- that's more of like a -- you got a  
12 leak, but there's -- there was still plenty of fuel going through  
13 that thing. Like you're talking about -- it was shooting out a  
14 stream of fuel, but not -- because if it was shooting out the full  
15 amount of fuel, there would have been pools of fuel. So there was  
16 still plenty of fuel going through there and the pressure I think  
17 was maintained around 45, 46 pounds in there, where normally you'd  
18 be at 90 or 100, so you'll get an alarm and you're going to get an  
19 alarm that says I got low fuel pressure. But there's still  
20 probably enough to keep it rolling through.

21 Q. Okay.

22 A. Like I don't -- it doesn't seem like it was starved out to  
23 me.

24 Q. Okay.

25 CWO [REDACTED] All right. At this time I'd like to open it

1 up to the room for any further remarks or questions.

2 (No response)

3 All right. No more follow-up questions from myself or  
4 Mr. Brian Young. I wanted to just give the opportunity for any  
5 final remarks or statement that you may have.

6 MR. SCAMELL: No, I'm good.

7 CWO [REDACTED] All right. And do you agree for us to contact  
8 you at a later time and date --

9 MR. SCAMELL: Anytime you need.

10 CWO [REDACTED] -- if we had any follow-up questions? All  
11 right. Well, thank you again for your time today. This concludes  
12 our interview. Time on deck is 12:59.

13 (Whereupon, at 12:59 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:           ENGINE ROOM FIRE ABOARD THE  
                                  STATEN ISLAND FERRY *SANDY GROUND* NEAR  
                                  STATEN ISLAND, NEW YORK  
                                  ON DECEMBER 22, 2022  
                                  Interview of Robert Scamell

ACCIDENT NO.:               DCA23FM010

PLACE:                        Staten Island, New York

DATE:                         March 8, 2023

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.

\_\_\_\_\_  
Kay [REDACTED]  
Transcriber

