

UNITED STATES OF AMERICA  
UNITED STATES COAST GUARD

\*\*\*\*\*  
\* In the matter of: \*  
\* \* \* \* \*  
\* THE MARINE BOARD OF INVESTIGATION \*  
\* FOR THE CAPSIZING OF THE \*  
\* LIFTBOAT *SEACOR POWER* IN \*  
\* THE GULF OF MEXICO ON APRIL 13, 2021 \*  
\* \* \* \* \*  
\*\*\*\*\*

HOUMA, LOUISIANA

THURSDAY  
AUGUST 12, 2021

8:00 a.m. – 4:24 p.m.

## **A P P E A R A N C E S**

### U.S. Coast Guard

CAPTAIN TRACY PHILLIPS, Presiding Officer

MR. ERIC VERDIN

MR. ANDREW LAWRENCE

LT SHARYL PELS, Legal Counsel

LT ANTHONY ALGER, Recorder

PAC ELIZABETH BORDELON, Media Liaison

CWO4 LAWRENCE BLEVINS, Family Liaison

### National Transportation Safety Board

MR. ANDREW EHLERS, Investigator in Charge

MR. MARCEL MUISE

MR. MICHAEL KUCHARSKI

### Parties in Interest

MS. ANTONIA APPS, Esq.

MR. GARY HEMPHILL, Esq.

MR. PETER TOMPKINS, Esq.

Seacor Marine, LLC and Falcon Global Offshore, LLC

MR. GERARD WHITE, Esq.

MR. CRAIG BURCH, Esq.

American Bureau of Shipping (ABS)

MR. PAUL STERBCOW, Esq.

First Mate Bryan Mires

### Also Present:

MR. TOM DIAZ, Esq.

(on behalf of Mr. John Spath and Mr. Michael Boudreaux)

MR. BRIAN EISENHOWER, Esq.

(on behalf of Mr. Thomas Gruber and Mr. Joseph Rousseau)

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**PROCEEDINGS**

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2  
3 **CAPT Phillips:** The time is now 0800 on August 12th, 2021, this hearing is now in  
4 session. Good morning ladies and Gentlemen I'm Captain Tracy Phillips, Eighth District  
5 Chief of Prevention I'm the Chair of the Coast Guard Marine Board of Investigation and  
6 the Presiding Officer over these proceedings. The Commandant of the Coast Guard  
7 has convened this board under the authority of Title 46 United States Code, Section  
8 6301 and Title 46 Code of Federal Regulations Part 4 in order to investigate the  
9 circumstances surrounding the capsizing of the SEACOR POWER on April 13<sup>th</sup>, 2021  
10 while the transiting the Gulf of Mexico. Our investigation will determine the factors that  
11 contributed to the accident. This hearing will examine a variety of different topics  
12 including the incident, the events leading up to the incident, the weather, search and  
13 rescue efforts, the condition of the vessel, the owner, the charterer and the regulatory  
14 scheme which applied to the vessel. Once we identify what contributed to the incident  
15 then we will make recommendations – we're going to hold. We're having a problem  
16 with the livestream. The time is 0801. This hearing is now in recess.

17 *The hearing recessed at 0801, 12 August 2021*

18 *The hearing was called to order at 0803, 12 August 2021.*

19 **CAPT Phillips:** The time is 0803 on August 12<sup>th</sup>, 2021. This hearing is now in session.  
20 Good morning ladies and Gentlemen I'm Captain Tracy Phillips, United States Coast  
21 Guard, District Eight Chief of Prevention I'm the Chair of the Coast Guard Marine Board  
22 of Investigation and the Presiding Officer over these proceedings. The Commandant of  
23 the Coast Guard has convened this board under the authority of Title 46 United States

Under 46 U.S. Code §6308, no part of a report of a marine casualty investigation shall be admissible as evidence in any civil or administrative proceeding, other than an administrative proceeding initiated by the United States.

1 Code, Section 6301 and Title 46 Code of Federal Regulations Part 4 to investigate the  
2 circumstances surrounding the capsizing of the SEACOR POWER and the loss of 13  
3 lives on April 13<sup>th</sup>, 2021 while the transiting the Gulf of Mexico. Our investigation will  
4 determine the factors that contributed to the accident. This hearing will examine a  
5 variety of different topics including the incident, the events leading up to the incident, the  
6 weather, search and rescue efforts, the condition of the vessel, the owner, the charterer  
7 and the regulatory scheme which applied to the vessel. Once we identify what  
8 contributed to the incident then we will make recommendations in order to prevent  
9 similar casualties from occurring in the future. This may include recommendations for  
10 new laws or regulations. Our Marine Board will determine whether there's evidence that  
11 any act of misconduct, inattention to duty, negligence or willful violation of the law on the  
12 part of any licensed or certificated person contributed to the casualty. The board will  
13 also determine whether there's evidence that any Coast Guard personnel or any  
14 representative or employee of any other Government agency or any other person  
15 contributed or caused the casualty. Upon the completion of the investigation this  
16 Marine Board will submit its report of findings, conclusions and recommendations to the  
17 Commandant of the United States Coast Guard. I will now review the hearing rules for  
18 all participants and observers. First we would like to minimize any disruptions to the  
19 board and to witnesses. Please remain silent during questioning. Any talking or loud  
20 noises that are distracting to the board or the witness will result in a recess. And the  
21 audience member engaged in the distracting behavior will received one warning.  
22 Please do not enter and exit the hearing room during witness testimony unless  
23 absolutely necessary. Second, silence all cellphones. Please exit the hearing room to

1 make or receive phone calls. Third, treat the witnesses and all other participants with  
2 respect. The witnesses are appearing before the board to provide valuable information  
3 that will assist this investigation. Please be courteous to the witnesses and respect their  
4 right to privacy, both inside and outside the hearing room. Fourth, all media interviews  
5 must be conducted outside of the hearing venue. The members of the press are  
6 welcome to attend the hearing and an area has been set aside for the press during the  
7 proceedings. The news media may interview hearing attendees or witnesses if they  
8 agreeable, but these interviews shall be conducted outside of the hotel building. Any  
9 witness interviews shall be conducted after I have released the witness from these  
10 proceedings. Finally, hearing attendees shall remain masked at all times and shall  
11 comply with other posted COVID protection measures. Hearing participants may  
12 remove their mask during questioning and testimony. Any failure to follow the hearing  
13 rules will result in one warning. If an individual continues to engage in the same  
14 behavior after receiving a warning, that individual will be removed. Warnings or removal  
15 of audience members can cause significant delays in the proceedings, so we ask for  
16 your cooperation in following these rules throughout this important event. We will now  
17 hear testimony from Mr. John Spath. Lieutenant Alger can you please administer the  
18 oath?

19 **Recorder:** Good morning, sir. Please stand and raise your right hand. Can you raise  
20 your right hand, sir? Thank you. A false statement given to an agency of the United  
21 States is punishable by a fine and or imprisonment under 18 U.S. Code 1001. Knowing  
22 this do you solemnly swear that the testimony you're about to give will be the truth, the  
23 whole truth and nothing but the truth, so help you God?

1 **WIT:** Yes.

2 **Recorder:** Please be seated. For the record, sir if you could state into the microphone  
3 your full name and spell your last?

4 **WIT:** John Spath, S-P-A-T-H.

5 **Recorder:** Thank you, sir. And if you could identify your counsel please.

6 **Counsel:** My name is Tom Diaz. Last name is spelled D-I-A-Z.

7 **Recorder:** Thank you very much.

8 **CAPT Phillips:** Good morning Mr. Spath thank you for coming in today. I'm going to  
9 start off with some background questions. I would like to start off by asking you where  
10 do you currently work?

11 **WIT:** TALOS Energy.

12 **CAPT Phillips:** And what's your position there?

13 **WIT:** Senior Vice President of Production.

14 **CAPT Phillips:** Where is your office located?

15 **WIT:** It's in Three Allen Center in Houston, Texas.

16 **CAPT Phillips:** And how long have you been in that position with TALOS?

17 **WIT:** In that position since 2018.

18 **CAPT Phillips:** And how long have you worked for TALOS total?

19 **WIT:** Eight years since February 2013.

20 **CAPT Phillips:** And what did you do before you worked for TALOS?

21 **WIT:** I was an independent consultant drilling engineer.

22 **CAPT Phillips:** For what company?



1 **WIT:** Deep Gulf Energy, Stone Energy and then I was also employed by Marathon Oil  
2 from 1997 until 2005.

3 **CAPT Phillips:** Have you ever spent any time underway?

4 **WIT:** Repeat that?

5 **CAPT Phillips:** Have you ever spent any time at sea on ships?

6 **WIT:** Yes, ma'am. As a drilling supervisor or drilling engineer I would go – I would work  
7 on drill ships, floaters, would transport by marine vessels, helicopters. I worked about 4  
8 years offshore so I was experienced in traveling in the sea.

9 **CAPT Phillips:** Thank you. Did any of that time offshore include time spent on lift  
10 boats?

11 **WIT:** No, ma'am.

12 **CAPT Phillips:** Do you hold any professional licenses or certificates?

13 **WIT:** I'm a licensed professional engineer.

14 **CAPT Phillips:** What's the highest level of education you've completed?

15 **WIT:** Bachelor of Science.

16 **CAPT Phillips:** Have you ever received any lift boat specific training?

17 **WIT:** No, ma'am.

18 **CAPT Phillips:** Thank you. Can you give us a general description of what TALOS  
19 does as a company?

20 **WIT:** We're an offshore operator. We do have some leases, some inland waters and  
21 land. But for the most part we produce oil and gas.

22 **CAPT Phillips:** What's the range of TALOS's operations? What's the geographic area  
23 you cover?

1 **WIT:** East Texas, South Louisiana, inland waters off the coast of Louisiana all the way  
2 out to deep water, I think our deepest platform is right around 3300 feet. From Highland  
3 area all the way to the outskirts of Viosca Knoll. So it spans at pretty much the entire  
4 Gulf of Mexico for leases

5 **CAPT Phillips:** Thank you. Can you tell us a little bit about your general  
6 responsibilities as the Vice President for Production Operations?

7 **WIT:** My general responsibilities are to manage the assets. I have a couple Directors  
8 that report to me. We manage the production, production engineering, asset  
9 management, coordinating any projects when it comes to recompletions. Any type of  
10 well working, expense well work and overall production operations which include the  
11 daily operations of all offshore facilities as well as the land facilities. I have roughly I  
12 would say about 4 or 500 people, 450 people that report to me.

13 **CAPT Phillips:** Does TALOS have, own their assets? I guess I'll say does TALOS  
14 own their vessels?

15 **WIT:** We have leases offshore with the Government. And we do own the assets that  
16 are on the leases.

17 **CAPT Phillips:** So that's floating and fixed facilities?

18 **WIT:** Fixed platforms and one floating platform which is VK956 Ram Powell. But the  
19 majority of our platforms are fixed. We do not own any helicopters or marine vessels or  
20 any marine transportation.

21 **CAPT Phillips:** So you contract vessels and helicopters to provide services for you?

22 **WIT:** Yes, ma'am.

23 **CAPT Phillips:** And when you say coordinate projects what do you mean by that?

1     **WIT:** Most of our engineers, whenever we have a project we identify a zone or a  
2     problem with the well. And what we do at that point is the engineers consult with our  
3     contractors and vendors about the problem or an idea that we want to do as far as  
4     moving up the hole. So they'll consult with all the vendors or the contractors on what's  
5     the best way to do that project. And they take their recommendations and based on  
6     their experience and they'll talk to other engineers on what's the best course of action.  
7     And then at that point we work with the vendors to write procedures, detailed  
8     procedures and from that point forward pretty much the coordinators in the sense of we  
9     just coordinate certain contractors that offer a service to work together, get out on  
10    location, mobilize them to location and go through the detailed procedure. And at any  
11    time when there's a change in procedure the engineers make sure that all the parties  
12    understand the change in the procedure. And they also solicit feedback from the  
13    vendors because they are the experts in a lot of the operations. So that's why I kind of  
14    call it coordination and projection management. They ultimately do make decisions, but  
15    it's based on the recommendations of the vendors and contractors.

16    **CAPT Phillips:** Thank you. Can you walk us through what your normal workday looks  
17    like?

18    **WIT:** I typically get to the office around 5:45 in the morning. I check emails and we  
19    start meetings about 7 a.m. We do a production operations meeting at 7 a.m. where we  
20    talk to all production superintendents about any issues they have going on offshore.  
21    Then at 7:30 we do a rig call which is with all the drilling rigs where we're doing any  
22    drilling or completion projects. Then at 8 O'clock we have a production engineering  
23    meeting where we talk about ongoing projects when it comes to asset management that

1 doesn't include anything with a BOP stack. That typically goes to about 8:30, 8:45. And  
2 then from that point on its several meetings on budgets, acquisitions, anything that may  
3 come up related to an incident offshore. My day's pretty full with meetings. And then  
4 typically around 3:30 I'll finally have time to get to my computer and I'll do emails until  
5 about 6, 6, 6:30 and then I'll start back up again around 9 O'clock and work until about  
6 11.

7 **CAPT Phillips:** Thank you. In your asset management and project coordination is that  
8 covering the entire scope of where TALOS works?

9 **WIT:** That's correct.

10 **CAPT Phillips:** So you don't have any counterparts that do the same job for a different  
11 geographical area?

12 **WIT:** No, ma'am.

13 **CAPT Phillips:** Okay. How are you involved in the decisions of about what vessels  
14 and how many people are going to be needed to meet upcoming projects?

15 **WIT:** I don't get involved to that level of detail. The Directors that report to me will sit  
16 down with the engineers and review the project, the detailed procedures. We have  
17 managers for all the support functions like Michael Boudreaux, Logistics Manager,  
18 procurement, regulatory. So the engineers will sit down with those group of managers  
19 and walk through the project and determine what resources they need. And then a  
20 Director may ask them what vendors they're going to use. But even they really don't get  
21 involved with the manpower. We do have guidelines in place that require, for every  
22 project and that is a third party coordinator on location or what we call the well site  
23 leader. And that individual is simply the eyes and ears of the operation. They work with

1 the vendors on location. And they communicate directly with the engineer in the office.  
2 And we also require an HSE Rep on every project. So all the engineers understand  
3 that. So those are the two individuals that we mandate that they have to have on  
4 location.

5 **CAPT Phillips:** Okay. The third party coordinator is that sometimes referred to as the  
6 company man?

7 **WIT:** Yes, ma'am.

8 **CAPT Phillips:** And then HSE Rep is that a TALOS employee or another contractor?

9 **WIT:** We do have 8 HSE Reps that work offshore that are TALOS employees. And  
10 then we use contractors for the remaining. For example right now we're rotating about  
11 56 HSE Reps offshore all of our projects.

12 **CAPT Phillips:** Is that pretty typical of what you have going on at any given time about  
13 56 projects?

14 **WIT:** It depends on the time of the year. Typically near the end of the year you typically  
15 slow down on projects mainly because of the weather. Once you start having cold  
16 fronts blowing through the seas get rough, wind picks up and it causes a lot of non-  
17 productive time on projects. So we try to focus our work really between starting  
18 February, March and wrap up sometime in October. Unless it's something that is  
19 critical, it's a safety issue or it's mandated by the Government that we have to do  
20 something then we'll execute during that time. But for the most part we try to avoid  
21 doing too much, third party contract work offshore at that time.

22 **CAPT Phillips:** Okay. What's the most number of projects you've seen at once?

1 **WIT:** If you count construction I would say somewhere right around 15 projects, 15 to  
2 20.

3 **CAPT Phillips:** How many do you have right now?

4 **WIT:** I would say about 12.

5 **CAPT Phillips:** How many vessels would you say TALOS typically has on charter at  
6 any given time?

7 **WIT:** Marine vessels we have 8 term vessels which are with us year round. And then  
8 we charter vessels for projects. I think we had 26 vessels under contract as far as  
9 yesterday. I've seen it as high as 46. So we will range anywhere between I would say  
10 8 to typically 30. Somewhere in there.

11 **CAPT Phillips:** Okay. And is that a range of different types of vessels?

12 **WIT:** Yes, ma'am. It ranges from offshore supply vessels that can support drilling rigs  
13 that are 320 feet long to crew boats that may be 100 to 110 feet. That also includes lift  
14 boats. As of today we have 4 lift boats under contract.

15 **CAPT Phillips:** Do you ever have any interaction with the vessels?

16 **WIT:** No, ma'am. Let me clarify. With the vessel itself?

17 **CAPT Phillips:** Correct.

18 **WIT:** No, ma'am. I do talk to some of the Vice Presidents of the contractors.

19 **CAPT Phillips:** Sure. Okay, thanks. You said you have Directors working for you. Do  
20 any of the folks that go on board the vessels work directly for you?

21 **WIT:** No, ma'am.

22 **CAPT Phillips:** They work for other folks in the company that then work for you?

23 **WIT:** That's correct.

1     **CAPT Phillips:** When TALOS is preparing to contract a vessel do you do any kind of  
2     review of the operator safety record or the status of the vessel or anything like that?

3     **WIT:** We do. When it comes to contracting vessels the engineers identify the project,  
4     they sit down with our Logistics Manager Michael Boudreaux to determine a scope of  
5     the project. At that point Michael goes out for tender to see what vessels are available.  
6     We have Master time charters with the contractors that we use for the marine  
7     transportation. We have SEMS bridging agreement in place. And we do SEMS audits  
8     on contractors each year. We rotate, we have roughly about 800 vendors right now so  
9     you can't do an audit all 800 every year but we choose 30 to 40 each year where we do  
10    a deep dive into the SEMS program and their safety record. Now one of the things we  
11    do use is we use ISN to track the performance of the contractors. But it is self-  
12    reporting. They have to report in the recordable incident rate or a lost time incident rate.  
13    And at that point we have criteria in ISN that if they cross a threshold then it would come  
14    up as, we call it red as an alert that there could be something wrong with that vendor or  
15    they're having some performance issues. And once they become red then we  
16    absolutely go audit the contractor to see what happened. You know review the  
17    incidents and see if it's something that they can address and may change their culture  
18    within the company. That's about as far as we go evaluating the contractors.

19    **CAPT Phillips:** Okay. And you said you do 30 to 40 deep dives or audits each year of  
20    certain contractors.

21    **WIT:** That's correct. And -----

22    **CAPT Phillips:** Do you use your own folks to do that?

1 **WIT:** Yes, ma'am. We use an individual by the name of Chad Bufford he's our  
2 manager of contractor, I'm trying to remember exact title. He works for our Director of  
3 HSE. He's like manager of vendor safety. He works in our Lafayette office and he does  
4 the audits. And the criteria we typically use we look at the previous year's performance  
5 of the contractor. That comes into play whether or not we're going to audit them that  
6 year. We look at the spend on the contractor. The contractors that we use more than  
7 others we want to audit more frequency, frequently than others. And then we throw in  
8 other companies that we feel critical to operation.

9 **CAPT Phillips:** Thank you. I realized that we're using a couple of acronyms. So just  
10 for the record I'm going to ask you clarify some of those.

11 **WIT:** No problem.

12 **CAPT Phillips:** Earlier on you said BOP. You said BOP. Is that for blowout  
13 preventer?

14 **WIT:** Oh blowout preventer, yes, ma'am.

15 **CAPT Phillips:** And then you just said ISN.

16 **WIT:** ISN it's a service, I – I just know it as ISN. I don't know what it stands for. It may  
17 be International Safety Network, or. It's a ----

18 **CAPT Phillips:** Network maybe?

19 **WIT:** That's correct. There you go.

20 **CAPT Phillips:** Okay, thank you. And then SEMS?

21 **WIT:** Safety Environmental Management System.

22 **CAPT Phillips:** Thank you. HSE?

23 **WIT:** Health Safety Environmental.



1       **CAPT Phillips:** Thank you. Can you talk a little bit more about the SEMS agreement  
2 that you said you had in place with the contractors?

3       **WIT:** So we're required by BSEE to have a SEMS program in place and there's 17  
4 modules of that program. And it ranges from training to management of change, there's  
5 several modules that make up SEMS. What we do is we bridge with all vendors whether  
6 it marine or other vendors a bridging agreement that puts that responsibility on them to  
7 comply with those modules.

8       **CAPT Phillips:** How would a bridging agreement like that work in conjunction with a  
9 vessel's safety management system?

10       **WIT:** So when it comes to the Master time, we use a Master time charter for vessels.  
11 And in that document, and I have a copy, I think we provided a copy for the Master time  
12 charter, it pretty much states the responsibility of each party. For the Master time  
13 charter it clearly states that the contractor, the owner of the vessel is responsible for the  
14 management of the vessel, any decisions made that affect the vessel. The SEMS  
15 bridging agreement is an agreement between essentially our safe operating practices  
16 and their safe operating practices. And it really states that if we're on their vessel we  
17 have to follow their safe operating practices. When it comes to our facilities when we do  
18 work on our facilities we have to follow our safe operating practices.

19       **CAPT Phillips:** So when TALOS charters a vessel and goes on board they're following  
20 the vessel's safety management system?

21       **WIT:** Yes, ma'am. We follow direction of the Captain. Whatever the Captain says, we  
22 have to muster, we have to do anything we listen to the Captain. And the same, not only

1 just marine vessels, but even drilling rigs that we contract. Drill ships, they have the  
2 ultimate authority of the vessel.

3 **CAPT Phillips:** Okay. I heard you mention another acronym BSEE?

4 **WIT:** That's correct.

5 **CAPT Phillips:** Can you?

6 **WIT:** Bureau of Safety Environmental Enforcement.

7 **CAPT Phillips:** Thank you. Going back to the audits on some of the companies each  
8 year. Do you know if SEACOR was one of the 30 to 40 companies that you audited in  
9 recent years?

10 **WIT:** I do not know that.

11 **CAPT Phillips:** Are there specific surveys that TALOS will do before they put a vessel  
12 on charter?

13 **WIT:** No, ma'am.

14 **CAPT Phillips:** You talked a little bit about a Master charter agreement. And then I  
15 think we've also seen a document that's a short form time charter. Can you tell us the  
16 difference between those two documents?

17 **WIT:** I believe the short term time charter is an exhibit in the Master time charter that  
18 lays out the terms of the contract of a particular vessel is the way I understand it. So  
19 the Master time charter is in place and it really just determines who's the responsible  
20 parties, the indemnifications, and then when you get to the short term charter which is  
21 really, I believe it's an exhibit in the Master time charter that lays out the specifics of that  
22 vessel we're going to charter. Day rate, duration, scope of work.

1       **CAPT Phillips:** So the Master time charter is more with the company and this short  
2 term charter agreement is about vessel – a specific vessel?

3       **WIT:** That's correct.

4       **CAPT Phillips:** Thank you. And you started to go into it a little bit. But can you give us  
5 more details when you charter a vessel what does the owner or operator provide and  
6 what does TALOS provide? What is the division of responsibilities there?

7       **WIT:** When we charter a vessel we go out to the market to let them know the scope of  
8 work, how much cargo is going to be transported, the amount of bulk materials on the  
9 vessel that's going to be transported. At that point award the charter and if you work  
10 with say one of the coordinators on the contractor side of where we need a vessel to  
11 show up, you know which dock. And then at that point we get equipment to the dock,  
12 load it on the vessel per the Captain. And then we just really coordinate, tell them this is  
13 where you need to go. Now how you get there is up to you. You know we give them  
14 point A to point B. When they get on location our representatives will communicate with  
15 the Captain of the vessel to determine whether or not it's safe for them to get to move  
16 underneath the crane so we can off load the vessel. And that decision is solely is  
17 between the Captain and the crane operator if they feel it's safe for that vessel to get on  
18 location and start off loading the vessel. And that's about the extent we have with the  
19 contractor. We don't get into their business on weather or routes they take or anything  
20 like that. That's solely up to them.

21       **CAPT Phillips:** If you're chartering a lift boat does TALOS provide information on  
22 where the lift boat needs to set down?

1 **WIT:** Yes, ma'am. We provide the water depth, the deck height, any surveys we may  
2 have of the sea floor that may indicate any additional what we call can holes or  
3 penetrations that another, either a rig or another lift boat may have put on location. We  
4 provide them with pipeline location. We provide all that to the lift boat company and  
5 then they work with the engineers to determine which is the best way to approach a  
6 platform to avoid any of its hazards. Sometimes if there's some question as to what we  
7 have or it's been a while since we've been on a location we'll have a survey company  
8 on the vessel do a side scan sonar of the sea floor just to make sure there's no hazards  
9 that we haven't been able to identify.

10 **CAPT Phillips:** So if you did that you would send the side scan sonar with them?

11 **WIT:** Yes, ma'am.

12 **CAPT Phillips:** If you don't need to send a survey team out do you rely on your  
13 company's previous survey data or is there somebody that provides the survey data to  
14 you?

15 **WIT:** We rely on our company's previous data.

16 **CAPT Phillips:** I think you said earlier sometimes you do talk to the companies that  
17 own or operate vessels you have on charter. Is that right?

18 **WIT:** Yes, ma'am. At a very high level.

19 **CAPT Phillips:** What's the nature of those conversations?

20 **WIT:** Typically it's about performance. Their representatives will reach out to me to talk  
21 about if we've had any issues with their company. Maybe upcoming work, what's our  
22 forecast look for the next year. Just really more general business discussions.

23 **CAPT Phillips:** Have you had one of those conversations with SEACOR recently?

1 **WIT:** No, ma'am.

2 **CAPT Phillips:** Do you remember the last conversation like that you had with  
3 SEACOR?

4 **WIT:** I would say probably a year and a half or two years ago.

5 **CAPT Phillips:** Did you have any concerns with their performance at that time?

6 **WIT:** No, ma'am.

7 **CAPT Phillips:** Does TALOS provide any type of weather reports for vessels that are  
8 on charter?

9 **WIT:** No, ma'am. We do have a weather service that we use, it's Wilkins or DTN. We  
10 do get, and I just looked at this the other day, the type of reports we get throughout the  
11 course of a day. We'll get what looks like a general Gulf of Mexico weather report about  
12 5:30 in the morning. And then we also – but our primary focus is on weather reports for  
13 our locations. So for every fixed platform we have offshore we get a specific, site  
14 specific weather report. And that's for our people on location to get a sense of weather  
15 impacts to the operation. Taking a look at when vessels may show up. If there's going  
16 to be a weather window to off load the vessels or not. And just really general planning  
17 purposes. Those site specific weather reports we get that about 6 a.m., one about noon  
18 and one about 5:30 in the evening. When it comes to tropical storms or hurricanes we  
19 get updates about every 4 or 5 hours. But at no time do we share that report with any of  
20 the marine vessels or the drilling contractors for that nature. They have their own  
21 weather service.

22 **CAPT Phillips:** Thank you. Who is your weather service provider?

23 **WIT:** Wilkins.

1       **CAPT Phillips:** Where do those weather reports go to?

2       **WIT:** It's a mass distribution. We give them a distribution list so all the individuals, all  
3 the engineers, pretty much everybody in operations including our executive  
4 management here gets these reports.

5       **CAPT Phillips:** Does it go to your fixed locations?

6       **WIT:** Yes, ma'am.

7       **CAPT Phillips:** Does it go to third party reps you have on board each vessel, the  
8 company man?

9       **WIT:** Yes, ma'am.

10       **CAPT Phillips:** And you said they were at 6, 12 and 1730?

11       **WIT:** Roughly. It may vary by a half an hour here or there. But it's around that time.

12       **CAPT Phillips:** Who coordinates that distribution list?

13       **WIT:** We have an admin that works for our HSE Department that manages that  
14 distribution list.

15       **CAPT Phillips:** So are they constantly adding these third party contractors that are  
16 going aboard vessels?

17       **WIT:** That is correct.

18       **CAPT Phillips:** And taking them off when they are done?

19       **WIT:** That is correct. I don't think they'll take them off. They'll get those weather  
20 reports for as long as they have that email address. We'll add them, most of our  
21 operations we have generic email addresses. For example company man 1 for a  
22 drilling rig, you know so that we know they're getting all the same emails. And it may be  
23 a different individual because those company men or well site leaders or coordinators

1 they rotate. So they'll go out there for two to three weeks and then they get someone to  
2 relieve them in two to three weeks. So what we try to do is set up a generic email so  
3 that they understand all the previous emails so that we're not having to email individuals  
4 all the time. Some of our well site leaders that have been with us for a significant  
5 amount of time they still do use their personal email addresses and they get the weather  
6 forecast.

7 **CAPT Phillips:** How do you get those specific weather reports for a specific location to  
8 the right location?

9 **WIT:** The report itself lists all – its individual attachments per location so it comes out in  
10 one email. And there may be like 25 attachments of each location. And then we add  
11 locations. For instance if we contracted a drill ship and we're drilling a well in a certain  
12 location we'll add that vessel or that company man to that distribution. Not only the  
13 company man, the clerk that we have on location. So it comes out in just a mass  
14 distribution of a bunch of attachments so everyone gets the same email.

15 **CAPT Phillips:** Thank you. And does your weather service notify you if there's a big  
16 change in weather conditions in between those intervals that you get during normally  
17 scheduled forecast?

18 **WIT:** No, ma'am.

19 **CAPT Phillips:** Do you know how long SEACOR POWER had been working for  
20 TALOS?

21 **WIT:** I believe we contracted it in February to do some abandonment operations. So it  
22 came on charter sometime in February. And then after – and then we had a project at  
23 Main Pass 138 that required that type of vessel because of the leg length and the water

1 depth and the deck height. So we suspended the abandonment operations and went  
2 over to do the recompletion.

3 **CAPT Phillips:** That Main Pass Block 138 facility, is that your facility?

4 **WIT:** Yes, ma'am.

5 **CAPT Phillips:** And what type of project was that that was going to happen?

6 **WIT:** That was a zone change, a recompletion.

7 **CAPT Phillips:** Do you know why SEACOR POWER was selected for that project?

8 **WIT:** Because of the water depth and the deck height. I believe there's only two or  
9 three lift boats in the Gulf of Mexico capable of doing that project.

10 **CAPT Phillips:** Were you aware that if SEACOR POWER had any limitations or  
11 issues?

12 **WIT:** I was not aware of any limitations or issues. Other than the max water depth they  
13 can work in. That's the only limitation that I'm aware of.

14 **CAPT Phillips:** Can you tell me the process for letting SEACOR know that TALOS  
15 needed the boat to move from one project to another?

16 **WIT:** We're in constant, our logistics coordinator or well site coordinators are in  
17 constant communication with the Captain or each contract like SEACOR has a  
18 representative, a marine manager that manages the movement of vessels and lift boats.  
19 And we're required to do a notification of location change to BSEE. So if we depart on  
20 location we're required to notify them when we move to a different location. And that's  
21 really so that they can come up with a plan to inspect the operations. So they want to  
22 know where everything's at in the Gulf of Mexico so that they can conduct their  
23 inspections. So we have to notify the Government. So everyone's aware of the



1 scheduled plan from the contractor to the well site leaders, even to our production  
2 operations because they have to have an idea of when a lift boat is going to show up on  
3 location, when a project is going to take place to make sure that they have everything  
4 out there necessary to support the project.

5 **CAPT Phillips:** Thank you. Are you required to give the vessel owner and operator a  
6 certain amount of notice?

7 **WIT:** There's not a requirement on the notice. We do it out of curtesy so that they can  
8 plan.

9 **CAPT Phillips:** Do you know how long the project at Main Pass 138 was supposed to  
10 last?

11 **WIT:** Anywhere from 10 to 14 days. If things went well it would probably be about a 10  
12 day project. And the timing to do that project when we contracted the vessel in  
13 February to do abandonment operations we did everything we could on that location  
14 that the SEACOR POWER was working for the abandonment. So they were actually in  
15 the process of wrapping up that project and our abandonment group was going to move  
16 it to another field to do some additional abandonments. And we had this project come  
17 up. We started coordinating about a month, month and a half in advance on the use of  
18 that vessel for that project. So that the abandonment group understood that there was  
19 going to be a slight gap in their planned projects.

20 **CAPT Phillips:** Okay.

21 **WIT:** And that's why – so the equipment used for abandonments is a little bit different  
22 than the services used for recompletion. So when our abandonment group finished that  
23 particular project we needed to remove all the equipment off of the lift boat that's why it

1 went into Bollinger's Dock to remove all that equipment and then we put on the  
2 equipment necessary to do the recompletion. It was going to move Main Pass 138, do  
3 that project which was going to be 10 to 14 days. And then move back Bollinger to that  
4 equipment moved off and the P&A equipment moved on. That's the ideal situation.  
5 Sometimes we'll move a lift boat and just transport the equipment out on a marine  
6 vessel. But when you start doing that operation, especially with a lift boat that can go  
7 into the dock you're susceptible to weather and additional risk when you're transporting,  
8 moving equipment from a fixed platform to a marine vessel with heaving and everything,  
9 we prefer to send it into the dock where it's more stable. It's less risky.

10 **CAPT Phillips:** Who makes the decision of when a vessel goes to the dock and when  
11 she leaves the dock to come out?

12 **WIT:** It's a conversation we have with the contractor.

13 **CAPT Phillips:** Do you get involved in those conversations at all?

14 **WIT:** No, ma'am.

15 **CAPT Phillips:** Who normally has those conversations?

16 **WIT:** I'm sorry.

17 **CAPT Phillips:** Who normally has those conversations?

18 **WIT:** Our logistics coordinator, the project engineers, they'll have those discussions  
19 along with the well site leaders if they feel they need to go in. And that will happen with  
20 the contractor. They'll do typically conference calls or just exchange emails on what  
21 scope is wrapping up and what's the next project and what scope of work and whether  
22 or not it's advantageous just to go to the dock or try to transfer equipment offshore.

1 They'll take a look at weather forecast and amount of equipment to move and make a  
2 decision.

3 **CAPT Phillips:** Who has the ultimate decision?

4 **WIT:** As to when to move equipment offshore versus going to the dock? It's really a  
5 joint decision. We, if the contractor – if anybody in that conversation raises any concern  
6 we typically – they typically listen to it. If someone says hey we feel it's safer or better  
7 to go to the dock, nobody will contradict that individually typically. And they'll go to the  
8 dock. If everybody's in agreement that it's easier to transfer equipment offshore then  
9 that's what they do. But at any time if anybody, we have stop work authority you know  
10 that we institute, if anybody brings up any concern whatsoever we have to address it.  
11 And if somebody raises a concern then we have to sit there and actually do a risk  
12 assessment, what's the risk? Can we mitigate that risk? And if we can't we end up  
13 taking the advice of and going with the less risker operation.

14 **CAPT Phillips:** Is that a TALOS stop work policy or is that the policy of vessels?

15 **WIT:** It's probably both. We have it within our SEMS program and they should have it  
16 within their SEMS program. And it's not just TALOS it's pretty much mandated  
17 throughout the Gulf of Mexico because of SEMS.

18 **CAPT Phillips:** If somebody exercises stop work authority does that come up to your  
19 level?

20 **WIT:** When someone – I get a report. So if somebody initiates stop work authority we  
21 have a reporting system, incident reporting system where the location, whether it's the  
22 platform or the lift boat or the clerk that's associated with that project they have to enter  
23 that data into a reporting system and then that gets distributed throughout the entire

1 company. Where somebody institute – implemented stop work authority and describes  
2 why they did it and what they did to solve the problem, the risk. So I get that report.  
3 Every now and then somebody may, if I read that report or an engineer may pop into my  
4 office and say hey somebody used stop work authority because of this situation what's  
5 your thoughts around it. It doesn't happen that often. I pushed that delegation down to  
6 the Directors.

7 **CAPT Phillips:** Okay, thank you. Are there any deadlines or incentives for completing  
8 a project earlier?

9 **WIT:** No, ma'am.

10 **CAPT Phillips:** What usually happens if a vessel is on contract and they need to do  
11 some maintenance?

12 **WIT:** It depends on the type of maintenance. Typically what will happen the contractor  
13 will notify our well site leader or a company man that they need to do some  
14 maintenance on a vessel. Whether it's the vessel itself or the cranes and that they're  
15 going to be out of service for a period of time. And then we coordinate our projects  
16 around that down time.

17 **CAPT Phillips:** What usually happens if a vessel can't move somewhere where you  
18 want it move because of weather?

19 **WIT:** It stays on location. It's the Captain's ultimate authority as to the weather window  
20 for them to transit to a different location. And if weather comes up its part of the time  
21 charter where we pay for weather. So like especially like during the winter months we  
22 get these winter storms that blow through and you have rough seas for 5 to 7 days

1 straight, we'll have vessels stuck on location just waiting on weather. And we incur that  
2 cost.

3 **CAPT Phillips:** Is there any kind of penalty to the company?

4 **WIT:** No. No, ma'am. It's not just with lift boats. Even with drilling rigs or any marine  
5 vessel, the Captain, even if we have critical, when I say critical cargo on board to  
6 continue with an operation if that Captain deems it unsafe and they need to transit in to  
7 shore because of some winter storm or some tropical depression it's their authority to  
8 do that. And we plan around it. There's never any pressure whatsoever given to any of  
9 these Captains you know to do an operation that's unsafe.

10 **CAPT Phillips:** Thank you. I would like to ask you to walk us through April 13<sup>th</sup> and  
11 starting with about lunchtime walk us through what you remember from that day and  
12 your interactions with SEACOR.

13 **WIT:** I was first notified – I was the first, I believe I was the first individual that Michael  
14 Boudreaux called roughly about 4 O'clock, 4:15 when Michael heard from one of our  
15 engineers of a mayday from the SEACOR POWER. Michael called me to tell me that  
16 what he heard. He hadn't confirmed it at that point. I immediately called my boss Bob  
17 Abendschein who is our Executive Vice President of Operations and our – Tim Duncan  
18 our CEO. And gave them the information I had at that point. I coordinated a call with  
19 Michael Boudreaux a conference call within 15 to 20 minutes after that initial call. We  
20 were giving Michael some time to verify that the report he received was accurate. So at  
21 that time he was calling around to some of our other marine contractors and shore base  
22 and SEACOR to see, to hear if that initial report was correct. We immediately, he  
23 immediately, and he told me this when I first talked to him, he said he was going to

1 deploy every asset we had available to go out there. But the weather was pretty rough.  
2 So he mobilized every vessel that we had on charter that was close to that area to  
3 assist. We did a conference call like I said about 20 or 30 minutes after that initial  
4 notification. And he was able to confirm that the SEACOR POWER did flip and sink. At  
5 that point I immediately went home and packed a bag and drove to Lafayette to assist in  
6 any way I could with Michael Boudreaux. Michael was in direct communication with  
7 SEACOR on the response. But for the first, I would say until the next morning we were  
8 doing everything we could you know to assist in any way possible. And communicating  
9 with SEACOR to offer any vessels available. We had a dive spread working for us on  
10 some inland pipeline removals. I immediately told them to be prepared to pull anchors,  
11 secure their equipment for transit over to location to assist in any way possible. And so  
12 that went on through the night. It got so rough and due to the darkness there were still  
13 vessels out there trying to do grids to search for individuals. We weren't really getting a  
14 whole lot of updates because everyone's communicating by radio. And we could  
15 communicate directly with the vessel through their cell phone, through their cell network.  
16 But we left that up to the shore base, Michael Boudreaux and the shore base was really  
17 talking to these vessels. Through the morning and then that next morning is when  
18 SEACOR took over the response and worked with the Government. At that point we  
19 were able to participate in some of the update calls. But we offered a lot of services and  
20 we were told that they had it under control.

21 **CAPT Phillips:** Tell me more about the last item you said, what kind of services did  
22 you offer?

23 **WIT:** We offered dive spread, additional vessels.

1       **CAPT Phillips:** What type of vessels?

2       **WIT:** We had any vessel we could at that time we had probably a 300 foot vessel on a  
3 charter, we had – we offered any vessel we had within our current contracted fleet.

4       Because when we were told that they weren't – they didn't need our dive vessel, or dive  
5 barge they were contracting somebody to put some dive equipment on another vessel.

6       We offered a vessel to help in any way possible. But they said they had it under control.

7       **CAPT Phillips:** Do you know what kind of dive vessel you had on contract at that  
8 point?

9       **WIT:** It was more of a barge, a moored barge which given the weather conditions  
10 probably couldn't have gotten on location at that sea state even for the day or two after.

11       But we were prepared for any available weather window to get that dive barge on  
12 location.

13       **CAPT Phillips:** Do you know how far away it was?

14       **WIT:** It was roughly about 7 or 8 hour transit.

15       **CAPT Phillips:** Okay. Thank you. I'm going to turn the microphone over to Mr. Verdin  
16 to see if he has some questions for you.

17       **Mr. Verdin:** Yes, good morning. Thank you Captain. Good morning Mr. Spath. A  
18 couple quick questions. You said that the weather, the Wilkins weather I believe you  
19 said you received, TALOS sends out to the company man. Are these weather reports,  
20 are they proprietary? Could they be shared to the Captain for example if requested to  
21 compare weather with his weather?

22       **WIT:** They're not proprietary. They could be shared with the Captain.

23       **Mr. Verdin:** Okay.

1 **WIT:** And let me elaborate on that. So it's a service we pay for. We get the emails.  
2 Okay, all the contractors and the marine contractor they also get their – they have their  
3 own weather service. It's not uncommon especially when it comes to like a drilling rig  
4 for our well site coordinator company man to share his weather report with the Captain.  
5 Because weather reports are subjected to the person putting them together. You'll see  
6 variances in the timing of like any front coming through or seas increasing. You'll get on  
7 our report it will say about 6 p.m. tonight is when the front will hit location and seas will  
8 go from 3 to 4, to 6 to 8. But then their service may say well not it's actually 8 p.m. or 9  
9 p.m. You know so they'll sit there and talk about upcoming weather so they can plan  
10 their operations.

11 **Mr. Verdin:** Thank you. Is that something that could be received by maybe the vessel  
12 if that vessel or the vendor requested ----

13 **WIT:** Absolutely.

14 **Mr. Verdin:** The ship or the Master in this case the vendor.

15 **WIT:** Absolutely. But then again then they're working off of probably two conflicting  
16 documents. That's the challenge there. So they use a service that they feel  
17 comfortable using. We use a service that we feel comfortable using. So when you  
18 have a Captain that has two different possibly conflicting documents what does he do?  
19 You know, so.

20 **Mr. Verdin:** But is available upon request?

21 **WIT:** It is available.



1 **Mr. Verdin:** You said that the SEACOR POWER just finished an abandonment job.  
2 Can you explain a little bit about what that was? What type of work was the  
3 abandonment?

4 **WIT:** It was some structures that upon expired leases we were doing some well  
5 abandonments. And these platforms, given the water depth that they were in we  
6 needed the lift boat the SEACOR POWER because of its capability in that water depth.  
7 To essentially provide an additional deck and berthing for the crew. Because the wells  
8 that we were abandoning those structures didn't have suitable living quarters available.  
9 So we needed that lift boat the SEACOR POWER to provide additional deck space,  
10 berthing for personnel to do the well abandonments.

11 **Mr. Verdin:** Abandonment meaning they're gonna just disassemble the rig, remove the  
12 structure, remove it from the sea surface or?

13 **WIT:** We were doing well abandonments at that point. That was isolating any of the  
14 hydrocarbon zones, cutting and pulling tubing. Stuff of that nature.

15 **Mr. Verdin:** And the Main Pass 138 facility, that was a production facility still in  
16 operation producing?

17 **WIT:** Yes, sir.

18 **Mr. Verdin:** And this was just a window between projects that you all decided to use  
19 the SEACOR POWER for -----

20 **WIT:** That's correct.

21 **Mr. Verdin:** Is this information trickled down possibly through SEACOR or through your  
22 onsite leader, is this information about the upcoming projects trickled down through the  
23 Master or the crew in any way that you know of normally?

1 **WIT:** I'm not sure. I know it goes, it includes our logistics manager, Michael  
2 Boudreaux. We have daily project meetings that I described whether its production,  
3 operations, drilling, and in production engineering where we talk about projects,  
4 upcoming schedules. And so it's communicated throughout our organization. And then  
5 Michael is the one that will typically coordinate with the contractors. And we try to go  
6 really sole source on that kind of communication. Because we don't want 15 of our  
7 engineers communicating with the same guy. We want one individual communicating  
8 with, and getting one story, one schedule and not a bunch of different stories from a  
9 bunch of different people.

10 **Mr. Verdin:** Right. But it's, and I'm just trying to rephrase it right. So it is possible that  
11 the crew, Captain knew, the crew on board knew that they were going to be doing  
12 multiple or different operations for TALOS in the future.

13 **WIT:** That's correct.

14 **Mr. Verdin:** Okay. That's where I was going with that. You said they finished this P&A,  
15 Plug abandoned wells, you said abandonment, but it's plug and abandonment?

16 **WIT:** That's correct.

17 **Mr. Verdin:** Okay. So they finish this plug and abandonment project, they have a site  
18 Rep, a site leader for that project as well, right?

19 **WIT:** That's correct.

20 **Mr. Verdin:** Okay. And they change when they're setting up and mobbing for the Main  
21 Pass 138, they had another site leader. Are these ----

22 **WIT:** That's correct.

1 **Mr. Verdin:** Are these site leaders determined by their level of expertise or some  
2 contractor you're generally using in common and they were just rotation?

3 **WIT:** It's by their level of expertise. And the project engineer and who they feel  
4 comfortable having on location given the scope of the project. For example on P&A we  
5 use very diverse individuals because they have to have knowledge of slick line, E line,  
6 coil tubing, snubbing, and their not – they're kind of deconstructing a well so they don't  
7 have to have the knowledge of some of the E line logging tools, or the slick line  
8 operations or coil tubing, the complexity of a recompletion using coil tubing. They're  
9 there typically just to pump cement and cut and remove tubing and casing. When it  
10 comes to recompletions we have I would say at minimum of ten consistent consultants  
11 we use to work these projects. And again we use the individuals that we feel the most  
12 comfortable with, with that skillset that can handle that project. We have individuals that  
13 are really strong on coil tubing operations. Or in understanding the complexities of coil  
14 tubing versus snubbing versus E lines. So it's really up to the engineer to take a look at  
15 who he's comfortable with and putting out there on a project to feed him the information  
16 that he needs so he could communicate with the vendors so they can make decisions.

17 **Mr. Verdin:** That's all I got. Thank you Mr. Spath. Thank you Captain.

18 **CAPT Phillips:** Thank you Mr. Verdin. Mr. Lawrence.

19 **Mr. Lawrence:** Thank you Captain. Good morning, sir.

20 **WIT:** Good morning.

21 **Mr. Lawrence:** So you mentioned that you have a – you do sort of a risk assessment  
22 for weather to transport cargo on the lift boat versus on a supply boat to the location,

1 right? Is there any sort of risk assessment for putting personnel on a lift boat to transit  
2 to site versus on a crew boat?

3 **WIT:** Not that I'm aware of.

4 **Mr. Lawrence:** And do you operate any jack up rigs?

5 **WIT:** We do not have any jack up rigs under contract right now. We have in the past.

6 **Mr. Lawrence:** Would you be able to compare like a jack up rig to a lift boat in terms of  
7 stability by any chance?

8 **WIT:** Well a jack up rig is a totally different operation because you have derrick on it.  
9 So its legs are a lot bigger. It can handle a lot of weight. So a jack up rig is definitely  
10 more stable than a lift boat. A jack up can stay on location during severe weather. Lift  
11 boats if they typically, if there's a storm coming through or a tropical storm or something  
12 like that the lift boats will typically jack down and seek safe harbor. Whereas a jack up  
13 rig will stay on location because it takes so long for them to jack up and preload and jet  
14 their legs to be able to move off location. So they just stay on location. Where lift boats  
15 they seek safe harbor.

16 **Mr. Lawrence:** How about in terms of buoyancy does a jack up or a lift boat have  
17 more?

18 **WIT:** I can't answer that question.

19 **Mr. Lawrence:** Sorry. Thanks. That's all I have.

20 **CAPT Phillips:** Thank you Mr. Lawrence. Mr. Ehlers.

21 **Mr. Ehlers:** Good morning Mr. Spath and thank you for your testimony. Just a couple  
22 follow up questions here. You mentioned that once a project gets underway that

1 TALOS is largely in coordination effort, do you ever put TALOS employees on board  
2 your project vessels or out at the site?

3 **WIT:** Prior to transit to a location?

4 **Mr. Ehlers:** Yes.

5 **WIT:** We – so most of the work that we do when we’re using a lift boat, especially in the  
6 operations of like the abandonment and recompletion we use consultants. We do have  
7 a couple employees that are well site consultants or well site leaders that we’re training  
8 as, you know, but they’re not of the expertise for us to solely put them on the project.  
9 But we do have employees that will do that. We do have a lift boat operations in our  
10 Ship Shoal 114 field which call the unit. We have a lift boat that works that field year  
11 round. Because of the nature of that field we have single weld caisson scattered  
12 throughout the field and so our production operators which are employees have to get  
13 on a lift boat, transit over to a well, jack up, do the work they need to do and then  
14 reroute. So we do put local employees on lift boats.

15 **Mr. Ehlers:** And you mentioned HSE Representative required to be on board or at a  
16 site, is that at the site only or also including the transit to and from or between sites?

17 **WIT:** It just depends on the situation. If for example if that lift boat was doing the  
18 recompletion on the one location and then transiting to another location, a recompletion  
19 and wasn’t going into the port that HSE Rep would typically ride with that vessel. Most  
20 of those HSE Reps are consultants. So they want to get any day they can working. So  
21 they’ll be glad to ride with the lift boat. In this particular situation because they went to  
22 the dock we felt it was better just to probably mobilize HSE Rep and additional crew  
23 after the lift boat got on location. So there were more personnel on schedule to go out

1 to location and once the lift boat arrived. What we did is we manned with a third party  
2 contractors the necessary personnel only needed to identify their equipment to make  
3 sure they had everything they needed on the lift boat and to starting the operations that  
4 they could once they got on location and jacked up. But this incident we could have  
5 probably another 8 to 10 people on that lift boat that we were waiting to transit after it  
6 got on location.

7 **Mr. Ehlers:** Great thanks. You mentioned you current, I think currently or maybe it was  
8 April you had four lift boats under contract. Is that all with say SEACOR or is that  
9 multiple companies?

10 **WIT:** Multiple companies.

11 **Mr. Ehlers:** Again that depending on the type of vessel you need?

12 **WIT:** That's correct.

13 **Mr. Ehlers:** Going to the dive spread that you mentioned. Was this the dive team –  
14 was this an industrial dive team, welder and repair type dive team? Or what was the  
15 nature of their regular employment?

16 **WIT:** They were recovering some pipelines for us.

17 **Mr. Ehlers:** Okay.

18 **WIT:** So they had individuals capable of doing you know cutting, it was more you know  
19 shallow dives. Nothing like a sat nature or anything like that. But they were there just  
20 really abandoning pipelines, making sure when we have crossing we have to remove  
21 stuff, for pipeline crossings. And that's what the scope they were doing.

1 **Mr. Ehlers:** Again to the accident day, how did notifications to well site workers under  
2 contract to TALOS, how did those happen? In other words notification to next of kin as  
3 far as that the accident had happened. Do you know how that occurred?

4 **WIT:** The notifications to the family of the well site leaders?

5 **Mr. Ehlers:** The workers under contract under TALOS on board the SEACOR  
6 POWER, when the accident happened were families notified that an accident had  
7 happened?

8 **WIT:** We notified the companies of the incident. And we left it up to the contractors to  
9 notify the families.

10 **Mr. Ehlers:** Do you know who made those calls to the company?

11 **WIT:** I'm not sure who made the calls. It may have been, I don't was assume but I  
12 know our project engineer Michael Melancon also made a few calls to the contractors  
13 that he knew we had on board. Some calls may have been from our HSE group. But I  
14 think Michael Melancon also made a majority of the calls notifying contractors.

15 **Mr. Ehlers:** Do you know when he made those calls?

16 **WIT:** I'm not sure. Probably that evening.

17 **Mr. Ehlers:** Thank you, sir.

18 **CAPT Phillips:** Thank you Mr. Ehlers. Mr. Muise.

19 **Mr. Muise:** Good morning, sir.

20 **WIT:** Good morning.

21 **Mr. Muise:** I just have a few follow ups for you. Does TALOS have its own marine  
22 department that assist with vending and assessment of these vessels?

23 **WIT:** No, sir.

1 **Mr. Muise:** So do you have a third party in contract that does that kind of work for you?

2 **WIT:** No, sir.

3 **Mr. Muise:** I heard you mention, we talked a little bit about ISN Network a little bit  
4 earlier. Is there a vessel database that you use as well? Have you heard of the  
5 Offshore Vessel Inspection Database?

6 **WIT:** Not that I'm aware of. We are looking at implementing, we're actually about ready  
7 to hire a former Coast Guard, they retired from the Coast Guard to start up some type of  
8 a marine assurance program for the company. It's a step that we probably need to  
9 make to vet the vessels. Up to this point we really count on the contractors and the  
10 annual inspections done by Coast Guard you know to pretty much determine if the  
11 vessel is capable. If they get the blessing from the Coast Guard you know during the  
12 annual inspection and we feel that the vessel is safe.

13 **Mr. Muise:** When the contractors are entering their information into ISN Network the  
14 self-reporting system about their safety management system does that also include  
15 vessel details also?

16 **WIT:** I don't believe so.

17 **Mr. Muise:** You mentioned the TRIR, total recordable incident rate. Is that – what's the  
18 threshold that makes that turn red?

19 **WIT:** I think it's about .75.

20 **Mr. Muise:** And is that company specific or vessel specific?

21 **WIT:** That's contractor specific. All contractors if they go above .75 they immediately  
22 turn red.

23 **Mr. Muise:** Do you happen to know what SEACOR Marine TRIR was?



1 **WIT:** I do not. I do know as a company we track it. We're at a .47 right now with about  
2 2 million man hours. And that includes employees, contractors, any project we have we  
3 track that.

4 **Mr. Muise:** How about down time, is that also a metric that goes in there?

5 **WIT:** We don't track down time. We may use it for maybe drilling operations. We  
6 would call it like non-productive time, unplanned time. But recompletions and, we really  
7 don't track down time that much.

8 **Mr. Muise:** Mr. Lawrence asked you to compare drilling units and lift boats stability  
9 wise. Could we do that safety wise? Are there additional tools that you use on drilling  
10 units that you don't use perhaps on a supply boat or a lift boat? I'll ask specifically, are  
11 you familiar with safety cases?

12 **WIT:** No.

13 **Mr. Muise:** Or some other just high level business analysis?

14 **WIT:** No, sir. We treat them pretty much the same.

15 **Mr. Muise:** Okay. That's all I have. Thank you Captain.

16 **CAPT Phillips:** Thank you Mr. Muise. Mr. Verdin.

17 **Mr. Verdin:** Yes Captain. Mr. Spath. One more quick question. Could you explain  
18 how the TRIR rate are calculated?

19 **WIT:** I know there's a formula. I'm not quite sure exactly how it's calculated. But it's  
20 associated with the number of reported incidents and then man hours. And there's a, I  
21 really can't answer exactly how the calculation is made.

22 **Mr. Verdin:** That's fine. I don't remember exactly how it's calculated either. But I just  
23 wanted to – there is a formula. And can you tell me just in general, just for those that

1 are not aware of it or familiar with the process, is this formula of, in a way, been  
2 determined to be in the way where a small employer of maybe 10 employees can  
3 compete against a big larger employer that maybe has 1000 employees?

4 **WIT:** It's definitely a challenge for the smaller companies. One incident because of the  
5 lack of man hours used to calculate the total reporting incident rate if they have one  
6 recordable it will turn red. When we see companies that turn red we'll do what they call  
7 a management of change where in order for our engineers to use that company our  
8 safety group has to go and do an audit on that company, review that incident, determine  
9 that they did the appropriate corrective actions to prevent reoccurrence. And if our HSE  
10 manager determines that the company did everything they could in their power it could  
11 be something – a prime example we've had one report, we had five recordable this  
12 year, one was a guy picking up a cap, just a pump cap for a fluid end on a mud pump  
13 that was 40 pounds and he had his position in the wrong, his body position in the wrong  
14 you know and when he picked it up he strained his back. So for a small company that's  
15 a recordable and they immediately go red. So our HSE Representative goes over there  
16 and reviews the incident and said it was nothing that they did, it was not a cultural issue.  
17 We feel we can put a MOC in place to allow them to continue to work for TALOS with  
18 that MOC in place. Which comes up to my level for approval.

19 **Mr. Verdin:** Okay. So just to confirm to make sure I understand this right. There's total  
20 recordable incident rate is basically based on the amount of employees, the amount of  
21 man hours and then some other.

22 **WIT:** You mean the recordable, the number of recordable and the amount of man  
23 hours.

1 **Mr. Verdin:** Okay.

2 **WIT:** And that's why it's a metric that gives you a high level. It doesn't provide the  
3 detail on what the recordable were. You have to do a deeper dive. But it is a metric  
4 that, you know a common metric that everyone uses.

5 **Mr. Verdin:** And just to clarify again. Not every incident is a recordable – is a  
6 recordable incident.

7 **WIT:** That is correct.

8 **Mr. Verdin:** So there are guidelines and standards for considering what injuries or  
9 incidents is recordable and what incidents and injuries are not?

10 **WIT:** That is correct.

11 **Mr. Verdin:** I believe, oh. Last question. And that is one of the major things that is  
12 used to determine the total recordable incident rate, TRIR, is one of the things like you  
13 said is used to determine contract, hiring.

14 **WIT:** That's correct. It's a high level metric that we use to determine if a company or a  
15 contractor works safely and what kind of culture they have. If they're above that  
16 threshold then we always do a deeper dive.

17 **Mr. Verdin:** That's all I got. Thank you.

18 **CAPT Phillips:** Thank you Mr. Verdin. Mr. Muise.

19 **Mr. Muise:** I'm sorry Captain I have no more questions.

20 **CAPT Phillips:** Thank you. I'm going to turn it over to the parties in interest to see if  
21 they have any questions. I'll start out with the American Bureau of Shipping.

22 **Mr. Eisenhower:** Thank you Captain Phillips, ABS has no questions.

23 **CAPT Phillips:** Thank you Mr. Eisenhower. SEACOR Marine and Falcon Global.

1 **Mr. Tompkins:** Thank you Captain. Mr. Spath my name is Peter Tompkins I represent  
2 SEACOR Marine and Falcon Global in this hearing. I just have a few questions for you,  
3 okay.

4 **WIT:** Yes, sir.

5 **Mr. Tompkins:** The Master time charter that's been referenced earlier in your  
6 testimony, but what I'm looking at dated August 9<sup>th</sup>, 2013, does that sound about right to  
7 you? Or do you have a copy in front of you?

8 **WIT:** I have a copy of it. I believe it is. That is correct, August 9<sup>th</sup>.

9 **Mr. Tompkins:** And 2013 was the year you started with TALOS, correct?

10 **WIT:** 2013, that's correct.

11 **Mr. Tompkins:** Sir.

12 **WIT:** I'm sorry say that again.

13 **Mr. Tompkins:** Is 2013 when you also started with TALOS?

14 **WIT:** That is correct.

15 **Mr. Tompkins:** So for, we can assume from this that SEACOR has been doing work at  
16 least sporadically if not consistently for at least 8 years?

17 **WIT:** For TALOS, that's correct.

18 **Mr. Tompkins:** And in those 8 years to your knowledge have you been satisfied with  
19 the service that SEACOR has provided?

20 **WIT:** Yes, sir.

21 **Mr. Tompkins:** And the safety record that they presented?

22 **WIT:** Yes, sir.

1 **Mr. Tompkins:** As I understand, sir you testified earlier that weather delays while on a  
2 vessel let's say is in route from one location to another did not result in any reduction in  
3 the charter rate, correct?

4 **WIT:** That's correct.

5 **Mr. Tompkins:** So we had a witness here earlier this week, Captain Timmons who  
6 testified that on the way in from the last plug and abandon job to the Bollinger Dock they  
7 had to stand by and wait on weather. Are you familiar with that?

8 **WIT:** I'm not familiar with that particular incident. But it's not uncommon if they have a  
9 long transit. Especially like a jack up rig that they may transit a certain period of time  
10 the weather picks up, they'll stop and jack up, wait for the weather to clear and then get  
11 back in the water and continue to transit. But to the best of my knowledge that boat is  
12 under charter until it's released. So we cover the day rate if its downtime associated  
13 with weather.

14 **Mr. Tompkins:** So TALOS does not penalize SEACOR for that?

15 **WIT:** No we do not penalize SEACOR for that.

16 **Mr. Tompkins:** And to your knowledge has TALOS ever requested or insisted that any  
17 SEACOR Captain be removed because TALOS wasn't satisfied with his work or safety?

18 **WIT:** No, sir.

19 **Mr. Tompkins:** And if you're not the right witness for this and the next one is let me  
20 know, but do you know if there were communications with your company representative  
21 on board on the day of August 13<sup>th</sup>? And I'm sorry, communications -----

22 **WIT:** I didn't communicate with the company Rep, but I have possession of an email  
23 where there was some communication. But I believe he called our project engineer

1 Michael Melancon somewhere, sometime around 3 O'clock to let everybody know and  
2 the shore base to let them know that they departed Bollinger.

3 **Mr. Tompkins:** Are you aware of any information that your company representative  
4 Steve Lewis provided that would indicate that as the time of that call there were any  
5 weather concerns on his part?

6 **WIT:** No, sir.

7 **Mr. Tompkins:** The Wilkins weather report that you referenced earlier in the morning  
8 report for August 13<sup>th</sup>, did that show any, to your knowledge did that show any weather  
9 predictions that would cause any concerns from TALOS's standpoint?

10 **WIT:** No, sir.

11 **Mr. Tompkins:** Was it acceptable weather as far as the prediction went?

12 **WIT:** We don't make the determination of whether or not to depart. We leave that  
13 solely to the contractor, the Captain of the vessel. There was nothing, our company  
14 Rep may in this past, not on this particular situation, in talking with the Captain say we  
15 may not have suitable weather to go so let's just stay where we're at or something like  
16 that. Those conversations do happen from time to time. But on that particular day I  
17 don't believe Steve Lewis had any issues with the weather.

18 **Mr. Tompkins:** Thank you. Thank you Captain.

19 **CAPT Phillips:** Thank you Mr. Tompkins. First Mate Representative.

20 **Mr. Sterbcow:** Thank you Captain. Mr. Spath I'm Paul Sterbcow I represent the First  
21 Mate who was on the SEACOR POWER, Bryan Mires. Does TALOS have a  
22 relationship with Bristow Helicopter to provide airborne rescue services in the Gulf?

23 **WIT:** Yes, sir.

1 **Mr. Sterbcow:** And what is that relationship require Bristow to do upon TALOS  
2 request? If you know.

3 **WIT:** I'm not sure what kind of requirements we put in place with Bristow. We do have  
4 a contract with them that if we need their services we'll notify them and request them to  
5 mobilize to a location. But just like marine contractors, aviation contractors we leave it  
6 up to them to make the decisions on how they're going to respond to an incident. And  
7 what resources they need.

8 **Mr. Sterbcow:** There's a contractual relationship though?

9 **WIT:** Yes.

10 **Mr. Sterbcow:** Do you know if TALOS, anyone with TALOS made a call to Bristow on  
11 April 13<sup>th</sup> to ask for help in response to the SEACOR POWER capsizing?

12 **WIT:** Not to my knowledge.

13 **Mr. Sterbcow:** Are you aware that Bristow did respond?

14 **WIT:** I read an article this week where Bristow -----

15 **Mr. Sterbcow:** That's what I was going to ask. So you read an article in the  
16 newspaper about that?

17 **WIT:** Yes I did. And I was proud of Bristow. Because I don't – I'm not sure if we called  
18 them or who called them. But I'm glad Bristow took the step, the initiative to go out  
19 there and do that. I don't even know who paid them to do it.

20 **Mr. Sterbcow:** Do you know if anyone from TALOS was on the SEACOR Microsoft  
21 Teams response meeting the afternoon of April 13<sup>th</sup>?

1 **WIT:** I'm not sure. I believe Michael Boudreaux may have been on the Teams meeting.  
2 I believe they set up a continuous Teams meeting of which he was participating. But  
3 you would have to ask him. I think he's coming next.

4 **Mr. Sterbcow:** And what's Michael's job title?

5 **WIT:** He is a logistics manager.

6 **Mr. Sterbcow:** For TALOS?

7 **WIT:** That's correct.

8 **Mr. Sterbcow:** Was there any agreement or understanding between TALOS and  
9 SEACOR as to who was primarily responsible for emergency response in an event like  
10 this one?

11 **WIT:** I wouldn't – I'm not – I don't have any knowledge of a written agreement on who's  
12 responsible for response. I do know that when it's on our lease we're responsible for  
13 response. We don't drill or transiting to and from leases. But we do have a response  
14 team for anything that may occur on our lease.

15 **Mr. Sterbcow:** Got you. Okay. For example if a boat like the SEACOR POWER  
16 arrives safely, jacked up, operation began and then for some reason say you had a leg  
17 punch through and the boat collapsed on site, would that fact scenario make TALOS  
18 primarily responsible for calling a response out to help the SEACOR boat and whatever  
19 problems this punch though may have caused?

20 **WIT:** I would feel that we would be definitely more involved in the response. Mainly  
21 because BSEE deems it as if they're pinned up on a location it's the operator's  
22 responsibility. So we would definitely probably be more involved then what we were in  
23 the response to this particular incident.



1 **Mr. Sterbcow:** Alright. And conversely like what happened here from a dock to site  
2 before a boat like the SEACOR POWER secures itself at the production site is that  
3 more of the responsibility of the vessel owner like SEACOR or whoever it is?

4 **WIT:** That's correct.

5 **Mr. Sterbcow:** And do I take it that this is just, because I looked at the time charter  
6 agreement, and the short form, and the bridging agreement and it doesn't look like  
7 there's any specific language on that particular issue. Is this sort of standard operating  
8 procedure type thing?

9 **WIT:** I would say so. Unless it's in the SEMS programs, which I reviewed it I didn't  
10 particularly see it.

11 **Mr. Sterbcow:** That would be the other place to go, the actual SEMS program?

12 **WIT:** That's correct.

13 **Mr. Sterbcow:** Was Main Pass 138 a producing well site?

14 **WIT:** Yes, sir.

15 **Mr. Sterbcow:** And was the coil tubing job that SEACOR POWER was going to be  
16 participating in was that, if you know, was that tubing going to be used as production  
17 tubing to produce the well?

18 **WIT:** No. Coil tubing is used to enter the production tubing to clean out a well and to  
19 pump cement. So it's a tubing coil that you put tool strings, goes into the well and it  
20 does an operation, pumps cement, cleans out the scale, cuts tubing, stuff like that. And  
21 then reeled out. But it's not left in there.

22 **Mr. Sterbcow:** So with respect to this particular job was this coil tubing job a  
23 prerequisite to bringing this particular well online to produce?

1 **WIT:** That is correct.

2 **Mr. Sterbcow:** So at the end of the day when the SEACOR POWER had she made it  
3 when she was finished her job would the next step on the production platform actually  
4 had been start producing this particular well?

5 **WIT:** That is correct.

6 **Mr. Sterbcow:** Has TALOS to your knowledge done any analysis or reexamination of  
7 about the relationship between itself and its vessel vendors on how to handle  
8 dissemination of weather information in situations like this?

9 **WIT:** We have not.

10 **Mr. Sterbcow:** Thank you. Thank you Captain. Thanks that's all the questions I have.

11 **CAPT Phillips:** Thank you Mr. Sterbcow. I'm just interested to know, as a kind of a  
12 follow up to that last line of questioning, if a lift boat is jacked up next to a facility that is  
13 producing does the lift boat then become a hazardous area? Do you know?

14 **WIT:** I wouldn't say it becomes a hazardous area. We have on platforms I guess we  
15 have area classifications depending on the distance in relation to where hydrocarbons  
16 are being produced. So in that term I wouldn't call it a hazardous situation.

17 **CAPT Phillips:** Because it's further away from ----

18 **WIT:** That's correct.

19 **CAPT Phillips:** The location of the hydrocarbons.

20 **WIT:** That's correct.

21 **CAPT Phillips:** Okay. Thank you. We'll wrap up with a couple final questions.

22 Looking back on what happened April 13<sup>th</sup> do you have any recommendations or  
23 suggestions on how to prevent something like this from happening in the future?

1     **WIT:** I would probably suggest, and I don't – and I'm not familiar with SEACOR's policy,  
2     I don't know at what level of authority if that's changed within the company as far as a  
3     Captain getting approval to move a location to where there's maybe multiple set of  
4     individuals that review the forecast and come to an agreement that it's safe to move.  
5     That's one recommendation. I don't know up to that, prior to this incident if SEACOR, I  
6     do know like on drilling rigs which are loaded, more complicated to transit especially  
7     jack up, they have conversations with their management on when to depart a location,  
8     what's the weather look like. I'm not sure if they have that at the level of lift boat  
9     because it's common for these lift boats to move. They're there for short term jobs and  
10    they jack down and transit. It's a lot easier than a jack up rig. So I don't know if they  
11    have that level of communication with management and the Captain of a lift boat. But I  
12    would suggest that they start if they don't.

13    **CAPT Phillips:** Okay. Anything else?

14    **WIT:** No, ma'am.

15    **CAPT Phillips:** Okay. Thank you. Is there anything else you would like to tell us about  
16    that we haven't asked you?

17    **WIT:** No, ma'am.

18    **CAPT Phillips:** Thank you. Thank you for your help today and thank you for  
19    answering our questions. You're now released as witnesses at this Marine Board  
20    Investigation Hearing. Thank you for your cooperation. If I later determine that this  
21    board needs additional information from you I will contact you through your legal  
22    counsel. If you have any questions about this investigation you may contact Board

1 Recorder Lieutenant Anthony Alger. Our next witness is scheduled for 1015. The time  
2 is now 0944. This hearing is now in recess.

3 *The hearing recessed at 0944, 12 August 2021*

4 *The hearing was called to order at 1015, 12 August 2021.*

5 **CAPT Phillips:** The time is 1015. This hearing is now in session. We will now hear  
6 testimony from Mr. Michael Boudreaux. Lieutenant Alger could you please administer  
7 the oath?

8 **Recorder:** A false statement given to an agency of the United States is punishable by  
9 a fine and or imprisonment under 18 U.S. Code 1001. Knowing this do you solemnly  
10 swear that the testimony you're about to give will be the truth, the whole truth and  
11 nothing but the truth, so help you God?

12 **WIT:** I do.

13 **Recorder:** Please be seated. Sir, for the record if you could state your full name and  
14 spell your last in the microphone.

15 **WIT:** My name is Michael Boudreaux, B-O-U-D-R-E-A-U-X.

16 **Recorder:** Thank you, sir. Again for the record if you could identify your counsel?

17 **Counsel:** I'm Tom Diaz. Last name is spelled D-I-A-Z.

18 **Recorder:** Thank you.

19 **CAPT Phillips:** Thank you Lieutenant Alger. Good morning Mr. Boudreaux thank you  
20 for coming in today.

21 **WIT:** Good morning Captain.

22 **CAPT Phillips:** I'm going to start off with some questions about your background. Can  
23 you tell me who you currently work for?

1 **WIT:** I work for TALOS Energy.

2 **CAPT Phillips:** And what's your position there?

3 **WIT:** I'm the logistics manager.

4 **CAPT Phillips:** And where is your office located?

5 **WIT:** I'm officed in Houston, Texas at our corporate office there.

6 **CAPT Phillips:** Can you describe what you do as a logistics manager?

7 **WIT:** Sure I oversee all of our marine, air, shore bases, any type of vessel support that  
8 is needed for offshore operations. So that includes overseeing our production  
9 operations or any type special projects or any vessel needs for a particular project.

10 **CAPT Phillips:** How long have you been working for TALOS?

11 **WIT:** I began there in 2014.

12 **CAPT Phillips:** And have you been the logistics manager the whole time you've been  
13 with them?

14 **WIT:** I have always managed logistics whenever I started there. I initially was only with  
15 drilling. But also logistics in supply chain. And then was promoted to oversee logistics  
16 and the supply chain for the entire company in '16.

17 **CAPT Phillips:** What did you do before you worked for TALOS?

18 **WIT:** I actually worked for Stone Energy in Lafayette, Louisiana. And I worked in the  
19 logistics and supply chain department there. Before that my first initial job was in Port  
20 Fourchon working at a shore base actually being a material coordinator. So overseeing  
21 the loadouts of vessels.

22 **CAPT Phillips:** Have you ever spent any time underway? On vessels.

1 **WIT:** Not much. Just whenever I would go offshore in order to visit rigs. There were  
2 times that I did take crew boats from one rig to another. Also helicopter flights. But it is  
3 not a normal routine thing for me to do, to be offshore on assets.

4 **CAPT Phillips:** Do you hold any professional licenses or certificates?

5 **WIT:** No, ma'am.

6 **CAPT Phillips:** What's the highest level of education you completed?

7 **WIT:** I have a Bachelors in Business Management from Springhill College.

8 **CAPT Phillips:** Have you had any other industry training or petroleum, oil field training  
9 or lift boat training?

10 **WIT:** Nothing for the marine aspect of it. But for supply chain yes I have several  
11 classes that I've taken for continuing education just learning about drilling operations  
12 and stuff.

13 **CAPT Phillips:** Can you walk us through some of those classes?

14 **WIT:** Mainly it was actually just from start to finish on drilling wells, the equipment, the  
15 tangible items that are needed, being that I was also head of supply chain it really  
16 helped my background in that. My first background being at the shore base was boats  
17 and helicopters. So I have a good grasp on that and I wanted to learn more about the  
18 drilling aspect for my supply chain background.

19 **CAPT Phillips:** I think I heard you say this, but I just want to confirm. So you manage  
20 all logistics for all of TALOS now?

21 **WIT:** Yes, ma'am.

22 **CAPT Phillips:** So that covers all the operations in the Gulf of Mexico?

23 **WIT:** Yes, ma'am.

1 **CAPT Phillips:** Can you walk us through what your day to day job looks like?

2 **WIT:** Every day is different. Normal day is just making sure that all of our production  
3 term boats are making their normal loop runs in order to supply supplies, groceries and  
4 whatnot to the facilities. On top of that we have several P&A, ARO projects going on to  
5 make sure that those vessels are getting dispatched at the correct times. Making sure  
6 that everything is arriving on location also for them. And then drilling also being that we  
7 have one drilling rig currently. Making sure that they have everything that they need  
8 whether it be supplies, mud and so on and so forth. In addition is overseeing that all of  
9 our helicopters are functioning properly. Making sure that we do not have any issues  
10 with those. Any delays with crew change in the mornings. And then as for trucking is  
11 just making sure that everything is still arriving on time based off planned loadouts that  
12 we have for particular projects.

13 **CAPT Phillips:** A couple follow ups there. You used a few acronyms, P&A, plug and  
14 abandonment.

15 **WIT:** Yes, ma'am.

16 **CAPT Phillips:** Then right next to that you had another one.

17 **WIT:** It was ARO.

18 **CAPT Phillips:** ARO.

19 **WIT:** Plug and abandonment. It's the same, plug and abandonment.

20 **CAPT Phillips:** Okay. And you said making sure our helos are functioning, when you  
21 say our helos are those TALOS?

22 **WIT:** No, ma'am. We rent our helicopters through RLC. So anytime every morning will  
23 do a whole system, well RLC we'll do a whole system check to make sure that there are

1 no issues with any of them. No sensors that have gone off or anything like that. If they  
2 are I make sure that everything is checked out. We do a test flight, we'll come back,  
3 and when I say we, RLC they will go do a test flight to make sure that everything is  
4 good. We head back to the beach in order for us to start our crew changes for the day.

5 **CAPT Phillips:** So RLC is the company that owns the helicopters?

6 **WIT:** That is correct.

7 **CAPT Phillips:** Thank you. What kind of role do you play in identifying which vessels  
8 are going to meet the needs of upcoming projects?

9 **WIT:** So the project engineer would meet with me. First obviously we'll talk about  
10 where the project is, which platform. At that point we'll discuss if he needs a lift boat, a  
11 supply boat, crew boat, if there's personnel being transferred and so on and so forth.  
12 Each project truly is different. So at that point we'll just meet initially, we'll talk about all  
13 those pertinent details and then we'll talk about the actual timeline of when he's looking  
14 to load out and go out and execute the project.

15 **CAPT Phillips:** Okay. And then once you have all of those details who looks for the  
16 vessel?

17 **WIT:** So I'll at that point go out to every vendor that has a vessel that can meet the  
18 criteria of what we're looking for depending on what type it is. And then at that point  
19 once all the bids are received we get the spec sheets on the vessels that are proposed  
20 and then I'll meet with the project engineer in order to review what his options are at that  
21 point.

22 **CAPT Phillips:** And if the engineer says these two boats will work who makes the final  
23 decision?



1 **WIT:** Normally it's a joint decision. It's made while we're in the office. At that point  
2 obviously safety and the criteria being met is most important and we normally never  
3 have the same, or two vessels with the exact same price. So at that point we go with  
4 what would be better financially for TALOS as long as everything else is met.

5 **CAPT Phillips:** Okay. And do you get involved with planning what kind of equipment is  
6 going to go on board a vessel or how many people you're going to need on board the  
7 vessel?

8 **WIT:** No, ma'am. I do not. I do ask the number of POB just to make sure that we do  
9 not exceed the COI for the vessel. Other than that the project engineer is in charge of  
10 the equipment that is needed for the particular project. And also which personnel will be  
11 going offshore.

12 **CAPT Phillips:** So the engineer will just provide that information to you?

13 **WIT:** That is correct. Once the vessel is actually decided upon I will send out an email  
14 to the vessel owner or the salesman, include the actual engineer. And then at that point  
15 we start discussing what exactly we're planning on putting on the boat, the number of  
16 POB, the well charge information. And the email will start with the actual name of the  
17 vessel, the type, the size, who owns it, the day rate then the next part will be for the  
18 engineer where I'll actually tell him please reply with your list of equipment, the number  
19 of personnel and you well charge information. So that way the whole group including  
20 the owner, operator, and the engineer and myself and my shore base in Port Fourchon  
21 will know exactly what's going on.

22 **CAPT Phillips:** Okay, thank you. Once a vessel is selected what kind of interactions  
23 do you have with that vessel?

1 **WIT:** The vessel itself very minimum, myself. My shore base will be in contact with the  
2 vessel to make sure that they are arriving on time. At that point normally a vessel will  
3 not have enough fuel, water and so on once they come on charter. So at that point my  
4 dispatchers in Port Fourchon will dictate exactly where to go while waiting on the  
5 equipment to arrive and the personnel so that way once he does arrive we can load the  
6 equipment then the personnel and then head to location.

7 **CAPT Phillips:** Do you ever visit any of the vessels?

8 **WIT:** I'm sorry?

9 **CAPT Phillips:** Do you ever visit any of the vessels?

10 **WIT:** No, ma'am.

11 **CAPT Phillips:** Who do you work for in TALOS?

12 **WIT:** My direct boss is John Spath.

13 **CAPT Phillips:** And who works for you?

14 **WIT:** A gentleman by the name of Cedric Babano [sic] and then in Port Fourchon I  
15 have 24 hour operations, we have two foreman that work 14 and 14, I have one  
16 dispatcher on tower every 12 hours that work opposite and I have two material  
17 coordinators that work every 12 hours, two per 12. So at any given time I have 4  
18 personnel every 12 hours at the shore base in Fourchon. And Cedric works for me in  
19 the Lafayette office where we have some of our production and construction personnel.

20 **CAPT Phillips:** So we heard a little earlier today that each time you charter a vessel  
21 you put a third party representative usually referred to as a company man on board.

22 Who does that person work for?

1 **WIT:** That person would work for our service provider, a personnel or a consultant  
2 provider. Not for TALOS, usually a third – a company man or a company Rep will not  
3 be a TALOS employee on the vessels.

4 **CAPT Phillips:** Okay. Once they get on board who at TALOS do they report back to?

5 **WIT:** The project engineer.

6 **CAPT Phillips:** And the project engineers don't directly work for you?

7 **WIT:** No, ma'am. They do not.

8 **CAPT Phillips:** Who do they normally report to?

9 **WIT:** The production director. In production aspect of it such as Main Pass. But once  
10 again if it's a plug abandonment group they will report to the director of plug and  
11 abandonment. Drilling will report to drillings and so on and so forth.

12 **CAPT Phillips:** Okay. And how does that work coordinating between the project  
13 engineers and the folks on your staff to get the boats whatever they need?

14 **WIT:** It's relatively easy. The majority of our engineers are all in Houston. We're all on  
15 the same floor, the operations floor. So it's either we walk to each other's office down  
16 the hall or we'll go into a conference room. You know there's three of them on our floor  
17 that we'll just have a quick meeting and discuss exactly what's needed.

18 **CAPT Phillips:** Thank you. When you're trying to decide what kind of vessel to bring  
19 on charter do you do any kind of surveys or audits on the boats?

20 **WIT:** No we do not. We have a very small group of vessel providers. And they are  
21 used by many, many other operators such as TALOS. Along with a lot of the larger  
22 companies, majors. They're all the same assets. The pool has gotten really small within  
23 the last few years due to the oil industry and the downturn. So we know that the ones

1 that are available are going through Coast Guard, ABS certifications annually. The  
2 majority of time it's while we have them on charter so we'll, the owner will request that  
3 we send them in. We'll get a replacement vessel for the time being and so on. So we  
4 rely on the owner of the vessel to meet all those criteria.

5 **CAPT Phillips:** Are there certain companies that provides vessels that have different  
6 reputations that you're aware of?

7 **WIT:** There are a lot of companies with different reputations. Those companies that I'm  
8 speaking of we do not do business with. They do not have active vessels on charter  
9 with us. I do not know for a fact, you know that they are blatantly doing anything that is  
10 inappropriate, but just based off rumors or things that you hear in the industry or how  
11 things are done I would rather not be a part of that situation.

12 **CAPT Phillips:** What's your overall assessment of SEACOR as a company?

13 **WIT:** They've done a great job for me throughout. There's several companies that they  
14 were even prior to SEACOR. I've had no complaints with them.

15 **CAPT Phillips:** Once you charter a vessel can you talk us through a little bit about  
16 what the owner or operator will provide and what TALOS will provide?

17 **WIT:** So would you like me to talk about the SEACOR POWER project in general from  
18 how we started that with engineering with SEACOR? Or in general with another way?

19 **CAPT Phillips:** Let's just talk general first and then we'll get into the SEACOR POWER  
20 specifics.

21 **WIT:** Okay. Can you please repeat that question, ma'am?

22 **CAPT Phillips:** Sure. Can you just talk to us in general about what the owner or  
23 operator of a vessel is expected to provide and what TALOS will provide?

1 **WIT:** At that point depending on what type of project it is, obviously they'll have a full  
2 crew compliment. If we are doing a specialized project such as a drilling rig or anything  
3 that is working 24 hour operations I will pay to increase the number of crew members so  
4 that way we have two riggers on deck at all times. So that way we're not having  
5 anybody working over 12 hours. Depending on, there are times where we can be on  
6 location for 18 hours and we only make lifts the first four and then the last two. So that's  
7 – other than a vessel that is in full requirement or approved by the United States Coast  
8 Guard and ABS they have to have a compliment crew that meets all the criteria based  
9 in their standard and safety practices. So other than that at that point we're the ones  
10 that are providing all the equipment, any additional personnel and so on and so forth  
11 onto the vessel.

12 **CAPT Phillips:** Thank you. Do you have some specifics about the agreement between  
13 SEACOR and TALOS for the SEACOR POWER?

14 **WIT:** Specifics as in what?

15 **CAPT Phillips:** The charter agreement what SEACOR was going to provide and what  
16 TALOS was going to provide.

17 **WIT:** Once again it was going to be a full crew compliment. It was crane, cooks, so on  
18 normal vessel crew. At that point other than that we were just going to provide the  
19 equipment and the personnel in order to run the equipment on the vessel itself.  
20 Obviously the boat company would not be running the actual wells specific or coil tubing  
21 equipment, they would just be operating the cranes and making sure that the vessel  
22 was maintained properly.

1     **CAPT Phillips:** In your role do you talk to the ship owner or operators on a regular  
2     basis?

3     **WIT:** The sales teams often just to try to get updates. And then occasionally I will  
4     interact with the operations groups if we do have issues with the vessel. Sometimes the  
5     operator, the Port Captains are the best point of contact in order to get a true estimate  
6     on what's going on, how long are we anticipating a vessel to be down and so on.

7     **CAPT Phillips:** Okay. You said they talk to sales for regular updates. What kind of  
8     updates do you get from them?

9     **WIT:** Normally just a vessel availability. So if there's any delays with you know if the  
10    vessel is currently working for another operator obviously we don't know the other  
11    operator's project specific information. So the sales team will give me updates as to  
12    when I can expect the vessel to be available to me. So that way I can relay back to the  
13    engineer and then we can plan on equipment and personnel movements.

14   **CAPT Phillips:** Okay. And you said you talk to operations if you have issues. What  
15    kind of issues do you have?

16   **WIT:** If ever we had let's say a crane was malfunctioning, if the jacking gear on a lift  
17    boat was malfunctioning, anything like that that required some type of maintenance. If  
18    ever we have something where it needs to come back into the shore base in order to do  
19    repairs or maintenance. Once again the actual scheduling of Coast Guard inspections  
20    that's also done through operations instead of sales. So just depends on exactly what  
21    type of information I'm looking for that will dictate who I would call.

22   **CAPT Phillips:** Thank you. If a vessel is on charter and it needs maintenance how  
23    does that work?

1 **WIT:** Normally the vessel will talk to the company man that is on location. For a lift  
2 boat the company man will literally be living on the lift boat. For a supply boat or a crew  
3 boat let's say that's supporting a rig they would let the company man or the clerk on the  
4 rig know that they're having some issues. For our drill ships for instance we have DP2  
5 vessels, dynamic positioning 2 if one of their systems goes down that doesn't meet the  
6 requirements or the criteria of the rig so at that point they start the conversation with the  
7 rig company. They'll start a conversation with the owner of the vessel and so on. So  
8 just depends on what's going on. But normally the first line of communication is the  
9 Captain is notifying the company man of the issues. Then they will notify their office  
10 and then at that point I get a call.

11 **CAPT Phillips:** So he would notify the project engineer?

12 **WIT:** Yes. Normally the Captain will notify the project, well the project engineer is in  
13 Houston. It would be the company man on location. The Captain, yes, the Captain will  
14 not call the project engineer in Houston, but he will call up to the platform or the lift boat  
15 or so on and let them know what is going on.

16 **CAPT Phillips:** And then if there's going to be an extended maintenance period  
17 required or they have to go to dock for a while, does the vessel come off charter  
18 usually?

19 **WIT:** Yes it will. Being it is no longer considered workable to us the vessel will come off  
20 charter. And the first thing that we do is offer the owner of the vessel that is having  
21 issues to offer a replacement in the place of it.

22 **CAPT Phillips:** And then if they can't find a replacement?

1 **WIT:** Then at that point I go out to the market and see what else is available that meets  
2 the criteria of the original asset.

3 **CAPT Phillips:** Okay. Does the company pay a penalty?

4 **WIT:** No, ma'am they do not.

5 **CAPT Phillips:** What happens if the vessel is underway and there's bad weather that  
6 comes through and they have to stop?

7 **WIT:** It's a common occurrence with lift boats. They stop exactly where they are.  
8 They'll jack up until the weather passes. Normally it's within 1 to 3 hours and that's it.  
9 Once the weather passes they'll jack back down and continue on their way.

10 **CAPT Phillips:** Is there any financial penalties associated with that?

11 **WIT:** No, ma'am.

12 **CAPT Phillips:** Tell me a little bit about the weather reports that TALOS gets.

13 **WIT:** We receive weather reports twice a day. Once in the morning and in the  
14 afternoons. They are site specific from all of our manned facilities that we have in the  
15 U.S. Gulf of Mexico. Furthest East will be Ram Powell which is Viosca Knoll 956,  
16 furthest West would be High Island 557. So every facility that we have within those two  
17 we get sit specific weather.

18 **CAPT Phillips:** And what if you have a vessel on contract to work in an unmanned  
19 facility?

20 **WIT:** The majority of the unmanned facilities are very near one of our manned, our  
21 platforms are pretty spread out, but also in certain areas. So we can look at the  
22 neighboring facility. We'll also look both East, West if we can South and North just to  
23 make sure that there is a consensus of exactly what we're looking at in all of the area.



1       **CAPT Phillips:** And who provides those weather reports?

2       **WIT:** Weather Ops DTN. DTN is the actual name of the company.

3       **CAPT Phillips:** And then what happens with the reports once you receive them?

4       **WIT:** They are reviewed, especially if we have a project specific loadout that we're  
5 trying to plan. That's one of the main things that we will do. Obviously a project we'll try  
6 to plan it normally a week plus in advance, especially if it's something with a lift boat.  
7 So we'll start looking at weather in order to dictate exactly when we want to plan the  
8 loadout in Port Fourchon or Inner Coastal City depending on which project, which  
9 location.

10       **CAPT Phillips:** And who are those weather reports sent out to?

11       **WIT:** It's a distribution list. There are many, many people. Definitely all of TALOS  
12 operations are on there with an addition of some company men, clerks, company  
13 representatives. Just anybody that's been working for TALOS for a long period of time  
14 that is a reoccurring company man or representative.

15       **CAPT Phillips:** And do you look at those weather reports?

16       **WIT:** Yes, ma'am.

17       **CAPT Phillips:** If you see a weather report that has some bad weather approaching  
18 would you take action on that?

19       **WIT:** Depending on what it is. The majority of the time these are site specific for  
20 current within the next 6, 12, 18, 24 hours. At that point if we have a vessel that's  
21 already offshore it's kind of hard to take action at that point. But at the same time the  
22 weather, the day prior should have hopefully dictated something where we knew we  
23 were going to anticipate 4 to 6 foot seas. At that point that's the majority of the time the

1 bigger seas are in our deeper areas which have the bigger boats that can handle much,  
2 you know bigger seas and winds. But it is a common occurrence that we do check the  
3 weather daily to make sure that we're not trying to endanger anyone.

4 **CAPT Phillips:** And what would you do if you thought anybody was in jeopardy?

5 **WIT:** The boat would stay at the shore base which has happened numerous times  
6 before and TALOS' past with me as logistics manager.

7 **CAPT Phillips:** Does your weather provider give you any updates during the weather if  
8 there's a major change to report?

9 **WIT:** It does not. The only time we get anything different from the weather provider is if  
10 there's a storm that is going to be approaching such a tropical storm, tropical  
11 depression or hurricane.

12 **CAPT Phillips:** Can you tell us a little bit about the project on Main Pass 138?

13 **WIT:** Sure. The project engineer and I originally started discussing the project in  
14 February I believe. He was going to be doing a coil tubing all to being a recompletion  
15 project. He asked exactly, you know what type of assets we could use. I believe the  
16 water depth is 158 feet if I'm not mistaking. At that point we realized that we had two  
17 options. We either go with a lift boat or we could go with a large supply boat. If we  
18 wanted a supply boat we would be putting the equipment on the platform, but  
19 unfortunately having to sleep people on the vessel so we have to be doing personnel  
20 transfers with baskets. In February with winter storms it wasn't the safest. So we  
21 decided at that point let's proceed with the lift boat option. At that point we started with  
22 SEACOR to see if the 245 class would work. Once reviewing we had an air gap, but we  
23 weren't comfortable with it. So at that point the 265 would have gotten to the plus 30 or

1 the cellar deck of the platform based off of an approximate 30 foot penetration on  
2 location. So the 265 class was decided as the safer bet. Also being that the SEACOR  
3 POWER was, I cannot confirm if we were already on charter or going to be on charter  
4 that month with that vessel. It was decided that would be best once we're finished at  
5 Eugene Island 224 with the plug and abandonment drill we would move it over to Main  
6 Pass 138 in order to do this work.

7 **CAPT Phillips:** Thank you. And were there any limits or limitations that the SEACOR  
8 POWER had?

9 **WIT:** No, ma'am not based off what we were doing, everything was going to be  
10 completely suitable.

11 **CAPT Phillips:** And how did you tell SEACOR the plans for the boat?

12 **WIT:** Several meetings, phone calls and emails discussing everything. So being that  
13 this was going to be a – this particular – the way we – the well that we had to get to on  
14 this one we were going to have to set up a lift boat in one particular area. So at that  
15 point we always incorporate SEACOR so that way they can pull the historical data of the  
16 actual penetration for legs so we can see exactly how high we would be able to get up  
17 to the actual main deck. At that point we also reviewed survey and sonar and see  
18 where the pipelines were at that particular platform. So it was a complete joint effort  
19 between TALOS and SEACOR from the start of the actual planning until the execution.

20 **CAPT Phillips:** So when would you say those discussions started involving SEACOR?

21 **WIT:** I'm going to say February or March. Definitely by March because we were  
22 delayed at Eugene Island 224 for the plug and abandonment work and the POWER was  
23 actually supposed to be back sooner than what it was on the 10<sup>th</sup>. So being that we

1 were delayed I know we were definitely into March with the planning. But it could have  
2 very well been February.

3 **CAPT Phillips:** Once a vessel is on charter and out at the facility in the case of a lift  
4 boat, it's jacked up next to the facility are there emergency response plans for the  
5 facility that covers the lift boat as well?

6 **WIT:** Any asset that's at the facility I will approach as the exact same way as I would a  
7 TALOS fixed structure. It's part of the project, it's part of that platform at that point. And  
8 it would be treated as the same.

9 **CAPT Phillips:** Who makes the decision on when a vessel is going to leave port?

10 **WIT:** The Captain. So the way we did it is for a normal particular loadout excluding the  
11 POWER due to that one not being at the Martin North facility which is ours, we will load  
12 all the equipment onto the vessel. The Captain will either come himself or send one of  
13 his crew members in order to get the manifest. They know exactly where they're going,  
14 first, second, third, fourth, so on and at that point we instruct them whenever they're  
15 ready to go or deem safe they can depart.

16 **CAPT Phillips:** You said you've seen examples in the past where they have to sit at  
17 the dock and wait?

18 **WIT:** Absolutely. And that's not only just for special projects that's our term production  
19 boats often. If we end up – we try to have our term production boats at the first facility  
20 for daylight whatever it is, whichever day of the week that morning, but there are many  
21 times where it is delayed due to weather. They could not leave Port Fourchon for an  
22 additional four hours. And we just adjust accordingly.

23 **CAPT Phillips:** Are there any incentives for SEACOR to complete the project earlier?

1 **WIT:** No, ma'am.

2 **CAPT Phillips:** Do you get notified if a vessel is delayed for weather?

3 **WIT:** Absolutely.

4 **CAPT Phillips:** How does that come to you?

5 **WIT:** In a form of an email. Every time a vessel is departing the dock my dispatchers  
6 will send an email to myself along with all the fields that that vessel will be going to in  
7 order to support in order to let them know the time of departure and also the estimated  
8 time of arrival. A lot of times, not a lot, there are times where a vessel will have to turn  
9 around, they will come right back into port. That same dispatcher will send an update  
10 saying that seas were rough right outside the pass, the vessel turned around. We will  
11 send another update once the vessel departs and then we'll get a final update once it  
12 departs with a new ETA.

13 **CAPT Phillips:** Thank you. Can you tell me a little bit about stop work authority?

14 **WIT:** Sure. That's one of the practices that we really preach a lot at TALOS. If  
15 anybody is experiencing or witnessing somebody that is doing something that is not  
16 safe or that can harm not only themselves or others, they have the right to stop  
17 everything that is going on, have a safety meeting and discuss what exactly is being  
18 done and what can be done to prevent any incidents from happening.

19 **CAPT Phillips:** Do you get notices if somebody exercises stop work authority?

20 **WIT:** I have received emails in the past from automatically generated system stating  
21 that stop work authority was used.

1     **CAPT Phillips:** I would like to ask you to walk us through what you remember from the  
2     afternoon of April 13<sup>th</sup>, so starting around about lunchtime on. All the events and  
3     sequence and times that you remember.

4     **WIT:** Okay. Would you like me to – I have actually a timeline printed out if you would  
5     like me to go through it that way?

6     **CAPT Phillips:** That sounds good, thank you.

7     **WIT:** So based off this the day of the incident at 1:02 p.m. project engineer called Steve  
8     Lewis to check in on the vessel loadout. Steven Lewis informed Michael that the lift  
9     boat was underway to location and that they were near the jetties in Fourchon. The  
10    next thing was at 3:02 Steve Lewis, TALOS company man called the Fourchon shore  
11    base to inform that the lift boat had departed Bollinger North in Fourchon at around  
12    12:30. At 3:05 the email from Vance Collins which is my dispatcher in Martin North  
13    went out to the project personnel that the lift boat departed Bollinger North around  
14    12:30. 4:33 that afternoon Michael Melancon project engineer missed a call from a  
15    Gentlemen by the name of Blake Barber with FUGRO. At 4:36 an email from Blake  
16    Barber with Fugro was sent out asking for the status of the lift boat and had they  
17    departed the dock. 4:41 an email from Mike [in audible] replying stating that the lift boat  
18    had left the Bollinger Dock around 12:30. 4:42 Michael Melancon received a call from  
19    Blake Barber at Fourchon informing him that Fugro had heard via people in Fourchon  
20    that the lift boat SEACOR POWER was capsized. So that was at 4:42. At 4:45 is  
21    whenever I began, I received a call from Michael Melancon stating that FUGRO had  
22    heard that the lift boat SEACOR POWER has turned over. 4:47 I called Ben Alvarez  
23    who's operations for SEACOR in order to get an update to see if they heard anything,

1 no luck. At 4:47 I called Michael VanDallen [sic] sales of SEACOR to see if he had  
2 information, once again no luck. At 4:48 I called John Spath with TALOS to tell him  
3 what Fugro had heard but I had not had any confirmation yet. At 4:52 I called our  
4 Fourchon shore base to see if they had overheard anything on the radio and to track our  
5 GPS tracking system to see exactly where the lift boat POWER was. 4:59 I called our  
6 Fourchon shore base to get in touch with the Motor Vessel MISTER LLOYD, the closet  
7 vessel to the actual last known location of the GPS, the GPS ping for the POWER and  
8 get them headed that way. A minute later I called the owner of the MISTER LLOYD to  
9 explain to him what we heard and I wanted him to be aware of what his crew was going  
10 to do at that point and that they were not doing their normal production operations. 5:01  
11 my Fourchon foreman called me back to confirm that the MISTER LLOYD was  
12 proceeding to the lift boat SEACOR POWER. At 5:05 I finally got a call back from  
13 Michael VanDallen [sic] SEACOR sales stating that they heard about the SEACOR  
14 POWER and they were trying to figure out if it was true and what was going on. At 5:22  
15 I called Curry and ended up having the Motor Vessel BIG P another crew boat diverted  
16 to the SEACOR POWER. And then at 7:30 that evening is whenever I got a call from  
17 our Fourchon shore base stating the MISTER LLOYD had just picked Steve Lewis up  
18 out of the water. 8:03 the owner of the MISTER LLOYD stated that they were heading  
19 in due to sea conditions. And at 8:20 I got a call from the shore base stating that the  
20 Motor Vessel BIG P was heading into Fourchon because of engine problems due to sea  
21 conditions.

22 **CAPT Phillips:** Thank you for those details. That's very helpful. The MISTER LLOYD  
23 was on charter for you at the time?

1 **WIT:** That is correct. The MISTER LLOYD and the BIG P were both boats that were  
2 working for TALOS. So immediately whenever I heard that the POWER had flipped I  
3 pulled up our App for our GPS tracking device. Saw that the POWER, saw exactly  
4 where it was. At that point it was still traveling at 7.5 miles per hour. But in fact it was  
5 not traveling. That was the last ping which was at 3:38, it showed 7.5 miles per hour.  
6 So whenever I realized that there was a delay in time I started diverting assets that were  
7 working for TALOS in order to head that way to assess and see if it had in fact  
8 capsized.

9 **CAPT Phillips:** You took us through I think about 8:30. What happened later that  
10 evening?

11 **WIT:** Later that evening we were, at that point the Coast Guard was on the scene and  
12 they had kind of taken control of everything with the assets that were already out on  
13 location. The crew boats, one was a 170 DP1, one was a 205 DP2 and with the sea  
14 conditions they were not able to remain in the water which was actually causing  
15 problems with the engines. The BIG P actually ended up having severe engine issues.  
16 Once they got closer to Port Fourchon they lost engines and ended up in the marsh  
17 where I had to go and get them with a tug I believe three days later. So at that point I  
18 did everything that I could in that period of time. Later that evening I received a call  
19 from SEACOR stating that they were looking for divers. That they – I informed them  
20 that we had divers and a dive barge at Bay Marchand area along with an anchor tug  
21 that we could offer to them. It did not meet qualification. I cannot confirm if it was Coast  
22 Guard dictating that, if it was Don Jon their diving company, I don't know that. But it did  
23 not meet the qualifications to them. So that asset remained. At that point they informed



1 me that they were getting divers down to Port Fourchon and they needed a larger  
2 supply vessel. At that point I had the Motor Vessel ROMAN ELIE which is a 180 DP1.  
3 It was at Port Fourchon on charter for us. I removed the equipment off of that, I sent it  
4 to Bollinger North in order to assist with dive operations. Once it arrived there I was  
5 informed that it had to be a DP2 vessel, not a DP1 vessel. So it did not meet the  
6 criteria, but it did remain in Bollinger North for the fact that SEACOR had nowhere to  
7 house the divers that were actually going to the dock. So it stayed there in order to  
8 assist in that manner. But other than that that was pretty much the end of April 13<sup>th</sup> at  
9 that point.

10 **CAPT Phillips:** Do you know when the divers arrived?

11 **WIT:** I do not know.

12 **CAPT Phillips:** Okay. You said the BIG P had trouble with their engines. Is that  
13 related to the sea conditions?

14 **WIT:** It was. The actual propellers kept going out of the water, they were getting a lot  
15 of air intake from it and they were spinning which caused the actual shafts and it ended  
16 up being quite a bit of issues. But yes it was definitely due to sea conditions.

17 **CAPT Phillips:** Did anybody ask the MISTER LLOYD to search in a particular  
18 location?

19 **WIT:** Whenever the MISTER LLOYD got there they were – they actually encountered  
20 other vessels that were already assisting with it and pretty much looking around where  
21 all the debris line was at that point. There was nobody that was on location instructing  
22 them to run patterns or anything at that point that I'm aware of. It was strictly everybody  
23 was just trying to look anywhere and everywhere. It was starting to get dark, you know

1 or darkening along with the rain and clouds and everything else. So it was just a fast  
2 pace trying to search as much area as possible.

3 **CAPT Phillips:** Did TALOS set up any sort of emergency response team?

4 **WIT:** I was handling everything. I was actually in our Lafayette office at that time just  
5 for that week by chance. So being that I was there I was handling everything. I offered  
6 to go down to Fourchon the following day once a trailer was established at Bollinger  
7 North in order to assist in any way possible. I was informed that everything was under  
8 control with SEACOR and the Coast Guard and that it was tight quarters. And that if I  
9 was needed that they would let me know. So I stayed in Lafayette for the remainder of  
10 that week. Just in case.

11 **CAPT Phillips:** Thank you very much. I'm going to look and see if any of the other  
12 Coast Guard or NTSB folks have some questions for you. I'll start with Mr. Ehlers.

13 **Mr. Ehlers:** Good morning, sir. Thank you for your testimony.

14 **WIT:** Good morning.

15 **Mr. Ehlers:** I have some follow up questions based on what you told Captain Phillips.  
16 Can you tell me a little bit more about your shore base in Fourchon and particularly your  
17 dispatcher, what their duties are, what they're responsible for doing.

18 **WIT:** Sure. Our dispatchers take calls from all of our facilities offshore to make sure  
19 that they know exactly what equipment is coming on if we are coming to the shore base.  
20 If we have personnel that are coming. Any special supplies. Any additional fuel or  
21 water that may need to be pumped to the facilities. So it's just the day to day operations  
22 of making sure that everything that is coming is known, manifested and put in the  
23 correct areas in order to load the vessel whenever it's under the crane.

1 **Mr. Ehlers:** And where do they operate out of? I know you said Port Fourchon, but  
2 specifically?

3 **WIT:** Martin North Dock in Port Fourchon.

4 **Mr. Ehlers:** And is it an office?

5 **WIT:** Yes. We actually have our own office. It's two offices, four bedrooms and two  
6 and a half bathrooms. Only for TALOS.

7 **Mr. Ehlers:** And what are there communications means? What means do they have  
8 for communications?

9 **WIT:** Phones, internet, radios, it's a full communications package.

10 **Mr. Ehlers:** And when you said radios you're talking about VHF?

11 **WIT:** That is correct.

12 **Mr. Ehlers:** And they're 24 hours a day somebody is awake and on watch?

13 **WIT:** Absolutely. So for roughly about 16 to 17 hours a day I have four people awake  
14 at all times. My foreman he stays there 14 days straight. He'll go to bed in the  
15 evenings, but I have a dispatcher and two material coordinators up at all times at night.

16 **Mr. Ehlers:** You mentioned the GPS tracker on the vessels. Can you explain why you  
17 have GPS trackers on your contract vessels?

18 **WIT:** So it's, absolutely. We implemented that probably about 2 to 3 years ago. It was  
19 mainly for making sure that I and the Fourchon shore base knew where all vessels were  
20 at all times. The main reason for it was response. If we were having issues with  
21 personnel that they were sick, that they were injured, anything pertaining in an  
22 environment if we had issues with equipment we would be able to find the asset that  
23 was closet in the area in order to go and assist or make a run and so on and so forth.

1 **Mr. Ehlers:** And just to be clear this is a separate GPS transponder from the vessel's  
2 GPS transponder, is that correct?

3 **WIT:** That is correct. We actually had a third party consultant come into our office and  
4 see exactly what was available in the United States from several companies. This is the  
5 one that actually fit us better for oil and gas operations for motor vessels. It's a  
6 company called Global Star out of Covington, Louisiana. So TALOS bought the  
7 devices. We pay a monthly membership on them. And we install them on the vessels  
8 that are working for us.

9 **Mr. Ehlers:** And how are they installed? Is it a portable unit, are they welded in  
10 placed?

11 **WIT:** It's a portable unit that we actually had, I'll call it a docking station that was built  
12 for it. So we actually put the GPS tracker on that and then it's installed on the hand rails  
13 of the vessels. It's solar powered so that way we can put it there and we should always  
14 have – it should always be charging.

15 **Mr. Ehlers:** Do you happen to know where it was installed on the SEACOR POWER  
16 specifically?

17 **WIT:** I do not know that answer.

18 **Mr. Ehlers:** Okay. And who is responsible for monitoring those positions, position  
19 reports?

20 **WIT:** It's not really a monitoring as in a step by step, we get a ping every 5 minutes on  
21 where the vessel is. It's for us on an as needed basis.

22 **Mr. Ehlers:** And you mentioned a response to an emergency or incident such as this?

1 **WIT:** Exactly. And anything. If we have somebody that's sick offshore. Before we had  
2 these devices I would get a call in the middle of the night from a platform. Most of our  
3 platforms we don't have 24 hour operations on the platform. So let's say one of them  
4 called. I'm trying to figure out what boat is in the area that can go pick up this person in  
5 the middle of the night. I can see that motor vessel A, B, C is near that facility, I can call  
6 that particular vessel on their satellite phone and reroute them in order to go to a  
7 neighboring platform to assist.

8 **Mr. Ehlers:** Okay. And am I correct in saying that you didn't get the follow on pings  
9 after the 1538 that was one of your – did that raise a concern with you?

10 **WIT:** It did not. Once again we don't get a notification that there was not another ping.  
11 If these vessels such as a lift boat if it jacks up and it has not been in movement for 5  
12 minutes the device will go dormant. It doesn't give an alert that it went dormant or  
13 anything like that. When – the reason why I went and looked at it is based on they  
14 telling me the boat had flipped. I wanted to see exactly where it was. Whenever I saw  
15 that they were still moving, I was like okay the boat's fine, but then realized that it had  
16 stopped pinging at that point. That's whenever I still hadn't had confirmation from  
17 SEACOR but at that point is whenever I dispatched the boats to reroute to the location.

18 **Mr. Ehlers:** So you used that signal from your GPS receiver to vector the BIG P and  
19 MISTER LLOYD towards the last location?

20 **WIT:** That is correct. I was able to see where the LLOYD and the BIG P were based  
21 off of the last known location of the POWER.

22 **Mr. Ehlers:** How would you communicate with SEACOR through the evening of the  
23 13<sup>th</sup>?

1 **WIT:** All of my phone calls with them was through our salesman Michael VanDallen  
2 [sic]. He was on calls the majority of that night. But I would call him. It was Teams call  
3 so he was able to do them on his computer. I would call him on his cell phone. Just  
4 trying to get updates. They were asking for how many POB we had on the boat. At one  
5 point, I don't know if it was that day, but they needed the age of each person. They  
6 wanted pictures of the people and so on. So it was many phone calls that evening.

7 **Mr. Ehlers:** Okay. So to be clear you were talking on telephone and then Mr. Van ----

8 **WIT:** VanDallen [sic] was on Microsoft Team calls with SEACOR.

9 **Mr. Ehlers:** And that evening did you have any communications with the Coast Guard  
10 directly?

11 **WIT:** I did not.

12 **Mr. Ehlers:** Going back to the persons on board, did you have an accurate list of who  
13 was on board from under SEACOR's contract?

14 **WIT:** There was bit of confusion at the beginning between 18 and 19 personnel. But  
15 we did realize quickly one particular provider of ours ended up sending two personnel  
16 instead of one which made it a total of 19.

17 **Mr. Ehlers:** Okay. Let me ask this. How do you normally get that information on a  
18 typical movement of a vessel?

19 **WIT:** Normally we'll do an ISN check prior to anyone going offshore. So all of the  
20 service companies that, within a day or two prior to loadout they'll know exactly which  
21 third party reps are heading offshore. So at that point they send the names and the  
22 screenshot showing that they are green in IS Network, all their training matrix meet our  
23 criteria and at that point we can already start populating a manifest.

1 **Mr. Ehlers:** So how do you then confirm who's on board once a vessel is underway?  
2 Is there another process confirming they go underway?

3 **WIT:** If anybody weren't to show up that was confirmed on the list at that point the  
4 company man and the project engineer would let me know that, you know one person  
5 we're still waiting on. Normally we'll wait. You know let's say traffic issue or some type  
6 of thing like that. So we'll delay you know the actual vessel leaving for the last person  
7 to back. That particular day no one was late or I was not informed that we had any  
8 issues with personnel showing up.

9 **Mr. Ehlers:** And the extra person that the company sent was that person on your  
10 original list or was that somebody who appeared the day of getting underway?

11 **WIT:** It was on the list of the eight personnel that I had in my possession for green on  
12 IS Network.

13 **Mr. Ehlers:** So how did you – how did you resolve the issue between 18 and 19?  
14 What did you use to resolve that?

15 **WIT:** I called the project engineer and explained to him that we did have a discrepancy  
16 of one person. And then he ended up calling a service provider that he had lined up  
17 and they confirmed that they were two people instead of one.

18 **Mr. Ehlers:** How did you know you had a discrepancy?

19 **WIT:** Based off of, I'm trying to remember that. I don't remember if SEACOR told me or  
20 we, the numbers kept going back and forth, a big gap within numbers. But I cannot  
21 remember if SEACOR told me that there was one more or one less or if our project  
22 engineer call, Michael Melancon and informed me that they ended up having one extra  
23 which made the total of eight for us. When the initial incident happened I was never

1 informed by SEACOR of how many personnel they had on their vessel. At that point  
2 they were withholding quite a bit of information, pertinent information to their company  
3 and looking for information from ours. So anything – I was just giving them our portions.

4 **Mr. Ehlers:** Sorry you said big gap.

5 **WIT:** Originally someone had told me that there were I believe only 7 crew members,  
6 but it ended up at the end of it being 11. So there was a gap between the total  
7 numbers. Once again this was just conversations that were being had real quick that  
8 day. But the main focus was trying to get TALOS's total number which ended up being  
9 a total of eight.

10 **Mr. Ehlers:** The divers that you offered to support the response. You mentioned that  
11 the qualification, they didn't have the necessary qualifications. Did they ask you for  
12 certain qualifications or do you know what qualifications were requested?

13 **WIT:** I sent them the information on what exactly we had and at that point I believe Don  
14 Jon was already chosen to be the dive company that was going to be doing it. So at  
15 that point I offered the dive boat itself in order for them to work off of along with the  
16 anchor tug. We had both of them currently on charter. And at that point they wanted to  
17 utilize a supply boat instead of a dive boat.

18 **Mr. Ehlers:** The – do you remember what time you initiated the discussion about the  
19 dive crew that you had available?

20 **WIT:** I do not know that.

21 **Mr. Ehlers:** It was the evening of the 13<sup>th</sup>?

22 **WIT:** Yes. Because that was the evening that our boat actually would house the divers  
23 that they chose.



1 **Mr. Ehlers:** And again the dive team that you had available they were working from a  
2 barge?

3 **WIT:** Yes.

4 **Mr. Ehlers:** Did that, do you know if that barge had to be anchored in order to be a dive  
5 platform?

6 **WIT:** It was anchored which is why I had the anchor tug on location also.

7 **Mr. Ehlers:** So it would have had to be anchored if it had been used in the – to respond  
8 to the incident it would have had to been anchored at the site as well, is that correct?

9 **WIT:** Correct.

10 **Mr. Ehlers:** Do you have any idea on how long it would have taken to reposition that  
11 vessel and divers over to the accident site?

12 **WIT:** By the time to reposition and set up it would probably be about 6 hours to get to  
13 where the SEACOR POWER was and then for setup with the sea conditions that they  
14 were I can't answer how long that would have taken.

15 **Mr. Ehlers:** Again where was that dive vessel at the time?

16 **WIT:** It was in the Bay Marchand area so right outside of Port Fourchon.

17 **Mr. Ehlers:** The vessel, that DP1 vessel I heard ROMAN, what was the?

18 **WIT:** ELIE, E-L-I-E.

19 **Mr. Ehlers:** ROMAN ELIE. Okay. And what time did you dispatch that vessel to, I  
20 believe you said it moved over to another pier.

21 **WIT:** It moved over to Bollinger North which is where SEACOR had made incident  
22 command at that point. I'm going to say sometime after 7 or 8 p.m. if I had to guess at a  
23 time.

1 **Mr. Ehlers:** And is that about the time you learned that it was not sufficient for what  
2 they needed as a dive vessel?

3 **WIT:** I believe the boat was actually already at Bollinger North whenever we were  
4 informed. But then I was told that they didn't have anywhere to sleep, the divers, so  
5 they asked if we would leave it there. So at that point I left it there overnight in order to  
6 house the personnel.

7 **Mr. Ehlers:** You mentioned that you normally use RLC helicopters for your moving  
8 people.

9 **WIT:** Correct.

10 **Mr. Ehlers:** And Mr. Spath mentioned that you also have a contract with Bristow  
11 helicopters. Is that correct?

12 **WIT:** That is correct.

13 **Mr. Ehlers:** And what do you use Bristow for?

14 **WIT:** They do our medivacs. Bristow used to be our sole helicopter provider. Last year  
15 they sold their 407, Bell 407 helicopters which is one of the main assets that we use for  
16 our shelf properties. So at that point we could not utilize Bristow anymore for probably  
17 80 percent of our operations. Most of our platforms cannot handle an S76 or larger  
18 which is what they went to. So at that point we changed to RLC. Bristow still does have  
19 a contract with for medivacs.

20 **Mr. Ehlers:** And a Bristow helicopter did respond out to the accident site. Do you know  
21 who contacted Bristow for their – ask for their help in responding?

22 **WIT:** I do not.

23 **Mr. Ehlers:** It wasn't you?

1 **WIT:** It was not.

2 **Mr. Ehlers:** If it had been in a normal medivac situation involving a TALOS facility or  
3 asset would you have been the individual who would have contact Bristow?

4 **WIT:** Absolutely. So part of our safety matrix is anytime a medivac is required offshore  
5 I am first call from the platform or the rig or whichever facility it is.

6 **Mr. Ehlers:** Okay is anyone else from TALOS authorized to exercise the contract I'll  
7 say with Bristow?

8 **WIT:** Absolutely.

9 **Mr. Ehlers:** And who else would it be?

10 **WIT:** Our safety department. The director of safety, safety manager, the helicopter  
11 dispatchers at that point. If people cannot get in touch with, the contract is open.  
12 Everything is set and ready to go.

13 **Mr. Ehlers:** Do you know if any of those individuals contacted Bristow that evening?

14 **WIT:** No one has told me that they did.

15 **Mr. Ehlers:** And do you know has – did TALOS fund or pay for the services that  
16 Bristow used that night or provided that night?

17 **WIT:** Not that I'm aware of.

18 **Mr. Ehlers:** Would you if there was a use of a Bristow helicopter would you be aware of  
19 who paid for it?

20 **WIT:** Yes. I get the invoices.

21 **Mr. Ehlers:** You haven't received anything?

1 **WIT:** Not that I'm aware of. We get a consolidated bill every month for any medivac  
2 flights. To be honest I never looked for April 13<sup>th</sup>. I know how many flights you know  
3 normally within a month and nothing caught me off guard for the April invoice.

4 **Mr. Ehlers:** Okay. Would you be able to check that out for us?

5 **WIT:** I can.

6 **Mr. Ehlers:** Okay. Thank you. Thank you very much, sir.

7 **CAPT Phillips:** Thank you Mr. Ehlers. Mr. Muise.

8 **Mr. Muise:** Good morning, sir.

9 **WIT:** Good morning.

10 **Mr. Muise:** The vessels I heard you mention are the BIG P, MISTER LLOYD, the  
11 ROMAN ELIE. What other vessels did you have in the immediate area that you had  
12 access to?

13 **WIT:** There were no others in the immediate area.

14 **Mr. Muise:** What was the name of the anchor tug that you were talking about?

15 **WIT:** I do not know that off the top of my head.

16 **Mr. Muise:** Does TALOS have any standby vessels in the field? And when I say  
17 standby vessels it's a special endorsement from the Coast Guard that helps you meet  
18 your emergency evacuation plan?

19 **WIT:** No we do not have any standby vessels per se.

20 **Mr. Muise:** Did you actually talk to the MISTER LLOYD when you first called them? Or  
21 it's my understanding that they actually responded to the Coast Guard's emergency  
22 broadcast. So they were already responding when you called them.

1 **WIT:** I, my shore base talked to the MISTER LLOYD and the owner of the MISTER  
2 LLOYD talked to them. I did not speak to the boat itself.

3 **Mr. Muise:** Okay. Did they mention any details that they were already responding or?

4 **WIT:** No.

5 **Mr. Muise:** And when you were talking about POB with Mr. Ehlers you mentioned IS  
6 Networld. And I know people have to check in with IS Networld if they fly offshore or get  
7 on a crew boat. So is that a source of data for POB? Can you look in there anytime  
8 and see what the POB's for every vessels that's offshore?

9 **WIT:** For the TALOS or any of our third party personnel that are on the boat, yes.

10 **Mr. Muise:** Would that include the crew as well?

11 **WIT:** That would not include the crew.

12 **Mr. Muise:** Okay. Thank you, sir. Thank you Captain.

13 **CAPT Phillips:** Thank you Mr. Muise. At this time I'm going to ask the parties in  
14 interest if they have any questions for you. I'm going to start with the representative for  
15 the First Mate.

16 **Mr. Sterbcow:** Thank you Captain. Mr. Boudreaux I'm Paul Sterbcow I represent  
17 Bryan Mires who was the First Mate on board the SEACOR POWER when it went  
18 down. Do you recall who the SEACOR sales rep was that day that you spoke to about,  
19 I believe you said 5:05 p.m.?

20 **WIT:** Michael VanDallen [sic].

21 **Mr. Sterbcow:** And is your dispatcher in Fourchon able to pull up the TALOS GPS info  
22 at any time upon request? Do they have access to that?

23 **WIT:** They could.

1 **Mr. Sterbcow:** So your dispatcher can locate a TALOS chartered vessel 24/7?

2 **WIT:** This is correct.

3 **Mr. Sterbcow:** Either on his or her own or if someone calls and asks?

4 **WIT:** That is correct.

5 **Mr. Sterbcow:** In this case was that system specifically used to locate as many  
6 resource assets as possible and direct them to the SEACOR POWER? Is that what you  
7 did?

8 **WIT:** I looked up – I pulled up the App on my cell phone whenever I received the call  
9 and I found what was in the nearest area at that point.

10 **Mr. Sterbcow:** So you were able to do that from your cell phone?

11 **WIT:** That is correct.

12 **Mr. Sterbcow:** And about what time did that happen? You were going quickly on your  
13 timeline and I missed it.

14 **WIT:** At 4:52 is whenever I called the shore base to see if they heard anything over the  
15 radio and see if the tracking system said anything about the SEACOR POWER that  
16 maybe I wasn't getting an update on. And then there was a gap in time. And then at  
17 4:59 is whenever I instructed my foreman to get in touch with the Captain on the  
18 LLOYD.

19 **Mr. Sterbcow:** Okay. Did – in April of this year did TALOS know that Bristow still or  
20 had a rescue diver under their employ?

21 **WIT:** I knew they had a search and rescue division. To be honest the day of the event  
22 everybody was telling me hurricane force winds, 10 to 12 foot seas. So my first  
23 response or initial thought was search and rescue on the water.

1 **Mr. Sterbcow:** Got you. You answered my question. Okay. Thanks that all I have. I  
2 appreciate it.

3 **CAPT Phillips:** Thank you Mr. Sterbcow. ABS.

4 **Mr. Eisenhower:** Thank you Captain. ABS no questions.

5 **CAPT Phillips:** Thank you Mr. Eisenhower. SEACOR Marine, Falcon Global.

6 **Mr. Tompkins:** Thank you Captain Phillips. Mr. Boudreaux just a few questions for  
7 you. We kind of took a timeline starting in the middle of the day. But I want to go back  
8 earlier. I think you told us you had two weather reports each day, correct?

9 **WIT:** Umm huh.

10 **Mr. Tompkins:** When was the first received typically?

11 **WIT:** Before 6 a.m.

12 **Mr. Tompkins:** And when would that be disseminated, same time frame?

13 **WIT:** Yes. Everybody gets it at the exact same time.

14 **Mr. Tompkins:** And I was confused because I thought I heard from another witness or  
15 read something Wilkins weather.

16 **WIT:** Yeah it's actually weather ops by DTN.

17 **Mr. Tompkins:** So that's different than Wilkins? Or is it the same? Would you know?

18 **WIT:** Can't confirm that. But ours is weather ops DTN.

19 **Mr. Tompkins:** The roughly 6 a.m. weather report that you received was there  
20 anything in that report that indicated that later that day we would experience any  
21 weather that would be suggest – that would suggest that the vessel should not have  
22 gone out that day?

1 **WIT:** Absolutely not. If my memory serves me right it was 2 to 4 seas and 10 to 15  
2 knot winds that day.

3 **Mr. Tompkins:** So actually the weather forecast was favorable for departure as far as  
4 you knew at 6 a.m.?

5 **WIT:** Absolutely.

6 **Mr. Tompkins:** And is 6 a.m. when the loadout commenced roughly?

7 **WIT:** That is correct.

8 **Mr. Tompkins:** Was the loadout of coil tubing, can you describe that as primarily route  
9 or a typical loadout of equipment?

10 **WIT:** Yeah. The equipment itself whether we put it on a lift boat or a boat, I mean its  
11 routine equipment. It's routine to load equipment on to a lift boat whenever it's going on  
12 charter. So it was a normal situation.

13 **Mr. Tompkins:** This wasn't an excessively large or excessively elevated hi loadout  
14 compared to others in your experience, is that correct?

15 **WIT:** That is correct.

16 **Mr. Tompkins:** And talked about the last ping on the GPS being at 3:38 so that would  
17 suggest that it was still underway at that point.

18 **WIT:** That's correct.

19 **Mr. Tompkins:** But it didn't do one 5 minutes later.

20 **WIT:** Correct.

21 **Mr. Tompkins:** When was the first ping that would show when the vessel left?

22 **WIT:** The first one was at 12:12 at Bollinger North.

23 **Mr. Tompkins:** And you could tell by that ping that it was starting to move?



1 **WIT:** Exactly. So being that it's solar powered in order to keep the batteries from not  
2 being wasted anytime it is completely not moving it will turn itself off. So the first ping of  
3 the entire day being that the boat was actually there for two days prior was at 12:12.

4 **Mr. Tompkins:** The company man that was on board or the consultant that you had on  
5 board you talked about a phone call that he made at 3:03, which the primary purpose of  
6 which sounds like to tell you, or tell TALOS that the departure had happened earlier,  
7 correct?

8 **WIT:** That's correct.

9 **Mr. Tompkins:** Was there any indication at 3:03 p.m. that afternoon that the company  
10 man had any concern whatsoever about the transit that he was undertaking or the  
11 weather that were facing at that point?

12 **WIT:** Not at all.

13 **Mr. Tompkins:** And on the 18 versus 19 POB issue. If I heard you correctly that the  
14 issue was that one of TALOS's contractors was originally thought or scheduled to send  
15 out one man but they sent out two?

16 **WIT:** Correct.

17 **Mr. Tompkins:** Which contract was that, do you know?

18 **WIT:** I don't know that off the top of my head.

19 **Mr. Tompkins:** But when TALOS was alerting the company man as to what to expect  
20 with respect to personnel and equipment was the thought that there would be that one  
21 less man that actually boarded?

1 **WIT:** Originally. But once everybody was on board obviously we knew the correct  
2 count. Unfortunately the POB count was on the vessel and we couldn't talk to anybody  
3 on the vessel once it happened.

4 **Mr. Tompkins:** So there was some confusion until that got straightened out?

5 **WIT:** That is correct.

6 **Mr. Tompkins:** You had worked with SEACOR on multiple occasions over the years,  
7 correct?

8 **WIT:** I have.

9 **Mr. Tompkins:** How many years?

10 **WIT:** We used them whenever I was at Stone from years of 2010 to '14 and then since  
11 '14 to present at TALOS.

12 **Mr. Tompkins:** And for the duration of that time have you've experienced working with  
13 SEACOR did you find them to be a very capable shipping company that you had  
14 confidence in?

15 **WIT:** Yes.

16 **Mr. Tompkins:** Have you ever had any occasion because of reports received from  
17 anybody on the vessel to suggest that they need to replace a Captain and he was not  
18 doing a good job or not operating in a safe manner?

19 **WIT:** No. Not within SEACOR.

20 **Mr. Tompkins:** Thank you, sir.

21 **CAPT Phillips:** Thank you Mr. Tompkins. I've heard a couple things about the count of  
22 the persons on board. So I just want to make sure I understand what your process is  
23 for getting a count once the boat's underway.

1 **WIT:** So we have the ISN quick checks. And normally the actual company man will  
2 send out his report. His report will have a detailed this is what we did, we loaded  
3 equipment, we departed the dock, number of personnel on board, so on and so forth.  
4 Unfortunately we never got to that part of the report by that day when this happened.  
5 So it wasn't until after the incident that we found out that there were in fact one extra  
6 person sent by a service provider. Company man obviously knew. Being that he was  
7 the one making sure that all of our TALOS third party personnel were on the vessel. It  
8 just was not dictated back to me. So which is why I engaged the project engineer  
9 Michael Melancon for a true head count. And I believe that we went back and forth with  
10 two phone calls. And then via at that point knew exactly how many we had, relay that to  
11 SEACOR and then they were trying to figure out their numbers for a total.

12 **CAPT Phillips:** Okay. The normal process though, not in this case, but the normal  
13 process is that the company man will send an email or make a phone call?

14 **WIT:** The true normal process is the boat will load out from Martin North. At that point,  
15 which is our shore base. This particular boat cannot get to Martin North. At that point  
16 every person that is going offshore will go into our office, scan an ISN kiosk that is  
17 located right by the front door. Their name will be put on the manifest, the TALOS  
18 manifest right there. And before that boat ever departs I can know exactly every single  
19 piece of equipment, every person TALOS third party that's on that boat and so on and  
20 so forth. Unfortunately this was Bollinger North so it was a different loadout, different  
21 process and the actual report would have been giving me my factual number. So what  
22 we did was in order to find out the eight people instead of seven was that we went to

1 ISN and made sure that we pulled everybody tagged to Main Pass 138 lift boat  
2 SEACOR POWER for that day.

3 **CAPT Phillips:** Thank you. So you laid out a clear process for the manifest when the  
4 boats are loading at Martin North. What is the process for loading in a different  
5 location?

6 **WIT:** At that point we do the ISN quick check. So all the vendors will send us their  
7 personnel that are going offshore. A person, a list of personnel that we received the  
8 day prior ended up being one less than what actually checked in ISN quick check the  
9 next day. So at that point we thought that we had seven personnel we ended up with  
10 eight because of the extra person and we found that whenever we pulled ISN's report.

11 **CAPT Phillips:** I'm just trying to get my head around the process, maybe not the  
12 details about this particular incident.

13 **WIT:** So the process normally at Martin North would be that anybody -----

14 **CAPT Phillips:** Right you explained the Martin North process. I was looking for a  
15 process for not at.

16 **WIT:** So even with this. They should still report to Martin North in order to check in with  
17 our dispatchers. At that point our dispatchers would instruct them to head to Bollinger  
18 North in order to get on the lift boat SEACOR POWER there.

19 **CAPT Phillips:** Okay. So everything does check in through Martin North?

20 **WIT:** That is correct.

21 **CAPT Phillips:** Regardless where the boat is?

22 **WIT:** That is correct. And according to that day everyone except one person had  
23 checked in at Martin North. The other went straight to the SEACOR POWER.

1       **CAPT Phillips:** That makes sense, thank you. When you were going through your  
2 timeline you said at 4:52 you called the shore base in Fourchon to see if they had heard  
3 anything. Had they heard any radio calls?

4       **WIT:** They had not.

5       **CAPT Phillips:** So for your folks that you put on board do you, does your company  
6 keep next of kin notifications?

7       **WIT:** No ma'am we do not. Not for third party service personnel. If ever we have any  
8 issues with anyone offshore from a minor cut and so on the policy is that we notify the  
9 HSE department at the company that they work for and then at that point they will do  
10 whatever is needed to be done. At this point obviously notification to next of kin, but  
11 otherwise just depending on what their third party HSE departments.

12       **CAPT Phillips:** And for the SEACOR POWER incident do you know when that  
13 notification went to the HSE's in the other companies, Fugro and Cardinal?

14       **WIT:** I do not know that. I knew that SEACOR obviously knew being that they finally  
15 called me back and said that they were working on. My boat's also confirmed at that  
16 time that the SEACOR POWER was in fact in the water. So as for the third party  
17 personnel that would have been the project engineer or our HSE department. I'm not  
18 really sure which one would have called the service providers.

19       **CAPT Phillips:** Thank you. As we wrap up our questions I'll ask you looking back do  
20 you have any ideas or recommendations for improvements for preventing these kinds of  
21 things from happening in the future?

1 **WIT:** Let's just say more up to date weather reports from the actual vessel providers,  
2 especially if they're getting any type of extreme weather reports that we may not be  
3 receiving. Anything in that particular area. But other than that that would be about it.

4 **CAPT Phillips:** So you think it would be helpful if TALOS got updates from the  
5 company?

6 **WIT:** Yeah. I'm saying if the vessel companies such as they have equipment on the  
7 vessels that are giving them up to date, or a special marine bulletin if the actual boat  
8 company maybe receiving it in their corporate office, but not receiving it on the boat or  
9 just as a second verification of hey this is going on right now let's just make sure that  
10 you know we're looking at it. We rely solely on the Captains of the vessel in order to tell  
11 us if the waters are navigable, safe to transit. We go off of what our information is and  
12 the reason why the site specific information is so important such as the Main Pass 138  
13 is once a lift boat does approach a platform I need to make sure that the sea conditions  
14 are conducive in order for the lift boat to approach and be able to set up in that  
15 particular location. The actual transit of the vessel and the route that they take, which I  
16 don't know, I can't tell them what their weather or what they're going to be encountering  
17 at that time.

18 **CAPT Phillips:** Thank you. Any other ideas for recommendations?

19 **WIT:** Nothing that I can think of at this time.

20 **CAPT Phillips:** Is there anything else that you would like to tell us that we haven't ask  
21 you about?

22 **WIT:** I think we covered everything actually.

1     **CAPT Phillips:** Thank you very much. Thank you for coming in today. We appreciate  
2 your help and assistance. You're now released as witnesses at this Marine Board  
3 Investigation Hearing. Thank you for your cooperation. If I later determine that we need  
4 additional information from you I will contact you through your legal counsel. If you  
5 have any questions about this investigation you may contact Board Recorder Lieutenant  
6 Anthony Alger. Our next witnesses are scheduled for 1300. We will take a recess until  
7 that time. The time is now 1137. This hearing is now in recess.

8             *The hearing recessed at 1137, 12 August 2021*

9             *The hearing was called to order at 1300, 12 August 2021.*

10    **CAPT Phillips:** The time is 1300. This hearing is now in session. We will now hear  
11 testimony from Mr. Tom Gruber and Joe Rousseau. Lieutenant Alger can you please  
12 administer the oath?

13    **[WIT 1 = Thomas Gruber. WIT 2 = Joseph Rousseau]**

14    **Recorder:** Gentlemen if you could both raise your right hand. A false statement given  
15 to an agency of the United States is punishable by a fine and or imprisonment under 18  
16 U.S. Code 1001. Knowing this do you solemnly swear that the testimony you're about  
17 to give will be the truth, the whole truth and nothing but the truth, so help you God?

18    **WIT:** Yes.

19    **Recorder:** Please be seated. For the record if you could each state your full name and  
20 spell your last into the microphone please?

21    **WIT 1:** Thomas Gruber, G-R-U-B-E-R. I work for ABS.

22    **WIT 2:** Joseph Rousseau, R-O-U-S-S-E-A-U. And I also work for ABS.

23    **Recorder:** Thank you. And if you could identify your counsel please.

1 **Counsel:** Brian Eisenhower, E-I-S-E-N-H-O-W-E-R.

2 **Recorder:** Thank you much.

3 **CAPT Phillips:** Good afternoon, thank you both for being here today. I'm going to start  
4 out with some questions on background. I'll start with you first Mr. Gruber. Can you tell  
5 us where you currently work?

6 **WIT 1:** I work for the American Bureau of Shipping in the office in Rosslyn, in  
7 Washington, D.C.

8 **CAPT Phillips:** And what is your position there?

9 **WIT 1:** I'm the Chief Engineer for statutes.

10 **CAPT Phillips:** Can you tell us a little bit about the responsibilities associated with that  
11 position?

12 **WIT 1:** Yes. I oversee the implementation of the statutory requirements across all of  
13 our technical offices make sure they done consistently and correctly. I also work as a  
14 liaison with Marine Safety Center in Headquarters for load line and stability matters  
15 between D.C. and our Houston office.

16 **CAPT Phillips:** And do you oversee implementation for the Americas or all across the  
17 globe?

18 **WIT 1:** Across the globe.

19 **CAPT Phillips:** Thank you. How long have you worked for ABS?

20 **WIT 1:** 33 years next month.

21 **CAPT Phillips:** And what kind of positions have you held with them?

22 **WIT 1:** I started out as an engineer in load line stability group in 1988. I spent six  
23 months in a structures group while I was up in in Paramas. Moved to Houston became



1 a Senior Engineer and a Principal Engineer in charge of the load line and stability  
2 group. I held that position from '88, I'm sorry from '92 to 2009. Then I moved the Naval  
3 Engineering Group as a Principal Engineer. And in 2012 I moved to the Chief  
4 Engineer's Office.

5 **CAPT Phillips:** Thank you. What's the highest level of education you've completed?

6 **WIT 1:** I have a Bachelor of Engineering and Naval Architecture from the New York  
7 Maritime College.

8 **CAPT Phillips:** Do you hold any professional licenses or certificates?

9 **WIT 1:** No the license I had at graduation ran out.

10 **CAPT Phillips:** Thank you. Mr. Rousseau I'm going to ask you the same series of  
11 questions. Can you tell me what your current position is?

12 **WIT 2:** Yes I'm the Director of offshore technology with the American Bureau of  
13 Shipping in the Houston office.

14 **CAPT Phillips:** And what are your general responsibilities associated with that  
15 position?

16 **WIT 2:** I'm in our technology team which deals with research and development and  
17 forward looking initiatives to tie together what we're seeing and technological advances  
18 in the industry to improve our rules, to look at new areas especially as they relate to  
19 green fuels for example wind, hydrogen that sort of thing.

20 **CAPT Phillips:** And your research and development applies to the offshore industry or  
21 does it apply across all types of vessels?

22 **WIT 2:** Primarily offshore, but it crosses into marine work as well.

23 **CAPT Phillips:** Would you say your scope is all across the globe as well?

1 **WIT 2:** Yes.

2 **CAPT Phillips:** How long have you worked at ABS?

3 **WIT 2:** About 23 ½ years.

4 **CAPT Phillips:** And what other positions have you held?

5 **WIT 2:** When I joined ABS in 1998 I was an engineer with the offshore stability group in  
6 Houston. I became a Senior Engineer and then a Principal Engineer with the offshore  
7 stability group. And I was promoted to manager of offshore engineering so I was in  
8 charge of the offshore structures and systems as well as the stability team. Then I  
9 moved to Singapore in 2010 where I was Director of Offshore Technology and Business  
10 Development. And that was a client facing role looking for the type of feedback that I  
11 deal with now in my current role. And then I became the Chief Engineer for Offshore for  
12 ABS, still in Singapore and then relocated to London, England where I was the Vice  
13 President for Offshore for the Europe Division. I was there for about a year and a half.  
14 Moved to the Ottawa office. I was Regional Vice President for Canada. And then in  
15 2017 I moved back to Houston where I became the Director and Market Sector Lead for  
16 Offshore Exploration. So dealing with all the business developments associated with  
17 drilling rigs offshore. And the in January of this year I became Director of Offshore  
18 Technology with the technology group.

19 **CAPT Phillips:** Thank you. What did you do prior to ABS?

20 **WIT 2:** I worked with several Naval Architecture companies in Vancouver and Ottawa  
21 Canada.

22 **CAPT Phillips:** And what's your highest level of education?

1 **WIT:** I have a Bachelor's degree in Naval Architecture from Memorial University  
2 Newfoundland and a Master's in Business Administration from Tulane University in New  
3 Orleans.

4 **CAPT Phillips:** Do you hold any professional licenses or certificates?

5 **WIT:** I have a professional engineer's license in Ontario and British Columbia Canada.

6 **CAPT Phillips:** Thank you. At this point I'm going to turn it over to Mr. Lawrence and  
7 have him ask you some questions. Mr. Lawrence.

8 **Mr. Lawrence:** Thank you Captain. Gentlemen thank you for being here. Could you  
9 please explain the purpose of a Classification for a vessel?

10 **WIT 2:** Sure I'll take that one. The Classification Societies like ABS we develop and  
11 publish standards that are used in the marine and offshore industries for the use of  
12 owners, shipyards, designers, vendors. They're a uniformed level of standard for the  
13 design and construction and in some aspects of operation of these vessels and offshore  
14 units. So we develop our rules, we publish them, we work with industry to improve them  
15 on an ongoing basis with a defined committee structure for example. And we also act a  
16 recognized organization for certain Flag Administrations as well in applying their  
17 regulations. But the Classification side of it is based on the rules that we publish that  
18 you can use when you're deciding to build or design or operate a vessel.

19 **Mr. Lawrence:** Thank you. We heard from both an ABS survey and Coast Guard  
20 Marine Inspector last week. And they kind of seemed to do same sort of inspections  
21 and the same sort of time. What's the purpose if the duplication of effort is, why do we  
22 have to do both?

1 **WIT 2:** Well in many cases you don't have to do both depending on the level of  
2 delegation that's offered by a Flag State to the Class Society. Sometimes the  
3 inspection on behalf of the Flag State and Class surveyor are carried out by the same  
4 person at the same time. In other cases if the Classification is based on the rules that  
5 we have published, the inspections for the Flag are based on regulations that they have  
6 published. So for example the Coast Guard is in the C.F.R. So if we are delegated to  
7 perform an inspection under the C.F.R. by navigation and vessel inspection circular for  
8 example, we can carry that out. But if we are not then a Coast Guard inspector needs  
9 to carry that out on behalf of the Flag. So we have delegated roles in some cases but  
10 not all cases. Whereas on the Class side that is our role is to administer those rules.

11 **Mr. Lawrence:** Okay. Lieutenant Alger you can bring up Exhibit 216 please?  
12 [Showing Exhibit]. So this is the certificate of classification for SEACOR POWER. I  
13 would just like you to explain what the class notations are and what they indicate on this  
14 form. Scroll down, right there.

15 **WIT 2:** Okay so the classification notation for this vessel is Maltese Cross A1, self-  
16 elevating unit for restricted service. Maltese Cross AMS. The Maltese Cross A1  
17 indicates that it is built in accordance with the ABS rules that apply to it. And the  
18 Maltese Cross indicates that it was built under survey at the shipyard so that we actually  
19 attended all the work that was going on. Self-elevating unit defines the type of vessel  
20 that it is. The self-elevating unit comes from the mobile offshore unit rules. That we  
21 have published that cover things like the self-elevating units, semi submersibles, drill  
22 ships, that sort of thing. So this defines that it is a jack up type of hull form. Restricted  
23 service refers to any service restriction that as defined in the rules it is not in full

1 compliance with a certain level of environmental force. So for example if it's in an afloat  
2 condition it may not have to meet the 100 knot wind speed for a severe storm. If it's, for  
3 example operating in the Middle East it might not have to have steel that has a  
4 designed temperature that's down below zero degrees and that sort of thing. So service  
5 restriction is something that is based on what is submitted to us in terms of what they  
6 want to do with the vessel. And it's based on the rule requirements at that certain level  
7 of environment that's applied to it. And that is a pretty well governed procedure in terms  
8 of vessels in coastal service for example. The Maltese Cross AMS is the machinery on  
9 board the vessel. So the main engines and propulsion system are classed in  
10 accordance with the rules that apply and Maltese Cross again that they were  
11 witnessed and surveyed by the ABS surveyor.

12 **Mr. Lawrence:** Do you know what the restricted service on this indicates? What that  
13 limitation would be?

14 **WIT 2:** Yes. In the case of this vessel it was a 70 knot afloat wind speed for a storm  
15 condition and 60 knot for intact. And that's allowed in the ABS rules to, normally it  
16 would be 100 knot and 70 knot, but you can use less than that as long as it's over 50 for  
17 the ABS rule purposes. And there's similar provisions in the C.F.R. as well.

18 **Mr. Lawrence:** Okay and is the self-elevating unit the same as a self-elevating drilling  
19 unit?

20 **WIT 2:** Basically yes. It's the same rules. The unit looks different, but it essentially  
21 operates the same way. It moves from one location to another, it jacks its legs down to  
22 elevate. Obtains an air gap above the surface and then carries out its work. In this case

1 it's doing construction or maintenance of coil tubing operations or something like that.

2 Whereas the drilling rig would generally be drilling or well testing.

3 **Mr. Lawrence:** But they have the same rule set? That MODU rules.

4 **WIT 2:** Correct.

5 **Mr. Lawrence:** Are there other Classifications notations responsible for lift boats?

6 **WIT 2:** There is a lift boat guide that has the notation Maltese Cross A1 lift boat. That  
7 rule set was not available when this particular vessel was built. It has been used by  
8 some vessels. But in general for particularly for international service most owners  
9 prefer the self-elevating unit in compliance with the MODU rules.

10 **Mr. Lawrence:** Are there—what are the main differences between them, a lift boat  
11 rules and MODU rules?

12 **WIT 2:** There is not a lot of difference. Over the years they have – they started out a  
13 little different. They have converged a fair amount. There are some minor differences.  
14 One of the big things that the lift boats guide set up to do was to better define some of  
15 the restricted service requirements when it came to things like mooring and stability.  
16 And they're not very different from what we have. And in most cases they have been  
17 carried over into the main MODU rules as well. So there's not a large amount of  
18 difference. I think the biggest difference that I'm aware of is in damage and it's still a  
19 minor difference in the way that the damage is treated.

20 **Mr. Lawrence:** If you're a vessel that meets the lift boat rules or lift boat guide would  
21 that still comply with the MODU code from IMO?

22 **WIT 2:** The MODU code from IMO? It would – it may fall short in some areas. Like I  
23 said the damage stability is not the same. It's an alternative. So there may be areas

1 where it does not necessarily comply with the MODU code. Which that is the reason  
2 why the international owners tend to want to use the MODU rules because it is  
3 completely aligned with the MODU code.

4 **Mr. Lawrence:** So the criteria for a self-elevating unit for a lift boat that's a self-  
5 elevating unit are essentially the same as for a jack up?

6 **WIT 2:** Yes.

7 **Mr. Lawrence:** Can you describe what the intact stability criteria are for a lift boat?  
8 And if you would like we can bring up your rules if you like to go through them.

9 **WIT 2:** It's not necessary. It's an afloat stability analysis that's carried out and you  
10 calculate the heeling moment from a wind force that's applied to the vessel. And then  
11 there's a – that will tend to lean the boat over. And then there's a restoring force from  
12 the buoyancy of the hull that seeks to move it back upright. And we require that there's  
13 an energy excess in the righting versus the heeling of 40 percent in excess. So 140  
14 percent of the heeling moment is the righting moment.

15 **Mr. Lawrence:** Are there other intact stability criteria or rules for lift boats, for MODU's?

16 **WIT 2:** The – not generally that work with criteria setting and the allowable VCG curve,  
17 I mean the metacentric height GM needs to be positive. In the case of the Coast Guard  
18 I believe the value is 2 inches. But that's rarely a limiting condition. It's usually in the  
19 wind heeling versus the righting moment that you get the actual criteria.

20 **Mr. Lawrence:** Thank you. So lift boats and jack ups have the same essential intact  
21 stability criteria. So are there any characteristic differences between the two that affect  
22 stability?

1 **WIT 2:** The main difference is size. The drilling jack ups are much larger. Their hulls  
2 are, you know in the 25 to 35 foot depth range. Some are even larger than that. The  
3 leg lengths are in excess of 500, some even 6 or 700 feet. The legs themselves are  
4 generally lattice structures, triangular shaped as opposed to cylindrical just for the  
5 structure efficiency of that especially in a long leg. Obviously with a deeper hull they  
6 have greater freeboard. They have a lot more on deck with a drilling derrick, a  
7 substructure, a cantilever, so and a very large quarters usually. So there's a – It's  
8 basically a bigger version of the what you might consider a lift boat. There's very little  
9 open deck space as you would get on a lift boat.

10 **Mr. Lawrence:** Are they normally self-propelled?

11 **WIT 2:** No. Typically they are towed. Some of them may have small thrusters for local  
12 positioning when they get to close to a jack up for work over for example. But in general  
13 they are towed from one location to another. And if it's a long tow, internationally they  
14 may be put on a heavy lift vessel instead. So they are lifted out of the water and towed  
15 somewhere and then they're refloated at the final location rather than towing it  
16 thousands of miles.

17 **Mr. Lawrence:** Do they have personnel on board when they're in transit?

18 **WIT 2:** Yes.

19 **Mr. Lawrence:** Do you know what the makeup of a crew would be on a jack up?

20 **WIT 2:** I do not.

21 **Mr. Lawrence:** What software and analytical tools does ABS use to analyze intact  
22 stability?

23 **WIT 2:** If I could pass that on to Tom.



1 **Mr. Lawrence:** Yeah.

2 **WIT 1:** We currently use two different programs. We use the SEA SAFE program and  
3 we use the Herbert Engineering stability program that was developed. We worked with  
4 them to develop a program for us.

5 **Mr. Lawrence:** Is that what you currently use?

6 **WIT 1:** Yes.

7 **Mr. Lawrence:** And has that changed since 2002?

8 **WIT 1:** Yes. In 2002 when this review was done we were using an ABS program called  
9 Drill Rig. That's no longer used.

10 **Mr. Lawrence:** How does that program work to analyze the intact stability?

11 **WIT 1:** Can you be specific on which program?

12 **Mr. Lawrence:** The one you used in 2002. If you recall.

13 **WIT 1:** Back to Joe with that one.

14 **WIT 2:** Yeah I was the one that was using that software. It was a pretty robust piece of  
15 software written in the '70's or '80's I guess. It was standard hydrostatic software that  
16 would calculate buoyant volume. You would have a separate program called drill wind  
17 where you would build up the wind panel method to figure out the wind drag and wind  
18 force that would be overturning and then feed that into the drill rig program and it would  
19 do calculations of when it's heeled over for example 10 degrees with this much wind on  
20 it, this is the restoring force and calculate the area ratios and that sort of thing. And the  
21 distance to the down flooding points.

22 **Mr. Lawrence:** And just to be clear does it address any sort of dynamic stability?

1 **WIT 2:** Not really. I mean it addresses the quasi static, quasi dynamic version that we  
2 have which is righting energy versus heeling energy. But it does not address any  
3 motions of the vessel and it doesn't include any wave actions.

4 **Mr. Lawrence:** So time is basically not a variable?

5 **WIT 2:** Essentially.

6 **Mr. Lawrence:** So you discussed how the wind load is calculated. How does it  
7 calculate a wind load in that program? Or how did it?

8 **WIT 2:** It uses the method that's both in the ABS rules and in the MODU code and the  
9 C.F.R. And you take the area of a given structure and based on shape and its height  
10 you calculate how much force would be exerted on that. You add them all up and that's  
11 the overall wind force area that you're dealing with.

12 **Mr. Lawrence:** Was shielding between components considered?

13 **WIT 2:** Generally no. We don't permit shielding. What we would generally do instead  
14 is if there's a bunch of structures involved we group them together and use a slightly  
15 higher shape coefficient. That's in rules in the C.F.R. so you would use a 1.1 instead of  
16 a 1 for example. But generally no, no shielding is permitted. The one thing to bear in  
17 mind is that we are looking at wind from multiple directions, all around the clock to find  
18 the weakest axis to stability of the unit. And so in that case something that's shielded in  
19 one direction may not be shielded in another. So we want to make sure that model is  
20 accurate.

21 **Mr. Lawrence:** Has that changed at all with the current method of evaluating wind  
22 load?

23 **WIT 2:** No.

1 **Mr. Lawrence:** So you mentioned drag coefficients do you use those shape, I think you  
2 called them shape factors, did you use the ones listed in the regulations?

3 **WIT 2:** Yes.

4 **Mr. Lawrence:** And those are essentially the same between the C.F.R., Code of  
5 Federal Regulations, ABS rules, MODU code?

6 **WIT 2:** Correct.

7 **Mr. Lawrence:** So in the ABS rules it says that shapes or combination of shapes which  
8 do not readily fall within the specified categories will be subject to special  
9 considerations. So what would special considerations be if it's not listed as a shape  
10 factor in the regulation?

11 **WIT 2:** That's something where for example on a leg, a lattice leg you have to figure  
12 out how we're going to evaluate a chord which is vertical section, the rack that is on that  
13 which is a bunch of gear teeth and then all the tubular members that are connecting  
14 those three chords together, that's not something that you would build up, it's just a  
15 bunch of cylinders. There's methods you can bring in. Work from ISO or SNAME on  
16 how to do a drag coefficient of a leg for example. But basically anything that's not a  
17 simple shape like a cylinder, a cube, a box, that sort of thing. That gives us the  
18 opportunity to have that discussion with the designer and to do something rational  
19 based on existing standards and in some way to come to an agreement on what is an  
20 appropriate value.

21 **Mr. Lawrence:** You mentioned SNAME, can you spell out that?

22 **WIT 2:** Sorry that's the Society of Naval Architects and Marine Engineers. That's called  
23 SNAME, it's a U.S. based organization for Naval Architects and Marine Engineers.

1 **Mr. Lawrence:** Thanks. Was there a specific reference that they have that talks about  
2 appropriate shape factors for shape or things that encounter on a vessel?

3 **WIT 2:** The 55 guideline on site assessment of jack up units discusses that. So the  
4 55A guidelines that are attached to that 55 have the site assessment in them. It's not a  
5 Class requirement, it's not a regulatory requirement, but it's something that an owner  
6 would use to check the site specific aspect of a rig before it's going on site to make sure  
7 that they have the proper amount of pre load and are able to stay on site. It's being  
8 pretty much superseded in the industry by the ISO or the International Organization for  
9 Standardization Standard 19905 which was built on the same base, but it goes further in  
10 research and soils and mechanics and that sort of thing. Not saying that these are the  
11 only references that you could use, but there are industrial standards out there that we  
12 can bring into the rules when we're having that special consideration decision.

13 **Mr. Lawrence:** Okay. Do you recall what the shape factor is for cylinder, for example?

14 **WIT 2:** Yeah, .5.

15 **Mr. Lawrence:** 0.5. And is that a good drag coefficient for a cylinder in your opinion?

16 **WIT 2:** It's a shape coefficient. As opposed to drag coefficient. It's what in rules,  
17 what's in the regulations. It hasn't been challenged by anybody that we have been  
18 working with. Some would use a higher coefficient. Some would bring in other  
19 standards as I say. But that's the value that's in the regulations and so it's the one that  
20 we minimally have to comply.

21 **Mr. Lawrence:** How would you apply wind load data that you got from a wind tunnel?

22 **WIT 2:** It – wherever the wind information comes from, whether it's from the analytical  
23 empirical style calculation of adding up all the panels or if it's direct forces from a wind

1 tunnel test that's input as a force with a center of effect. So it's essentially a moment  
2 acting upon the unit. So that's fed into the hydrostatic program like HecStab or Drill Rig  
3 or any others.

4 **Mr. Lawrence:** How do you – so I understand the regulations give kind of a step wise  
5 function for wind pressure. So would you get a realistic wind in a wind tunnel based on  
6 that step wise function?

7 **WIT 2:** Well the step wise is really a hangover from days that we didn't have the  
8 analytical capability to deal with a continuous curves. It is under laying by an actual  
9 function. So there is a curve, an exponential relationship that you can use. Instead of  
10 the step wise function, the step wise function was useful in the early days when you  
11 were doing all this by hand. And you just divided up a page of 50 foot strips and do that  
12 calculation. Now certainly computers can do that a lot more easily. And wind tunnel  
13 can set up that wind profile, that vertical profile based on, you know either the step  
14 function or the continuous function. It just depends on how the wind tunnel is capable of  
15 doing that. And to what type of detail they control that vertical function in their size of  
16 tunnel.

17 **Mr. Lawrence:** How does the wind load that you calculate from a wind tunnel compare  
18 when using it with empirical methods that you've used, that you talked those blocks that  
19 you build up?

20 **WIT 2:** Typically the wind tunnel is less from drag standpoint. And the important thing  
21 about the wind tunnels and the difference between empirical calculations, the empirical  
22 formulas that are in the rules and regulations they're just drag. Whereas in wind tunnel  
23 you actually get a lift effect that operates opposite to that so it's like an airplane wing.

1 So as the unit heels over you actually get a small lift effect coming backwards. So that  
2 get represented in the wind tunnel test from the results. So generally the wind tunnel  
3 will give you slightly lower values of wind heeling moment than the empirical method  
4 would.

5 **Mr. Lawrence:** Have you received any wind load data or wind load, yeah data from  
6 computational fluid dynamic methods?

7 **WIT 2:** Not for Classification. Not for vessels that have been Classed. There's always  
8 research going on with many parties, but CFD is not something we've taken calculations  
9 for and used it in an analysis.

10 **Mr. Lawrence:** A wind tunnel testing would be acceptable and empirical method as we  
11 discussed?

12 **WIT 2:** Yes. Provided it meets some pretty strict you know quality standards in terms  
13 of the way they set up the model. What wind speeds they're choosing, how they orient  
14 the model, how they handle the heel, how they handle the boundary layer effect from  
15 the bottom of the wind tunnel. So there's a lot of work that goes into it, so it's often not  
16 worth doing from the standpoint of cost. But it has been done and we have applied it on  
17 certain units.

18 **Mr. Lawrence:** Have you ever received any wind tunnel testing for a lift boat?

19 **WIT 2:** Not that I'm aware of.

20 **WIT 1:** If I can just add on to Joe's answer. The U.S. Coast Guard does not permit us  
21 to accept wind tunnel test results for U.S. Flag vessels. So it is also an issue for the  
22 statutory side whether or not the Flag Administration with accept it.

1 **Mr. Lawrence:** That was going to be my next question. I think I'm done talking about  
2 wind. Now we can talk about the hydrostatic response that you talked about. So the  
3 ABS rules for building and classing MODU's asks you to use the critical stability axis to  
4 define the righting arm. Could you define what the critical stability axis is?

5 **WIT 2:** Yes. Since we are dealing with, it's not a long slender ship shaped vessel it's a,  
6 these units are triangular or rectangular so you have to check wind from other directions  
7 and so there will be a certain direction in which the wind is blowing the and unit is  
8 heeling away from that. That is the, I guess you could call it the weakest, it's going to  
9 give you the most conservative VCG value because it's either using stability or down  
10 flooding earlier because the unit is just – it's righting moment is not as strong in that  
11 particular direction as it is in other directions.

12 **Mr. Lawrence:** So to generalize it would be, instead of rolling from side to side or  
13 heeling from side to side it's going from like the port bow to the starboard quarter?

14 **WIT 2:** Exactly.

15 **Mr. Lawrence:** It's sort of wobbling to some degree. So in the design of a MODU does  
16 ABS calculate that stability, that critical axis?

17 **WIT 2:** All the calculations are submitted by the designer which it may be an  
18 independent designer or the shipyard may have their own in house capability. But they  
19 do the full calculation for intact and damage stability and as part of that they would find  
20 the critical axis and what the minimum – maximum allowable VCG is. We repeat that  
21 and so we build our own models. We verify that the wind is appropriate to the vessel  
22 that's being modeled. We check the hydrostatics to make sure that we've got the same  
23 buoyant body. And then we carry out the stability calculations in the same way. And

1 we check multiple directions and do check multiple damage cases to verify in the end  
2 that what has been submitted as the designer as the critical axis is the same one as we  
3 get it. Sometimes there's minor difference and it can depend as well on what interval  
4 you have. If you're doing it in 15 degrees or ever 5 degrees you might be off plus or  
5 minus 5 degrees, but that's not going to make a large amount of difference for an  
6 allowable VCG.

7 **Mr. Lawrence:** Okay. So you're checking the different axis and you're heeling the  
8 vessel to try to find the weakest?

9 **WIT 2:** Right.

10 **Mr. Lawrence:** So do you allow it – do you allow the vessel to move in the other  
11 direction so if you were heeling the vessel and changing that axis to the trim direction,  
12 would you allow the vessel to freely trim when you set the heel?

13 **WIT 2:** Yes. The calculations that we carry and then we get from the designer is a free  
14 trim method. Because if you use a fixed trim method the unrestrained or unbalanced  
15 energy you're getting in that trim moment is going to be some artificial results. So free  
16 trim is the general way that these calculations are carried out.

17 **Mr. Lawrence:** And have you heard of the steepest descent method to calculate these  
18 critical axis?

19 **WIT 2:** Yes.

20 **Mr. Lawrence:** Will you be able to describe it?

21 **WIT 2:** Sure. This arose from an issue that we had back in the mid 2000's after this  
22 vessel was built where we were doing some work on stability of jack ups. And we found  
23 that these calculations using the free trim method were having problems when you get



1 to a certain angle and you let the trim balance, but the vessel just does not want to  
2 incline further along that axis. And that's not because it's going to capsize, it's because  
3 physically there's a force that wants it to turn in another direction. So it's essentially  
4 allowing the vessel to follow an energy path that rather than a fix axis that's only toward  
5 the port bow for example, it may as it gets down to a certain number of degrees tend to  
6 twist over so it's inclining in a different direction. So the righting energy is still there, it's  
7 just that you can't see it in the direction that you chose and are trying to fix it to. So the  
8 steepest descent method sets up an energy plot where you can track that path of the  
9 vessels that's going into, its looks like contour plot and you track it through saddle points  
10 and maxima and minima and you find the stability along a certain direction with the  
11 knowledge that the vessel does not want to just sit there and only climb up one fixed  
12 axis.

13 **Mr. Lawrence:** So to generalize it, if the wind were blowing on the vessel it would heel  
14 over but then it could move and it could twist and yaw in the direction as well?

15 **WIT 2:** Correct. It's releasing the free trim, you know it releases it in the trim direction,  
16 but there still a yawl that is not being allowed to work. So that's what the steepest  
17 descent method, or there are other methods to do as well. But they're seeking to find  
18 out what's really happening to the unit and essence what you're looking at is if you take  
19 a unit and tilt it to a certain direction and then take the force off does it come back  
20 upright or does it roll over. And so this is trying to find all those paths where it comes  
21 back upright. So it's not necessarily following a linear path back and forth it may be  
22 going on a C shape or S shape curve around a certain yawl, but it is coming back.

1 **Mr. Lawrence:** Does that generally take – if you use the steepest descent method,  
2 does it take less energy to heel vessel over, generally than a fixed critical axis?

3 **WIT 2:** It's not a matter of less energy to heel it. I mean it's physically allowing you to  
4 do the calculation. Without this method the curve stops. The software can't handle the  
5 inclination where it's got such a high unbalanced yaw moment. So this allows you to  
6 continue this calculation. We really only apply it for a range of stability criteria that we  
7 have associated with jack ups that came in in 2005. Because that's where we ran into  
8 this problem. In general the criteria that we use in intact and damage you can usually  
9 get that to converge to a solution without having to go to this method.

10 **Mr. Lawrence:** So the righting arm that you would calculate by fixing the critical axis it  
11 would be similar to what you calculate for a righting arm by allowing the axis to vary?

12 **WIT 2:** Yeah. For the first amount of inclination they're going to be the same. It's just  
13 that with a free trim method at some point you'll get to an inclination and the calculation  
14 will just stop. And we had always interpreted that as a capsize and that's not the case.  
15 What's happening is the unit is twisting itself. And the steepest descent method allows  
16 you to take that into account and see. Particularly for a range of stability and criteria  
17 that we use it for that the vessel is actually able to go over 10 degrees as opposed to 7.

18 **Mr. Lawrence:** Right. So now I'm going to try to get into specifics of the SEACOR  
19 POWER. So since SEACOR POWER was constructed at SEMCO in 2002 could you  
20 provide us with a timeline and what stability reviews were conducted by ABS?

21 **WIT 2:** Sure I'll pass it over to Tom he's got the records.

22 **WIT 1:** The stability was originally approved for the vessel prior to delivery with 250 foot  
23 legs. Shortly after delivery the yard submitted additional calculations that included the

1 265 foot legs, 15 foot additions to the legs. Those allowable VCG curves were  
2 approved later that year but not implemented. There was also another stability study  
3 that was submitted and never implemented in 19, I'm sorry in 2008. In 2012 the owners  
4 at that point decided to implement the leg lengthening. The vessel was inclined at that  
5 point, it ran a full stability test. The allowable VCG curves that were approved in 2002  
6 to the longer leg were then input into the updated Operations Manual. And then it was  
7 separate iteration of the Operations Manual just to update for comments that were  
8 made during a review process and the final approval of that was in October of 2014.  
9 And that's the – we reviewed the stability portion of it and sent to OCMI for final  
10 approval.

11 **Mr. Lawrence:** Did you concurrently review it for load line at any of those points?

12 **WIT 1:** Yes. Each of those reviews were reviewed for load line up to the load line draft.

13 **Mr. Lawrence:** Did the load line ever change?

14 **WIT 1:** No.

15 **Mr. Lawrence:** If the load line were changed would you have to change where the  
16 markings are on the side of the hull?

17 **WIT 1:** Yes. The plimsoll mark always has to move to the maximum draft that's  
18 allowed by the load line convention or stability or structures.

19 **Mr. Lawrence:** And is there a requirement for what that mark has to consist of?

20 **WIT 1:** Yes. That's actually delineated in both the load line, the International Load Line  
21 Convention as well as 46 C.F.R. Part 42.

22 **Mr. Lawrence:** Can you describe what that is?

Under 46 U.S. Code §6308, no part of a report of a marine casualty investigation shall be admissible as evidence in any civil or administrative proceeding, other than an administrative proceeding initiated by the United States.

1 **WIT 1:** It's basically a plimsol mark, one inch in diameter. It's got a line through the  
2 center. It's also one inch that goes across the top of that line as the center of the ring.  
3 That's the center of ring that's the maximum draft in the summer condition. Then  
4 there's an allowance tree that goes forward of that. That gives you tropical allowance,  
5 summer allowance, and winter allowance, winter North Atlantic and then a tropical fresh  
6 and a fresh water allowance.

7 **Mr. Lawrence:** Does it have to be permanent mark?

8 **WIT 1:** Yes.

9 **Mr. Lawrence:** So does it have to be made out of steel or something?

10 **WIT 1:** It can either be bead welded on, it can be a template that's welded to the hull or  
11 it can be center punched and painted with contrasting colors with the hull.

12 **Mr. Lawrence:** And how would the crew use it to know the vessel was loaded safety?

13 **WIT 1:** The load line simply delineates what maximum draft is. Regulation 10 of the  
14 Load Line Convention requires that the stability be approved. And that would be  
15 handled through the Operations Manual.

16 **Mr. Lawrence:** So which of the reviews that you mentioned were performed on behalf  
17 of the Coast Guard?

18 **WIT 1:** The original review for delivery. The review of the allowable VCG curves shortly  
19 after delivery. All the Operations Manuals were approved on behalf, or the stability  
20 portions were reviewed on behalf of the Coast Guard and the inclining experiment and  
21 all the associated reviews of that were done on behalf of the Coast Guard.

22 **Mr. Lawrence:** Does ABS have a different process for Classification reviews and  
23 reviews on behalf of the Coast Guard?

Under 46 U.S. Code §6308, no part of a report of a marine casualty investigation shall be admissible as evidence in any civil or administrative proceeding, other than an administrative proceeding initiated by the United States.

1 **WIT 1:** The reviews are essentially the same. It's just a different criteria that we use.  
2 With, well statutory we have to use the C.F.R. criteria or the MODU code for this type of  
3 unit for Class review we would look at our MODU rules.

4 **Mr. Lawrence:** Are there different rules for lift boats for C.F.R. and Class rules?

5 **WIT 1:** They track pretty close together. The C.F.R. for intact stability has an area  
6 requirement in addition to the 1.4 requirement that Mr. Rousseau had mentioned before.  
7 And the damage stability requirements are actually slightly less than what our Class  
8 rules are.

9 **Mr. Lawrence:** Do the Code of Federal Regulations do they have the critical axis  
10 language as well?

11 **WIT 1:** They don't specifically call out looking at the different range of angles for 360  
12 degrees. But we've been in contact with the Coast Guard Marine Safety Center and the  
13 Naval Architecture Branch and confirmed that we are to do the same review similarly as  
14 the MODU rules – MODU code and our MODU rules.

15 **Mr. Lawrence:** So you said there was an area requirement in addition in the Federal  
16 Regulations. Do you ever run into any challenges applying that using critical axis style  
17 analysis?

18 **WIT 1:** No. Because that's up to – that's prior to what the – where the critical axis  
19 theory would come into effect.

20 **Mr. Lawrence:** So the area requirement would just be for a beam heeling?

21 **WIT 1:** Well it's, you still have to look at it from 360 degrees. So each direction you  
22 have to run a righting arm curve and meet that criteria. Either 1.4 area comparison plus  
23 the 5 degrees of running energy.

1 **Mr. Lawrence:** So when the legs of the POWER were lengthened did that – and then  
2 that's what required a new stability test in 2012?

3 **WIT 1:** Correct.

4 **Mr. Lawrence:** Could you describe what a stability test is like on a lift boat?

5 **WIT 1:** Generally it's the same as any other vessel. You start out with a dead weight  
6 survey where you take free boards and draft readings to determine the actual waterline  
7 and the displacement of the vessel. You do a survey to determine the weights that  
8 have to come off, weights that have to be added, weights relocated. And then you do a  
9 series of weight movements. Known weights across the deck to heel the vessel  
10 between 1 and 4 degrees. You do three movements to each side. Come up with the,  
11 you also have three measurements to how much it heels each time. You plot that  
12 against a moment, total moment tangent curve and use the slope of that to determine  
13 the as inclined GM of the vessel using the hydrostatics. That's how you determine the  
14 KG of the vessel. And then you calculate all the weights, deduct weights to deduct,  
15 weights to add to come down to your light ship values.

16 **Mr. Lawrence:** Would you mind defining what GM and KG are?

17 **WIT 1:** Your KG is the center of gravity of the vessel. Your KM is your metacentric, the  
18 metacenter of the vessel, that's the point where the vessel's going to rotate and heel  
19 back and roll against. And your GM is your difference between your KG and KM.

20 **Mr. Lawrence:** Are there any unique things about a lift boat that make it complicated to  
21 calculate that metacentric height?

22 **WIT 1:** No.

1 **Mr. Lawrence:** Because one of the assumptions is the water plane has to remain  
2 constant.

3 **WIT 1:** Yes.

4 **Mr. Lawrence:** So are there any features of the lift boat that would affect the water  
5 plane?

6 **WIT 1:** The pockets of the legs could change the water plane. But that's up to the  
7 Naval Architect to verify that that's not going to happen.

8 **Mr. Lawrence:** Lieutenant Alger could you bring up Exhibit 220 page number 7?  
9 [Showing Exhibit]. So these are the field notes for that 2012 stability test on SEACOR  
10 POWER. It's hard to see on the screen there, but this just shows it's just a sketch of  
11 where the test weights were on the SEACOR POWER for that stability test. And you  
12 can see the total test weight there was 389, 940 pounds. And that the center of that  
13 weight was just 18 feet aft of the bow.

14 **WIT 1:** Okay.

15 **Mr. Lawrence:** So why would they put all the test weight so close to the bow?

16 **WIT 1:** More than likely because the weight of the engines and machinery are towards  
17 the stern. It was a way to make sure the vessel was on an even trim.

18 **Mr. Lawrence:** So to keep those pad pockets in the water probably while it's heeling.

19 **WIT 1:** That as well.

20 **Mr. Lawrence:** Can you switch to page 5 please. What this page shows the condition  
21 of the tanks at the time of the stability test. And would you say that this is a normal  
22 operating condition of those tanks?

1 **WIT 1:** No this is basically when the vessel was in the shipyard. I would not consider  
2 this to be a normal operating condition.

3 **Mr. Lawrence:** Do you know if SEACOR POWER could carried ballast water?

4 **WIT 1:** I believe they did have ballast tanks, yes.

5 **Mr. Lawrence:** Lieutenant Alger could you bring up Exhibit 59 page 108? [Showing  
6 Exhibit]. This is the operating manual for SEACOR POWER. And page 108 is the  
7 allowable VCG curve. Allowable vertical center of gravity curve. I think you may have  
8 to rotate it.

9 **WIT 1:** Okay.

10 **Mr. Lawrence:** So we said it had they had to load all their test weight very far forward  
11 to get the trim to even out on the SEACOR POWER for the stability test. Even though  
12 it's not an operational condition it kind of indicates that the SEACOR POWER has some  
13 significant trim, natural trim. So is trim considered in this allowable VCG curve?

14 **WIT 1:** Yes it is. There's a trim restriction in the operating manual of maximum of 6  
15 inches aft.

16 **Mr. Lawrence:** What draft is referred on this allowable VCG curve?

17 **WIT 1:** That is the mid ship draft.

18 **Mr. Lawrence:** Mid ship draft. And it looks like on here the curves are labeled as being  
19 approved 14 August 2002. Are you able to see that? And that was because of the  
20 analysis or this VCG curve was done before the legs were extended, is that correct?

21 **WIT 1:** Say that again.

22 **Mr. Lawrence:** So in the legend it says that the curves were generated in August 2002.



1 **WIT 1:** Yes that's correct. As I mentioned before after delivery the yard submitted  
2 additional calculations to reflect that and that's where those numbers came from. They  
3 didn't do a separate review when the legs were added. They went back to the original,  
4 not the original, the review after delivery which was done ahead of time.

5 **Mr. Lawrence:** And after the stability test was the vessel still in compliance with these  
6 – or were these still applicable to the vessel after the stability test of 2012?

7 **WIT 1:** Yes. These values were applicable after the vessel's legs were lengthened.

8 **Mr. Lawrence:** Can you explain why that would be?

9 **WIT 1:** The – each leg was lengthened 15 feet. So that's another 15 feet of leg and  
10 wind profile at the highest point of the vessel. So you – the wind loads that you were  
11 talking about before now are applied to that point and then results in a lower allowable  
12 VCG.

13 **Mr. Lawrence:** Thank you. And does the VCG that's calculated with that change – the  
14 VCG that's calculated on a light ship or the inclining test, would that change anything  
15 about this curve?

16 **WIT 1:** No. This curve is independent of the light ship values.

17 **Mr. Lawrence:** Thank you. And then can you switch to page 38 please? Get it rotated  
18 around the right way. What's the purpose of this page in the operating manual?

19 **WIT 1:** The designer was looking to give guidance to the Master on how to read the  
20 draft marks and how to calculate his, his or her mean draft.

21 **Mr. Lawrence:** And what would the trim be in this sample draft calculation?

22 **WIT 1:** Between 1 and 2 feet of trim.

23 **Mr. Lawrence:** But you said a limit of 6 inches of trim.

1 **WIT 1:** Yes. I think the, what the designer, and it's my thought, the designer was trying  
2 to do was use larger numbers so it was clear to the Master how to do this. This is a  
3 sample calculation. Not a specific limit for the vessel.

4 **Mr. Lawrence:** Would the location of the actual draft marks on SEACOR POWER  
5 could that effect this calculation?

6 **WIT 1:** Yes.

7 **Mr. Lawrence:** How about if the draft marks did not start at zero at the bottom of the  
8 hull? Would that effect this calculation?

9 **WIT 1:** Yes then the, if you're using a different set of draft readings they would have to  
10 be adjusted to read the baseline drafts which were – what's measured here.

11 **Mr. Lawrence:** Would the crew know that draft readings indicates baseline draft as  
12 opposed marks drafts?

13 **WIT 1:** I believe the drawing shows that there are on baseline. So if the actual draft  
14 marks have been changed and are different from that then there would need to  
15 additional guidance given.

16 **Mr. Lawrence:** Does ABS review where the draft marks are placed on a vessel?

17 **WIT 1:** It can be part of the review if it's submitted to us for review.

18 **Mr. Lawrence:** Do you know if it was for SEACOR POWER?

19 **WIT 1:** I do not know. I did not see the drawing itself when I looked through.

20 **Mr. Lawrence:** Do surveyors check that the draft marks in the correct location if it was  
21 reviewed by ABS?

22 **WIT 1:** If it was reviewed by ABS then the draft marks would be checked in dry dock  
23 before launching.

1 **Mr. Lawrence:** And then if you could go to page 89 please. Then scroll down to the  
2 bottom of the page. Where the trim and heel calculation is. You'll probably have to  
3 zoom in. So was this the text you were indicating that limits their trim to 6 inches aft?

4 **WIT 1:** Yes, sir.

5 **Mr. Lawrence:** Do you know where that limit comes from?

6 **WIT 1:** Yes. The ABS, when we do a review are only permitted to review the  
7 calculations that are submitted by the Naval Architect. We're not allowed to do  
8 additional calculations and then approve them. It would be a conflict of interest. So the  
9 Naval Architect submitted calculations for even keel and 6 inches of trim aft. So that we  
10 were allowed to review and approve.

11 **Mr. Lawrence:** We heard some testimony last week that it would, from the crew  
12 essentially it would be impossible to get the vessel in that sort of condition. Is there any  
13 sort of feedback loop that would inform you that 6 inches of trim is not reasonable for  
14 the vessel that it always operates with more trim?

15 **WIT 1:** That would be up to the owner to advise us or consult a Naval Architect to get  
16 the manual changed to match their operations. It would still require approval, but it –  
17 the responsibility lies with the crew and the owner to recognize the difference.

18 **Mr. Lawrence:** Okay, thank you. Can you go to page 37? There's a lot of stability  
19 information all over the book. So this page restrictions while afloat, can you read what  
20 the trim line is here on this page?

21 **WIT 1:** It says vessel may not be trimmed, or shall not be trimmed by the bow at any  
22 time.

23 **Mr. Lawrence:** Should this have also given that 6 inch aft trim limit?

1 **WIT 1:** It could have been placed there, yes.

2 **Mr. Lawrence:** But it wouldn't be a requirement?

3 **WIT 1:** The designer felt it was clear to the Master if it was in the guidance on  
4 calculating the condition itself.

5 **Mr. Lawrence:** Do you feel it's a clear limit to the Master if it's not on this page that  
6 summarizes stability limits?

7 **WIT 1:** I feel it's clear – it's clear in the book. It could be more clear if it was here, but it  
8 meets the requirement of being in the book for the Master.

9 **Mr. Lawrence:** Okay. So also on this page it has 70 knot wind limit, do you see that?

10 **WIT 1:** Yes.

11 **Mr. Lawrence:** With the legs fully raised. Is that where that restricted operating class  
12 notation comes from?

13 **WIT 1:** It's the restriction based on Class as well as the C.F.R. So there's a Coast  
14 Guard restriction as well.

15 **Mr. Lawrence:** And what would it be if it wasn't restricted, do you know?

16 **WIT 1:** It would be 70 operation, 100 knot survival.

17 **Mr. Lawrence:** Okay. And how does SEACOR POWER meet that 100 knot survival  
18 condition that makes it restricted? Because it still has to meet that condition, right?

19 **WIT 1:** It has to meet the survival – the restricted service reduces those to 60 and 70  
20 knots. But would not have to meet the 100 knot afloat. It would have to get to 100 knot  
21 in the jacked up condition.

22 **Mr. Lawrence:** Okay. So where is the 60 knots here? What does that change for the  
23 crew between 60 and 70 knots?

1 **WIT 1:** 60 knots is the operational limitation. 70 knots is storm survival.

2 **Mr. Lawrence:** Okay. So what sort of wind is 70 knots based on? Where does the 70  
3 knots come from?

4 **WIT 1:** It comes from the C.F.R.

5 **Mr. Lawrence:** Okay. And that doesn't incorporate any sort of dynamics or does that  
6 incorporate any waves?

7 **WIT 1:** No there's no dynamic stability criteria.

8 **Mr. Lawrence:** Does it incorporate whipping of the legs?

9 **WIT 1:** The structural review does look at that to an extent. But not the stability.

10 **Mr. Lawrence:** But not momentum from the legs wobbling?

11 **WIT 1:** No.

12 **Mr. Lawrence:** So is this an appropriate operating restriction for the crew if it's an  
13 unrealistic you know actual condition where you would have 70 knots but no waves and  
14 no momentum?

15 **WIT 1:** There is no dynamic criteria for any vessel at this point. We can only apply the  
16 regulations as they're written. That's what makes it consistent across all vessels. We  
17 can't make it up as we go.

18 **Mr. Lawrence:** Alright. But this is the operating manual for the crew. So how do they  
19 know that they can't operate this vessel in 70 knots of wind?

20 **WIT 1:** There's restrictions throughout the book that say the maximum wind speed is a  
21 certain amount and what to do when those – if it's expected that those values are going  
22 to be exceeded.

1 **Mr. Lawrence:** Okay. Do you know where this limiting wave height comes from, the 5  
2 feet that's listed here?

3 **WIT 1:** That's something that imposed by the Naval Architect or the designer of the  
4 boat. There's no operational – there's no statutory or Class requirement for that. When  
5 it's included in the booklet like that we consider it to be an owner's requirement. And we  
6 don't take any action on it.

7 **Mr. Lawrence:** Okay. Thank you. I'm going to pass it back to Captain Phillips.

8 **CAPT Phillips:** Thank you Mr. Lawrence. Thanks for walking us through all that. I'm  
9 going to ask a couple follow up questions. Going back to the beginning when you were  
10 talking about the different stability programs you have. You said now you got two new  
11 programs that are different from the original program used to calculate. And then we  
12 heard later that there was some discussion on the steepest descent method and the  
13 problem we ran into in 2005. So does SEA SAFE or the Herbert Engineering program  
14 account for these issues you said you received in 2005?

15 **WIT 1:** The Herbert Engineering program does account for that. It can account for that.  
16 It's an option.

17 **CAPT Phillips:** Would there be a need to go back and reevaluate those that were done  
18 before this new program was put in place?

19 **WIT 1:** There's been no discussion on that.

20 **CAPT Phillips:** If you ran the same boat through both programs would you likely get  
21 different results?

22 **WIT 1:** It could be the same. It's really vessel dependent. The results would be vessel  
23 dependent.

1     **CAPT Phillips:** Thank you. You were talking about the process for your review of a  
2     stability calculation. You said it's submitted to you by a third party, a Naval Architect  
3     that the companies hire. When they submit it to you do they submit their model to you  
4     and then you run the same calculations on their model or do you create your own  
5     model?

6     **WIT 1:** The preferred method is create our own model to verify their calculations. If we  
7     do – if there's a situation where we have to use a submitted model, number one it has to  
8     be compatible with the program that we're using. And number two we'll spend a lot of  
9     time to validate the model to make sure it – it agrees with construction plans and is an  
10    accurate model. There is no time saving one way or the other.

11    **CAPT Phillips:** Okay. Can you tell me a little bit more about the process you would  
12    use to validate the model?

13    **WIT 1:** Essentially the hull is verified against the lines plan and construction drawings  
14    to make sure it meets the same – it agrees with them all. The wind profile is then  
15    evaluated against the profile drawings to make sure that the wind moments are going to  
16    come out correct. If there's issues then we'll go back and correct them. Or have it  
17    corrected.

18    **CAPT Phillips:** Thank you. Do you know if the model for the SEACOR POWER was  
19    created by ABS or if it was submitted by the Naval Architect?

20    **WIT 1:** No we created our own independent model for this review.

21    **CAPT Phillips:** Thank you. Can you tell me a little bit more about creating a model, to  
22    incorporate the pads on the legs?

1 **WIT 2:** Yes the, any buoyant part of the hulls will be modeled as part of that hydrostatic  
2 models. So in this case since I understand the vessel had buoyant legs and the core of  
3 the pad plus the outer round bar were considered watertight. So anything that was a  
4 buoyant element would be modeled that way.

5 **CAPT Phillips:** Thank you. Mr. Lawrence asked some questions about the trim  
6 restriction for the SEACOR POWER. Could one of you walk me through what would be  
7 the – what would the risk entail if a vessel were to exceed the trim as marked?

8 **WIT 1:** In general as the vessel trims aft it brings the down flooding points closer to the  
9 waterline and when you run the allowable VCG curve, or the VCG values that effects  
10 the values and typically brings the allowable VCG curve down. The values are lowered.

11 **CAPT Phillips:** Thank you. Just one quick point to clarify. So we brought up the  
12 allowable VCG curve and took a look at that. The bottom axis was marked draft. I just  
13 want to make sure we get this on the record that means the mean draft, correct?

14 **WIT 1:** That's correct.

15 **CAPT Phillips:** Thank you. I'm going to turn it over to NTSB. Mr. Ehlers has some  
16 questions.

17 **Mr. Ehlers:** Good afternoon Gentlemen. You all will have to apologize – or I'll have to  
18 apologize I'm not a Naval Architect so I'm probably going to be asking very simple  
19 questions. I believe Mr. Rousseau you said that a heeling moment in a wind tunnel test  
20 was generally less because of lift. And I imagine it's in my mind the lifting surface being  
21 like a helo landing pad or the bottom of a hull, flat hull would seem to add, not subtract.

22 Can you explain what I'm missing there?



1 **WIT 2:** I think you're actually on a good point. Yes if the undersides of structures come  
2 up as you were heeling then that's going to increase it. What generally you see happen  
3 is, and most of the wind tunnel testing we've seen has been on semi-submersibles so  
4 it's slightly different. But you get the lift from the big derrick being like an airplane wing.  
5 But yes as soon as – once you get to a point where the underside of the box deck on a  
6 semi or the underside of a helo deck come in then yes you get an increase in the wind  
7 heeling moment. But that generally happens at a higher angle of heel then often the  
8 stability criteria are satisfied at. So if it takes 10 or 15 degrees to get that underside  
9 exposed, but you satisfied the criteria at 10 degrees already then it doesn't really come  
10 into it.

11 **Mr. Ehlers:** I see. So you don't see that on a graph?

12 **WIT 2:** You would see it on the overall graph, but it may not have any effect on the  
13 actual results.

14 **Mr. Ehlers:** Okay, thank you. That's helpful. You also mentioned, I think Mr. Gruber  
15 that wind tunnel tests are not allowed by U.S. Statute. Do other country, other Flag  
16 States allow wind tunnel test?

17 **WIT 1:** It's always handled on a case by case basis with the Flag Administration.

18 **Mr. Ehlers:** But are there some Flag Administrations that do allow wind tunnel test if  
19 that case was requested?

20 **WIT 1:** Yes.

21 **Mr. Ehlers:** And is that – are those test more realistic for the vessel or the unit that's  
22 being reviewed or evaluated?

1 **WIT 1:** I think as Mr. Rousseau explained they're typically slightly less than what's  
2 calculated through the empirical calculations.

3 **Mr. Ehlers:** Okay. Let me make sure I get this. Are the empirical calculations then  
4 more conservative?

5 **WIT 1:** Yes.

6 **Mr. Ehlers:** By conservative meaning less chance of a loss of stability.

7 **WIT 1:** By conservative they would be, the wind moment would be higher.

8 **Mr. Ehlers:** Okay, alright. That makes sense. Talked a lot about critical axis. And I  
9 understand critical axis being an axis about which the vessel would rotate in a heeling  
10 moment, do I have that correct?

11 **WIT 2:** Yes.

12 **Mr. Ehlers:** So on a non-traditional hull form like a lift boat could you have more than  
13 one critical axis depending on because of the shape might rotate around one axis going  
14 one way and another axis going the other way? One axis to port, one axis to  
15 starboard?

16 **WIT 2:** They're symmetrical port and starboard so you would get it one direction. If it's  
17 to the port quarter by 15 degrees then it would be the same to the port quarter by, or the  
18 starboard quarter by 15 degrees, that sort of thing.

19 **Mr. Ehlers:** I understand. Lieutenant Alger if we could bring up Exhibit 59, page 108  
20 again [showing Exhibit]. Again this is the operations manual. First question, and this is  
21 again the VCG curve. First question I didn't see it in any of the stability documents, but  
22 I'm used to the traditional stability curve, GZ versus angle, I didn't see it anywhere in  
23 this document or any other document for this vessel. Can you explain why not?

1 **WIT 1:** These curves of the KG, the maximum KG curves that the vessel can load to. It  
2 alleviates the Master from having to run in depth Naval Architecture calculations to  
3 produce that GM curve. Nor could the Master do that based on what's available on  
4 board to replicate how these curves are evaluated. Because you would need the wind  
5 moments, you would need the everything. These are calculated on the wind moments  
6 for intact & damage stability. So the Master would not need to run that calculation. All  
7 they need to do is calculate the vertical center of gravity of the vessel as loaded and  
8 compare it with this curve to verify that the criteria are met.

9 **Mr. Ehlers:** And so how does he get that vertical center gravity calculation, by  
10 traditional method?

11 **WIT 1:** That's what the loading form that's shown here for, if you go to page 8-17.

12 **Mr. Ehlers:** That's okay. I think I know which one you're talking about. So explain to  
13 me again because I didn't quite understand, when the vessel was modified with the  
14 extra 15 feet of leg, that's all that weight up high why didn't this curve change?

15 **WIT 1:** This curve is not based on the center of gravity of the vessel itself. This curve is  
16 based upon the displacement and the wind moments that we're applying to it based on  
17 the regulations. So because of that wind area the lateral area has increased by that 15  
18 foot additional leg section. It's going to change the calculations that are done for this  
19 allowable curve.

20 **Mr. Ehlers:** I'm not sure I quite get it. Does this make it, go ahead.

21 **WIT 1:** Assume a rectangle 20 feet long and ----

22 [1414 - Loss of power at hearing site].

1     **CAPT Phillips:** The time is 1430 this hearing is now in session. For those of you  
2     watching on line our previous session ended abruptly due to a power failure. The power  
3     was quickly restored, but at that time it was 1414 we immediately went to recess. As  
4     such I'm going to have Mr. Ehlers re-ask his previous question and then Mr. Gruber you  
5     can continue with your answer. Mr. Ehlers.

6     **Mr. Ehlers:** I'll go ahead and restate my question for the record. But I may change my  
7     question here. So my original question why didn't the curve change when the legs were  
8     265 or added 15 feet to the legs. Let me ask this question. Maybe I asked the wrong  
9     question, I should say are these the curves that were calculated for 265 feet when those  
10    original calculations were done back in 2002?

11    **WIT 1:** The original calculations in 2002 before delivering were 250 foot legs. After  
12    delivery a new stability set of calculations were submitted that reflected the additional  
13    length. So it did reflect the 265 foot legs. These values in the booklet reflect those  
14    values for 265 foot legs.

15    **Mr. Ehlers:** I understand now. So I'll go back to my question, two questions ago about  
16    not having traditional stability curve in the book. As a mariner I might want to know as  
17    I'm heeling what are my dangerous angles, is that on a boat, a vessel like this, I mean is  
18    there very little room for a dangerous angle, is that why that type of calculation is not in  
19    here?

20    **WIT 1:** Are you talking about a righting energy calculation?

21    **Mr. Ehlers:** Right, yes, sir.

22    **WIT 1:** The Coast Guard requires a rapid and simple means to evaluate stability. That is  
23    what the allowable KG curve does. It takes the place of having the Master to do that

1 calculation. What it used to be the Master would run his GZ curve and actually do the  
2 comparison to the criteria and say is my condition acceptable or not. So we've  
3 eliminated that by saying evaluate your condition in accordance with the curve if your  
4 KG is above – is below the line you meet the criteria.

5 **Mr. Ehlers:** Okay, thank you.

6 **CAPT Phillips:** Thank you Mr. Ehlers. Mr. Kucharski.

7 **Mr. Kucharski:** Yes thank you Captain. Gentlemen, counselor thank you for being  
8 here. Again some of the answers you've given are fascinating to me. I appreciate that.  
9 I have some follow on questions. First to some of the things you said to make sure I  
10 understand these clearly. And the first is you mentioned, Mr. Rousseau or maybe it was  
11 Mr. Gruber, the different programs that you current use. And you said SEA SAFE and  
12 is the HEXALVE or HEXELL?

13 **WIT 1:** The program we currently use is HECSTAB, H-E-C-S-T-A-B.

14 **Mr. Kucharski:** V as victor or B?

15 **WIT 1:** B as in boy.

16 **Mr. Kucharski:** And the lift boat guide Mr. Rousseau was that an ABS publication?

17 **WIT 2:** Yes it is.

18 **Mr. Kucharski:** Thank you. And the draft marks. You were asked about draft marks  
19 and the placement on them post new build. Is there any check that a surveyor makes,  
20 after new build to check to see that the draft marks are properly in place?

21 **WIT 1:** I do not believe there is a specific survey for him to do that. Unless there was  
22 any indication that they would need to.

1 **Mr. Kucharski:** Thank you, thank you. And Mr. Gruber so the incline, the incline you  
2 were shown the notes there and you talked about the weights. And I'm guessing that  
3 when you talk about shift weights that is the actual incline you're talking about, correct?

4 **WIT 1:** That's correct.

5 **Mr. Kucharski:** And did it cause any concern that you have to put the weights so far  
6 forward to do this incline? Is that usual to do it?

7 **WIT 1:** It varies from vessel to vessel. In the case of a lift boat the weights are  
8 traditionally towards the stern, the heavier weights, the accommodation structure, the  
9 main engines. So there is a means to, you know if you can use the inclining weights to  
10 control the trim you're only heeling the vessel side to side. You're not changing the trim  
11 with the weight movements. So using that – utilizing that is an acceptable way to do the  
12 inclining experiment.

13 **Mr. Kucharski:** And you're familiar with the, we call it deep draft type of vessels that  
14 can go out into international waters under SOLAS?

15 **WIT 1:** Yes, sir.

16 **Mr. Kucharski:** And you're familiar with the 25 percent, 50 percent consumables and  
17 the full load calculation that are done and the in ballast conditions safe for a tanker, are  
18 you familiar with those?

19 **WIT 1:** Yes the intact stability, the code of intact stability requires you to run the  
20 calculations at full consumables and 10 percent consumables or the arrival condition.

21 **Mr. Kucharski:** For the arrival condition. Are those typical type conditions that a  
22 vessel will run in? Those 25 percent, 50 percent, is that why those were chosen?

1 **WIT 1:** Those are sample conditions that show the consumable levels. It's up to the  
2 Master to run the vessel as they see fit for the conditions that they're seeing.

3 **Mr. Kucharski:** Understood but why would those – are those number arbitrarily chosen  
4 or does it somehow say that during the course of that ship's operations you will have  
5 those different 25 percent, say 50 percent and full load and then running in ballast  
6 condition?

7 **WIT 1:** The traditional, well full consumables is full consumables. 10 percent is usually  
8 the traditional arrival condition that the ship should be arriving in, in the worst case  
9 condition. So those two conditions bracket the full range of operation of the vessel.

10 **Mr. Kucharski:** And we heard testimony that SEACOR POWER never operated with  
11 less than 2 foot trim. This is from the Master. And I think there was a little confusion  
12 maybe in degrees what they were using prior. Does that cause you concern the vessel  
13 couldn't operate on a regular basis within that 6 inch parameter? Or as close to even  
14 keel as the manual says?

15 **WIT 1:** It's concerning that the vessel was being operated outside of the approved  
16 parameters.

17 **Mr. Kucharski:** And do you recollect the initial, the initial operations manual, there's no  
18 stability booklet, correct? No stability manual?

19 **WIT 1:** Correct. There's no trim and stability booklet. It's just an operations manual  
20 that includes a section on stability.

21 **Mr. Kucharski:** And do you recollect if that had an angle measurement for trim as  
22 opposed to value in feet or inches?

23 **WIT 1:** Which the original manual?

1 **Mr. Kucharski:** Yes, sir.

2 **WIT 1:** I would have to go back and look at the original manual.

3 **Mr. Kucharski:** Okay.

4 **WIT 1:** I would like to just add to that I would assume that based on the allowable KG  
5 calculations submitted for the additional leg length they were done by the same  
6 designer, the original designer. So I would assume they would have done the same  
7 thing for the original submittal.

8 **Mr. Kucharski:** Okay that makes sense, thank you. Thank you for that. Now I'm just  
9 going to ask some general questions. In broad terms would you say that ABS provides  
10 the technical expertise in its role to act on behalf of the Coast Guard in its role as Flag  
11 State?

12 **WIT 1:** Well yes. We are a third party verification. And we do that review on behalf of  
13 the Coast Guard.

14 **Mr. Kucharski:** And ABS belongs to the International Association of Classification  
15 Societies or IACS?

16 **WIT 1:** Yes, sir.

17 **Mr. Kucharski:** Does ABS participate in any IMO type functions, International Maritime  
18 Organization?

19 **WIT 1:** As a company we do not. As an individual company we do not. IACS,  
20 International Associations of Class Societies does – is an NGO, a Non-Governmental  
21 Organization. Which means they can go and provide technical advice, but it's a non-  
22 voting member. Only the administrations. Now we do go and act with the



1 administrations as a technical advisor to the delegation. I've done that numerous times  
2 with the Coast Guard.

3 **Mr. Kucharski:** As invited by the Coast Guard?

4 **WIT 1:** Yes. It's – I'm considered to be an industry advisor to the delegation at the  
5 request of the Coast Guard.

6 **Mr. Kucharski:** And one of you, maybe Mr. Rousseau the difference lift and drag.  
7 Would you kindly in layman's terms?

8 **WIT 2:** Yes. It's probably easiest to use an airplane analogy, the lift is what makes it  
9 goes up and the drag is what keeps it from going at an infinite speed. In this case  
10 they're kind of, whereas on an airplane they aren't. They're kind of right angles. But  
11 here the drag is the force acting trying to push the boat over. If you have a lift effect it  
12 will be trying to rotate it back up. But it's very small.

13 **Mr. Kucharski:** Great. Could lift also, we heard some conversations about maybe lift  
14 could lift also in certain circumstances cause the lift boat to go ahead and heel more?

15 **WIT 2:** The instance that we were talking about earlier with the things like if a helo deck  
16 comes up and we get the air underneath that that's more of a drag phenomenon. So it's  
17 not going to be the lift that increases it.

18 **Mr. Kucharski:** Okay, thank you. This, the SEACOR POWER was, the stability  
19 calculations were under the 2001 rules, the MODU rules, is that correct?

20 **WIT 2:** Correct.

21 **Mr. Kucharski:** And have there been changes to the MODU rules since the SEACOR  
22 POWER?

1 **WIT 2:** Yes there have. Our rules are updated on an annual basis in all areas. The  
2 main one related to stability was the one I was talking about earlier with the range of  
3 stability for jack ups. That's why we brought in the steepest descent method. It's used  
4 specifically for that. It doesn't need to be used for the calculations of the type we were  
5 doing for this vessel. So it's a specific criteria we brought in 2005 that says that if you  
6 flood any single compartment we have to be able to heel the unit over a certain number  
7 of degrees and it comes back. There's no wind, there's no down flooding. We're just  
8 making sure that there's that buoyant restoring force. The problem we had there was  
9 that with the typical fixed trim we couldn't do that calculation because it kept truncating  
10 and that's why we came up with the steepest descent method and then others came up  
11 with that to try to take into account what's really physically happening on that floating  
12 body that's in 3D.

13 **Mr. Kucharski:** So is the steepest descent, so I understand this correctly, I've seen this  
14 term fading stability, is that what that – is that directly what it is?

15 **WIT 2:** Essentially yes. I mean in a normal GZ curve if the vessel capsizes the curve  
16 ends, it terminates. In the case of the range because we were trying to force a vessel  
17 around an axis it didn't want to be on it would truncate, it would fade. But only  
18 mathematically. The vessel itself would want to twist a bit and then bounce back up to  
19 its original position. So it's a mathematical construct using physics. It's just a different,  
20 slightly different way of approaching things using potential energy plots as opposed to  
21 GZ curves. So it's a little bit more physics based than some of the marine based  
22 technology that we used in the past.

23 **Mr. Kucharski:** And just for clarification GZ is the righting arm?

1 **WIT 2:** Yes that's a righting arm, I'm sorry. But that's the only major thing that's  
2 changed. That was in the mid 2000's. And we don't retroactively apply criteria to  
3 existing vessels. The Classification rules are based on the date of construction or the  
4 contract for construction actually. So we don't go back and then impose all the new  
5 requirements on the older units.

6 **Mr. Kucharski:** So I can just get a handle on all this. So the wind heel moment is what  
7 causes, when the wind force hits the boat to heel, is that correct?

8 **WIT 2:** Correct.

9 **Mr. Kucharski:** Okay. And then the righting moment you talked about you said is what  
10 causes the boat to come back?

11 **WIT 2:** Correct.

12 **Mr. Kucharski:** Okay. And so you mentioned about the 140 percent, so I understand  
13 this.

14 **WIT 2:** Yes, sir.

15 **Mr. Kucharski:** And maybe Lieutenant Alger could we pull up Exhibit 59? I'm sorry.  
16 That's not it sorry. Let's look at Exhibit 40, page 7 [showing Exhibit]. 40 and page 7.  
17 Let's go down a little bit more please. So is this what we're looking at when we talk  
18 about the sort of interplay between all those factors?

19 **WIT 2:** Correct.

20 **Mr. Kucharski:** Okay. And so safety margins. I would like to talk a little bit about  
21 safety margins. You mentioned that 140 percent. And the area under the curve, is that  
22 it?

23 **WIT 2:** That's it.

1 **Mr. Kucharski:** Could you, you know a couple, give us a little explanation about it?

2 **WIT 2:** Yeah, sure. What would be happening here on a curve like this the hump  
3 shape curve that's labeled righting moment curve up to the first vertical line that's down  
4 flooding. It's either going to lead to down flooding or the second intercept angle that  
5 cuts it off, down flooding usually cuts it off first. But the area under that hump shaped  
6 curve up to that line is 40 percent more than the area under the wind heeling moment  
7 curve up to that same line.

8 **Mr. Kucharski:** Okay, great, great. And so maybe just a little interpretation, or  
9 clarification, down flooding angle there are certain points on that vessel like the engine  
10 vents, is that sort of a down flooding?

11 **WIT 2:** Correct. In the intact condition it will be openings like the engine room vents  
12 and something that leads water into the buoyant body of the vessel. In the damage  
13 case you also include things like tank vents which only have a ball check valve. So if  
14 they're submerged then water can get through that type of arrangement.

15 **Mr. Kucharski:** So down flooding for the purpose of this wouldn't be considered down  
16 flooding from leaving a watertight door open?

17 **WIT 2:** Not unless it led into a buoyant space below deck.

18 **Mr. Kucharski:** I'm sorry.

19 **WIT 2:** Not unless it led into a buoyant space below deck. The deckhouse structure on  
20 this I believe is not considered part of the buoyant body of the stability, correct Tom?

21 **WIT 1:** That's correct.

1 **WIT 2:** So flooding into the above deck space is not considered truncating these curves  
2 because it's not down flooding into the – it's not taking away any of the buoyancy in the  
3 hull.

4 **Mr. Kucharski:** So engine room to my knowledge is below the main deck.

5 **WIT 2:** Correct.

6 **Mr. Kucharski:** So if the door, leaving that door open would be included in down  
7 flooding?

8 **WIT 2:** Yes. If the water was going into the engine room, yes. I mean if it's a door on  
9 the quarters, I'm not sure which door you're talking about. If it's a door on the  
10 deckhouse side then that's not down flooding. But if it gets to the door of the engine  
11 room that is down flooding.

12 **Mr. Kucharski:** Okay so the deckhouse, so the galley area would not be considered  
13 down flooding?

14 **WIT 2:** It would not.

15 **Mr. Kucharski:** Thank you. So if I understand correctly Mr. Gruber you were asked  
16 about GM on other vessels, not lift boats, okay. And that minimum required GM say  
17 and you were also asked about using the VCG for the lift boats. In comparison is this  
18 just a simplified method? Is there any reason that we don't look at GM or do you look at  
19 GM?

20 **WIT 1:** Okay we haven't actually discussed the use of minimum GM curve at this point.  
21 But essentially a minimum GM curve is the equivalent to the allow KG curve. The KM  
22 value is a constant so the KG and GM are what make up the KM.

1 **Mr. Kucharski:** So if the vessel, the SEACOR POWER let's say was sailing close to  
2 the VCG limit does that – what's the significance of that?

3 **WIT 1:** The allowable VCG curve is the value where the vessel above that may not  
4 meet the criteria, but below that will.

5 **Mr. Kucharski:** And either one of you Gentlemen, we'll talk about wind now, our  
6 favorite Mr. Gruber, right? Do you know what type of wind is used for stability  
7 calculations?

8 **WIT 2:** It's applied as a sustained wind force so it's a single value. There's a – the  
9 definition in the current MODU rules which was added after the 2001 rules just for  
10 clarification is that it's based on a one minute average.

11 **Mr. Kucharski:** A one minute average?

12 **WIT 2:** One minute average. That would be aligned with the Saffir-Simpson hurricane  
13 wind scale and is fairly common in the U.S. meteorology. One to two minutes.

14 **Mr. Kucharski:** Oh boy I've got some questions on that too. So is that also  
15 considered a static wind?

16 **WIT 2:** Essentially. I mean we're not talking time varying the wind. It's a single value  
17 of wind that we're applying.

18 **Mr. Kucharski:** So the 70 knot wind survivability if you will in Exhibit 59 that's a one  
19 minute wind that we're talking about?

20 **WIT 2:** That's what you would be looking at yes.

21 **Mr. Kucharski:** Do you know where that wind comes from? Why a one minute wind  
22 average?

1 **WIT 2:** There are different versions of wind averaging. You know the world  
2 meteorological organizations uses a 10 minute wind often in Europe for example. We –  
3 a lot of it depends on the ability or something to act under that force. If you're going to  
4 go with a 3 second gust for example 3 seconds of wind is not going to do anything to an  
5 afloat body. It doesn't have time respond. But it could do something to a building  
6 window or to a tower or something like that. So you use that in those type of designs.  
7 For our purposes we're looking at the sustained wind that is of a fairly high level. If you  
8 use the 1 hour wind speed it's going to be lower. So by using 1 minute wind speed  
9 we're hoping to catch most of what you will see up there. We don't add a gust factor to  
10 it. For other purposes we use other averaging periods like 1 hour maybe for mooring  
11 where it's even a longer slower type of physics. But basically the 1 minute is what we  
12 use and that's been applied to – through the various rules that we have.

13 **Mr. Kucharski:** And so the, this 1 minute average that's the MODU rules? But it  
14 wasn't in 2001 just to clarify? Or was it in 2001?

15 **WIT 2:** It wasn't clarified in the rules. The question did come from somebody so we  
16 added it, but it was meant to clarify that you know we're talking about structures that can  
17 respond in a minute. So we don't want people using the one hour or longer periods if  
18 they're evaluating weather. It really is more applicable to a site specific installation  
19 that's using the actual wind statistics for its location, a fixed production installation that  
20 has at that site you have a specific wind profile. It's vertical profile. It's averaging, you  
21 know it's all related to that. In the MODU space it's generally it's a convenient tie to the  
22 weather, but that is the value that we use in the calculation and it corresponds to  
23 something that you don't have to add a gust to. That's what we were really getting at.

1 **Mr. Kucharski:** But the MODU code also applies to MODUs.

2 **WIT 2:** Yes.

3 **Mr. Kucharski:** Which you had said before are typically large platforms with big legs on  
4 them. So would your answer change to a lift boat as far as a gust of wind?

5 **WIT 2:** No.

6 **Mr. Kucharski:** So are you telling me that gusting winds are not accounted for  
7 anywhere in the MODU code or any stability calculations?

8 **WIT 2:** Not for mobile drilling units or lift boats, no. They are for certain things on  
9 production installations and for land based structures and that sort of things where if you  
10 use a longer – a long period like if you use a one hour average then you have to have a  
11 gust factor for local structures.

12 **Mr. Kucharski:** And so you mentioned earlier about the 10 minute sustained wind that  
13 the National Weather Service uses, yes?

14 **WIT 2:** I'm not aware if it's 10 minutes. I've seen various numbers on the National  
15 Weather Service website.

16 **Mr. Kucharski:** If I told you that the sustained wind for the National Weather Service  
17 was 10 minutes, so this would be sufficient for stability calculations or for the Master to  
18 know that?

19 **WIT 2:** The 10 minute wind would be lower than the 1 minute wind. So it would be  
20 within that.

21 **Mr. Kucharski:** But if the sustained wind was given that would be sufficient?

22 **WIT 2:** I'm not sure what you mean sufficient.



1 **Mr. Kucharski:** To meet, if they said it had a 40 knot sustained wind would that be  
2 sufficient to pass muster with 70 knots on the stability?

3 **WIT 2:** Strictly speaking if you know it's a 10 minute period you should do that  
4 adjustment of the wind. But this is all, I don't know if it's a 10 minute period. What I've  
5 seen from the National Weather Service I've seen 1 and 2 minutes on their websites.

6 **Mr. Kucharski:** So I'm trying to get my arms around this, if the Master is getting 10  
7 minute winds and then they have wind gust of an unspecified time period that they know  
8 right now, if they see wind weather report, is then what you're saying that 1 minute wind  
9 period could be higher than the sustained wind of 10 minutes?

10 **WIT 2:** Yes the 10 minutes plus the gusts. It may be comparable to the 1 minute.  
11 That's purely hypothetical.

12 **Mr. Kucharski:** So you're saying that gust, the 3 second gust, do you have any idea if  
13 a gust of anything less than 1 minute would be a problem for a lift boat? So let's say it's  
14 10 seconds.

15 **WIT 2:** I'm not aware whether it would be a problem or not.

16 **Mr. Kucharski:** Okay I see.

17 **WIT 2:** It's not in the criteria.

18 **Mr. Kucharski:** So bear with me here. The wind forces that were applied, right on a lift  
19 boat, is that static upright condition? Zero heel?

20 **WIT 2:** Zero heel as it heels over the wind value changes as different structures  
21 become higher or lower or exposed.

1 **Mr. Kucharski:** Okay. What would happen if a vessel is already heeling from a 1  
2 minute wind value that's less than 70 knots and then all of a sudden gets hit by a big  
3 gust of wind? Does your answer change now to where the wind gust is insignificant?

4 **WIT 2:** I don't really understand the question.

5 **Mr. Kucharski:** Okay. So -----

6 **WIT 2:** I mean it will probably push it a little further. But then it will die off very quickly.  
7 So I mean overall the dynamics of the vessel it's got a natural period 15 or 20 seconds  
8 maybe it has some effect or not.

9 **Mr. Kucharski:** We have a capsizing vessel that's why I'm asking these questions.

10 **WIT 2:** Yeah.

11 **Mr. Kucharski:** And we have wind values which the ABS has. Okay. So we have a  
12 sustained wind which we know approximately what it was and we have gusting values.  
13 I'm trying to get my arms around this to try to explain why this vessel, I'm trying to figure  
14 out, we're all trying to figure out why this vessel capsized. So again so I'm clear on this.  
15 If we have a sustained wind which is below that 70 knots would it, I guess depend on  
16 how strong that gust was and the period?

17 **WIT 2:** It would depend on a number of factors. I mean it's something you could  
18 calculate through. But it's not required by the regulations or the rules as they currently  
19 stand. But it is something that could be evaluated.

20 **Mr. Kucharski:** And how about, does your answer change if the vessel is close to it's  
21 maximum righting arm when you get that gust of wind? I mean if we looked at that  
22 curve it goes down, right?

1 **WIT 2:** I understand, yeah. Yeah depending on where it is. It's righting ability will  
2 follow that curve. So if it's being pushed over past that maximum then yes there's a  
3 little less energy on the other side of it.

4 **Mr. Kucharski:** But for a lift boat like the SEACOR POWER would have to be quite a  
5 large angle?

6 **WIT 2:** I don't what angle it would be.

7 **Mr. Kucharski:** For the righting curve. Because we don't – we're looking at the righting  
8 moment here, I don't see any in the manual for the boat.

9 **WIT 2:** Yeah. It would depend. I don't know what these – I don't have the calculations  
10 of what the static heeling angle would be under wind.

11 **Mr. Kucharski:** Okay, fair enough, fair enough. Maybe this one is for Mr. Gruber. The  
12 VCG of the deck loads, the vertical centers of gravity for the deck loads, are they  
13 assumed to be in the middle of the cargo? For stability calculations.

14 **WIT 1:** Ideally they should use the center of gravity of the actual item if it's given.  
15 Typically though if there's no center of gravity given it's usually used at half the height of  
16 the deck cargo.

17 **Mr. Kucharski:** Okay half height. So in the middle vertically?

18 **WIT 1:** Yes.

19 **Mr. Kucharski:** Just if the VCG, the vertical center of gravity that cargo stacked up is  
20 higher, okay than the midpoint is it possible that the cargo could topple? If it's listed at  
21 all?

22 **WIT 1:** It's possible. We don't evaluate the stability of the cargo we evaluate the  
23 stability of the vessel.

1 **Mr. Kucharski:** Understood. We're just trying to get answers to what happened.

2 **WIT 1:** You can tilt anything over to a point where it will topple.

3 **Mr. Kucharski:** Have you ever seen, either one of you Gentlemen, any calculations or  
4 study where a gust of wind is applied to an already heeling vessel?

5 **WIT 1:** No.

6 **Mr. Kucharski:** Would it be possible to develop a righting arm or moment curve with  
7 different values of sustained winds and then accounting for the various effects of gust  
8 on the vessel? Say a 5 second gust, would that – could the computer do that?

9 **WIT 2:** Yes you would just have to build it into the wind calculation of the wind moment.

10 **Mr. Kucharski:** I understand it's not currently required. I get that.

11 **WIT 2:** It just changes the shape of the wind moment curve.

12 **Mr. Kucharski:** Yes, sir.

13 **WIT 1:** If I could go back to your first question there about the wind gust. The IMO  
14 criteria for severe wind and roll does include a wind moment and a wind gust arm. So  
15 that is applied – it is applied in that condition. I just wanted to clarify that answer for  
16 you.

17 **Mr. Kucharski:** Great, great. And is that wind gust applied from a static upright  
18 condition? So you're starting – do you understand what I'm saying. So you're starting  
19 at zero, I mean in real life we don't turn all of a sudden 70 knot gust in 3 seconds or 5  
20 seconds or whatever it is. But usually a gust is embedded inside some kind of  
21 sustained wind, usually.

22 **WIT 1:** What it takes is the heeling arm and it multiplies it by 1.5 to account for that  
23 wind gust.

1 **Mr. Kucharski:** Okay.

2 **WIT 1:** Now that criteria was not applicable to this vessel. I just wanted to be clear  
3 there is a criteria out there from the International Maritime Organization, IMO that does  
4 have what you're talking about.

5 **Mr. Kucharski:** I see, okay. So it's not in the MODU rules?

6 **WIT 1:** No, no, sir.

7 **Mr. Kucharski:** Okay, got you. Are either of you Gentlemen aware of any lift boats  
8 worldwide that have capsized, underway in adverse weather conditions?

9 **WIT 1:** Not that we're aware of.

10 **Mr. Kucharski:** Mr. Gruber would you agree that the requirements for what is to be  
11 included in the lift boat's operations manual are mandatory requirements?

12 **WIT 1:** I believe you're supposed to give consideration to these items. Whether or not  
13 they're included depends on the person doing the review of the actual manual.

14 **Mr. Kucharski:** I'm sorry I probably set you up for that and I really didn't mean to.

15 Could we see Exhibit 68 please? [Showing Exhibit]. And that's 46 C.F.R. 134.170.

16 Because I think considerations may be for a deep draft. And we're going to go to page,  
17 first page. It talks about the operating manual. Yes, sir.

18 **WIT 1:** You're correct. In this it says must include.

19 **Mr. Kucharski:** Yeah deep draft which you have a stability manual is consideration,  
20 right?

21 **WIT 1:** There's multiple requirements for operations manuals and they're a little bit  
22 different. So I apologize, you are correct.

1 **Mr. Kucharski:** No, sir, I apologize I should have just showed you that. I didn't mean it  
2 come out that way. So some of the items down there as I scroll down it talks about  
3 wave height. But on the second page at the very top it talks, Roman Numeral IV it talks  
4 about the wave period. Why is the wave period critical to the lift boat? Why does it  
5 need to be in there?

6 **WIT 2:** Some of these are relevant to the elevated condition. So in the elevated  
7 condition the wave period, the current, the wave height those are exciting forces  
8 against the legs trying to push the unit. So the amount of force generated and the  
9 periodicity of the force is dependent on these factors in the elevated condition.

10 **Mr. Kucharski:** Okay. So the wave heights, either one of you Gentlemen are not  
11 critical when it's afloat?

12 **WIT 2:** It's not part of the criteria.

13 **Mr. Kucharski:** So I won't ask why it's not available in the manual, because if you say  
14 it's not critical to – the First Mate testified that he felt a side to side motion going on. I'm  
15 not understanding why the wave period would not be relevant. We're talking about a  
16 dynamic condition, right, the boat they said it does roll, so why would it not when you  
17 only have 5 foot of free board? Why would it not be relevant? The rolling motion. If you  
18 start to roll, you got hit with that wind, again we're trying to piece this together, would it  
19 not be significant?

20 **WIT 2:** It's not that it's not relevant, there's no established criteria for the dynamic  
21 response of the hull in a seaway. There is a – you do take a look at the dynamic  
22 response in the elevated condition, but in a seaway the criteria we have is solely based  
23 on an applied wind force to the top side.

1 **Mr. Kucharski:** Do you think that needs to be maybe brought, I know it's not in the  
2 rules now, does that need to be considered in light of what happened here?

3 **WIT 2:** We look forward to whatever recommendations may come out of this.

4 **WIT 1:** I also believe that the designer should be looking into these things when they're  
5 creating their design.

6 **Mr. Kucharski:** That 5 foot limitation, do you see that, you know for the sea height, do  
7 you see that commonly in lift boats? Is that a fairly common?

8 **WIT 1:** We do see that in different manuals in different designers. I have consulted  
9 with several and they consider it to be their rule of thumb. Either twice the free board or  
10 5 feet whichever is more critical. You asked the question I can only give you an honest  
11 answer.

12 **Mr. Kucharski:** I know I just trying – we were scratching our heads and trying to find  
13 out where this 5 foot comes from. Why designers throw it in there, what's the  
14 significance of 5 foot? Is it shipping seas on deck, what is it?

15 **WIT 1:** As best as I can understand and I haven't gone into detail with them, but a  
16 typical free board is around 2 ½ foot for some of these small lift boats. And a 5 foot  
17 wave would keep that wave below the deck line.

18 **Mr. Kucharski:** And is there any problem if you get a wave on deck as far as stability  
19 wise goes? If you got water on deck?

20 **WIT 1:** Water on deck is obviously detrimental to the stability of a vessel. But the load  
21 line convention one of the key features of it is with regards to guard rails and bull works  
22 is to rapidly drain that water from the deck so it doesn't pocket and create an issue.

23 **Mr. Kucharski:** Okay. But if it didn't drain fast enough what would happen?

1 **WIT 1:** You're talking about additional weight on deck which is high, above the hull and  
2 depending on how it's pocketing and where it's pooling you could have a free surface  
3 effect. That would raise the VCG.

4 **Mr. Kucharski:** Okay. Thank you for that explanation. Thank you for that explanation.  
5 So going back to that same exhibit, Lieutenant, that was 46 C.F.R., yeah. So in here  
6 going further down to item 10 which is on page 2, it says the general arrangement  
7 diagram showing the locations of water tight and weather tight compartments. You see  
8 that Mr. Gruber?

9 **WIT 1:** Yes, sir.

10 **Mr. Kucharski:** So you talked about the access doors into the galley, the water tight  
11 doors. Those for this would not be considered water tight or would they?

12 **WIT 1:** Well the doors themselves may be water tight but they're not considered in the  
13 calculations because that's not a buoyant volume.

14 **Mr. Kucharski:** For down flooding?

15 **WIT 1:** The house was not a buoyant volume for the stability calculations. They  
16 provided no additional righting energy to bring the vessel back to the upright.

17 **Mr. Kucharski:** Understood, understood. Can we look at Exhibit 59 now, page 36,  
18 Table 4-5 [showing Exhibit]. This has a watertight door list. Why is none available?

19 **WIT 1:** I believe the designer put that in Table 4-4, which is you know which doors have  
20 to be closed. And the form LL11D on the vessel does include all of those closures and  
21 their devices to maintain it in a closed position.



1 **Mr. Kucharski:** Is it anywhere in the operations manual where there's a list, either a  
2 GA, I think we agree that it says there should be GA in the operations manual with a list  
3 of water tight doors, right?

4 **WIT 1:** There is a general arrangement drawing. I would like to point out that ABS did  
5 not approve this manual.

6 **Mr. Kucharski:** Who did?

7 **WIT 1:** United States Coast Guard. You don't have a copy of the manual that was on  
8 board the vessel. The review process and it works the same if the Coast Guard Marine  
9 Safety Center did the review or ABS did the review. Is ABS's review is limited to the  
10 stability portion of the manual. All other portions, the manual with that section approved  
11 or stamped which for our purposes the allowable KG curve, the allowable VCG curve  
12 was stamped by ABS is then sent to the Coast Guard OCMI, they do a review stamp it  
13 approve and put it and the stability letter on board the vessel. What you're missing here  
14 is the copy that was stamped approved by the OCMI and then it ultimately went on  
15 board the vessel.

16 **Mr. Kucharski:** So if this, you're saying this copy here is not the one that's actually on  
17 the vessel?

18 **WIT 1:** This is the copy that ABS sent with our reviewed stamp on it to the OCMI for  
19 their approval of the manual.

20 **Mr. Kucharski:** Great, thank you. Thank you for that. We talked a little bit about  
21 vessel trim by the stern. I don't want to flog this to death, but we know the vessel was  
22 trimmed by the stern. And you mentioned that it was maybe not good to have trim by  
23 the stern because you bring certain vents closer to down flooding, is that correct?

1 **WIT 1:** That's correct.

2 **Mr. Kucharski:** So on certain ocean going vessels, let's look at this outside of lift boats  
3 a second, where they have appreciable bow flare if it runs by the head, meaning like it's  
4 down by the bow would that be bad because for stability because there's less flotation  
5 where you have that bow flare area?

6 **WIT 1:** Stability is dependent upon each vessel. It's an individual evaluation. You can't  
7 look at it that way. For an ocean going vessel you also have a requirement for  
8 additional reserve buoyancy at the bow and bow height if you keep the bow higher to  
9 protect those openings.

10 **Mr. Kucharski:** Correct, I understand. But would you agree in general that you know,  
11 and I'll bring you to the lift boat here in a second. That when you have that less  
12 buoyancy up forward on certain ships it's not good to run by the bow. I'm going to do it  
13 in reverse for a lift boat. That's why.

14 **WIT 1:** As I understand that most vessels don't – most Masters don't like running the  
15 trim by the bow.

16 **Mr. Kucharski:** So back to the lift boat, the SEACOR POWER we asked the Masters  
17 why they run with bow up and they said they had a lot of buoyancy in there, that was the  
18 answer, or one of the answers. So the shape of the lift boat the square end is at the  
19 bow, right. And the back end has a little bit more taper to it.

20 **WIT 1:** Yes.

21 **Mr. Kucharski:** So would running by the stern have anything – would be, or too much  
22 trim in the aft would that be bad for the stability because of less buoyancy or anything  
23 like that?

1 **WIT 1:** The limitation typically with the stern trim is because it's a down flooding issue.  
2 Down flooding issues occur sooner than when the vessel has no trim and that becomes  
3 critical. How critical it gets depends on the vessel itself. It manifests itself in a reduction  
4 of the allowable KG.

5 **Mr. Kucharski:** So you don't have any opinion on whether the less buoyancy also –  
6 you didn't, I understand you didn't analyze this with more than 6 inches of trim. So I  
7 know you really, we're just trying to get some pieces here, information, is that possible  
8 because it's by the stern with less buoyancy?

9 **WIT 1:** Because it's narrower you have a little bit less reserve buoyancy at the stern,  
10 that is correct. And that can affect the righting arm curve as well.

11 **Mr. Kucharski:** Thank you. It may be many different things that come – we come to  
12 find out that caused this. I'm just trying to gather pieces if you will.

13 **WIT 1:** I would caution looking, if that's what you're looking to do then I would caution  
14 against looking at generalities and do a direct evaluation on a specific hull.

15 **Mr. Kucharski:** Sure. Agreed, understood. So Mr. Gruber could you take the visual  
16 drafts of this boat and just subtract the lower from the higher and get the trim of the  
17 vessel? Could you do that?

18 **WIT 1:** Yes. If you knew what the differential was. You know if there was a differential  
19 on how they were – what their reference point was you can account for that.

20 **Mr. Kucharski:** Knowing that the reference in this case would be baseline, is that what  
21 you're talking about?

1 **WIT 1:** You're indicating that the draft marks are different, they have a different  
2 reference point. If you know what each reference point is then you know the difference  
3 between them and you can account for that in the calculation, yes.

4 **Mr. Kucharski:** And Lieutenant Alger can we look at Exhibit 59 again, our old friend  
5 and page 107 [showing exhibit]. Which should be a table of hydrostatic properties.  
6 Now is this something you did review Mr. Gruber, that ABS did review?

7 **WIT 1:** Yes, sir.

8 **Mr. Kucharski:** Okay, great. So the entering argument if you will on the left hand side  
9 is the LCF draft, do you see that?

10 **WIT 1:** Yes, sir.

11 **Mr. Kucharski:** That's what you're going to pull out, your different numbers, is that  
12 correct?

13 **WIT 1:** That's correct.

14 **Mr. Kucharski:** Okay, great. And so can you explain to me what the difference  
15 between LCF draft is and the mean draft and the mid ship draft? Because we saw it in  
16 that other diagram when we pulled it up the draft marks 4.2.2 would show that it is at  
17 mid ship and then this here has LCF draft. And then a mean draft is that the same as a  
18 LCF draft? Can you explain this to us?

19 **WIT 1:** The LCF is the longitudinal center of flotation. It will change with each draft  
20 depending on the shape of the hull. So this is – it's an output from the stability  
21 calculations for the determination of the hydrostatics. This is specifically at the point  
22 where the vessel at the LCF. It's close to the mid ship, it's not exact.

23 **Mr. Kucharski:** Got it.

1 **WIT 1:** The mid ship draft is the mid ship – it's the draft at the mid ship point of the  
2 vessel. And the mean draft has them calculating in the booklet is there's an  
3 approximate – there's a factor that, because the draft marks are not equal distance from  
4 the mid ship point. So there's a slight calculation that shows, that adjusts them to get to  
5 the mid ship draft.

6 **Mr. Kucharski:** So my follow on now, it's a practicable point when they go out and they  
7 take drafts we asked them if they – how they took drafts. Took it at all four corners then  
8 came up with the mean draft. Can you use a mean draft for them to compare it, okay, is  
9 it sufficiently close to go into that calculation that you were talking about?

10 **WIT 1:** Yes it is.

11 **Mr. Kucharski:** It is. Mr. Gruber if vessel personnel are using a computer program on  
12 an Excel spreadsheet to calculate stability would that program, to meet the letter of law,  
13 need to be approved by Class?

14 **WIT 1:** The stability guidance as used by the Master to evaluate the stability has to be  
15 an approved form.

16 **Mr. Kucharski:** So Class could approve something like that, is that correct?

17 **WIT 1:** ABS, if submitted to ABS we would review and approve it. For Class purposes  
18 as well as on behalf of the Coast Guard under NVIC 3-97.

19 **Mr. Kucharski:** Have you, and you've been there a long – you were long time in load  
20 lines and stability. Did you ever see, not Excel there's different Herbert engineering  
21 there are different people that make stability programs, correct?

22 **WIT 1:** Yes there's dozens.

1 **Mr. Kucharski:** Have you ever seen a simple a spreadsheet, if you will or an Excel  
2 program that just mimics what was – mimic the values in the stability program?

3 **WIT 1:** Yes.

4 **Mr. Kucharski:** Yes?

5 **WIT 1:** Yes.

6 **Mr. Kucharski:** And Class can approve those?

7 **WIT 1:** As long as it meets the minimum requirements, yes.

8 **Mr. Kucharski:** And the owner would have to bring that to your attention to get it  
9 approved, is that how it works?

10 **WIT 1:** Yes. Like any plan it would have to be submitted and, you know we would do a  
11 complete review of the program itself for many different issues and topics before  
12 approving it for use. And then it would be put on board the vessel our surveyor would  
13 have to go on board the installations and make sure it's working properly. And then we  
14 would evaluate that on an annual basis as well.

15 **Mr. Kucharski:** And the surveyor goes on board has the approved version and  
16 compares it to what's on the ship? Is that how it works? The values, the surveyor has  
17 values.

18 **WIT 1:** The program, with the program we have a set up review conditions that come  
19 from the program. And those are standard. Those are approved conditions. Those are  
20 on board for the surveyor to run. To rerun on the program itself and compare against  
21 the approved program to make sure the program is still operating properly.

1 **Mr. Kucharski:** Thank you for that. When the SEACOR POWER was undergoing  
2 stability review was there anything that caused you concern with this vessel in  
3 particular?

4 **WIT 1:** Say that again please.

5 **Mr. Kucharski:** Was there anything in the stability review, okay of the SEACOR  
6 POWER, was there anything that caught ABS's eye, your eye if you looked at it, I don't  
7 think you did?

8 **WIT 1:** No. We, you know the review was done. Any questions we had during the  
9 review were addressed satisfactorily. We wouldn't have approved it if we had issues.

10 **Mr. Kucharski:** Did the crane arrangements, being integral to the legs, it's a little bit  
11 different I understand than other lift boats, are you familiar with what I'm talking about?

12 **WIT 1:** Yes, sir.

13 **Mr. Kucharski:** Did that cause any concern?

14 **WIT 1:** No we treated it like a regular crane at that point. It's creating a heeling  
15 moment that we look to address.

16 **Mr. Kucharski:** How about for, we were talking about cylinders, right and wind profile.  
17 Are they adequately then with those structures around the legs, are they adequately  
18 accounted for?

19 **WIT 1:** Yes.

20 **Mr. Kucharski:** So it's separate from that cylindrical .5 you were talking about?

21 **WIT 1:** Yes.

22 **Mr. Kucharski:** Is there a one particular axis or angle of heel that is worse for a lift  
23 boat?

1 **WIT 1:** Each lift boat is evaluated individually. The critical axis depends upon that  
2 specific vessel.

3 **Mr. Kucharski:** So if I understand correctly ABS has not reviewed any wind tunnel  
4 numbers if you will for a lift boat, is that correct?

5 **WIT 2:** To my knowledge yes that's correct.

6 **Mr. Kucharski:** How about computational fluid dynamics, CFD, have you reviewed  
7 those?

8 **WIT 1:** No.

9 **Mr. Kucharski:** I'm not sure if Mr. Ehlers asked this, is CFD approved by the Coast  
10 Guard?

11 **WIT 1:** We have not, they have not given us guidance on that. If it was proposed to  
12 ABS we would then bring that to the Coast Guard for their acceptance.

13 **Mr. Kucharski:** How about the MODU code does that allow for either one, CFD or wind  
14 tunnel?

15 **WIT 2:** CFD is not included in any of these instruments yet. It still needs some work.  
16 Wind tunnel testing is acceptable to certain administrations so that can be accepted.  
17 But we do talk to them before we approve anything on their behalf.

18 **Mr. Kucharski:** Do you feel that wind tunnel testing or CFD computations would be  
19 useful for lift boats?

20 **WIT 2:** Any range of engineering tools could be useful. It depends on what you want to  
21 do and what your goals are. And there's costs associated with it and time and having a  
22 CFD computing cluster and that sort of thing. We wouldn't rule it out, but it's not  
23 something that we would require either.



1 **WIT 1:** If I could add to that.

2 **Mr. Kucharski:** Yes, sir.

3 **WIT 1:** What you need to understand too is 20 years ago, 30 years ago that kind of  
4 calculation was not possible. So as years go on we get more capabilities. Sure there's  
5 going to be better things we can do. We can't limit ourselves in the future just because  
6 of what we know now.

7 **Mr. Kucharski:** That's a great point. Thank you for mentioning that. So Gentlemen  
8 are lift boats used in the North Sea?

9 **WIT 2:** Yes. There are self-elevating units used over there.

10 **Mr. Kucharski:** Would you agree that the North Sea has some rather spectacular  
11 weather conditions?

12 **WIT 2:** It has some good winter storms, yes. Yes it does have the advantage though it  
13 doesn't suffer from tropical revolving storms, hurricanes. So it's 10,000 year weather.  
14 It's pretty close to its 1,000 and 100 year weather. Whereas the Gulf of Mexico a  
15 hurricane changes those numbers quite a bit.

16 **Mr. Kucharski:** Okay. Are lift boats in the North Sea built differently to your knowledge  
17 than those like the SEACOR POWER running in the Gulf of Mexico?

18 **WIT 2:** The ones that I'm aware of are larger units and many of them have four legs  
19 rather than three. But they're used for wind turbine installation as well as for offshore  
20 purposes.

21 **Mr. Kucharski:** Are there length to beam ratios any different?

22 **WIT 2:** I don't know.

23 **Mr. Kucharski:** So you've heard, have you heard this term a non-dominant axis?

1 **WIT 2:** Yes.

2 **Mr. Kucharski:** Yeah. And that's pretty much a dominant axis would be something  
3 that's longer, yeah?

4 **WIT 2:** Yeah.

5 **Mr. Kucharski:** To its beam?

6 **WIT 2:** Yeah.

7 **Mr. Kucharski:** So do you see that in the North Sea built, I guess a longer more  
8 dominant axis?

9 **WIT 2:** Some of them are, some of them aren't. I mean worldwide the boats are, it  
10 depend on the purpose they are being built for and then who the designer is and what  
11 their preference is. Many of them come from a background where they're building  
12 similar to what they done in the past. But yeah there's no particular design that is long  
13 and skinny and only used in the North Sea that I'm aware.

14 **Mr. Kucharski:** Can different Flag States, now the Coast Guard is a Flag State,  
15 correct?

16 **WIT 1:** Yes.

17 **Mr. Kucharski:** Under the IMO.

18 **WIT 1:** Yes.

19 **Mr. Kucharski:** Okay. So can a different Flag State say like Norway have a more  
20 stringent regulations than those required by the MODU code?

21 **WIT 1:** Yes.

22 **Mr. Kucharski:** So is that pretty much a standard rule you can have a more stringent  
23 regulations than what the code requirement is?

1 **WIT 1:** If they've adopted the code then that's their minimum. They can always go  
2 above and beyond that.

3 **Mr. Kucharski:** Do you know if any other Flag States require a lift boat stability to  
4 withstand greater wind forces than those in the C.F.R.?

5 **WIT 1:** I would have to go back and look at the different administrations requirements.

6 **Mr. Kucharski:** Mr. Rousseau you're the offshore guy.

7 **WIT 2:** Yeah I'm not aware of any that require more. There may be. The restricted  
8 service aspect of it that's codified in the C.F.R. that's not codified just to specific value  
9 with other Flags, but they have the same type of approach if they wanted. But as far as  
10 going beyond the MODU code, I'm not aware of any.

11 **Mr. Kucharski:** The, except for hurricanes which you were talking about, would the  
12 waters off the Northeast and Northwest coast of the U.S. have winds, waves, swells that  
13 are more significant than the Gulf of Mexico?

14 **WIT 2:** I don't have that information.

15 **Mr. Kucharski:** Does – are you looking at lift boats that are operating up in the  
16 Northeast? Any wind farm type of, or wind turbines if you will?

17 **WIT 2:** There have been some operating. But the actual operation on site is an  
18 assurance activity that we don't undertake in terms of site specific soils properties and  
19 the pre loading requirements and everything. That's marine warranty type of work.

20 **Mr. Kucharski:** I was just wondering if it causes you concern you know you see some  
21 of these vessels that are doing wind turbine work outside of this area with more robust  
22 weather conditions. Does that cause you any concern?

1 **WIT 2:** They have the limitations that we've applied under the rules in the C.F.R. and  
2 then we would expect that they would provide the appropriate instructions to meet them.

3 **Mr. Kucharski:** Thank you. Let's talk about that helo deck a little bit. The helo pad I  
4 think it's called. Is it fairly typical for lift boats to have a helo deck that extends past the  
5 outline of the hull? This one extends out pretty far.

6 **WIT 2:** Yeah that's pretty typical for both, for drilling jack ups as well. I mean you want  
7 to use the deck space for work. And you can't land a helicopter in the middle of the  
8 legs. So you have to cantilever it off somewhere.

9 **Mr. Kucharski:** And are they typically on, let's talk about a lift boat now, are they  
10 typically astern of the house like that?

11 **WIT 2:** I can't say whether they're typically one way or another. It's the designer's  
12 choice as to how he wants to do it. It makes more sense in term of evacuation to put it  
13 there. But I can't say there's one way to do it.

14 **Mr. Kucharski:** Is there a maximum size for that helo pad on a lift boat?

15 **WIT 2:** The size is covered by regulation and the rules as well.

16 **Mr. Kucharski:** But I'm talking proportion to the rest of the vessel, or is through the  
17 calculations that you really?

18 **WIT 2:** There's a specific size for the helo deck based on rotor diameter of the  
19 helicopter that has to land that. And it can't be smaller than that.

20 **Mr. Kucharski:** Well let's concentrate on stability wise. Is there a maximum size for  
21 that?

22 **WIT 2:** No.

1 **WIT 1:** Captain Kucharski just one other thing to think about when they're putting this  
2 helo pad down is you also want to keep it away from the cranes. There's several  
3 factors to determine where you're going to put that. And being out of the way of the  
4 working deck as well as the crane, you know the swing of the crane movements is also  
5 important.

6 **Mr. Kucharski:** I guess what I'm sort of, I'm not trying to lead you on, but if that helo  
7 deck is so big, you know you start to list the vessel. When you get hit with a gust of  
8 wind the bigger the helo deck seems to me like more lift possibly. Would you agree with  
9 that Mr. Rousseau?

10 **WIT 2:** Well more wind force closer to drag than lift.

11 **Mr. Kucharski:** So if there's not maximum size, I understand based on the rotors.

12 **WIT 2:** It's a geometrical part of the unit that's designed that way. You evaluate what  
13 you are designing into it and put in that wind heeling moment. And if doesn't meet the  
14 criteria then you have to go back to the drawing board.

15 **WIT 1:** It's not independent of the allowable VCG curve, it's worked into the curve. If  
16 that helo pad was bigger it could have an effect on the allowable curve. So it is  
17 accounted for in the stability.

18 **Mr. Kucharski:** How about lift?

19 **WIT 2:** No there's no lift effect in the regulations.

20 **Mr. Kucharski:** Okay. So then, bear with me if I went – if it met stability but I went with  
21 a helo pad that was twice as big as what's on there, you start to heel a little bit and you  
22 get a gust of wind would it be greater on something that's larger? On a bigger helo  
23 pad?

1 **WIT 2:** Yes the area is part of the equation. So the area goes up so the force goes up.

2 **Mr. Kucharski:** Thank you. Again we're just trying to get pieces here. It may not be  
3 just one thing. Has the ABS performed any initial post-accident modeling for stability  
4 calculations related to the SEACOR POWER?

5 **WIT 1:** We had a model from our tonnage department that we provided to the Coast  
6 Guard to go ahead and use. It was early on in the process.

7 **Mr. Kucharski:** So you haven't, ABS hasn't done any calculations?

8 **WIT 1:** We've done some evaluation of the curves to verify the curves, but we have not  
9 gone beyond that.

10 **Mr. Kucharski:** You mentioned earlier that ABS is a member of SNAME, Society of  
11 Naval Architects and Marine Engineer, is that correct?

12 **WIT 2:** Individuals at ABS are members of SNAME.

13 **Mr. Kucharski:** Oh I see, I see.

14 **WIT 2:** We do a lot of work, a lot of work in the same area. We are both involved in the  
15 marine and offshore industries.

16 **Mr. Kucharski:** The Exhibit 37, can we just pull that up briefly please? [Showing  
17 Exhibit]. I won't get into the details I think we'll cover those with Mr. Hodapp. So this  
18 here wind study was ABS a member of this OC-8 panel? Did they participate in any of  
19 this?

20 **WIT 2:** Yes we did. I was actually working on it at one point as well. This was one of  
21 several efforts that were ongoing to take a look at what factors could go potentially into  
22 guidelines or rules and regulations about how to do the wind calculation. And Mr.  
23 Hodapp's paper here and Kevin Berto and Mr. Falzarono they came up with this one

1 relative to the, I mean you can read the abstract, but it's basically comparing the  
2 methodologies and coming up with some conclusions.

3 **Mr. Kucharski:** Okay. And the – would you say that based on this study, you said you  
4 participated that the CFD computation the fluid dynamics compared favorably with the  
5 wind tunnel test?

6 **WIT 2:** The conclusion say that it was comparing favorably and it was fairly consistent.  
7 You know the goal is to be able to have that happen across you know multiple people  
8 and multiple organizations, multiple software tools. So that's part of why that work is  
9 being done to come up with some sort of guideline to do that. Because you can vary  
10 quite significantly if you do not, if you don't adhere to the same procedure.

11 **Mr. Kucharski:** Thank you. Thank you for that clarification. So are you aware of any  
12 studies, workgroups, IMO, SNAME, IACS that are looking at the way stability is  
13 calculated for lift boats or MODU's?

14 **WIT 1:** Currently?

15 **Mr. Kucharski:** For wind values, yeah. Go ahead.

16 **WIT 1:** Currently there's no IACS project going on relative to the lift boats. And based  
17 on my participation at IMO there's no, nothing's been brought up to IMO and addressed  
18 through the Maritime Safety Committee or the Ship Designing and Construction  
19 Committee. Now something like this would have to be presented and an Administration  
20 would have to pick up the flag so to speak and bring it to IMO with either SNAME or with  
21 one of non-governmental organizations or on their own and bring it up for evaluation at  
22 that point.

1 **Mr. Kucharski:** Okay, great, great. Thank you for the explanation of the inter, or  
2 relations of how they all fit together, thank you. So we had testimony, we can actually  
3 pull it up if anyone questions it about what's called a whipping effect of the legs. Are  
4 you familiar with that type of a term Mr. Gruber, or Mr. Rousseau, sorry?

5 **WIT 2:** I'm not sure what whipping means here. If it's a ridge body of motion, just a  
6 small movement in the guides or if we're talking about an actual deflection of the top of  
7 the legs like a spaghetti noodle. It's, certainly we do have structural requirements for  
8 the legs while afloat that they have to be able to withstand a 15 degree roll, 10 seconds  
9 with the gravity moment added in at 120 percent. So the basic structures of that is part  
10 of the ABS requirements. But if there is some true resonance phenomenon happening  
11 because of the length versus diameter and wind, that's something – that's not  
12 something that's part of the regulations or the rules. We would only know if it was  
13 highlighted to us by the owner that you know we've reports that something is happening  
14 that the Naval Architect has evaluated it and you can change the natural frequency of  
15 the leg by making some structural changes or something like that. There's no whipping  
16 analysis that's a standard analysis in the rule and regulations. We would need more  
17 information on exactly what phenomenon it is and what it looks like.

18 **Mr. Kucharski:** I don't know, Captain do we want to pull up that report and have them  
19 look at that stop work order? I don't know which exhibit it is. It was a head sea and I  
20 had some questions. I know Mr. Gruber you didn't sail very long but have you heard of  
21 the panting of the hull on a vessel where it goes into the head sea, heard that term?

22 **WIT 1:** No. My sailing is limited to what I needed to what I needed for my license. I  
23 never sailed on my license.



1 **Mr. Kucharski:** I was just wondering if you ever heard that term used. So maybe, let  
2 me see, bear with me a second. Yeah the stop work authority. 116.

3 **Recorder:** 116.

4 **Mr. Kucharski:** 116, yeah. Yes, yes. So high seas and winds hitting the vessel on the  
5 bow, see it down there? Initial cause while traveling giving a whipping effect on the  
6 legs, so high seas and the wind hitting the vessel on bow created a whipping effect. I  
7 guess my question is could that also happen if a sea and a wind hit it on the beam could  
8 you get a whipping effect?

9 **WIT 2:** If it is some sort of vibration induced phenomenon, it needs to have the right  
10 excitation so for the same, you know the right frequency and amplitude to make it do  
11 what it is doing. It's one of those things you'd have to look into it to the specific  
12 condition, here the wave period would make a difference. The vessel trim and  
13 everything. But you know dealing with vortex induced motions and vortex induced  
14 vibrations or something like this which is excited by any sort of periodic force that's  
15 something that could be engineered. But we have to know about the problem.

16 **Mr. Kucharski:** Understood. But would you agree that it could be caused by a beam  
17 sea, it's possible if it's the right frequency?

18 **WIT 2:** It could be caused by seas from any direction if it's exciting the legs at their  
19 natural frequency.

20 **Mr. Kucharski:** So it could be seas or wind possibly?

21 **WIT 2:** It could be any number of things, yes.

22 **Mr. Kucharski:** To either of you gents, can current effect the afloat stability of the  
23 vessel? Of a lift boat, current.

1 **WIT 1:** What was the question?

2 **Mr. Kucharski:** Current.

3 **WIT 1:** Oh concurrent effect it.

4 **Mr. Kucharski:** No, no. A current, you know you got horizontal movement in the water,  
5 is a current.

6 **WIT 1:** No it would be factored into the calculation of the strength of the legs in the  
7 raised condition, but not the afloat condition.

8 **Mr. Kucharski:** Thank you Gentlemen, Captain. Thank you.

9 **CAPT Phillips:** Thank you Mr. Kucharski. Mr. Ehlers.

10 **Mr. Ehlers:** I just have one quick follow up question from Captain Kucharski's  
11 questions. You mentioned that an Excel spreadsheet used to calculate stability can be  
12 approved by Class if submitted. Is it required if it – to be used on a day to day basis to  
13 calculate stability, is it required for the owner to submit that for approval?

14 **WIT 1:** If it's being used to evaluate the stability on board it needs to be approved.

15 **Mr. Ehlers:** And if it's not approved but being used should that be flagged by an  
16 auditor?

17 **WIT 1:** Yes. If it's known that it's there and it's known that it's not approved program,  
18 yes.

19 **Mr. Ehlers:** Thank you.

20 **CAPT Phillips:** Thank you Mr. Ehlers. Mr. Kucharski.

21 **Mr. Kucharski:** Sorry gents. One more quick question. Have you heard the term  
22 vortex shedding?

23 **WIT 2:** Yes.

1 **Mr. Kucharski:** Could you explain to us what vortex shedding is?

2 **WIT 2:** Yes. That will be where the you've got an incident fluid coming into a shape like  
3 a cylinder for an example and based on certain physical factors around the Reynolds  
4 number of the fluid and the speed that the fluid passing by the cylinder and its  
5 dimensions you get an alternating force to the side. So the vortices will come off the  
6 right side, the left side, the right side, the left side and it can cause an oscillation. We  
7 see that in slender items like tendons on tension leg platforms or on risers for drilling  
8 and production. That you can have vortex induced – vortex induced vibration or vortex  
9 induced motion. Vibration is more of a high frequency and vortex induced motion is a  
10 translation that you see in the system. But is that what you were?

11 **Mr. Kucharski:** Yes. So it's not a tran – transverse or translation is what you called it  
12 type motion?

13 **WIT 2:** The, it depends on the frequency that it's going to do it at. I mean if it's exciting  
14 a higher mode of vibration then it's a vortex induced vibration. So it's going to be  
15 moving, it depends on the mode of the vibration of it. If you get into Euler or beam  
16 theory on whether or not it's the first mode or the second mode and how many Chris  
17 crosses you're getting on that column. But something like a vortex induced motion is  
18 much slower so it's going to be something that's moving back and forth as a ridged  
19 body.

20 **Mr. Kucharski:** And this fluid that you talked about it could be fluid?

21 **WIT 2:** It could be wind. You have the concepts of like the Strouhal number where you  
22 can calculate what the natural frequency and the effect on an incoming, fluid stream has  
23 on cylinder of a certain size. And that's why you see smoke stacks with the vortex

1 strakes that go up them is to prevent that sort of vibration or motion from resonating and  
2 causing a collapse.

3 **Mr. Kucharski:** Would that be possible on the legs of the SEACOR POWER?

4 **WIT 2:** It could be possible on any cylindrical body like this. Some old jack ups they did  
5 experiment with putting vortex strakes at the top of the legs, these were much shorter  
6 legs than, well it was probably roughly the same leg lengths as this I guess, but they  
7 didn't – they may or may not have helped. I don't know given the state of dynamic  
8 studies in the early 1980's or late 1970's, we may have better knowledge now. But it is  
9 something that can happen depending, it depends on the length and diameter ratio and  
10 the speed of the fluids that's incoming. So it can happen. And if that's one of the  
11 factors involved in those legs whipping then that's something that can be analyzed.

12 **Mr. Kucharski:** So and just to be clear is it a vibration or can it be a side to side  
13 motion?

14 **WIT 2:** It could be either.

15 **Mr. Kucharski:** Because we had the Mate was describing a side to side motion.  
16 Which we're trying to -----

17 **WIT 2:** Yeah for that length yeah it could be moving the whole leg with the force at the  
18 top. Again it's we're talking hypotheticals here. It's something that can be analyzed the  
19 same as a smoke stack.

20 **Mr. Kucharski:** Thank you. Thank you for that clarification.

21 **CAPT Phillips:** Thank you Mr. Kucharski. Before we take another break I would just  
22 like to make sure that we have all of our acronyms clarified on the record. I think we got  
23 most of them. I'm going to go back and cover some just to double check. C.F.R.?

1 **WIT 1:** Code of Federal Regulations.

2 **CAPT Phillips:** IMO?

3 **WIT 1:** International Maritime Organization.

4 **CAPT Phillips:** IACS?

5 **WIT 1:** International Association of Class Societies.

6 **CAPT Phillips:** CFD?

7 **WIT 1:** Computational Fluid Dynamics.

8 **CAPT Phillips:** MODU?

9 **WIT 1:** Mobile Offshore Drilling Unit.

10 **CAPT Phillips:** NVIC?

11 **WIT 1:** Navigation and Inspection Circular.

12 **CAPT Phillips:** Thank you very much. At this point let's take a break. We will  
13 reconvene at 1605. The time is now 1554. This hearing is now in recess.

14 *The hearing recessed at 1554, 12 August 2021*

15 *The hearing was called to order at 1605, 12 August 2021.*

16 **CAPT Phillips:** The time is 1605. This hearing is now in session. Mr. Muise has some  
17 questions I'll turn it over to him.

18 **Mr. Muise:** Thank you Captain. Good afternoon Gentlemen. I would like to change  
19 topics just for a few minutes and if you're not the right people to ask just say so please.

20 I understand that at least three survivors egressed through two different stateroom  
21 windows. Do you know of any ABS Class lift boats or MODU's that have stateroom  
22 windows that are designated as emergency egress?

23 **WIT 1:** That's out of our area. We don't have any knowledge of that.

1 **Mr. Muise:** Okay. The 2001 rules only mention windows very briefly, most of it is about  
2 fire protection. Is there anything – any other Class rules out there that talk about  
3 window design that you're aware of? Maybe like minimum breaking strength or  
4 minimum head pressure? Again if that's not your area just say so that's fine.

5 **WIT 1:** That's not our area.

6 **Mr. Muise:** Okay. Thank you Gentlemen.

7 **CAPT Phillips:** Thank you Mr. Muise. Going back to some of the discussions from  
8 earlier there was a brief discussion about water on deck. Would a vessel that has 100  
9 foot beam and maybe 100 foot of deck area up forward would you be concerned about  
10 water on deck even if it was only 1 or 2 inches deep?

11 **WIT 1:** Yes. It's the beam of the pocket per se is what's most critical in the calculation  
12 of the free surface effect. So a wide area, 2 inches of water that's standing could be an  
13 issue, yes.

14 **CAPT Phillips:** Thank you. And then talking about the calculations that were originally  
15 approved, so you were walking us through the different calculations for 250 foot legs  
16 and 265 foot legs. You said they were both done right around the time the vessel was  
17 built and delivered. But the change in the legs wasn't implemented until I think you said  
18 2012.

19 **WIT 1:** Correct.

20 **CAPT Phillips:** As part of the process you said when the legs were lengthened in 2012  
21 there was an inclining. Would ABS have also done any kind of verification of the vessel  
22 to make sure that the arrangements were still the same as when the calculations were

1 done originally? So general arrangement verifications making sure there were no other  
2 modifications besides the leg lengthening?

3 **WIT 1:** The inclining experiment would have accounted for any changes that were  
4 made to the vessel. Any equipment that was added that's all going to be included in the  
5 light ship value calculation.

6 **CAPT Phillips:** Thank you. At this point I'm going to turn it over to the parties in  
7 interest to see if they have questions for you. I'm going to start out with SEACOR.

8 **Mr. Tompkins:** Thank you Captain Phillips. SEACOR's got no questions.

9 **CAPT Phillips:** Thank you Mr. Tompkins. First Mate.

10 **Mr. Sterbcow:** Thank you Captain. My name is Paul Sterbcow I'm counsel for Bryan  
11 Mires who was the First Mate on the SEACOR POWER. Lieutenant can we pull up  
12 Exhibit 1 slide 22? [Showing Exhibit]. Next one please. Thanks. This shows the  
13 vessel track line for her final 20 minutes before she sank. Have you all – are you all  
14 familiar with this? Have you seen this before? No? Okay. If we go to 1535, 3:35 in the  
15 afternoon her heading is 143 degrees, her course is 171 degrees moving at 7 knots. So  
16 there's a difference of 28 degrees in her compass heading. Two minutes later she's  
17 oriented more Easterly heading Southeast instead of South and now there's a 40  
18 degree difference between her heading and her course. Two minutes after that she's  
19 now at a heading that's almost due East course of 139 speed of 6 knots and we're now  
20 at a 70 degree difference in compass between her heading and her course. Now given  
21 that the 70 knot, if I understand correctly, the 70 knot wind limitation is a calculation  
22 based on when the vessel is jacked down and stationary. Can we conclude that when  
23 she is in this situation headed in one direction, moving in a different direction at a speed

1 that exceeds her normal travel speed is the wind, the critical wind figure much less than  
2 70 knots?

3 **WIT 1:** Just to clarify your question the 70 knot survival is afloat.

4 **Mr. Sterbcow:** Is afloat, but stationary right? No dynamic forces?

5 **WIT 1:** Correct.

6 **Mr. Sterbcow:** Okay. So when we add all these dynamic forces and we assume that  
7 the wind is now coming from the port across the vessel, from port to stern, excuse me  
8 from port to starboard while the vessel is being pushed to starboard. Does that 70 knot  
9 wind speed decrease significantly in terms of its ability to turn this vessel over? If you  
10 can say? Or can you not say?

11 **WIT 1:** I believe you have to do an in-depth evaluation of the condition and the dynamic  
12 condition that the vessel was in. But the reason we look at the wind speeds from all  
13 directions is to make sure that no matter what direction the wind is coming from the  
14 vessel can survive.

15 **Mr. Sterbcow:** Okay. But clearly the vessel couldn't survive this situation because it  
16 flipped, correct?

17 **WIT 1:** It did flip, yes.

18 **Mr. Sterbcow:** Alright. But does it necessarily mean that the winds that the vessel  
19 encountered at the time that she flipped to starboard were at or really anywhere near 70  
20 knots? We can't assume that can we based on this dynamic situation because we don't  
21 have the information to know what wind in this dynamic situation would cause a boat to  
22 flip, is that fair?



1 **WIT 1:** There's no wind speeds given or wind directions given so I'm not in a position to  
2 make any estimation or guess on what was happening at that specific time.

3 **Mr. Sterbcow:** If we – could the vessel's ability to survive in this situation be further  
4 degraded by standing water on the deck?

5 **WIT 1:** Yes.

6 **Mr. Sterbcow:** Could it be further degraded by water entering the starboard vents?

7 **WIT 1:** Yes.

8 **Mr. Sterbcow:** Could it be further degraded by water entering the engine room?

9 **WIT 1:** Yes.

10 **Mr. Sterbcow:** Could it be further degraded by water somehow entering the starboard  
11 leg and getting inside the leg of the vessel?

12 **WIT 1:** It's possible.

13 **Mr. Sterbcow:** So in addition to the dynamic forces I've discussed if water was coming  
14 over the deck and standing, water was getting into the vents and water somehow got  
15 into the engine room it would further decrease this vessel's ability to remain upright in  
16 this dynamic situation, correct?

17 **WIT 1:** It would – can you repeat the question again please?

18 **Mr. Sterbcow:** If in this situation the SEACOR POWER had standing water on the  
19 deck, hypothetically, water going into her vents, water in the engine room, a  
20 combination of 1, 2 or all three of those, would her ability to withstand this dynamic  
21 situation be further degraded?

22 **WIT 1:** Those three singularly or in combination would inhibit any vessel's ability to  
23 survive.

1 **Mr. Sterbcow:** Okay. So if those three either singularly or in any combination, if those  
2 three conditions existed logically can we also conclude that it would take less wind,  
3 certainly than 70 knots to push this vessel over?

4 **WIT 1:** Keep in mind you would be looking at, especially you're talking about water into  
5 the hull is a damage condition. And the damage condition wind speed is 50 knots.

6 **Mr. Sterbcow:** Alright. And would a vessel with 250 foot legs be better able from a  
7 wind stand point to maybe survive this situation than a vessel with 265 foot legs?

8 **WIT 1:** Are you talking this specific situation considering the dynamic?

9 **Mr. Sterbcow:** Right.

10 **WIT 1:** We have not looked at the dynamic criteria, the dynamic positioning or the  
11 dynamic condition. So to make an estimate on that or, it's basically a guess at this point  
12 so I don't want to provide an answer to that.

13 **Mr. Sterbcow:** So we just don't know whether the extra 15 feet would have further  
14 degraded her ability had she remained at 250 versus 265, we don't know that at this  
15 point?

16 **WIT 1:** The difference in stability is represented by the lowering of the allowable VCG  
17 curve.

18 **Mr. Sterbcow:** Okay. Having looked at this, and I frankly don't know how closely  
19 you've looked, so really that's the basis of my question. Have you all looked at this  
20 incident closely enough based on your education, training and experience to formulate  
21 an opinion as to exactly what caused the SEACOR POWER to flip over?

22 **WIT 1:** No we are not in a position to make a recommendation on that.

23 **Mr. Sterbcow:** Thank you Captain. That's all I have. I appreciate it.

1 **CAPT Phillips:** Thank you Mr. Sterbcow. ABS.

2 **Mr. White:** Yes. Thank you Captain. Mr. Rousseau I'm just looking to clarify a couple  
3 points concerning your discussion the steepest descent method. Can you tell us when  
4 the steepest descent method came into effect?

5 **WIT 2:** That was associated with the additional criteria for a range of stability that were  
6 added in 2005 for the MODU rules.

7 **Mr. White:** And typically under ABS rules do any rules changes are they applied  
8 retroactively to vessels that may have been built earlier than the rule change?

9 **WIT 2:** No they are not.

10 **Mr. White:** Mr. Gruber with respect to your review of the stability under a C.F.R.  
11 requirement on behalf of the Coast Guard, do the C.F.R. requirements incorporate any  
12 allowance for inclusion of the steepest descent method?

13 **WIT 1:** It is not in the C.F.R. specifically.

14 **Mr. White:** Can you on behalf of, as a recognized organization performing that review  
15 on behalf of the Coast Guard apply any different method than what the Code Federal  
16 Regulations require?

17 **WIT 1:** We can do so only after consultation and written guidance is provided by the  
18 Coast Guard Headquarters allowing us to specifically do so.

19 **Mr. White:** And do you know of any such guidance for the steepest descent method  
20 was in effect in 2002 considering it had not come out yet?

21 **WIT 1:** No there was no guidance effective at that point.

22 **Mr. White:** And sitting here today is there any similar guidance from the Coast Guard  
23 on the steepest decent method?

1 **WIT 1:** I don't recall what has actually been requested from the Coast Guard at this  
2 point.

3 **Mr. White:** Additionally there was some questions concerning the ballast of the vessel.  
4 Can this vessel be ballasted based on your reading of the ballast – or the vessel  
5 operations manual?

6 **WIT 1:** Yes there are ballast tanks available and there's guidance on the use of the  
7 ballast.

8 **Mr. White:** Thank you Captain. Oh I'm sorry one follow up. Can we look at Exhibit 44  
9 for a minute please? [Showing Exhibit]. Mr. Gruber for the sake of the record can you  
10 identify this stability letter as far as when on whose behalf it was issued?

11 **WIT 1:** This is the actual stability letter that was issued by ABS on behalf of the Coast  
12 Guard to reflect our stability review of the vessel and the stability portion of the  
13 operations manual. It was provided to the OCMI in Morgan City I believe along with the  
14 stamped, the booklet that we stamped reviewed for their final review and placement on  
15 board the vessel. If you look, not this letter but the actual cover letter we do have a note  
16 to the Coast Guard indicating what needs to get done. Indicating what we did review  
17 and what has to get done to move this forward.

18 **Mr. White:** And based on this vessel's departure on the incident voyage did it meet the  
19 C.F.R. requirements?

20 **WIT 1:** In the condition it was in?

21 **Mr. White:** Yes.

22 **WIT 1:** It did not meet the guidance in the operating manual, but it met the allowable  
23 VCG curve.

1 **Mr. White:** Thank you. Nothing further.

2 **CAPT Phillips:** Thank you Mr. White. As we wrap up I'm going to ask the same two  
3 questions to the both of you. So I'll start with you first Mr. Gruber. Given the SEACOR  
4 POWER incident and discussions we've had today do you have any suggestions or  
5 recommendations?

6 **WIT 1:** Right now when we provide the documentation to the OCMI we don't get  
7 feedback from the OCMI that they've completed their portion of the review. It would be  
8 helpful for ABS to know and to be able to confirm that was done. But at this point and  
9 time pending the outcome of this investigation that's the one thing that sticks into my  
10 mind.

11 **CAPT Phillips:** Thank you. And you were just saying in response to one of Mr. White's  
12 questions that you made a request to the Coast Guard for some guidance. I just flipped  
13 my page over so I don't remember where it went. Hold on.

14 **WIT 1:** Are you referring to the steepest descent?

15 **CAPT Phillips:** Yes.

16 **WIT 1:** No I indicated that we have not requested any guidance. We haven't brought it  
17 to the Coast Guard for -----

18 **CAPT Phillips:** Oh have not?

19 **WIT 1:** Correct.

20 **CAPT Phillips:** Okay. I thought I heard have. Alright. Any other recommendations or  
21 suggestions?

22 **WIT 1:** Not at this time.

1       **CAPT Phillips:** Okay. Is there anything else you would like to tell us that we haven't  
2 asked you about?

3       **WIT 1:** No, ma'am.

4       **CAPT Phillips:** Thank you. Mr. Rousseau I'll ask you the same questions. Any  
5 suggestions or recommendations?

6       **WIT 2:** No I think Tom covered that. I'm definitely looking forward to the outcome of  
7 this hearing. And I just, especially giving my role with helping us improve our rules and  
8 coverage. So I very much appreciate the effort that you're all doing.

9       **CAPT Phillips:** Thank you. Anything else you would like to tell us that we haven't  
10 asked you about?

11       **WIT 2:** No, ma'am.

12       **CAPT Phillips:** Thank you very much. Thank you for coming in today. You're both  
13 released as witnesses at this Marine Board Investigation Hearing. Thank you for your  
14 cooperation. If I later determine that I need additional information from you I will contact  
15 you through your legal counsel. If you have any questions about this investigation you  
16 may contact Board Recorder Lieutenant Anthony Alger. We will recess until 0800 on  
17 August 13<sup>th</sup>, 2021. The time is now 1624. This hearing is now in recess. Thank you.

18               *The hearing recessed at 1624, 12 August 2021*

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UNITED STATES OF AMERICA  
UNITED STATES COAST GUARD

In the Matter of:

THE MARINE BOARD OF INVESTIGATION INTO THE CAPSIZING OF THE L/B  
SEACOR POWER ON 13 APRIL 2021 WHILE TRANSITING THE GULF OF  
MEXICO

I, [REDACTED], an officially designated and qualified  
Court Reporter of the United States Coast Guard, hereby certify  
that the foregoing proceedings were taken by me and transcribed  
by me, and is a true record of the testimony of all witnesses,  
and of the proceedings herein contained. I further certify that  
there is no interest attached, either financially or by virtue  
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Court Reporter/Paralegal Specialist  
U. S. Coast Guard, Eighth District