

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
OFFICE OF MARINE SAFETY

**SS NORWAY ENGINEERING GROUP  
MAJOR MARINE ACCIDENT  
DCA 03 MM 032  
INVESTIGATIVE INTERVIEWS**

INVESTIGATIVE INTERVIEW OF:  
SVERRE DAMSGAARD  
CHIEF ELECTRICIAN, SS NORWAY

Wednesday, June 4, 2003

In Attendance:

TOM ROTH-ROFFY, NTSB  
BRIAN CURTIS, NTSB  
KEN OLSEN, USCG  
JOHN RILEY, NCL CONSULTANT  
DAN FARKAS, ESQ.  
CHRIS FOONG, NCL

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

2 10:30 a.m.

3 MR. ROTH-ROFFY: Okay. Good morning. It's  
4 about 10:30 in the morning, and we're here to interview  
5 the Chief Electrician of the Norway, Sverre Damsgaard.

6 Good morning, sir, and thank you for coming.  
7 My name is Tom Roth-Roffy, and I am an accident  
8 investigator with the National Transportation Safety  
9 Board from Washington, D.C.

10 The National Transportation Safety Board is a  
11 federal -- United States Federal Government agency  
12 responsible for investigating transportation accidents  
13 in the United States. A division of the NTSB is the  
14 Office of Marine Safety, and we are responsible for  
15 investigating maritime accidents in the United States.

16 We are conducting a safety investigation.  
17 Our goal is to find out what happened, what caused the  
18 accident, and then to make recommendations aimed at  
19 preventing similar future accidents. Our investigation  
20 is strictly a safety investigation, not a legal  
21 investigation. We're not interested in assigning blame  
22 or liability to any person or agency or company.

23 We'd like to take this -- I should have asked  
24 you this off the record, but is it okay if we tape this  
25 interview?

26 MR. DAMSGAARD: Sure. No problem.

27 MR. ROTH-ROFFY: Well, if you'd like, you can  
28 request a copy of the transcript, if you want to review  
29 it for accuracy.

30 What I'd like is for each -- everybody in the  
31 room to identify themselves.

32 MR. CURTIS: My name is Brian Curtis. I'm  
33 with the NTSB, Marine Engineering Accident  
34 Investigator.

35 MR. OLSEN: My name's Ken Olsen. I work for  
36 the Coast Guard at their Headquarters in Washington,  
37 D.C.

38 MR. FARKAS: Dan Farkas, representing Mr.  
39 Damsgaard.

40 MR. ROTH-ROFFY: And for the record, could  
41 you state your name, please?

42 MR. DAMSGAARD: Sverre Damsgaard, Chief  
43 Electrician, SS Norway.

44 MR. ROTH-ROFFY: Okay.

45 MR. FOONG: Chris Foong, VP for Technical  
46 Operations, NCL.

47 MR. ROTH-ROFFY: Okay. Okay. Sverre, I  
48 would like you to think back to Sunday morning, May

1 25th. If you would, please describe or tell us what  
2 happened from the time you woke up on Sunday morning,  
3 how you were awoken, what you heard, what you saw, what  
4 somebody might have told you or what you told other  
5 people, in as much detail as you can, from the -- from  
6 the time you awoken on Sunday morning, May 25th.

7 MR. DAMSGAARD: I woke up during the shake, I  
8 believe it was 2, and then I thought, "What is this?"  
9 Never had that before on the ship. So, after a few  
10 seconds, the sound, air conditioning sound stopped, and  
11 then after a few seconds again, the light went out, and  
12 then I know it was a black-out.

13 Then my duty is to go to the control room.  
14 So, I found boiler suit, and I always have a flashlight  
15 in my cabin, grabbed that, forgot the socks, put the  
16 shoes on, and run down the stairs, and when I come down  
17 to B Deck, there the sprinkler system was -- and the  
18 light was partly out. The emergency generator was  
19 running. I noticed the light on. I went straight to  
20 control room.

21 Then I told the engineers it was a black-out,  
22 and I could see it was the emergency generator was  
23 running, and I told the engineer start up diesel, so I  
24 could get power back on the ship. After that was  
25 started, we clicked on the first generator, Number 12,  
26 and covered up the main switchboard, the 4420  
27 switchboard, and you know, there was some cables  
28 breaking. So, this is all-trans system, so it's in  
29 every station is you have to set it manually for all  
30 the ship stations. You have to go and reset manually  
31 off the record. That takes a little bit time. Some of  
32 the other areas were closed. You couldn't go in them,  
33 this and this.

34 And then, after we are -- they started  
35 another generator and we got that into the switchboard,  
36 and more or less the whole up to noon was just to  
37 restore power to the different places. I didn't do it  
38 myself. I got the electrician to delegate different  
39 tasks.

40 MR. ROTH-ROFFY: Okay. Is that about it that  
41 you can recall immediately?

42 MR. DAMSGAARD: Yeah.

43 MR. ROTH-ROFFY: Okay. What I'd like to do  
44 now --

45 MR. DAMSGAARD: I was thinking about that,  
46 the power, to get the power on. I didn't -- that was  
47 my task. So, I saw them come up in the control room,  
48 and I had to -- I had to walk over there like this, but  
49 there was a section coming in with people, you know,

1 but I just have a look, but my main task was to get  
2 power on. That's what I was thinking about, you know,  
3 because it's black-out and it's a lot of trouble. So  
4 many things depends on each other.  
5 MR. ROTH-ROFFY: Okay. What I'd like to do  
6 now is to ask you more specific questions about that  
7 morning. You say you woke up by a shake and you  
8 thought there were two shakes possibly?  
9 MR. DAMSGAARD: I think it was -- I'm not  
10 sure, but what I think.  
11 MR. ROTH-ROFFY: Okay.  
12 MR. DAMSGAARD: It's a little bit -- it's a  
13 little bit and then a little bit more.  
14 MR. ROTH-ROFFY: Okay.  
15 MR. DAMSGAARD: And the shake, I think it  
16 moved about this. I thought to myself it has to be  
17 complete black-out. It had never been like that  
18 before.  
19 MR. ROTH-ROFFY: Okay.  
20 MR. DAMSGAARD: Yeah.  
21 MR. ROTH-ROFFY: And where's your cabin  
22 located?  
23 MR. DAMSGAARD: All the way -- all the way  
24 forward in the front.  
25 MR. ROTH-ROFFY: And you mentioned that after  
26 you felt the shake, after -- after that, the light or  
27 the fan stopped.  
28 MR. DAMSGAARD: The fan stopped first and  
29 then the light a little bit after.  
30 MR. ROTH-ROFFY: About how long from the time  
31 you felt the shake until the fan stopped?  
32 MR. DAMSGAARD: Oh, it's about maybe 10-15  
33 seconds. I'm not sure. 10-15 seconds, probably, and  
34 then 10-15 seconds after the light went out. Something  
35 like that. I'm not sure.  
36 MR. ROTH-ROFFY: Were you fully awake or were  
37 -- were you asleep or awake when the -- when you felt  
38 the shake?  
39 MR. DAMSGAARD: Well, it was in the morning.  
40 So, I don't know.  
41 MR. ROTH-ROFFY: You were kind of waking up a  
42 little bit?  
43 MR. DAMSGAARD: Yeah, yeah. Maybe that.  
44 MR. ROTH-ROFFY: So, it's possible after you  
45 felt the shake that you might have fallen back asleep?  
46 MR. DAMSGAARD: No.  
47 MR. ROTH-ROFFY: No?  
48 MR. DAMSGAARD: No, because it was so -- it  
49 was so big, so --

1 MR. ROTH-ROFFY: Okay.  
2 MR. DAMSGAARD: I thought first maybe a tug  
3 boat or something but no, I'm not sure, so I don't  
4 know.  
5 MR. ROTH-ROFFY: Then you said you put on  
6 your clothes --  
7 MR. DAMSGAARD: When it got dark, yes.  
8 MR. ROTH-ROFFY: -- and it was dark in your  
9 room when you were putting your clothes on?  
10 MR. DAMSGAARD: Yeah.  
11 MR. ROTH-ROFFY: And you -- you went down.  
12 Which -- what was your route down to the -- to the  
13 control room?  
14 MR. DAMSGAARD: It was a step or two. I run  
15 a step or two because that's big stairs down. All the  
16 way down stair tower on starboard side, all the way out  
17 to control room on B Deck.  
18 MR. ROTH-ROFFY: Along the way, did you see  
19 any other -- any other officers or crew members? For  
20 example, the staff chief?  
21 MR. DAMSGAARD: Yeah. I -- I see passengers,  
22 lots of passengers and crew in the -- mostly  
23 passengers, I think, in the hallways. I was thinking  
24 electrical in order to get it back again. So.  
25 MR. ROTH-ROFFY: How about by your cabin?  
26 Did you see any -- any -- for example, the chief  
27 engineer or the --  
28 MR. DAMSGAARD: No, --  
29 MR. ROTH-ROFFY: -- staff chief?  
30 MR. DAMSGAARD: -- I didn't see anything. I  
31 didn't see anything. I can't remember that.  
32 MR. ROTH-ROFFY: Okay. And then you went  
33 down the stair tower to B Deck, and you ran down the  
34 starboard side of B Deck?  
35 MR. DAMSGAARD: Yes, sir.  
36 MR. ROTH-ROFFY: Did you see -- you said you  
37 saw the sprinklers were --  
38 MR. DAMSGAARD: Yeah.  
39 MR. ROTH-ROFFY: -- discharging?  
40 MR. DAMSGAARD: It was water coming down.  
41 MR. ROTH-ROFFY: Are there lights along --  
42 along that corridor on B Deck?  
43 MR. DAMSGAARD: Yeah. Lights.  
44 MR. ROTH-ROFFY: Emergency lights?  
45 MR. DAMSGAARD: Emergency lights always on.  
46 MR. ROTH-ROFFY: They were on?  
47 MR. DAMSGAARD: Yeah. We had two systems.  
48 We had one system in batteries. With the AC, just --  
49 that's on AC normally. When it's dark, they switch

1 over to DC and battery, and then that's besides this  
2 emergency generator lights. We also have additional.  
3 When it's emergency, the lights stay up. In the  
4 corridor, we have lighting for emergency, too.  
5 MR. ROTH-ROFFY: And do you have low-level  
6 lighting?  
7 MR. DAMSGAARD: Yeah. Low-level lighting.  
8 MR. ROTH-ROFFY: Do you remember if that was  
9 on or not?  
10 MR. DAMSGAARD: Low-level lighting, we have  
11 to have the other light to see that, you know. It's  
12 not enough power. It's just -- if you know what I  
13 mean. It's reflective.  
14 MR. ROTH-ROFFY: Oh, photo-luminescence?  
15 MR. DAMSGAARD: Yes.  
16 MR. ROTH-ROFFY: A reflector?  
17 MR. DAMSGAARD: Yeah.  
18 MR. ROTH-ROFFY: Okay. Did you see any  
19 injured crew members as you were going down that  
20 starboard passageway to the control room?  
21 MR. DAMSGAARD: No, I didn't see any before  
22 because then I come in the control room, and they had  
23 brought him in after some time. I don't remember -- I  
24 don't remember how long time, but I know --  
25 MR. ROTH-ROFFY: Do you remember who brought  
26 him in?  
27 MR. DAMSGAARD: No. He was on a stretcher,  
28 on a stretcher. I know that.  
29 MR. ROTH-ROFFY: He was on a stretcher the  
30 first time you saw him?  
31 MR. DAMSGAARD: Yeah.  
32 MR. ROTH-ROFFY: Did you see when they  
33 brought him up from -- from the boiler room?  
34 MR. DAMSGAARD: No. I just saw him because I  
35 was on the switchboard behind the corner, so I just saw  
36 him laying there when they come up from -- into the  
37 control room. I didn't see it.  
38 MR. ROTH-ROFFY: Okay. When you first  
39 arrived in the control room, who was there?  
40 MR. DAMSGAARD: I think second engineer on  
41 nuclear, and the chief engineer was there.  
42 MR. ROTH-ROFFY: Do you recall anybody else  
43 that was there?  
44 MR. DAMSGAARD: There was a lot of people,  
45 but I don't remember.  
46 MR. ROTH-ROFFY: That's when you first  
47 arrived?  
48 MR. DAMSGAARD: Yeah.  
49 MR. ROTH-ROFFY: When you first arrived,

1 opened the door, who --  
2 MR. DAMSGAARD: The first engineer on duty  
3 was there. That's what I'm -- I'm coping with. So,  
4 that's what I remember.  
5 MR. ROTH-ROFFY: Sure.  
6 MR. DAMSGAARD: At that time, you know.  
7 MR. ROTH-ROFFY: Sure. I understand. A lot  
8 of things were happening.  
9 MR. DAMSGAARD: Yeah. But I was mainly  
10 concerned with getting power back to the switchboard so  
11 we could cover the ship.  
12 MR. ROTH-ROFFY: When you first went into the  
13 control room, what did the chief or did anybody tell  
14 you anything to do?  
15 MR. DAMSGAARD: No, nobody tells me, but I  
16 said, "Are they trying to starting up the diesels?"  
17 And, "Yes, he gets ahold of our engineer." So, the  
18 diesel engine is being -- should be starting up as soon  
19 as possible, I was told.  
20 MR. ROTH-ROFFY: Okay.  
21 MR. DAMSGAARD: Then I just sit on the meter  
22 and waiting for something to happen.  
23 MR. ROTH-ROFFY: You switched on the voltage  
24 meter on the switchboard?  
25 MR. DAMSGAARD: Yeah. The frequency meter.  
26 MR. ROTH-ROFFY: About how long did you have  
27 to wait?  
28 MR. DAMSGAARD: I don't know. 15 minutes,  
29 maybe. 10-15 minutes, it started up. The emergency  
30 generator was running.  
31 MR. ROTH-ROFFY: Sure. During those 10 or 15  
32 minutes, what were you doing?  
33 MR. DAMSGAARD: I was waiting for power to  
34 come on the generators.  
35 MR. ROTH-ROFFY: And nothing more?  
36 MR. DAMSGAARD: No.  
37 MR. ROTH-ROFFY: Did you make any calls to  
38 your second electricians or first electricians?  
39 MR. DAMSGAARD: They called me from the  
40 stations, from the aft switchboard, the forward  
41 switchboard, and the elevator was -- he also -- he  
42 always take and check this by himself. So, I started  
43 checking all the things.  
44 MR. ROTH-ROFFY: Okay.  
45 MR. DAMSGAARD: Yeah.  
46 MR. ROTH-ROFFY: Did the chief engineer tell  
47 you to do anything? No?  
48 MR. DAMSGAARD: No. We was talking together.  
49 MR. ROTH-ROFFY: Just talking?

1 MR. DAMSGAARD: Yeah.  
2 MR. ROTH-ROFFY: But he didn't give you any  
3 instructions on to do a particular --  
4 MR. DAMSGAARD: No.  
5 MR. ROTH-ROFFY: -- task?  
6 MR. DAMSGAARD: No. I said we have to do  
7 this and this and this. Okay, okay, he said. He was  
8 more concerned, I don't know, but he had other things  
9 to do.  
10 MR. ROTH-ROFFY: Do you recall --  
11 MR. DAMSGAARD: They called him from  
12 everywhere. He had his hands full. Yes, I think he  
13 was more accident, I think, the accident, whether --  
14 and things with that.  
15 MR. ROTH-ROFFY: I'm sorry. Could you say  
16 that again?  
17 MR. DAMSGAARD: I think he was more -- he was  
18 thinking about these people in the engine room, get  
19 them up front, if possible.  
20 MR. ROTH-ROFFY: The injured crew members?  
21 MR. DAMSGAARD: Yeah. He was -- he was  
22 concerned about that.  
23 MR. ROTH-ROFFY: Okay. So, what happened  
24 after about 10 or 15 minutes? They started up Number  
25 12 --  
26 MR. DAMSGAARD: Yeah.  
27 MR. ROTH-ROFFY: -- and the frequency meter  
28 for the frequency?  
29 MR. DAMSGAARD: Yeah. Then we put it on the  
30 switchboard, right, --  
31 MR. ROTH-ROFFY: Okay.  
32 MR. DAMSGAARD: -- and then we have start to  
33 get coverage on the ship, first to the big macs, you  
34 know, the big diesel engines, so we could start them  
35 up, too.  
36 MR. ROTH-ROFFY: And after that, they started  
37 the big macs, --  
38 MR. DAMSGAARD: Yeah.  
39 MR. ROTH-ROFFY: -- and then did you close  
40 the breakers on the big macs or who does that?  
41 MR. DAMSGAARD: Me.  
42 MR. ROTH-ROFFY: In the control room?  
43 MR. DAMSGAARD: Control room. The big macs  
44 is high voltage, you know.  
45 MR. ROTH-ROFFY: Okay. Generator Number 12  
46 is --  
47 MR. DAMSGAARD: 440s, straight on the 440  
48 range.  
49 MR. ROTH-ROFFY: Okay.



1 MR. DAMSGAARD: Just to power up the lights  
2 and the pumps to the big lights.  
3 MR. ROTH-ROFFY: Oh, okay. When there's a  
4 problem in the engine room, does the switchboard have a  
5 load shed where it automatically opens breakers before  
6 -- before a complete black-out?  
7 MR. DAMSGAARD: Yeah. There is overload  
8 trips.  
9 MR. ROTH-ROFFY: Overload trips?  
10 MR. DAMSGAARD: There's two trips, you know.  
11 MR. ROTH-ROFFY: What trips first?  
12 MR. DAMSGAARD: First the galley trips and  
13 the air conditioner. The galleys first, the air  
14 conditioner is on the second trip. That's on every  
15 generator on the overload.  
16 MR. RILEY: Can I interrupt on terminology?  
17 Overload or non-essential?  
18 MR. DAMSGAARD: Well, I'm only speaking about  
19 non-essential.  
20 MR. ROTH-ROFFY: Okay. John, I don't know if  
21 that cleared that up for you. If you could just wait,  
22 when we come around and just clear it up --  
23 MR. RILEY: Sorry.  
24 MR. ROTH-ROFFY: -- then. Just make a little  
25 note to yourself.  
26 MR. DAMSGAARD: You know, when it's -- that  
27 turbo turbines, the steam/no steam, you know, then it's  
28 everything trips, you know. It's too much load on  
29 everything.  
30 MR. ROTH-ROFFY: Well, the steam pressure  
31 would start falling off and the turbine would start  
32 slowing down, right?  
33 MR. DAMSGAARD: Yeah.  
34 MR. ROTH-ROFFY: Okay. So, you don't have a  
35 -- a --  
36 MR. DAMSGAARD: Before you can -- things  
37 happen.  
38 MR. ROTH-ROFFY: Okay. Okay. I think that's  
39 all I have for the events of the morning.  
40 Anybody else need some clarifications on any  
41 of those items?  
42 (No response)  
43 MR. ROTH-ROFFY: Okay. We can always come  
44 back to it, but I'd like to, you know, try to finish  
45 that up first before we go into -- into other items.  
46 Chief, could you describe your -- the -- you  
47 know, the responsibilities of your position as chief  
48 electrician on the Norway?  
49 MR. DAMSGAARD: Yeah. Handle the electrical

1 department.  
2 MR. ROTH-ROFFY: And just for the record, the  
3 electrical department, what -- what sort of  
4 responsibilities or duties?  
5 MR. DAMSGAARD: It's to take care of the  
6 power, all the electricity, elevators, whatever.  
7 MR. ROTH-ROFFY: So, anything that has  
8 electrical power, --  
9 MR. DAMSGAARD: Yeah.  
10 MR. ROTH-ROFFY: -- you're responsible for?  
11 MR. DAMSGAARD: Yes, sir.  
12 MR. ROTH-ROFFY: Do you have the capability  
13 to rewind motors on board ship?  
14 MR. DAMSGAARD: No. That's -- that's another  
15 profession. We don't have equipment for that.  
16 MR. ROTH-ROFFY: Your preventive maintenance  
17 of electrical equipment, do you have a schedule for  
18 that?  
19 MR. DAMSGAARD: Yeah. We have this AMOS  
20 system.  
21 MR. ROTH-ROFFY: Okay.  
22 MR. DAMSGAARD: AMOS system.  
23 MR. ROTH-ROFFY: What about if something  
24 electrical breaks and you have to repair it, do you  
25 make a record of that somewhere?  
26 MR. DAMSGAARD: Yeah. We have -- in our  
27 AMOS, it's -- it's a -- it's an item that says  
28 unexpected maintenance. We go in that and put it in.  
29 So, we have -- that's where it is, the history, you  
30 know.  
31 MR. ROTH-ROFFY: Correct.  
32 MR. DAMSGAARD: All of the history.  
33 MR. ROTH-ROFFY: And do you personally make  
34 the entries or who would type it into AMOS?  
35 MR. DAMSGAARD: You know, I usually do it  
36 before, but it was so much just checking alarms and  
37 this and this and this, you know, so -- so, the  
38 technical engine secretary does the little things, but  
39 if something special, I do it myself. Like unexpected.  
40 MR. ROTH-ROFFY: Okay. The unexpected  
41 repairs, you would do yourself?  
42 MR. DAMSGAARD: Yeah.  
43 MR. ROTH-ROFFY: Do you also maintain a paper  
44 or handwritten log book?  
45 MR. DAMSGAARD: We have what we call a rough  
46 log. Every -- every Sunday, after a cruise, the first  
47 electrician, he make a list of -- he make a report and  
48 send it up to the unit chief for filing and they send  
49 it to Mr. Crankstaad. Yeah.

1 MR. ROTH-ROFFY: Okay. So, you give  
2 information to -- to who? I'm sorry?  
3 MR. DAMSGAARD: My first electrician.  
4 MR. ROTH-ROFFY: Your first electrician types  
5 it up?  
6 MR. DAMSGAARD: Yeah. He make a list of the  
7 week, a weekly list.  
8 MR. ROTH-ROFFY: Okay.  
9 MR. DAMSGAARD: Then he send it to the -- to  
10 the unit chief and the unit chief forwards it to Mr.  
11 Crankstaad whatever, the company.  
12 MR. ROTH-ROFFY: Mr. Crankstaad is a  
13 superintendent?  
14 MR. DAMSGAARD: He's the superintendent.  
15 MR. ROTH-ROFFY: Okay.  
16 MR. DAMSGAARD: Yeah.  
17 MR. ROTH-ROFFY: Is there a record of -- of  
18 those weekly reports? Is it on the computer?  
19 MR. DAMSGAARD: Yeah. I have -- I have it on  
20 the -- on this disk.  
21 MR. ROTH-ROFFY: On a disk?  
22 MR. DAMSGAARD: Yeah. And the technical  
23 secretary, she sign that, too.  
24 MR. ROTH-ROFFY: Okay.  
25 MR. DAMSGAARD: The sheet.  
26 MR. ROTH-ROFFY: Okay. Is that -- that's  
27 sent up by e-mail to the staff chief?  
28 MR. DAMSGAARD: Yeah.  
29 MR. ROTH-ROFFY: Could you tell us about your  
30 maritime background, when you started going on ships,  
31 and the different jobs you've held, and then ending up,  
32 you know, with the Norway, how long you've been on the  
33 Norway?  
34 MR. DAMSGAARD: I was -- I started in '74 as  
35 an oiler on a Norwegian ship, gas tanker first. Then I  
36 was a motorman, Norwegian cargo ship. Then I like went  
37 to electrical ship's electrician school in Norway, and  
38 I had two years before electrical before I went to sea.  
39 I had the basic and the -- the -- the basic and the --  
40 what you call it? The two years electrical school  
41 before I went to sea.  
42 Then I was a ship's electrician. That was  
43 more specialized, you know. Then I worked on ship's  
44 electrician on you name it, tankers, cargo ships, gas  
45 tanker, load on/load off, and then I started in the  
46 cruise business as relief electrician on, I think it  
47 was, Son of Norway.  
48 MR. ROTH-ROFFY: Did you say Son of Norway?  
49 MR. DAMSGAARD: Yeah. The old one.

1 MR. ROTH-ROFFY: Okay.  
2 MR. DAMSGAARD: And then, I -- then, I was a  
3 relief there and then I got -- got a job in the -- you  
4 know, in the -- and I was on load on/load off ships for  
5 him and then I started on this Star of Viste. He had  
6 the company. He had bought them from Norwegian America  
7 line. So, the Star of Viste, I was on for seven years  
8 as electrician, the cruise ship, seven-eight years.  
9 MR. ROTH-ROFFY: Star of Viste.  
10 MR. DAMSGAARD: Star of Viste. The Cunard  
11 bought it in '83. So, then they become Cunard, and  
12 then I went to school for two and a half years in  
13 Sweden, engineering school, both -- both -- both --  
14 what do you call it? Regular electrician and -- and  
15 electrical --  
16 MR. ROTH-ROFFY: What year was that?  
17 MR. DAMSGAARD: Both -- both direction, you  
18 know. Regular electricity, regular voltage, like 220.  
19 Also electronics course.  
20 MR. ROTH-ROFFY: And when did you do that?  
21 What year?  
22 MR. DAMSGAARD: '87 to '91.  
23 MR. ROTH-ROFFY: Okay.  
24 MR. DAMSGAARD: And then, I was on the Royal  
25 Viking Sun, a cruise company, from '91 to '93. Then I  
26 was ashore for a company in Norway, building supply  
27 ships and things like that.  
28 MR. ROTH-ROFFY: And during what period did  
29 you do that?  
30 MR. DAMSGAARD: It was from '93 to '97. And  
31 then, I went to Norwegian Star, NCL, in '97, the old  
32 Norwegian Star, and I've been with NCL since '97.  
33 MR. ROTH-ROFFY: And when did you start  
34 sailing on the Norway?  
35 MR. DAMSGAARD: In '98, 17 of May.  
36 MR. ROTH-ROFFY: What was your position?  
37 MR. DAMSGAARD: Electrician first, first  
38 electrician, then chief electrician.  
39 MR. ROTH-ROFFY: So, you started in '98 as a  
40 -- as a first electrician?  
41 MR. DAMSGAARD: No. Electrician, regular  
42 electrician.  
43 MR. ROTH-ROFFY: Okay. Then you were -- then  
44 first electrician?  
45 MR. DAMSGAARD: Hm-hmm.  
46 MR. ROTH-ROFFY: And when did you start  
47 sailing as chief electrician?  
48 MR. DAMSGAARD: 2000, June 2000.  
49 MR. ROTH-ROFFY: Okay. And how many people

1 work for you?  
2 MR. DAMSGAARD: About 13 to 14 people.  
3 MR. ROTH-ROFFY: 13 or 14?  
4 MR. DAMSGAARD: Yeah.  
5 MR. ROTH-ROFFY: Could you describe the  
6 positions?  
7 MR. DAMSGAARD: Yeah. We have myself, one  
8 first electrician we call it on board, but it's some --  
9 in new ships, he's ultimate chief engineer on first  
10 rotation, and two electrical engineers.  
11 MR. ROTH-ROFFY: All right.  
12 MR. DAMSGAARD: One elevator technician, two  
13 second electricians, one Filipino, one Polish, two  
14 second electricians.  
15 MR. ROTH-ROFFY: Okay.  
16 MR. DAMSGAARD: And I have three Filipino  
17 assistants. One communication officer, also, under me.  
18 Communication electronics. He's communications.  
19 MR. ROTH-ROFFY: Since you've been sailing as  
20 an electrician on the Norway, do you recall any -- any  
21 significant problems with the boiler automation system,  
22 other than, you know, routine maintenance?  
23 MR. DAMSGAARD: No. Nothing, nothing  
24 special. Always something happens, you know, on a  
25 ship, but not -- not a large problem, so we can stop.  
26 We had to stop anything because of that, no.  
27 MR. ROTH-ROFFY: Do you work closely with the  
28 electronics engineers on boiler automation or do they  
29 do it by themselves?  
30 MR. DAMSGAARD: Yeah. They report to me. We  
31 meet in the morning, discuss it. We meet at 1:00. We  
32 meet 6:00.  
33 MR. ROTH-ROFFY: Okay.  
34 MR. DAMSGAARD: When they're supposed to  
35 order things and so they come to me. They need this  
36 and they need this. We need service, right.  
37 MR. ROTH-ROFFY: Could you describe the  
38 black-outs that you've experienced since you've been  
39 aboard the Norway? You know, complete loss of power,  
40 when the last one occurred, and if there's any others  
41 you can recall.  
42 MR. DAMSGAARD: I don't -- some time ago last  
43 time.  
44 MR. ROTH-ROFFY: Okay. I'm not trying to --  
45 to entrap you or anything, but we heard about a black-  
46 out that occurred in St. Thomas less than six months  
47 ago. Could you tell us about what happened on that or  
48 if you recall it? Do you recall that?  
49 MR. DAMSGAARD: Hm-hmm.

1 MR. ROTH-ROFFY: Do you recall that black-out  
2 in St. Thomas?  
3 MR. DAMSGAARD: Yes, I recall that.  
4 MR. ROTH-ROFFY: Okay. Could you describe  
5 what happened on that one?  
6 MR. DAMSGAARD: The lights went off.  
7 MR. ROTH-ROFFY: Could -- could you describe  
8 why the lights went off and -- and how long they were  
9 off?  
10 MR. DAMSGAARD: It was one hour. They tried  
11 to change some relays in the main -- in the high-  
12 voltage switchboard, and then the -- the -- then it was  
13 voltage-dependent relays for the transformers. Some of  
14 the transformers -- one of the transformers went off,  
15 then the other get overloaded and it blacked out. We  
16 had to start it over again. But it is -- it was -- it  
17 was overload. I mean, it was not done by anything else  
18 than human being. It was unfortunate. But then we  
19 also anchored. We didn't -- we didn't go somewhere.  
20 MR. ROTH-ROFFY: You were at anchor --  
21 MR. DAMSGAARD: Yeah.  
22 MR. ROTH-ROFFY: -- when that happened?  
23 MR. DAMSGAARD: Yeah.  
24 MR. ROTH-ROFFY: And about how long did it  
25 take to bring the power back up?  
26 MR. DAMSGAARD: All together, you know, one  
27 or two hours.  
28 MR. ROTH-ROFFY: One or two hours?  
29 MR. DAMSGAARD: Yeah.  
30 MR. ROTH-ROFFY: Okay. Is that normal time  
31 to get power back up? Two hours?  
32 MR. DAMSGAARD: Yeah. It's one or two, to  
33 every places, you know. Some places get it before.  
34 MR. ROTH-ROFFY: To start that generator that  
35 --  
36 MR. DAMSGAARD: We had to start the boilers,  
37 too.  
38 MR. ROTH-ROFFY: Right.  
39 MR. DAMSGAARD: That's another thing. We get  
40 the diesels in, then go fast, but to start the boilers  
41 does not take long.  
42 MR. ROTH-ROFFY: Was there a problem getting  
43 that Number 12 -- to get the diesel generator started  
44 that time? Did it take longer than normal?  
45 MR. DAMSGAARD: No, no, not that I remember.  
46 MR. ROTH-ROFFY: Who's the person actually  
47 working on that relay? Was -- was it one of your  
48 electricians?  
49 MR. DAMSGAARD: It was me.

1 MR. ROTH-ROFFY: It was you personally?  
2 MR. DAMSGAARD: Me and the first electrician.  
3 MR. ROTH-ROFFY: I'm sorry?  
4 MR. DAMSGAARD: Me and the first electrician.  
5 MR. ROTH-ROFFY: You and the first  
6 electrician. Okay. I'm going to go ahead and pass it  
7 to Brian.  
8 Thank you.  
9 MR. CURTIS: Brian Curtis.  
10 Back to during the accident, just one  
11 question. When you left your cabin, did you go outside  
12 at all? Did you --  
13 MR. DAMSGAARD: No.  
14 MR. CURTIS: -- see the smoke and the funnel  
15 or anything?  
16 MR. DAMSGAARD: Go straight down to the  
17 control room.  
18 MR. CURTIS: Could you describe to us the --  
19 the sequence of restoring power once power was  
20 available?  
21 MR. DAMSGAARD: Yeah. From -- from -- from  
22 beginning?  
23 MR. CURTIS: Yeah.  
24 MR. DAMSGAARD: Start-up -- first, the -- the  
25 emergency guys, they come in. So, the emergency system  
26 is pulled up, the PA and walkie-talkies, and things  
27 like that. Emergency lights. Then you have to start  
28 diesel as well. Then you put that in 440 switchboard  
29 and then put in the breaker to the big -- big -- big  
30 mac, you know, the pumps for the big mac. Then start  
31 the pump for the big macs. Then they start the big  
32 mac, then put -- then get power on the big mac and the  
33 big diesel generators, six we're talking about now.  
34 MR. CURTIS: Six?  
35 MR. DAMSGAARD: 6,000 volt.  
36 MR. CURTIS: 6,000?  
37 MR. DAMSGAARD: Volt.  
38 MR. CURTIS: Oh, volts. Okay.  
39 MR. DAMSGAARD: Yeah. Then we have cover on  
40 the high voltage. Then we -- the switchboard is in  
41 three sections.  
42 MR. CURTIS: So, --  
43 PARTICIPANT: Can you repeat that?  
44 MR. CURTIS: -- the switchboard is, did you  
45 say, in three sections?  
46 MR. DAMSGAARD: Yeah. We have three -- three  
47 transformers.  
48 MR. CURTIS: Okay.  
49 MR. DAMSGAARD: I don't get it right, but

1 anyway, --  
2 MR. CURTIS: What part --  
3 MR. DAMSGAARD: -- it's -- it's two -- the  
4 high voltage board, it's -- it's like a -- take it from  
5 the beginning. The high voltage board is -- it's two  
6 sections with breakers in the middle. All right?  
7 MR. CURTIS: Okay.  
8 MR. DAMSGAARD: And to each high voltage  
9 switchboard, you know, is three transformers on each  
10 end.  
11 MR. CURTIS: Okay.  
12 MR. DAMSGAARD: All right?  
13 MR. CURTIS: Okay.  
14 MR. DAMSGAARD: Not bad.  
15 MR. CURTIS: Okay.  
16 MR. DAMSGAARD: There is the breakers here.  
17 MR. CURTIS: Correct.  
18 MR. DAMSGAARD: Now, okay, the breakers is  
19 here and there are three to each part, right?  
20 MR. CURTIS: Okay.  
21 MR. DAMSGAARD: And you have different  
22 generators also going to this part, right?  
23 MR. CURTIS: Okay. Just for the record,  
24 we'll -- we'll get this schematic.  
25 MR. ROTH-ROFFY: Yeah. We could maybe look  
26 at that.  
27 MR. DAMSGAARD: Yeah.  
28 MR. ROTH-ROFFY: The diagram. We can sort it  
29 out.  
30 MR. DAMSGAARD: That's no problem.  
31 MR. CURTIS: I just want to go through the  
32 sequence of your actions, an overview of the sequence.  
33 MR. DAMSGAARD: I don't know. When you put  
34 power on the high voltage, then it's -- then you have  
35 to put in the transformer to the full voltage. The 440  
36 and the high voltage. This goes through a transformer  
37 from the high voltage to the 440, that part, you know.  
38 Then everything is sent to us. Then you can go to the  
39 substation and reset them.  
40 MR. CURTIS: Substations.  
41 MR. DAMSGAARD: That's power to all the ship.  
42 MR. CURTIS: Okay.  
43 MR. DAMSGAARD: It's done.  
44 MR. CURTIS: Each deck have its own  
45 substation or they just --  
46 MR. DAMSGAARD: No. Every substation are on  
47 C Deck, you know, following the ship's zones, from Zone  
48 A to Zone 1.  
49 MR. CURTIS: Okay.



1 MR. DAMSGAARD: 440 and 110 volt. It's all  
2 -- it's very much manual. You have to reset the  
3 breakers. The power goes off, you have to manually  
4 reset a lot of breakers in the substations to get power  
5 to all your spaces.  
6 MR. CURTIS: Okay. And all of your  
7 assistants, the first electrician, the --  
8 MR. DAMSGAARD: Yes.  
9 MR. CURTIS: They're all stationed at the  
10 substations?  
11 MR. DAMSGAARD: At the main switchboard and  
12 substations.  
13 MR. CURTIS: All right.  
14 MR. DAMSGAARD: Yeah.  
15 MR. CURTIS: So, once you restore power to  
16 the substations, --  
17 MR. DAMSGAARD: They go around -- around to  
18 reset.  
19 MR. CURTIS: Okay. All right. After the --  
20 after the accident, the monitoring system for the alarm  
21 for the engine room, when we arrived, the screen was  
22 frozen.  
23 MR. DAMSGAARD: Yeah.  
24 MR. CURTIS: All right. Were you aware of  
25 that --  
26 MR. DAMSGAARD: Yes.  
27 MR. CURTIS: -- after the accident?  
28 MR. DAMSGAARD: Hm-hmm.  
29 MR. CURTIS: Okay. Could you tell me that  
30 you know about -- about them being frozen and if you  
31 attempted to unfreeze them or --  
32 MR. DAMSGAARD: The cable was blown off in  
33 the boiler room.  
34 MR. CURTIS: Did the watch -- how were you  
35 notified that the -- the screen was frozen and they  
36 couldn't --  
37 MR. DAMSGAARD: You could see the screen. No  
38 alarm comes up.  
39 MR. CURTIS: Okay. Did the engineer on watch  
40 notify you or --  
41 MR. DAMSGAARD: I could see it myself.  
42 MR. CURTIS: Okay. And are you the one that  
43 found the problem?  
44 MR. DAMSGAARD: No. The electricians was  
45 working. I told them to -- to have a look at the  
46 screens when it was all power again, you know.  
47 MR. CURTIS: Okay. And the -- the printer  
48 failure associated with that system, were you aware  
49 when that failed?

1 MR. DAMSGAARD: It was one week or one-half  
2 week before this happened.

3 MR. CURTIS: And -- and who notified you of  
4 that?

5 MR. DAMSGAARD: Electronics engineers  
6 service.

7 MR. CURTIS: And had a new printer been  
8 ordered for that system?

9 MR. DAMSGAARD: No. The old one was  
10 obsolete. We asked for can we get -- he immediately --

11 MR. CURTIS: And did the engineers on watch  
12 express concern that they have this printer restored  
13 quickly?

14 MR. DAMSGAARD: Not to me. It was so much  
15 happened, nobody knows so much what -- what the cause  
16 of.

17 MR. CURTIS: Did they express concern that  
18 they had no --

19 MR. DAMSGAARD: They had no boilers, you  
20 know. So, --

21 MR. CURTIS: No. After the printer failed,  
22 I'm sorry, that -- did -- did the watch engineers  
23 express concern that they didn't have the printer to  
24 look back on their alarms?

25 MR. DAMSGAARD: Probably did. Then I told  
26 them to have a look at that, and then they come back,  
27 the cables are broke.

28 MR. CURTIS: And would that type of --

29 MR. DAMSGAARD: There was every kind of  
30 people on the -- every kind. It was hours digging  
31 everywhere.

32 MR. CURTIS: I have no further questions  
33 right now.

34 MR. OLSEN: You mentioned somebody by the  
35 name of a technical engineering secretary. Who was  
36 that?

37 MR. DAMSGAARD: Just the chief engineer  
38 office.

39 MR. OLSEN: Who is it?

40 MR. DAMSGAARD: She's sitting beside chief  
41 engineer and do the paperwork for this.

42 MR. OLSEN: And what's his name?

43 MR. DAMSGAARD: Chief engineer.

44 MR. OLSEN: No, I'm sorry. Is this -- let me  
45 back up. The technical engineering secretary, --

46 MR. DAMSGAARD: Yeah. She's sitting in the  
47 chief engineer's office.

48 MR. OLSEN: He sits --

49 MR. DAMSGAARD: She have her own -- she have

1 her own --  
2 MR. OLSEN: Oh, it's a she? Okay. What's  
3 her name?  
4 MR. DAMSGAARD: I don't know this one. I  
5 know Joette was there for two weeks ago. They did --  
6 they just got another one, though.  
7 MR. OLSEN: They just got -- but she was on  
8 at the time of the casualty?  
9 MR. DAMSGAARD: Yeah. There was a new one,  
10 and I don't know her.  
11 MR. OLSEN: Okay.  
12 MR. DAMSGAARD: But I know the old one.  
13 MR. OLSEN: Is there a similar type of person  
14 that works in the main engine office?  
15 MR. DAMSGAARD: No.  
16 MR. OLSEN: No? Who works in the main engine  
17 office?  
18 MR. DAMSGAARD: Me and the first engineer,  
19 the relief engineer, and the first engineer.  
20 MR. OLSEN: Who -- who does all the filing of  
21 engineering receipts?  
22 MR. DAMSGAARD: The technical secretary.  
23 MR. OLSEN: The technical secretary.  
24 MR. DAMSGAARD: Yeah.  
25 MR. OLSEN: Okay. Could we get her name?  
26 MR. ROTH-ROFFY: I can.  
27 MR. DAMSGAARD: I know her. Joette before,  
28 but this -- it's a new one now.  
29 MR. OLSEN: Okay.  
30 MR. DAMSGAARD: She's just working -- I don't  
31 know.  
32 MR. OLSEN: Okay.  
33 MR. DAMSGAARD: I don't know her.  
34 MR. ROTH-ROFFY: Let's go ahead and take a  
35 five-minute break.  
36 (Whereupon, a recess was taken.)  
37 (End Tape 1, Begin Tape 2)  
38 MR. ROTH-ROFFY: Okay. It's about 11:30, and  
39 after a brief break, we're resuming our interview of  
40 the Chief Electrician, Mr. Damsgaard, and I believe Ken  
41 Olsen was asking some questions.  
42 MR. OLSEN: I just have a few more questions.  
43 Do you have any knowledge of -- of any of  
44 your -- yourself or any of your personnel in the  
45 Electrical Department having worked on any of the  
46 sensors associated with the safety line on the boilers?  
47 MR. DAMSGAARD: Not as I know. Not as I  
48 know.  
49 MR. OLSEN: Would you be the -- you -- if

1 there was some work done, you would know of the work  
2 done, is that correct?  
3 MR. DAMSGAARD: Yeah.  
4 MR. OLSEN: Okay. In general, did you ever  
5 in your experience on board the ship, did you ever hear  
6 anyone talk about microcracks or fractures in any of  
7 the boilers or steam piping?  
8 MR. DAMSGAARD: No.  
9 MR. OLSEN: Okay. That's all I have.  
10 MR. ROTH-ROFFY: John?  
11 MR. RILEY: Yes. Sorry. I was making a  
12 note. John Riley, independent surveyor for NCL, joined  
13 the meeting late.  
14 The -- is it possible, please, to give a  
15 guess or an estimate about how long between a black-out  
16 and getting the power to your 440 volt substations? A  
17 rough estimate?  
18 MR. DAMSGAARD: 20 minutes. I don't know.  
19 30 minutes, maybe.  
20 MR. RILEY: So, between 20 and 30 minutes?  
21 MR. DAMSGAARD: Yeah.  
22 MR. RILEY: And is the substation for the  
23 boiler room one of the first substations to be reset?  
24 MR. DAMSGAARD: No. There are no substations  
25 to the boiler room. The feeding to the boiler room  
26 goes straight -- straight from two places, from the  
27 forward and aft main stations have -- each have one  
28 breaker feeding. In case the forward is off, you can  
29 use the aft, and -- and -- and it's used to support two  
30 of the fans on the forward, fuel the fans and fuel the  
31 fans to go aft on each side. So, they work from inside  
32 and there's two breakers, 45 and 47, feeding that.  
33 MR. RILEY: Can I -- can I try to understand  
34 then, please, --  
35 MR. DAMSGAARD: Yeah.  
36 MR. RILEY: -- the --  
37 MR. DAMSGAARD: Substations just have the --  
38 from the C Deck and up in the ship to do it, what we  
39 call it, and the engine room is different ship  
40 switchboard in each compartment.  
41 MR. RILEY: Does the 440 volt from the Number  
42 12 diesel enable them to start going through the  
43 process of lighting up the boiler?  
44 MR. DAMSGAARD: Yeah. To maintain.  
45 MR. RILEY: And so, is -- as soon as the  
46 Number 12 diesel is on with that 440 volt supply, the  
47 engineers stationed in the boiler room can start going  
48 through the lighting up process for the safety checks  
49 on the boilers?

1 MR. DAMSGAARD: Yeah. They probably can  
2 then.  
3 MR. RILEY: Thank you.  
4 MR. DAMSGAARD: I don't -- I don't know about  
5 which boiler because some of them go from the aft  
6 forward, but at least some of them -- some of the  
7 things can do that.  
8 MR. RILEY: And just to recap then, Chief,  
9 please, so, can you give me an estimate of the time  
10 from the black-out to the Number 12 diesel being on  
11 line so that the engineers could start up the lighting  
12 up process on a boiler? A rough estimate?  
13 MR. DAMSGAARD: When it's powered, they can  
14 start -- start. I don't know exactly how they do it,  
15 but -- but they can start the pumps as soon as we have  
16 power on the 440 volt.  
17 MR. RILEY: Sorry. Can I rephrase my  
18 question? I'm being misleading. The -- I'm trying to  
19 get an estimate of the time from the -- the time of the  
20 black-out where the Number 12 diesel is on the board so  
21 that they could then start operating in the engine  
22 room.  
23 MR. DAMSGAARD: Yeah.  
24 MR. RILEY: Approximately how -- how long --  
25 MR. DAMSGAARD: When it's on the board, they  
26 can start immediately.  
27 MR. RILEY: No, no. But what's the time lag  
28 between the -- you've had a black-out. The lights go  
29 out, and then Number 12's on line.  
30 MR. DAMSGAARD: I'd say 20 minutes, 30  
31 minutes. Whatever. I don't know.  
32 MR. RILEY: Okay. Thank you.  
33 MR. FOONG: Chris Foong, NCL.  
34 I just have two points to clarify. When you  
35 say that you -- from black-out and it was mentioned  
36 between one-one and a half hours to get power up, are  
37 you talking about giving power to all services on the  
38 ship?  
39 MR. DAMSGAARD: Yeah. All services.  
40 MR. FOONG: Okay. Now, on the -- my second  
41 question is when you mentioned the printer's obsolete,  
42 did you mean to say that it's -- it's a model that is  
43 discontinued?  
44 MR. DAMSGAARD: It's obsolete, yes.  
45 MR. FOONG: Thank you.  
46 MR. DAMSGAARD: Then I got another -- I got  
47 other example you can put in, but then we need  
48 something else for it and things like that.  
49 MR. FOONG: Some modifications?

1 MR. DAMSGAARD: Yeah. The ship's engineer  
2 want to get one, you know.  
3 MR. FOONG: That's all.  
4 MR. ROTH-ROFFY: Chief, Tom Roth-Roffy. Are  
5 you the senior chief electrician on the Norway or the  
6 junior? I mean, the person that relieves you, is that  
7 a particular person?  
8 MR. DAMSGAARD: I'm the chief, I'm the chief.  
9 MR. ROTH-ROFFY: Okay. Is there always one  
10 person that relieves you when you go on vacation?  
11 MR. DAMSGAARD: Yeah.  
12 MR. ROTH-ROFFY: Could you give us his name,  
13 please?  
14 MR. DAMSGAARD: He's Gunnar Bersaas, G-U-N-N-  
15 A-R, first name.  
16 MR. ROTH-ROFFY: Okay.  
17 MR. DAMSGAARD: B-E-R-S-A-A-S.  
18 MR. ROTH-ROFFY: Did you get that?  
19 G-U-N-N-A-R.  
20 MR. DAMSGAARD: Yeah. First.  
21 MR. ROTH-ROFFY: B-E-L-S --  
22 MR. DAMSGAARD: No. B-E-R- --  
23 MR. ROTH-ROFFY: E-R- --  
24 MR. DAMSGAARD: -- S- --  
25 MR. ROTH-ROFFY: -- A-A --  
26 MR. DAMSGAARD: -- S --  
27 PARTICIPANT: Bersaas.  
28 MR. DAMSGAARD: Bersaas. That's good. So,  
29 you say Bersaas.  
30 MR. ROTH-ROFFY: Okay. He is -- he relieves  
31 you when you go on vacation?  
32 MR. DAMSGAARD: Yeah.  
33 MR. ROTH-ROFFY: How long has he been on  
34 board the ship?  
35 MR. DAMSGAARD: Been on board ship since --  
36 two -- two years almost. About two -- I'm not sure,  
37 but I can think about two years.  
38 MR. ROTH-ROFFY: About two years?  
39 MR. DAMSGAARD: Yeah.  
40 MR. ROTH-ROFFY: And before that, was he  
41 sailing on the Norway?  
42 MR. DAMSGAARD: He was ashore before.  
43 MR. ROTH-ROFFY: About how long had he --  
44 MR. DAMSGAARD: Just come back to relieve me.  
45 MR. ROTH-ROFFY: Okay. But how long has he  
46 been working on Norway?  
47 MR. DAMSGAARD: Two years.  
48 MR. ROTH-ROFFY: Two years total?  
49 MR. DAMSGAARD: Yeah.

1           MR. ROTH-ROFFY: Okay. That's all I have.  
2           Brian?  
3           MR. CURTIS: No questions.  
4           MR. ROTH-ROFFY: Okay. It's amazing, but we  
5 are done with you. We appreciate your patience and  
6 understanding, and thank you very much for coming.  
7           The time is about 11:40 and that concludes  
8 our interview of the chief electrician.  
9           (Whereupon, at 11:40 a.m., the Investigative  
10 Interview of Chief Electrician Sverre Damsgaard, SS  
11 Norway, was concluded.)  
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