

'95 MAY -3 P2:39

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

BEGIN TAPE NO. 58, SIDE A

1 Swartzwelder: [Inaudible] plant equipment operator.
2 Voice: Hold on.
3 Swartzwelder: Thank you.
4 Mosbaugh: [Inaudible.]
5 Voice: It's probably the best one he's got, the handwritten one?
6 Mosbaugh: Yeah. These aren't transcript type. This is what
7 [inaudible]
8 Swartzwelder: It has to be what he had doing his LER, I think. I
9 believe that's what he had.
10 Mosbaugh: Yeah. This is because of the LER we're getting ready to
11 submit.
12 Voice: Okay.
13 Swartzwelder: Mr. Hairston
14 Voice: Yeah.
15 Swartzwelder: This is Jim Swartzwelder.
16 Voice: Hey, Jim.
17 Swartzwelder: Allen came in my office. He's here with me. He says
18 that you'd like to talk to Duane DeLoach or Slim Whitman.
19 Mosbaugh: Is Bill Shipman in with you?
20 Hairston: No. He's down on another phone downstairs.
21 Mosbaugh: Okay.
22 Hairston: We --
23 Swartzwelder: I have Duane here.
24 Hairston: Was Duane one of the operators that was in the --
25 Swartzwelder: That went to the diesel.
26

NUCLEAR REGULATORY COMMISSION

50-424-04A-3

Docket No. 50-425-04A-3 Official Ex. No. GPC 2

In the matter of Veggie Un. + 3 1-2

Staff IDENTIFIED ✓

Applicant ✓ RECEIVED ✓

Intervenor REJECTED

Cont'g Offr

Contractor DATE 04-17-95

Other Witness Mc Coy

Reporter J. Zilask:

1 Hairston: Duane, let me tell you what -- why -- I've got to sign
2 out this LER on this event.

3 DeLoach: Yes.

4 Hairston: And we're talking the first time the diesel tripped and
5 you went to the diesel.

6 DeLoach: Yes.

7 Hairston: And I don't have it right in front of me, but it --
8 [pause] get the words, what it said, "after the trip,
9 operators were dispatched to the engine control panel to
10 investigate the cause of the trip." This was after the
11 first one.

12 Voice: Okay.

13 Hairston: "According to the operator, several annunciators were
14 lit. Without fully evaluating this condition, the
15 operator reset the annunciators, and then, during the
16 same shift supervisor [inaudible]."

17 Voice: . . . PRB and they changed it . . .

18 Hairston: Now, the reason they're saying it is this way is, where
19 they can explain it, when they talk about what we were
20 investigating as to why we weren't really sure what
21 tripped it on the first time, and I had had them reword
22 that, and I don't have the rewording, but it said
23 something like this: "In order to restore power" or
24 something to that bus, I forget exactly how I worded it,
25 "the operator reset the annunciators without fully
26 evaluating the condition." What I wanted to do is say,

1 hey, you know, it wasn't he just went down and blindly
2 pushed the damn button.

3 DeLoach: Yeah.

4 Hairston: You were trying to get the diesel going. Now, what all -
5 - and I think all that's correct and you need to tell me
6 if its not, but what I'm trying to do is come up with an
7 additional sentence to put right in front of that,
8 something to the effect of, "The operator briefly looked
9 at several instrument readouts and no problems were
10 noted." There are two key things in that: One, it was
11 briefly -- you only looked at two, like, like I'm sure
12 you read the panel.

13 DeLoach: Yes sir.

14 Hairston: And did you look at, say, jacket temperature or pressure?

15 DeLoach: I glanced at all of the parameters on the panel to make
16 sure they were okay. Also, looked at the engine
17 physically itself to make sure there were no parts flying
18 apart somewhere, and that's the reason it wasn't running.

19 Hairston: And you did that before you reset the annunciator panel,
20 right?

21 DeLoach: Yeah. I walked by the diesel, looking at it on the way
22 in. Even though its dark, if there was a part laying
23 anywhere you would know it.

24 Hairston: But you actually looked at the gauges and you didn't see
25 anything abnormal.

26 DeLoach: Right.

1 Hairston: See, I don't want to say that you did a thorough look,
2 but, you know, I've operated myself and I know that you
3 just don't go out here and push the dang button without
4 scanning something. Do you think it's a true statement
5 that you briefly observed or looked at several of the
6 instrument readouts and noted no problems? Now, I didn't
7 say that there was a problem, it just basically says you
8 looked at several of the instrument readouts briefly, and
9 you didn't note a problem. Is that a truthful statement?

10 DeLoach: Yes, sir.

11 Hairston: You see, it just don't look right -- the way this thing
12 - read to begin with, it looks like you just went down
13 there and closed your eyes and pushed the reset button.

14 DeLoach: Yeah, I read that when I read it once already myself.

15 Hairston: And that's not right, is it?

16 DeLoach: No.

17 Hairston: Okay. Well, I just -- you know, I think you all did a
18 good job without talking -- just going down there running
19 that diesel -- you know, if there had been a problem,
20 running it into the ground and tearing it up. That's one
21 of the strong things I'm trying to say about this thing,
22 is that you all knew you had a little time, and you took
23 the time to check the diesel out, especially after the
24 second trip.

25 DeLoach: Yes, sir.

26 Hairston: So I feel comfortable with that. Jim?

27 Swartzwelder: Yes, sir?

1 Hairston: Do you feel comfortable with what I said?

2 Swartzwelder: Yes, sir. It was never intended to be otherwise. It

3 wasn't intended to have people running in with their eyes

4 closed.

5 Hairston: I know that, and I know why you put the sentence in

6 there, is where you could explain. Well, we didn't

7 exactly remember what those annunciators were. It was

8 put in there really to lead into, you know, what was said

9 later.

10 Swartzwelder: That's correct.

11 Hairston: But to the casual reader, he's going to read something

12 else into it. Do you see what I mean?

13 Swartzwelder: You're probably right, yes.

14 Hairston: Okay. And that's why I just wanted to add a little bit

15 in there and restructure the sentence. Well. Okay,

16 fellas. Are we doing torsional testing?

17 Swartzwelder: Yes, we're starting it now.

18 Hairston: Well, good luck.

19 Mosbaugh: We're more than starting.

20 Swartzwelder: And I'm thinking about going home a little early today.

21 Hairston: Ha, ha, ha. Who's that talking?

22 Mosbaugh: That was Swartzwelder.

23 Hairston: I'd feel bad if the rest of you all go home.

24 Swartzwelder: I don't really like this idea of torsional testing. But

25 I haven't successfully fought it, that's for sure.

1 Hairston: I understand that. Hey, thanks a lot. And I'm sorry to
2 disrupt you all, but I just wanted to make sure that, you
3 know, we had this as candid as we could.

4 Swartzwelder: Okay. Very good.

5 Hairston: Thank you much.

6 Swartzwelder: You bet. Bye now.

7 Hairston: Bye.

8 Voice: [Inaudible.] This is a new one on me.

9 Cash: I know about high ramp rates. Three percent until you
10 get your fuel conditioning out of -- never heard of a rod
11 withdrawal rate, three steps per hour.

12 Swartzwelder: What are you talking about?

13 Cash: That's what I'm asking him.

14 Swartzwelder: What are you talking about?

15 Mosbaugh: We had a rod withdrawal rate . . .

16 Cash: That's the first time I'd ever heard about it.

17 Mosbaugh: . . . for the initial restart.

18 Cash: Sam Bradley just gave Bill Burmaister a note that says,
19 "Hey, tell the control room, that greater than 20 percent
20 an hour, is three percent an hour." We knew that.

21 Carter: Yeah.

22 Cash: Greater than 50 percent an hour is three steps per hour.

23 Voice: Until rods, are all rods out.

24 Cash: I've never heard this one before.

25 Voice: [Inaudible.]

26 Cash: I just thought maybe you were familiar with it.

27 Swartzwelder: I've never heard it.

1 Mosbaugh: State that requirement again?

2 Cash: Greater than 50 percent an hour, maximum rod withdrawal
3 rate of three steps per hour.

4 Mosbaugh: I hadn't heard of that, either.

5 Cash: Bill's beeping --

6 Carter: Its in all the operators' boxes, too -- all the
7 supervisors' boxes -- [inaudible] sent a copy of the
8 letter, yes.

9 Cash: I've never heard about it.

10 Swartzwelder: The entire reason that we have rods [inaudible].

11 Mosbaugh: I can't help you.

12 -Swartzwelder: I'll tell you what we'll do. We'll go get the damn rods
13 out of the core below 50 percent.
14 [Pause.]
15 [Walking Sounds; Door Opening Sounds.]

16 Aufdenkampe: Well, the way -- Allen Mosbaugh just walked in, George,
17 so I'll put you on the speaker. The way my people came
18 up with the greater than 20 starts is they took the 18
19 and 19 starts and, based on the April 9th letter, and
20 they went and checked and found out how many starts we
21 had subsequent to April 9th. And that's why you can say
22 greater than 20.

23 Bockhold: I think you can say greater than 20. Ah, you know, we
24 even had more starts recently. We had a start last, the
25 other night.

1 McCoy: We need to be sure that we know the number of starts
2 after we've completed the comprehensive control test
3 program.

4 Aufdenkampe: I do have people right now going out through -- my people
5 going out through the RO's log.

6 Bockhold: From my numbers that I presented at the, at the
7 conference, they were verified correct by Jimmy Paul Cash
8 who went through the operators' logs.

9 McCoy: We ought to use those numbers.

10 Bockhold: Okay. So we'll say greater than those numbers that were
11 used in the conference.

12 McCoy: Right. And those, um, and those numbers you used in the
13 conference were after they had completed the
14 comprehensive test of the control system on each diesel?

15 Bockhold: That is correct. Those numbers were not before that
16 time.

17 Stringfellow: Are we going to say -- I just want to make sure I'm clear
18 -- are we going to say "Since 3/20/90, DG1A and DG1B have
19 been subjected to a comprehensive test program?" Or do
20 we want to say that kind of stuff, or do we want to just
21 say --

22 Bockhold: Yes, you can say that.

23 McCoy: That's pretty clear.

24 Voice: [Inaudible.]

25 Mosbaugh: [Side conversation with Aufdenkampe.] Gotta look at
26 those logs, friend. They ain't done it.

27 Voice: Right.

1 Voice: [Inaudible.]

2 Aufdenkampe: [Side conversation.] [Inaudible.] Is the operator
3 downstairs?

4 Mosbaugh: [Side conversation.] Yeah, he's done -- we're done with
5 Hairston on that.

6 Aufdenkampe: You guys talk to Hairston?

7 Mosbaugh: Hairston's happy with that one.

8 Aufdenkampe: But the wording was [inaudible]?

9 Mosbaugh: He's going to add something. There's a new sentence
10 going in front of -- the one --
11 [End of side conversation.]

12 Shipman: Eighteen and 19 -- what did you have in your presentation
13 George? Seventeen and 18 or 18 and 19?

14 Bockhold: Eighteen and 19.

15 Shipman: If we say greater than 18 --

16 Stringfellow: We mean more than 18 times.

17 Bockhold: Greater than 18 would be good.

18 Shipman: Fine.

19 McCoy: Wouldn't be more than 18 on one of them. It would be 18.

20 Stringfellow: Say 18 times.

21 Shipman: Okay, I understand, John and Al, if Al just walked in, I
22 understand that George [Hairston] just got off the phone
23 with Jim Swartzwelder and the operator and he is
24 satisfied now [phone ringing in background] with the --
25 what the operator did when he walked in the room.

26 Mosbaugh: Yeah, I was down there Bill. And I just ran up here.
.7 Yeah, we are done with that one.

1 Shipman: Apparently -- I don't know how George knows all this
2 stuff, but apparently he -- somehow he knew more about it
3 than you and I did.

4 McCoy: Well, he went down to the plant and talked [inaudible].

5 Mosbaugh: Well, no, I don't -- not really.

6 Shipman: It sounds like to me the operator, the operator said he
7 looked at something other than the annunciators.

8 Mosbaugh: He confirmed with the operator that the operator did a
9 cursory review of instruments. And the operator's
10 comfortable with, you know, some statement that's kind of
11 like that.

12 Shipman: He didn't lead the operator, did he?

13 Mosbaugh: I don't think so.

14 Aufdenkampe: Not very far [laughing].

15 Shipman: Well, he don't need to lead him at all. The guy might
16 get an opportunity to testify sometime about that. So,
17 you all don't let Mr. Hairston lead the operator.

18 Hairston: I didn't lead the operator.

19 Voice: Yeah, an hours worth.

20 Mosbaugh: [Laughs.]

21 Shipman: I'm making sure that we didn't put words in his mouth.

22 Hairston: No. He said he read that, because he had that same
23 statement, and that he read it.

24 Shipman: Okay.

25 Hairston: And Jim explained to him the reason it was put in there
26 was because it ties in later, and Jim said that's the
27 reason. It wasn't to make you think that the operator

1 just went down there and closed his eyes and hit the
2 button, but the operator said he didn't. Actually, the
3 operator said he did more. I said **survey** briefly. The
4 operator says he looked at all the gauges and he didn't
5 see any problem on them gauges. He said walking by and
6 he didn't see any mechanical problems. He said he didn't
7 look at it closely, it was dark, but, you know, he didn't
8 see any rods sitting out on the floor. But, you know,
9 what we put in there is less than what he verbalized to
10 me.

11 Shipman: Okay, I know how you are, and I'm just trying to make
12 sure we --

13 Hairston: I wouldn't lead nobody, I just want to make sure we don't
14 make the operators look dumb.

15 Shipman: Okay. All right.

16 Hairston: Of course, they'd probably say "that's just what the
17 shift supervisor told me to do."

18 Shipman: Let's see. What other questions do we got? We got the
19 start thing straightened out.

20 Stringfellow: The other question we had Bill, was the --

21 Hairston: [Interrupting.] We got the starts --

22 [Disputed Portion of Tape]

23 GPC Version: [Note: A Secondary Conversation Takes Place Simultaneous
24 To The Primary Conversation.]
25

	<u>Primary</u>	<u>Secondary</u>
1		
2	Voice: So we didn't have no,	
3	didn't have no trips?	
4	Voice: No, not, not . . .	Voice: It seems possible
5		[inaudible].
6		
7		Voice: [Inaudible].
8	Shipman: What else do we have,	
9	Jack?	
10		Voice: Have a copy of the
11		comments?
12	-	Voice: Yes, and he's read
13		it.
14	Stringfellow: 08:57 CST.	
15	Shipman: Oh, yeah.	Voice: We'll have it
16	Okay. The other problem	[inaudible].
17	we got that we got to	
18	wrestle with is the time	
19	of the -- when the	Voice: [Inaudible.]
20	notification began. We say	Voice: [Inaudible.]
21	the emergency director	Voice: [Inaudible] that
22	signed the notification form	they [inaudible]
23	used to inform off-site	
24	government agencies of the	
25	emergency at 08:48 central	
26	standard time and notifica-	
27	tions began at 08:57,	Voice: So must have been

1 and Mr. Hairston's question
2 is what happened between Voice: Yeah, [inaudible]
3 8:48 and 8:57? What -- models [inaudible].
4 does the word "began" mean?
5 Is that where he picked up
6 the ENM and found out it was
7 disabled or is that --
8 Bockhold: That's the time that the South
9 Carolina communicator logged
10 the receipt of an incoming
11 message from Plant Vogtle. Voice: [Inaudible.]
12 NRC Version
13 Hairston: So we didn't have no,
14 didn't have no trips?
15 Shipman: No, not, not . . .
16 McCoy: [Inaudible] three. I'll testify to that.
17 Shipman: [Inaudible] disavow. What else do we have, Jack?
18 McCoy: [Inaudible.]
19 Voice: Does he have a copy?
20 Voice: Yes, he's read it.
21 Stringfellow: [Inaudible] 08:57 CST.
22 Shipman: Oh, yeah. Okay. The other problem we got that we got to
23 wrestle with is the time of the -- when the notification
24 began. We say the emergency director signed the
25 notification form used to inform off-site government
26 agencies of the emergency at 08:48 central standard time
27 and notifications began at 08:57, and Mr. Hairston's

1 question is what happened between 8:48 and 8:57? What --
2 does the word "began" mean? Is that where he picked up
3 the ENN and found out it was disabled or is that --

4 Bockhold: That's the time that the South Carolina communicator
5 logged the receipt of an incoming message from Plant
6 Vogtle.

7 Intervenor Version

8 Hairston: So we didn't have no,
9 didn't have no trips?

10 Shipman: No, not, not . . .

11 McCoy: Let me explain. I'll testify to that.

12 Shipman: Disavow. What else do we have, Jack?

13 McCoy: I have Pat, ah, comments.

14 Hairston: Yes, he's read it.

15 Stringfellow: [Inaudible] 08:57 CST.

16 Shipman: Oh, yeah. Okay. The other problem we got that we got to
17 wrestle with is the time of the -- when the notification
18 began. We say the emergency director signed the
19 notification form used to inform off-site government
20 agencies of the emergency at 08:48 central standard time
21 and notifications began at 08:57, and Mr. Hairston's
22 question is what happened between 8:48 and 8:57? What --
23 does the word "began" mean? Is that where he picked up
24 the ENN and found out it was disabled or is that --

25 Bockhold: That's the time that the South Carolina communicator
26 logged the receipt of an incoming message from Plant
27 Vogtle.

1 [End Disputed Portion of Tape]

2 [Background Conversation Going On At Same Time Mr.
3 Hairston Is Speaking.]

4 Hairston: All right, let me tell you -- why I asked the question?
5 You know, what -- you have a picture in your mind of the
6 shift clerk trying to pick up the ENN, and its dead. Do
7 you know what I mean?

8 Bockhold: Yeah.

9 Hairston: And then she, or whoever made the decision to start with
10 the backup [inaudible]. Now, so, the way it looks, if we
11 can say that you signed the form and then a minute later
12 or for several minutes an attempt was made to make a
13 notification. That the ENN was noted to be without power
14 at 8:57, or whenever it was, South Carolina was notified
15 or initiated at 8:57 on the backup ENN, it just reads
16 better. You know what I mean? It looks like --

17 Bockhold: That's fine. That's what happened. Yeah, you know --

18 Hairston: Well, you and Bill draft up some words to that effect
19 right in there, because that fills in some blanks. It
20 looks good up to you signing the form, and then there's
21 like 15 minutes.

22 Bockhold: Actually, it's John Hopkins who signed the form because--

23 Hairston: Hopkins? But then it looks like just nothing went on,
24 and you know something went on.

25 Bockhold: Well, she tried to get people and then she couldn't get
26 people, so then went over to the backup ENN and started
27 a roll call, but the roll call really wasn't complete

1 because the South Carolina people, the first time they
2 logged it on their log was, you know, 57, and a couple of
3 people logged that consistently as the time -- that,
4 that's the time that the critique team went ahead and
5 decided was probably the most reliable time that the
6 message was starting to come out.

7 Shipman: Okay. George, do you have a copy of -- John -- anybody,
8 a copy of the LER there?

9 Aufdenkampe: I have a copy of the LER here.

10 Shipman: [Noise.] Hello. Why don't you give it to George and
11 let's word engineer this phrase to take care of the
12 concern that Mr. Hairston had.

13 Bockhold: Let's do it right now and simply say that -- add a
14 sentence that says the, the shift clerk went to the
15 primary ENN, and it had lost power; had to go to the
16 back-up ENN, conduct a roll call before the initial
17 message was started at [inaudible] 9:57.

18 [Pause.]

19 Bockhold: Did you get that Bill?

20 Shipman: Yes. I'm trying to write so I can read it back.

21 [Pause.]

22 Aufdenkampe: How do we think we're doing on this critique? Did we do
23 a lot of things wrong?

24 Webb: Well, we really haven't said we've done anything.

25 Shipman: Okay. Now, let me -- I got everything but the last
26 phrase. I wanna read it to you. "The shift clerk went
27 into the primary ENN and found it had lost power. The

1 shift clerk then went to the backup ENN and initiated
2 notification," and I need the last phrase to that.

3 Bockhold: Initiated notification after roll call.

4 Shipman: After roll call . . .

5 Bockhold: At whatever time. You use an Eastern time in there, so
6 it would be 9:57.

7 Shipman: Okay.

8 Aufdenkampe: The LER had Central time in it.

9 Shipman: So we got 8:57 Central Standard Time. Okay. I think --
10 that may not be the exact phrasing that comes out, but
11 that's the data you think we need to put in there and
12 we'll get that data, that sense in there for sure. Okay.
13 Anything else, Jack? Anything else that I need to get
14 Mr. Bockhold --

15 Stringfellow: Okay. We got the thing about, we got the thing about
16 what the operator saw when he got in there.

17 Shipman: -- the diesel starts. We got the time . . .

18 Stringfellow: We got the 08:57, we got that straightened out. I can't
19 think of anything else.

20 Shipman: George, I don't think we have anything else at this red
21 hot minute.

22 Aufdenkampe: Hey, Bill.

23 Shipman: Yeah.

24 Aufdenkampe: This is John. Are these all the changes that we're going
25 to make, because I don't think there's anything
26 substantial that needs a PRB.

27 Shipman: I won't make that guarantee, John.

1 Aufdenkampe: Okay. So I need to keep somebody on standby to do that.
2 Shipman: Yes, sir. You sure do.
3 Aufdenkampe: Okay, I'll have whoever is going to be on standby give
4 Jack a call in case, you know, this drags on till 7:00 or
5 8:00 at night or something like that.
6 Shipman: But it's not going to drag on that long.
7 McCoy: We'll be done with it in about 30 minutes with the
8 changes, and we'll call you back and let you know and you
9 can make a judgment on whether you have to go back to the
10 PRB.
11 Aufdenkampe: Okay. That's fine.
12 Bockhold: Hey, Bill?
13 Shipman: Yes, sir.
14 Bockhold: You know my afternoon plans, so I need to run.
15 Shipman: All right. Well, John, Al, could one of you give us just
16 a 30 second update on where we are with the test?
17 Bockhold: I spoke to the control room, and they were about to close
18 the breaker, and so the test was proceeding.
19 Mosbaugh: I think that's been done at 1800 RPMs and they had gotten
20 the negative sequence. They were exciting, using the
21 temporary excitation equipment and they had gotten up to
22 like -- I think it was like two-and-a-half negative
23 sequence, and everything was going fine.
24 McCoy: Have we seen any --
25 Mosbaugh: No anomalies?
26 McCoy: No anomalies yet?

1 Mosbaugh: No anomalies, and they're going to do a little more
2 excitation, and then they take the machine up to a higher
3 RPM.
4 Shipman: Okay. Thanks, Allen.
5 Aufdenkampe: Okay. Jack, you're going to call me?
6 Shipman: Yeah. Okay. Bye, folks.
7 Voice: Bye.
8 Shipman: Goodbye, George.
9 [Pause]
10 [Marginalia: "Performance Report"]
11 Voice: It sounds like he's [inaudible].
12 Voice: [Inaudible.]
13 Minyard: [Inaudible], it will be lost forever.
14 Mosbaugh: Why?
15 Minyard: Stephanie will not go to the airport and pick it up. It
16 will sit there forever.
17 Voice: [Inaudible.]
18 Aufdenkampe: Why don't we just fax it up to her?
19 Minyard: If you'd like us to modem it and fax the cover sheet.
20 Voice: [Inaudible.]
21 Minyard: If I modem her just [inaudible] letter, sure.
22 Aufdenkampe: You know, we can -- she can start working on it.
23 Whatever she has to do with it, we can fax it up to her.
24 Voice: [Inaudible]
25 Williams: There's a cover letter on it.
26 Aufdenkampe: What day does she have to send it out?
27 Minyard: It's supposed to be at McCoy's tomorrow.

1 Williams: If we Delta Dash it out tomorrow morning after it's
2 signed, it will get there tomorrow afternoon. She can
3 put her letter on it and get it to [inaudible].
4 Minyard: Stephanie says she will not get it at the airport because
5 its our problem we can't get it out earlier.
6 Williams: [Inaudible] get all the information, and send it out
7 without all the information.
8 Aufdenkampe: Yes. What is this?
9 Williams: We can't get cents per kilowatt.
10 Minyard: They don't know how to calculate for kilowatt.
11 Williams: They don't know how to calculate for kilowatt for either
12 - one.
13 Aufdenkampe: Why, because its infinite?
14 Williams: Well, for the month of March.
15 Minyard: And they can't start -- they haven't decided how they're
16 going to account for the break in the cycles and where
17 the time in between cycles --
18 Aufdenkampe: Okay. Am I going to get in the [expletive] over this one
19 now, too?
20 Williams: Why?
21 Voice: I don't know. I just [inaudible.]
22 Voice: The more reason Stephanie won't go to the airport.
23 Voice: Hey.
24 Voice: Hey.
25 Aufdenkampe: Can you find a way home?
26 Burwinkle: Not thirteen minutes after everybody's left. I'll try.
27 Aufdenkampe: I'll be able to leave in a half-an-hour.

1 Burwinkle: Do you got some emergency going on?

2 Aufdenkampe: No. I just have to sit here for a half-an-hour as
3 punishment for crimes in a previous life, is really all
4 I can figure. Is that a good assessment, Allen?

5 Williams: Hey, he's getting off light. You're getting off light.

6 Mosbaugh: Where's the other control for the . . .

7 Aufdenkampe: How's that?

8 Burwinkle: Have you guys figured out how come the diesel starts when
9 it ain't supposed to?

10 Aufdenkampe: No. I'm trying to figure out how many times the diesel
11 started, but that's, that's irrelevant, too. It's just
12 that corporate's reviewing the LER on the Site Area
13 Emergency, and I got to tell them whether we need to take
14 it back through the PRB. And I've already determined,
15 regardless of what they change, it doesn't need to go
16 back to PRB, but I can't tell them that until after the
17 fact, and they're going to call me in a half-an-hour. I
18 told you its for crimes in a previous life. I would have
19 tried to call you, but I've been talking to some guy
20 named Bockhold and -- what's that guy's name? Hairston
21 and McCoy and Shipman for the last 35 minutes.

22 Burwinkle: All right.

23 Aufdenkampe: Sorry.

24 Burwinkle: I'll call you back, bye.

25 [Noise. Phone Rings.]

26 [Background Noise; Inaudible Voices.]

7 [JGA Listens To His Voice Mail.]

1 [Pause.]

2 Aufdenkampe: I'm trying to get through.

3 Williams: [Inaudible.]

4 [Aufdenkampe Calls His Home.]

5 Aufdenkampe: Hello. What are you guys doing? Is your Mom there?

6 I've not left yet. It will probably be a half-hour

7 before I can get out of here. Anything going on?

8 [Inaudible conversation. Mr Aufdenkampe speaks with his

9 daughter, Sarah.]

10 [Walking Sounds. Break in taping.]

11 Shipman: -- and that they should not be included because they were

12 part of the return to service of the diesel coming out of

13 the overhaul, and this count only included those starts

14 after we had calibrated all these sensors. John, you

15 heard George Bockhold's logic.

16 Mosbaugh: Yes, so, but what I'm is, let's say we had ten starts on

17 the machine between the 20th and the time we declared it

18 operable or completed our logic testing, you know, and

19 then interspersed in there on the -- maybe the third,

20 fifth and sixth starts --

21 Shipman: We would discount any failures.

22 Mosbaugh: -- were failures, you know, then I think what we're

23 saying is we would start counting at the ten point, if

24 that was an example.

25 Shipman: Right. We would discount those starts prior to when we

26 did that calibration.

1 Mosbaugh: So we want to start it after we completed the logic, the
2 logic test?

3 Shipman: The -- what I understood that George had done was started
4 after we completed the recalibration of all the
5 instrumentation. That's when we ought to have, you know,
6 as far as our instrumentation is concerned, that's when
7 we ought to have had valid set points and good
8 instruments. That's what we're trying to show, that the
9 unit starts -- when that's been done correctly, that the
10 unit starts reliably, starts and runs reliably. Does
11 that make sense, and can we get to that data?

12 Mosbaugh: We have the data. The question is, is what's that date
13 and time? [Laughing] What -- what, as soon as we get to
14 the point at which we want to start counting, we can get
15 the count pretty quick.

16 Aufdenkampe: Well, not pretty quick, but --

17 Shipman: How do we get to that point, Al?

18 Mosbaugh: Well, you know what? I can tell you that the thing we
19 did is we went in and, you know, we changed out a bunch
20 of switches, we went in and then did logic tests, we went
21 into the undervoltage tests, and then we finally ran the
22 surveillance on the machine, and at that point that we
23 completed the surveillance on the machine, we called the
24 machine operable. You know, . . . so the question again
25 comes back to at what point are we going to start
26 counting?

1 Shipman: Well, George said he started counting after we had
2 completed the instrumentation recalibration, okay? So
3 that's one point we can start counting, if we can define
4 that point. I can't define it. I don't, you know, I
5 don't know when that was. Somebody generated this set of
6 data that generated the numbers 18 and 19 to George on
7 that basis.

8 Aufdenkampe: That was Jimmy Paul Cash.

9 Mosbaugh: Jimmy Paul did. Let me go downstairs and talk to Jimmy
10 Paul and see --

11 Aufdenkampe: Okay. I'm trying to get Swartzwelder up here.

12 Mosbaugh: Swartzwelder? Okay.

13 Shipman: Okay. One other thing we could do, Al, you know, saying
14 we still continue to have problems with trying to define
15 this. We could back away from this completely, and
16 change this to say how many starts we've had since we
17 declared the diesel operable.

18 Mosbaugh: Yes, that --

19 Aufdenkampe: That would be more --

20 Mosbaugh: That's easy to define. We just go into OPS LCO's and
21 find out when they cleared the LCO and we'll know that
22 point real easy. That's an easy point to find. I think
23 the other point we'll have to find by talking to Jimmy
24 Paul Cash.

25 Shipman: The problem with that is that that number is going to be
26 significantly less, I think, than what George told
27 Mr. Ebnetter, and, you know, it's going to create a

1 selling job for me, I think, but -- if that's the only
2 way we can tell a valid story that, you know, we can
3 defend if somebody calls Allen Mosbaugh, Bill Shipman and
4 John Aufdenkampe to testify, that's the story I want to
5 tell.

6 Mosbaugh: Well, I think -- you know, let me -- let me, let me try
7 some logic here. We have these two failures, and now
8 John says there are three failures. You know, we're kind
9 of saying, hey, those are not valid failures, you know,
10 because we were coming out of maintenance on the machine
11 and had yet to declare it operable. You know, that's how
12 and why we're discounting those failures.

13 Shipman: So we had yet to, to, to determine that coming out of an
14 outage on the machine, we had to go and basically do a
15 complete set of recalibrations of the instruments. That
16 was the logic that George used, not that, not that we
17 were declaring it operable, because we obviously hadn't
18 declared it operable.

19 Mosbaugh: Well, one of those failures was when we were doing the,
20 you know, an eight-hour loaded run. I would sure hope to
21 hell think that we had calibrated the instruments before
22 we did an eight-hour loaded run.

23 Shipman: Well, not according to George. We hadn't recognized the
24 need to go back and redo all those things. Is that not
25 what he said John Aufdenkampe?

26 Aufdenkampe: That's what I understood.

1 Mosbaugh: I'm just thinking from the standpoint of testing logic.
2 You know, you're going to do an eight-hour loaded run on
3 the machine, you know, obviously the component testing
4 ought to be done at that point.

5 Shipman: Well obv . . . , you know, on 1A obviously we thought we
6 had done everything we needed when we returned it to
7 service.

8 Aufdenkampe: It was operable.

9 Mosbaugh: Yeah. It was declared operable.

10 Shipman: We found out that we hadn't, and George is saying, oh,
11 oh, hey, gang, from the time we realized that 1A or 1B,
12 we had to do a complete recalibration and make sure we
13 had our facts together on all the instruments, we had
14 many many starts. I'm trying to, I'm trying to defend
15 George and --

16 Aufdenkampe: Well, you know, the bottom line is on the B diesel, we
17 had done major maintenance on it. We were in the process
18 of testing to, making sure it was working right. During
19 that testing process, we had it fail apparently three
20 times. Once we got all the bugs worked out of it --
21 since the point we got all the bugs worked out of it that
22 we've had -- we had -- and I'm kind of guessing, but uh,
23 27 starts, because I don't know where the three failures
24 are in the sequence of 27 starts, but we had X number of
25 starts. And George's argument to that is, after we got
26 all the bugs worked out, we had 18 starts.

1 Shipman: What he's trying to do is he's trying to show by data
2 that once you get the bugs worked out, like you say,
3 John, the diesel works fine.

4 Aufdenkampe: That's right. And that's regardless of the point of
5 declaration of operability or not.

6 Shipman: Fine. Right.

7 Aufdenkampe: You know, I think what we discussed on how to handle
8 those, the number of actual diesel starts, how we
9 discussed that before, I think we ought to just leave it
10 at that.

11 Shipman: Just say at least 18 times each, huh?

12 Aufdenkampe: Yeah.

13 Shipman: Okay.

14 Aufdenkampe: I mean, that, that, that -- somebody has gone and
15 validated that data, and that's what George presented.
16 The data that's been offered to us does not bring into
17 question that data.

18 Shipman: Okay.

19 Aufdenkampe: It tends to support that data. Would you take exception
20 to that Allen?

21 Shipman: We're going to go with that. Jack Stringfellow's just
22 grinning from ear to ear.

23 Aufdenkampe: The only issue is, we can't let people be misled, to
24 think that there were not failures until we started doing
25 that count.

26 Shipman: And we say that -- we say "After the 3-20-90 event, that
27 the control system with both engines have been subjected

1 to the comprehensive test program. Subsequent to this
2 test program, diesel generator 1A and 1B have been
3 started at least 18 times each, and no failures or
4 problems have occurred during any of these starts."

5 Mosbaugh:

6 When you read it that way to me, Bill, when you talk
7 about the comprehensive test program, you know, I kind of
8 set the philosophy for that down here, is that we would
9 have a test program to, you know, determine root cause
10 and restore operability, and, uh, you know, that kind of
11 sounds like what I talked about down here on our diesel
12 test program, and it sounds like that is kind of
13 establishing the starting point, you know, at least at
14 the point in time after which we did the UV testing.

15 Shipman:

16 Let me add one more additional fact in here that I think
17 will help us as we struggle with this to make sure we're
18 not trying to mislead somebody, at least the people we
19 most want not to mislead, and that's the Region II folks
20 and IIT team. Since we started discussing this issue,
21 some half hour ago or hour ago, whenever it was. Pat,
22 since we had an issue with this, not Pat, but Ken [McCoy]
23 went and called Ken Brockman --

24 Voice:

25 Yeah.

26 Shipman:

-- and talked to him about, you know, the numbers and
what the basis of the number was as George Bockhold
described it, and asked Ken if he understood that, you
know, and if they had understood that in Atlanta on that

1 basis, and Ken said, "Yes, absolutely we did, and also
2 the ITT team understands that."

3 Aufdenkampe: There's no question, I think, that the IIT team
4 understands that.

5 Shipman: Which is the basis, as well. So from that sense, you
6 know, the people we're trying to tell understand the
7 basis for the number George presented, and we really
8 aren't changing George's number.

9 Aufdenkampe: Jim Swartzwelder just walked in, too. He's going to help
10 shed light on various things.

11 Shipman: Various things.

12 -Aufdenkampe: Because I'm not sure I can answer --

13 Swartzwelder: Other things he doesn't want to shed any light on.

14 Shipman: Things he doesn't want to be quoted on, right?

15 Aufdenkampe: Other things that I'm in the dark --

16 Swartzwelder: That's correct.

17 Aufdenkampe: That I'm in the dark on.

18 Voice: [Inaudible]

19 Voice: And I would never hear.

20 Shipman: Well, I don't know if --

21 Aufdenkampe: I want to go over Pat McDonald's comments with him.

22 Shipman: Okay.

23 Aufdenkampe: Well --

24 Shipman: You want to run back through them?

25 Aufdenkampe: Yeah. Let's just start at the beginning and -- because
26 you can go ahead and read him what you, how you rewrote
27 what the operator said.

1 Shipman: Okay. Well, let me start at the beginning with Pat's
2 comments --

3 Mosbaugh: Do you have it?

4 Shipman: -- and the first one on the abstract --

5 Voice: Not to look at.

6 Shipman: -- Jim, is very straightforward. Pat --

7 Voice: Try to look at my copy.

8 Shipman: -- picked up the fact that we called it the core instead
9 of the RCS. We got that corrected, John agreed that
10 we're really talking about the RCS.

11 Voice: Yes. That comment was discussed in there.

12 Swartzwelder: Well, we discussed it with respect to the analysis of the
13 event.

14 Voice: Yeah. We fixed it there.

15 Voice: Yes.

16 Voice: Well, we didn't fix it here.

17 Swartzwelder: Okay. That's good. Yeah, that's good.

18 Aufdenkampe: Tell him we'll give him an 'at-a-boy for that. Tell Pat
19 we'll give him an 'at-a-boy for that one.

20 Shipman: That's what I told George a while ago. That's what we
21 keep him around here for. The second place, Jim, that
22 Pat had a comment was on Description of Event, fourth
23 from the last paragraph, and I think this is one that we
24 didn't settle on a while ago, John, that we have to do
25 something with. The statement reads like this, and it's
26 really the last paragraph before this, and this one, too,
27 I think: "The only alarms noted by the control room

1 operator assigned to diesel generator operation were lube
2 oil pressure sensor malfunctioning, fuel oil level
3 high/low alarm." Pat's concern is we open an issue
4 there, and nowhere in the LER do we ever close it by
5 saying these were invalid alarms, they were sensor
6 failures, they were normal for the condition, you know.

7 Swartzwelder: Where is that from? Bill, what paragraph are you in?

8 Shipman: I'm in the fourth from the last, the bottom of the fourth
9 from the last paragraph under Description of Events.
10 There is also a question at the bottom of the third
11 paragraph from the last one, the third paragraph from the
12 last.

13 Swartzwelder: Wait a minute. I think I see where you are now. Hold
14 on.

15 [Pause.]

16 Swartzwelder: Okay. And the concern is we never closed that up
17 anywhere? Is that what the --

18 Shipman: Right. We just, we just, you know, opened up something
19 the guy saw, and we never say whether it was valid,
20 invalid, or important, not important, you know. It's
21 just left hanging.

22 Swartzwelder: You're right.

23 Shipman: No corrective actions dealing with it you know.

24 [Rustling Noise; Break In Taping.]

25 Shipman: . . . 20-90 event [Reading] "the control system to both
26 diesels have been subjected to a comprehensive test
7 program," period. "Subsequent to this test program,

1 Diesel Generator 1A and Diesel Generator 1B have been
2 started at least 18 times each, and no failures or
3 problems have occurred with any of these starts," period.
4 John can walk you through all of the discussion. I just
5 don't think I want to go through it all again.

6 Aufdenkampe: Well, why not, Bill?

7 Shipman: I've been around that tree so many times today.

8 Aufdenkampe: All right. It's getting soggy around there.

9 Shipman: It sure is.

10 Aufdenkampe: Okay.

11 Shipman: Okay, fellows. I appreciate you all's helping. Hang
12 with us on this. I think I said earlier that the thing
13 has such a political impact that Ken and Pat and George
14 all wanted to fine-tune it for technical as well as
15 political implications.

16 Swartzwelder: Yes. It reads somewhat like we might be sending a direct
17 copy to the Governor.

18 Shipman: Well, and probably to the Secretary of Energy and --

19 Swartzwelder: I understand.

20 Shipman: -- a few other people.

21 Aufdenkampe: Yeah. I got a call from some guy named Bush that lives
22 in the White House. He wanted me to fax him a copy.

23 Shipman: I never told you all this, but the day of the incident,
24 and five different times since then, I've gotten a call
25 from a fellow named Dick Olde, who works for a guy who
26 works for the Secretary of Energy Watkins.

27 Swartzwelder: Is that right?

1 Shipman: Yes, and he was just enraged by the press that we got.
2 I mean, he just was literally livid that they were
3 reporting it the way they were.
4 Aufdenkampe: Bill, unless you tell me different, I'm going to let my
5 PRB people go home.
6 Shipman: They are. You've heard all the changes we were going to
7 make, unless you feel like we need to review them, I
8 certainly don't.
9 Aufdenkampe: No. No.
10 Shipman: We will get this printed up and signed out of here and
11 we'll telex you a copy down.
12 Aufdenkampe: Okay. Thanks a lot.
13 Shipman: Thank you. Jim, let me just . . . why don't you just
14 hang on, and I'll let you talk to Ken.
15 Swartzwelder: I'll walk downstairs and call him.
16 Shipman: Okay.
17 Swartzwelder: All right. Bye-bye.
18 Voice: I get four. This is unclear.
19 Voice: [Inaudible]
20 Swartzwelder: I don't have the faintest idea.
21 Voice: This is a no smoking room.
22 Voice: Oh, good.
23 Voice: I'll agree to anything. Sure. Sure.
24 [Concurrent Laughter.]
25 Mosbaugh: Jim, Jim, Jim.
26 Voice: No. Don't tell me.
7 Swartzwelder: I tripped the diesel myself --

1 Voice: No. Don't tell me about the fact that the company policy
2 has now been changed.

3 Mosbaugh: No, I'm not talking about smoking at all. Jimmy Paul
4 supposedly counted these starts for George, and then he
5 provided the information that George took to the
6 presentation in Atlanta. Do you know how he counted them
7 or where he started?

8 Swartzwelder: No, but he's still here.

9 Mosbaugh: Okay.

10 Swartzwelder: Cathy was to . . . whenever I got here, he was still
11 here. [Inaudible.]

12 Mosbaugh: I'll try to get him.

13 Swartzwelder: 67 is his beeper.

14 Aufdenkampe: [Talking On The Phone.] I'm leaving now. Okay, bye.

15 Voice: [Inaudible.]

16 Mosbaugh: I can't find enough starts so far.

17 Aufdenkampe: Can you find 18?

18 Mosbaugh: No. Not even close . . .

19 Aufdenkampe: Odom got this.

20 Mosbaugh: I'm not sure when he started.

21 Aufdenkampe: He started March 20th.

22 Mosbaugh: Oh, sure, sure, if you start March 20th. But, their
23 words say it completed a comprehensive test program.

24 Aufdenkampe: George said the comprehensive test program ended after
25 the third trip.

26 Mosbaugh: Well, that's bull [expletive]. The undervoltage testing
27 and all that is all part of the comprehensive --

1 certainly the undervoltage testing is part of the
2 comprehensive test program, right?

3 Aufdenkampe: On Unit 2? On Unit B?

4 Mosbaugh: On the B unit, the undervoltage testing is certainly part
5 of the comprehensive test program.

6 Aufdenkampe: I don't know, Allen.

7 Mosbaugh: Well, [expletive], it was part of the test program that
8 we put in writing in the little schedule we gave to the
9 IIT.

10 Aufdenkampe: I personally don't think it matters whether we put in 18
11 or 40.

12 Mosbaugh: I think it personally matters a [expletive] of a lot
13 because you can't put false information in written
14 correspondence to the NRC.

15 Aufdenkampe: Well, in the -- well, I agree with that one. The reason
16 I don't think it matters is because, regardless of how we
17 put it in there, when they come and ask us questions
18 about it, we'll tell them this is what our basis for it
19 was. This is why we get 18. If they interpret it
20 differently, we're sorry. We'll send a rev out. You,
21 you don't agree with me on that.

22 Mosbaugh: I'm having trouble counting starts. I can't find very
23 many starts.

24 Aufdenkampe: And I'm not talking wrong or right, [inaudible] I'm just
25 talking practical. The practical side of it is that
26 that's what will happen.

27 Mosbaugh: I can't find enough starts.

1 Aufdenkampe: Its just like, you know.

2 Mosbaugh: I'm really having trouble finding starts, and maybe they
3 are not all logged here because --

4 [Marginalia: "Tom Webb & Odom was working on a list of starts."]

5 Aufdenkampe: They are all logged there.

6 Mosbaugh: They are all logged? There's Jimmy.

7 Cash: [Inaudible.] I went through the log book page by page.

8 Mosbaugh: When did you start? Where did you start at?

9 Cash: When did I start what?

10 Mosbaugh: You've got the information --

11 Aufdenkampe: You told George about the failures, right? You gave him
12 failures as well as valid starts.

13 Cash: I gave him every one that we -- every start that we have
14 done.

15 Aufdenkampe: You took one, it started, it failed. Two, it started and
16 passed. Three, it started and failed. Four, started and
17 passed. Is that how you gave it to him, or did you just
18 give him totals.

19 Cash: Totals.

20 Aufdenkampe: You told him there were 20 valid starts. Are there 20
21 starts, three failures?

22 Cash: I'm not sure if I found the failures or not.

23 Aufdenkampe: George was aware of the failures is what he told Shipman
24 on the phone.

25 Mosbaugh: The information George presented when he was in Atlanta--

26 Cash: Right.

27 Mosbaugh: -- okay, --

1 Cash: Right.

2 Mosbaugh: -- you got some information together for him.

3 Cash: Right.

4 Mosbaugh: When did you start counting and what did you count?

5 Cash: 3-20.

6 Mosbaugh: You started on 3-20?

7 Cash: Right. For 1A diesel, the total numbers included, the

8 three maintenance starts that we did the night of 3-20.

9 Mosbaugh: Okay.

10 Cash: Out of service, I can't count.

11 Mosbaugh: Okay. And for the B machine --

12 Cash: Everything -- well, it was out of service then.

13 Mosbaugh: Again, every start from the very beginning?

14 Cash: Right. [Inaudible]

15 Mosbaugh: Okay.

16 Aufdenkampe: So, you know.

17 Mosbaugh: And so as of that date and for that presentation, then,

18 those were the --

19 Cash: But not as of the date now.

20 Mosbaugh: Yeah. Those were the 18 and 19 as of the date that

21 George presented it.

22 Cash: Right.

23 Mosbaugh: Okay. Some of those starts resulted in a failure.

24 Aufdenkampe: You didn't count the failure, though.

25 Cash: Uh-uh.

26 Aufdenkampe: The bottom line, Allen, is what we wrote in this LER just

27 now, the comprehensive, the comprehensive test program is

1 not defined, but basically you have to assume that if
2 George, and George told Shipman that it started after the
3 third failure. Now, if you disagree with that --

4 Cash: The third failure?

5 Voice: The third failure?

6 Aufdenkampe: The third failure.

7 Mosbaugh: I'm not agreeing or disagreeing with anyone. I'm just
8 trying to find out what's been done. It's . . .

9 Aufdenkampe: Well, that's where the numbers, that's where the numbers
10 come from.

11 Cash: . . . failures . . .

12 Mosbaugh: It sounds like Jimmy counted everything starting from the
13 20th.

14 Aufdenkampe: That's what Odom did.

15 Mosbaugh: Okay.

16 Cash: You guys come up with different numbers or something?

17 Mosbaugh: No. Odom counted up to present, and you counted up to
18 the --

19 Aufdenkampe: [Inaudible] because you counted up to present at the time
20 you did it.

21 Mosbaugh: Up to the 9th, or so, at the time you did it. But you --

22 Cash: What did Rick come up with?

23 Aufdenkampe: Twenty-seven and 38, or something like that.

24 Cash: We've been running the hell out of those diesels.

25 Mosbaugh: Oh, yeah.

26 Voice: Okay.

1 Cash: We're going to run them into the dirt is what we're going
2 to do. [Laughing.]
3 Voice: [Inaudible.]
4 Aufdenkampe: Where do you want to go with this Allen?
5 Mosbaugh: There's no place to go with it. We have already --
6 Hairston has already submitted a letter stating the same
7 thing the LER states. Right?
8 Aufdenkampe: Yeah.
9 Mosbaugh: All we did is state the same thing in this LER that
10 Hairston already stated in the letter.
11 Aufdenkampe: And George has an argument on why that's correct.
12 Mosbaugh: And that's the same thing that George presented at the
13 meeting.
14 Aufdenkampe: George has an argument on why that is correct, and Ken
15 McCoy called and said, you know, called Brockman, and
16 Brockman understood what that meant.
17 Voice: Do you want them?
18 [Pause.]
19 Aufdenkampe: Do you need anything from me before I leave?
20 Voice: [Inaudible.]
21 Mosbaugh: No.
22 Aufdenkampe: Do you want to buy another bunch of bingo tickets?
23 Mosbaugh: I don't know how many I bought.
24 [Laughter.]
25 Mosbaugh: One? That's probably enough, isn't it? Enough to win,
26 right? Is that enough to win?
27 Aufdenkampe: I imagine that's really enough to win.

1 Mosbaugh: Okay.

2 [Break In Taping.]

3 Voice: [Inaudible] right now?

4 Voice: [Inaudible.]

5 Voice: Oh, okay.

6 Swartzwelder: Yeah. It is Saturday night and I'll even reconfirm that,
7 if they want me to.

8 Voice: No, that's okay.

9 Swartzwelder: All right.

10 Voice: Okay. Bye.

11 Swartzwelder: Bye-bye.

12 Mosbaugh: Not more INPO.

13 Swartzwelder: No. He just was wondering when [inaudible].

14 Voice: Same old . . .

15 Mosbaugh: How's the turbine test going? Have any idea?

16 Swartzwelder: Yes, they were -- when I came [inaudible], I was down in
17 [inaudible] and John's office. They were on their way to
18 100 RPM from 1800.

19 Mosbaugh: They did the 1800 test, and they excited, and they did a
20 couple percent of negative sequence, and had all of the
21 data is what I heard.

22 Swartzwelder: Yeah. I think the bulk of the testing actually -- the
23 testing -- I think they were just doing minor testing at
24 1800. The bulk of the testing is the ramp up with a max
25 negative.

1 Mosbaugh: Yeah. They had gone to like one -- two-and-a-half
2 percent negative sequence current, or something like
3 that, at 1800.

4 Swartzwelder: I thought they went to 5%.

5 Mosbaugh: Yeah. Well, when I talked to them last, they had done
6 two-and-a-half percent, and then I guess they were
7 ramping that up to like five percent, and then what do we
8 do? Then we come back to 100 and do five percent all the
9 way up, or something like that?

10 Swartzwelder: I'm not sure five percent is --

11 Mosbaugh: Or whatever the max is.

12 Swartzwelder: As specified by maximum, you know, excitation.

13 Voice: Okay.

14 Swartzwelder: And then you come up to like 1925.

15 Voice: [Inaudible.]

16 Mosbaugh: Then they go to 1950 or 1925 or something.

17 Swartzwelder: Right. And then they start the 1900 to 1700 to 1900 to
18 1700 to 1900, and then they give up. [Inaudible] look at
19 with that excitation.

20 Mosbaugh: Yeah. Okay.

21 Swartzwelder: And then we go [inaudible].

22 Mosbaugh: Good. Anything else?

23 Swartzwelder: It's really going to be 12 hours?

24 Mosbaugh: I don't know. Horton didn't think it would. Horton
25 thought they would --

26 Swartzwelder: I don't think they will, either.

1 Mosbaugh: Horton thought they'd get done quicker that way. If
2 they're into it, and now it looks like they're into it,
3 and, you know, most of the problems we had were just
4 problems with running this turbine. No, these weren't
5 really test problems; these were problems that we would
6 experience tomorrow when we tried to do the turbine if we
7 hadn't done the test.

8 Swartzwelder: Yeah. I think those [inaudible] minor incident is that
9 first [inaudible]. That was all --

10 Mosbaugh: The neutral over-current was what was, I think, a test
11 condition issue, but Kerstiens figured that out in a
12 heartbeat.

13 Swartzwelder: But, otherwise, I think the vast majority [inaudible].

14 Mosbaugh: Oh, yes. Obviously the pump problems and the valve
15 problems, and the, those types of things.

16 Swartzwelder: The other one, I think, is one of the load. I could not
17 see any progress on those. [Inaudible.] We are working
18 on [inaudible].

19 Mosbaugh: Those are the same. Same status. Have we done anything
20 more with the gag?

21 Voice: No.

22 Mosbaugh: Okay.

23 Swartzwelder: [Inaudible] I'm just going to leave it in until 70
24 percent.

25 Mosbaugh: That's about all I had. I'm going to call the boys in
26 Birmingham, and I'm going to leave.

27 Swartzwelder: Who do you call, Paul?

1 Mosbaugh: Yes. It's been Shipman, but now -- now its back to Paul.
2 The start. We don't know any more about the start?
3 Swartzwelder: Diesel start?
4 Mosbaugh: Yeah.
5 Voice: Well --
6 Mosbaugh: Oh, I have that.
7 Voice: You do?
8 Mosbaugh: I already have that.
9 Swartzwelder: You're not copied?
10 Mosbaugh: What?
11 Swartzwelder: You're not a copy?
12 Mosbaugh: Right there. Nobody is copied.
13 Swartzwelder: I know.
14 Mosbaugh: That's why we make thousands of them. [Laughter.]
15 Mosbaugh: It doesn't say anything [inaudible].
16 Swartzwelder: All we really have determined is that its a test circuit
17 problem that will not impact performance, which is the
18 only thing I asked him to do [inaudible].
19 [Pause.]
20 Mosbaugh: Great.
21 Voice: [Inaudible] the only thing that deals with it.
22 Voice: [Inaudible.]
23 Voice: Do you [inaudible].
24 Voice: [Inaudible] negative phases such as grounding, and what
25 they're attempting to [inaudible].
26 Mosbaugh: They're testing to determine any degree of resonance that
27 we might have in the turbine due to our machine's

1 configuration, and so they are exciting the system with
2 this negative sequence baloney, and then they're going to
3 diiinng the system with the out-of-phase
4 synchronization, okay? Basically what they're doing is
5 you got the big machine up there, and they're worried
6 about these last stage, end-bucket stress problems, okay?
7 What they're doing is they're essentially shaking the
8 machine electrically by negative phase sequence currents.
9 That's a steady-state test, okay? And then the out-of-
10 phase synchronization is a dynamic ringing type test
11 where, you know -- you think of something mechanical and
12 you're wondering if it's got some resonant vibration.
13 Well, you can put a shaker on it and shake it at
14 different frequencies, you know, and different magnitudes
15 and see if you have a response, or you can whack it with
16 a hammer and see what kind of ringing frequencies, you
17 know, you get out of it. That's basically what they're
18 doing. And then they're checking a series of frequency
19 range by varying the RPM of the machine, you know, over
20 certain ranges. So basically this is a vibrational test
21 using electrically-induced stimuli. Okay? They're
22 testing for mechanical vibrations by inducing the
23 vibration electrically, and that's all they're doing.
24 Then they determine what the resonant ranges are, and if
25 we have resonant ranges and if we do, then General
26 Electric has various recommendations for detuning.

1 Swartzwelder: Now, I would assume, my guess is if the resonant range we
2 find is sufficiently away from normal operating speed,
3 nothing will have to be done.

4 Mosbaugh: If it's more than two, plus or minus two hertz from 60,
5 then there's nothing, okay? If it's like greater than
6 one, plus or minus one, but less than two hertz, then
7 there's monitoring, and if it's less than one, then
8 there's physical changes, they'll recommend. That's kind
9 of the guideline.

10

11 **END TAPE NO. 58, SIDE A -- SIDE B NOT RECORDED**

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