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PUBLIC MEETING  
BETWEEN U.S. NUCLEAR REGULATORY COMMISSION O350 PANEL  
AND FIRST ENERGY NUCLEAR OPERATING COMPANY  
OAK HARBOR, OHIO

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Meeting held on Tuesday, October 7, 2003, at  
2:00 p.m. at the Camp Perry Clubhouse #600, Oak Harbor,  
Ohio, taken by me, Marie B. Fresch, Registered Merit  
Reporter, and Notary Public in and for the State of Ohio.

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PANEL MEMBERS PRESENT:

U. S. NUCLEAR REGULATORY COMMISSION

- John "Jack" Grobe,  
Senior Manager, Region III Office  
& Chairman, MC 0350 Panel
- William Ruland, Senior Manager NRR  
& Vice Chairman, MC 0350 Panel
- Christine Lipa,  
Projects Branch Chief, Region III NRC
- Christopher Scott Thomas,  
Senior Resident Inspector  
U.S. NRC Office - Davis-Besse
- Jack Rutkowski, NRC Resident Inspector

FIRST ENERGY NUCLEAR OPERATING COMPANY

- Lew Myers, FENOC Chief Operating Officer
- Mark Bezilla, Vice President/Plant Manager
- Mike Roder, Manager - Plant Operations
- Rick Dame, Reliability Unit Supervisor
- Greg Dunn, Manager  
Outage Management and Work Control
- Steve Loehlein  
Manager - Nuclear Quality Assessment
- Mike Ross, Restart Director

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1 MS. LIPA: Okay, good  
2 afternoon, everyone. I would like to extend a welcome to  
3 FirstEnergy and members of the public for accommodating  
4 this meeting today. This is a public meeting between the  
5 NRC's Davis-Besse Oversight Panel and FirstEnergy Nuclear  
6 Operating Company.

7 My name is Christine Lipa. I'm the Branch Chief in  
8 Region III, the Region III office for the NRC, and I'm  
9 responsible for the Inspection Program at Davis-Besse.

10 I'd like to go through the next slide, right.

11 Okay. What we're going to cover today are some NRC  
12 Oversight Panel activities, focusing on those since our  
13 last public meeting, and then the second part of this  
14 meeting is to allow FirstEnergy to present the status of  
15 activities and their Return to Service Plan.

16 The next slide is the agenda. We're just going to  
17 go through introductions in a moment here. We're going to  
18 summarize last month's public meeting. We'll discuss the  
19 NRC's activities since that last public meeting. And then  
20 we'll turn it over to FirstEnergy for their presentation.  
21 We'll have a break after about an hour and 15 minutes, I  
22 would say, and then, in the middle of the presentation,  
23 and then we'll continue as necessary. And we definitely  
24 have room at the end, after the business portion of the  
25 meeting for members of the public to ask questions of us.

1        So, I'll start off with introductions on the NRC  
2 table here. To my left is Bill Ruland. Bill is the Senior  
3 Manager in the agency and the Division of NRR, and he's the  
4 Vice Chairman of the Oversight Panel. Bill's actual  
5 position is Director, Project Directorate 3 in the Division  
6 of Licensing Project Management.

7        To my right is Jack Grobe. Jack is the Senior  
8 Manager in the Region III Office and he's the Chairman of  
9 the Davis-Besse Oversight Panel.

10       Next to Jack is Scott Thomas. Scott is the Senior  
11 Resident Inspector for the NRC, stationed here at the  
12 Davis-Besse facility.

13       Next to Scott is Jack Rutkowski. Jack is the  
14 Resident Inspector of the facility.

15       We also have Monica Salter-Williams, and she is  
16 another Resident Inspector here at the facility.

17       We have Nancy Keller in the foyer, with the  
18 handouts.

19       Viktoria Mitlyng is our Public Affairs. And, there  
20 she is.

21       And we have Sam Collins. He's the Deputy EDO in our  
22 headquarters office.

23       We also have Randy Baker. Randy is Reactor Engineer  
24 in our branch in Region III.

25       And, I don't think I've forgotten anybody for NRC.

1           And then, go ahead, Lew, if you want to introduce  
2 your table there.

3           MR. MYERS:           Thank you,  
4 Christine.

5           At the end today we have Steve Loehlein. Steve  
6 Loehlein is the Manager of Quality Oversight.

7           Mark Bezilla next to him. Mark is the Site Vice  
8 President.

9           And Rick Dame next to me. Rick is from our Perry  
10 Plant. He spoke at our last few meetings. He came here to  
11 help us with the Integrated Test Plan as Integrated Test  
12 Plan Manager.

13          Mike Roder, the Operations Manager, is next to him.

14          And Greg Dunn, the Work Control Manager. Greg, move  
15 forward. Greg is next to him. Greg is our Work Control  
16 Manager.

17          And then Mike Ross is with us today. Mike is the  
18 Restart Test, Restart Director of our plant and responsible  
19 for making sure that the issues identified are properly  
20 implemented.

21          We also have some guests in the audience today. I  
22 would like to go ahead and get that out of the way, if I  
23 can.

24          MS. LIPA:            Go ahead.

25          MR. MYERS:            My first two

1 slides.

2 Fred von Ahn is with us. Fred is the Vice President  
3 of our Oversight Group from our corporate office.

4 And then Joe Hagan is with us today. He is in the  
5 audience here. We believe people at the nuclear industry  
6 know Joe. Joe is, there has been some organizational  
7 changes since our last meeting.

8 Everybody hear me okay?

9 AUDIENCE MEMBER: No, your voice is  
10 garbled.

11 MR. MYERS: How about now?  
12 Better? Okay.

13 Joe Hagan is with us today also. Joe is the new  
14 Senior Vice President of Overseeing Engineering and Support  
15 Services and reports to Gary Leidich, the President and  
16 Chief Operating Officer of FENOC Nuclear Operating  
17 Company. As you know, Bob Saunders retired recently, and  
18 Gary has been named as the new President of FENOC. Joe  
19 came to us in Gary's old position.

20 Joe has a really broad-based experience in  
21 operations as Senior Vice President of Nuclear Operations  
22 at Excelon. I knew Joe from his Entergy days when he was  
23 Vice President at the Grand Gulf Nuclear Power Plant and I  
24 was at the Perry Plant. Joe has a Bachelor of Science  
25 degree in Electrical Engineering, which is strange, but is

1 completing Executive Management and Development Program at  
2 Harvard. He has an SRO license from Hope Creek, so has a  
3 good broad base in operations experience and has about 26  
4 years of nuclear experience. And, Joe is well known to the  
5 industry and I believe that he will add a lot to our FENOC  
6 team.

7 Do you have anything you want to add, Joe?

8 MR. HAGAN: I think you've  
9 covered it.

10 MR. MYERS: Thank you. That's  
11 it.

12 MS. LIPA: Thank you, Lew.

13 The good news is we're closer this time than we have  
14 been in the past, so we can hear each other; unfortunately,  
15 not everybody in the room can hear us.

16 Okay. I would also like to ask if there are any  
17 public officials or representatives of public officials in  
18 the room?

19 MR. ARNDT: Steve Arndt,  
20 County Commissioner.

21 MR. KOEBEL: Carl Koebel,  
22 County Commissioner.

23 MS. LIPA: Okay. Thank you.

24 Okay. When you came in today, there were copies of  
25 the October edition of our monthly newsletter, which looks

1 like this, and copies of the slides for this meeting.

2 The newsletter provides background information, also  
3 discusses current events, and on the back page has  
4 reference information about how to contact the NRC if you  
5 have additional questions or concern. We've included the  
6 email address and phone number for Viktoria, our Public  
7 Affairs folks in Region III. There is also the address for  
8 our web page where you'll find a lot of helpful documents  
9 on the Davis-Besse efforts here.

10 We also have a public meeting feedback form that you  
11 can use to provide comments. And feel free to give us your  
12 comments. We've already received comments about having  
13 trouble hearing, but feel free to provide that.

14 It will be important for everybody to check their  
15 voices and their microphones today as we communicate.

16 The next slide is a summary of the September 10th  
17 public meeting that was held here last month. I was not at  
18 that meeting, but I can tell you that the transcript for  
19 that will be available probably within about a week. And  
20 what you see here are the topics we discussed last month.

21 And we'll go on to the next slide, which is the NRC  
22 activities since the September 10 public meeting.

23 The first item I want to mention is we issued an  
24 Integrated Inspection Report on September 29th, and that  
25 report contains one nonsite violation regarding the

1 hydrogen analyzers that the Licensee discovered had been  
2 inoperable due to a valve lineup issue. That report also  
3 contained Resident Inspector observations and radiation  
4 protection baseline inspection activities.

5 There are also four of our Restart Checklist items  
6 that are closed in that report. And in the NRC update, we  
7 have the whole Restart Checklist, and you'll be able to see  
8 the items that have the check marks, but the ones that we  
9 closed in that report, were Item 2.c.1 on the containment  
10 sump, Item 3.d on the Boric Acid Corrosion Management  
11 Program, and Item 3.h on the Radiation Protection Program  
12 and then finally 6.g, which was a license amendment  
13 associated with flow balance testing of the high pressure  
14 and low pressure injection systems.

15 The next item is, on October 1, last Wednesday, we  
16 held a public meeting in the Region III office, and we  
17 discussed the Licensee's efforts to-date to address and  
18 improve and monitor Safety Culture at the facility.  
19 Licensee's presentation materials are on our web page. We  
20 also have a transcript that will be posted in about three  
21 weeks, and our inspection of this area continues.

22 The next item is the CAL, Confirmatory Action Letter  
23 was updated. We updated that letter to close two items.  
24 The first one was the quarantine of the materials from the  
25 reactor pressure vessel head and the control rod drive



1 mechanism nozzle penetrations; and the second item was the  
2 root cause assessment that the utility has done. So, that  
3 CAL has been updated to address those.

4 Then the fourth item is not on the slide, is we did  
5 issue the final significance determination for the yellow  
6 finding associated with containment emergency sump. So, I  
7 didn't have time to get that on the slide. I have a copy  
8 that, I will give to Rick Dame.

9 The next slide is continuing NRC activities. And,  
10 what we have going there are, the first item is the Safety  
11 Culture/Safety Conscious Work Environment. The NRC's  
12 inspection in this area is evaluating the Licensee's  
13 process and tools for monitoring the improvement in the  
14 Safety Culture and Safety Conscious Work Environment and  
15 the effectiveness of the Employee Concerns Program. The  
16 inspection is in progress and a public exit will be  
17 scheduled when that inspection is complete.

18 The next item is the Normal Operating Pressure  
19 Test. The inspection is in progress this week and last  
20 week and it covers inspection of the upper and lower vessel  
21 head area and the leak tightness of the reactor coolant  
22 system in general.

23 The next continuing activity is Resident  
24 Inspection. There are three Resident NRC Inspectors  
25 stationed permanently at the site, who inspect a broad

1 spectrum of activities and areas of Operations,  
2 Maintenance, and Testing. And the Resident Inspectors  
3 issue reports every 6 to 7 weeks.

4 And finally, our Restart Checklist. I already  
5 referred to the monthly update that shows the items that  
6 are checked off. What we've done to-date is closed 18 of  
7 the 31 Restart Checklist items, and each of the ones that's  
8 closed has a check mark and there is a reference for which  
9 the report number contains the basis for closure.

10 The next slide are some upcoming NRC activities. We  
11 plan public meetings in the near future to discuss some  
12 recent inspection activities. The first one is the System  
13 Health Review Design Issues. This meeting will be held at  
14 the Davis-Besse Administration Building tomorrow at 9:30  
15 a.m.

16 The Corrective Action Team Inspection has completed  
17 the on-site portion of their inspection and they plan to  
18 present their results publicly once they finalize their  
19 conclusions, and we'll get that date issued as soon as it's  
20 available.

21 The next item, we are working to schedule a public  
22 meeting at headquarters to discuss the High Pressure  
23 Injection Pump Design Modifications.

24 The next item is the Review of the Inaccurate and  
25 Incomplete Required Records and Submittals Inspection. The

1 NRC is planning a specific three-person inspection team to  
2 come out and assess the Licensee's effort to address that  
3 Restart Checklist Item, which is 3.i, and the results of  
4 that inspection will enable the NRC to gain confidence in  
5 the quality of the Licensee submittals for reasonable  
6 assurance of their accuracy going forward.

7 The next item is the NRC is also preparing to  
8 conduct a Restart Assessment Team Inspection, and that's as  
9 the utility nears the point where it will seek NRC  
10 authorization for restart. That inspection will review the  
11 readiness of the plant equipment and the plant staff to  
12 resume plant operations safely and in accordance with  
13 requirements. Those inspection findings will be considered  
14 by the Oversight Panel in making its recommendation on  
15 possible restart dates and times.

16 The final bullet on that page is the Backlog  
17 Inspection. The purposes of that one is, as the utility  
18 has a number of work items that they've been working off,  
19 there are some that they plan to defer until after restart.  
20 And the purpose of this inspection is to understand what  
21 those items are; work items, such as equipment issues or  
22 procedure changes or corrective actions, and what the basis  
23 is for deferring those until after restart and make sure we  
24 understand what they are.

25 So, these are the upcoming NRC activities and that

1 completes my portion of the presentation.

2 I'll turn it over to you, Lew.

3 MR. MYERS: Thank you,

4 Christine.

5 Our first slide here -- can you go back -- indicates  
6 the Building Blocks that we put in place several months ago  
7 on our journey to return the plant back to service. As you  
8 notice, "The Quest to get OUR Plant Back", not only to get  
9 it back, but to get it "Better and Beyond".

10 Today our desired outcome is to demonstrate that we  
11 have identified and addressed meeting material and people  
12 issues at our plant requiring attention for restart.

13 We also would like to provide results of our Normal  
14 Operating Pressure Test that we just completed. It was a  
15 7-day test that took us 13 days to do, and we would like to  
16 talk about our people, our plant, and our processes, and  
17 their performance.

18 Finally, I would like to communicate the actions  
19 both from a material condition standpoint and also a people  
20 standpoint that are required yet to be done in our minds  
21 before our restart.

22 And with that, we have, today, I'll talk about the  
23 outage accomplishments; the NOP Test, Greg Dunn and Mike  
24 Roder will discuss that; and there is some specific issues  
25 that they will discuss and those areas about some of the

1 Human Performance problems that we did have.

2 Rick Dame will talk about the organization and the  
3 processes that we demonstrated a few months ago that we're  
4 going to monitor our organizational effectiveness during  
5 this test.

6 From an oversight perspective, Steve Loehlein will  
7 give you his perspective. And then there is some ~~licenses~~ lessons  
8 learned from the NOP Test that we just finished, and we're  
9 still getting data in. As we sit here today, we have our  
10 pagers going off on new information. And, so, Mark Bezilla  
11 will give you as much information as we have from that  
12 test.

13 There is some remaining actions that Mike Ross will  
14 talk about, having to do with our HPI pump and some  
15 electrical issues that we're taking now. And then,  
16 finally, I'll leave you with the overall conclusions.

17 Next slide. I've already done Joe Hagan, once  
18 again, is our new site, our new Senior Vice President  
19 overseeing Engineering and Support Services.

20 I knew Joe as the site Vice President at Grand Gulf.  
21 Joe's from the Pennsylvania area. I always wondered while  
22 he was at Grand Gulf he talked pretty funny down there.  
23 We're real pleased to have him here with us today.

24 Next slide. We also continue to improve the  
25 management of our plant from a credential standpoint, and

1 we've been absent a Plant Manager. I've been sort of  
2 acting as the Site Vice President. I will continue to do  
3 that until after restart, but we have hired a gentleman,  
4 Barry Allen, as our New Director of Operations/Plant  
5 Manager for the Davis-Besse Plant. He will be reporting to  
6 Mark once we make that transition.

7 Barry has good experience at the B and W Plant, the  
8 Arkansas Plant; he has a Master degree in Civil  
9 Engineering, a strong, strong System Engineering  
10 background; SRO certification and RO certification, both on  
11 Combustion Engineering; and the B and W plant, he has  
12 experience in both places. He's got about 17 years of  
13 nuclear experience.

14 First area I would like to talk about is some of the  
15 outage accomplishments that we've made since the beginning  
16 of this outage. If you go back and look at the outage, the  
17 outage has been going on for 20 months now. And it's been  
18 a very intensive outage in identifying problems and then  
19 going to fix the problems.

20 We've made what I think is tremendous strides. Our  
21 company has made tremendous financial obligations to this  
22 plant to get it restarted, and they've treated us  
23 extremely well at the site.

24 We've installed many modifications that we think  
25 will improve the margin of safety beyond the original

1 design basis of the plant. We take a strong management  
2 action to improve the safety focus of our managers and our  
3 employees and to ensure the safety-related activities do  
4 receive the attention warranted by their significance. And  
5 we thought this 7-day test really helped pull our  
6 organization together and let us focus on some key issues.

7 The next slide. We just completed what we call our  
8 Restart Test Plan. Our Restart Test Plan had several  
9 objectives. It had, one of the objectives was to ensure  
10 the plant and personnel safety. Our Restart Test Plan was  
11 performed with no issues of safety significance.

12 Now, we did have some issues, and in our mind from a  
13 management standpoint, they were very significant. We did  
14 have some human performance problems and those problems,  
15 once again, will be discussed later and we'll spend some  
16 time discussing those, but from a, from a nuclear safety  
17 standpoint, we accomplished our objectives.

18 We conducted all the post maintenance and  
19 modification testing that we had on our plate  
20 successfully. In fact, the overall performance of the  
21 plant was already in good equipment performance.

22 And, if you go back and look, we're always measuring  
23 our leakage in gallons per minute. Our limit is one gallon  
24 per minute identify leakage. Our leak rate, our operator  
25 tells us, you can only measure to a certain tolerance. Our

1 leak rate came out to be I think .01 gallons per minute,  
2 the way we measured it. That boils down on our reactor  
3 coolant system .76 teaspoons per minute, which is not very  
4 much. So, the plant came up extremely solid and we were  
5 pleased with that.

6 The results of our overall Restart Test Program are  
7 being assessed as we sit here today. And we will generate  
8 an overall report late next week, and that report will  
9 summarize the entire outage, if you will, and the  
10 performance of all the, both the technical issues and  
11 management issues to-date.

12 We will then take that report and provide it to, the  
13 overall assessment to our Restart Over -- our Independent  
14 Oversight Panel, the Restart Overview Panel. And then they  
15 will make comments to Gary Leidich for his approval.

16 It will identify, that report will identify the  
17 remaining actions we need to take before restart. And that  
18 report will be used as the basis document to ask the NRC  
19 for permission to restart the plant. These actions will  
20 then be added to our Corrective Action Program, and we'll  
21 make sure we take the necessary corrective actions prior to  
22 restart.

23 Overall, the 7-Day Pressure Test took 13 days, and  
24 it was extremely successful in testing our systems, our  
25 equipment, our organizational teamwork, if you will; how



1 the organization responds to issues, the Safety Culture of  
2 our plant, many of our new programs, like our Leak Rate  
3 Program; our operating procedures were also tested in great  
4 detail.

5 In general, in order to go up to near normal  
6 operating pressure/temperature, you have to do all your  
7 surveillances, you have to use your integrated leak rate  
8 test procedures, you have to use your ingrated thorough  
9 procedures. There was only a few procedures, like reactor  
10 start procedure that we had at this time period. And we  
11 found some areas for improvement in those procedure areas  
12 that we will be addressing before the plant starts up.

13 We were also able to do, once again, all of the post  
14 maintenance testing and post modification testing. We've  
15 installed about a thousand monitors in the plant, so  
16 hundreds of mods since the plant was shut down. And what  
17 that does is it sets us up as a plant to have all that  
18 paperwork behind us prior to restart. That's a little  
19 different than what other plants has been in extended  
20 outage has done. We won't face that backlog of paperwork  
21 to be closed out. Basically, we have it all closed out  
22 already with some exceptions. So, in my mind, that sets us  
23 up to really focus on a good controlled restart of the  
24 plant.

25 One of the purposes of the test is to take a few

1 moments to talk about the Restart Test Plan. Everybody  
2 thinks it's a 7-day test, but it's a lot more than that.  
3 The first thing we did, on May 6, we completed the 50-pound  
4 pressure test and then somewhere around May 25th, we  
5 completed the 250-pound pressure test.

6 The significance of that is, we worked on over a  
7 hundred valves that are first off the reactors. Those  
8 valves, we need to make sure they're in good stead. And if  
9 you go look at the total population of work, there was over  
10 a thousand valves worked on over this outage, so there was  
11 a lot of maintenance performed.

12 One of the other items we did is cut a 17-foot hole  
13 in the Containment to install the reactor vessel head. We  
14 had to reweld the steel liner in, and then the concrete  
15 structure and rebar, we reinstalled that.

16 We then took Containment and did probably the best  
17 Integrated Leak Rate Test we've seen. Ran a short test,  
18 shown to be very structurally sound. We completed that on  
19 April 9th. That's part of the Restart Test Plan also.

20 Then the final part of that was this Normal  
21 Operating Pressure Test. And basically we took the plant  
22 here up to 2155 pounds of normal operating pressure and  
23 about 532 degrees, which is the normal temperature. We  
24 completed that test October the 5th.

25 Basically, all the equipment we think ran well. We

1 did have some equipment problems, we addressed this  
2 equipment problem, while we were up. Nothing required us  
3 to shut down. But we've completed that test now. We think  
4 that puts us in good stead to go forward.

5 Next slide. One of major Building Blocks we worked  
6 on this outage is the material condition of our Containment  
7 building. You can now go in our Containment building with  
8 just a lab coat routinely for inspection. So, typically,  
9 when you dressed out, you used to have to wear Anti-Cs in  
10 Containment all the time; now you can go in there with just  
11 a lab coat.

12 For detailed inspections, you're required protective  
13 clothing, such as you're seeing here in the picture. There  
14 is several of our inspectors that are, that were in the  
15 Containment during the Normal Operating Pressure Test.  
16 Just because our reactor is critical or up in pressure  
17 doesn't mean you can't go in Containment.

18 And these are a group of our happy inspectors inside  
19 our Containment, and doing walkdowns to make sure that the  
20 equipment was leak tight. So, it's not anything that you  
21 can't walk around and look for. So, I think we looked at  
22 like 1,300 components or so during the inspection.

23 Next slide.

24 The outage has many accomplishments. First, Reactor  
25 Vessel and Reactor Coolant System, our new head has access

1 openings that are in place for vessel head and our stand  
2 for inspection.

3 The Control Rod Mechanism Nozzle Inspection Repair  
4 is complete.

5 We replaced the Reactor Vessel Head and it's in  
6 service.

7 The Reactor Vessel Head transporting and handling  
8 equipment is in good stead.

9 The Service Structure and Access Openings are there.

10 The original Reactor Head Nozzle Samples have been  
11 shipped off; and original Reactor Head has been shipped  
12 offsite. That was a happy day when we shipped the head  
13 offsite a few weeks ago.

14 We also installed what I would call a FLUS  
15 Monitoring System. I guess, don't ask me what that stands  
16 for. The FLUS Monitoring System is basically a humidity  
17 monitoring system; first of a kind in the United States.  
18 We're very pleased to have that installed. It allows us to  
19 life time look for very, very small leaks in the bottom,  
20 bottom head of our reactor. So, it's a new technology for  
21 the United States. I'm very, very excited about that  
22 technology.

23 From a Reactor Coolant System standpoint, we  
24 replaced our Code Safeties and our PORV's. The Safety seal  
25 plate modification has been installed. That was a major,

1 major modification that we put in this plant. In fact,  
2 it's a very costly modification. But, it allows you not to  
3 go down and put a temporary seal plate in place every  
4 refueling, and that really is a difficult job, and it sets  
5 you up to have leakage down on the vessel. So, that  
6 modification we think really adds value to the plant.

7 The Reactor Coolant System Deep Drain Valve  
8 Maintenance was completed. Once again, about a hundred  
9 valves repaired there.

10 The Thermal Sleeves for the High Pressure Injection  
11 Lines were cut out on 2-1 and 2-2 and we replaced the pump  
12 sleeves we had indications there, or rather than try to  
13 justify it away, we just went ahead and replaced them.

14 And then we did a complete full upload and fuel  
15 inspection test to verify the fuel was in the best possible  
16 condition that we could put it prior to restart. And we  
17 believe that we have very good integrity. In fact, we  
18 rebuilt several bundles in some areas where there is high  
19 flow that, where you get flow induced vibration, we  
20 replaced some fuel pins with stainless steel pins.

21 From a Reactor Coolant standpoint also, we went into  
22 and replaced the rotating assemblies on the 1-1 and 1-2  
23 Reactor Coolant Pumps. There is four Reactor Coolant  
24 Pumps. And then, we replaced the 1-1 Reactor Coolant Pump  
25 shaft.

1       And then all four Reactor Coolant Pumps, they have  
2 to break down the pressure to 2150 pounds pressure. They  
3 have like a sealed cartridge with like four seals in them.  
4 They break the pressure down to near atmospheric pressure.  
5 So, we replace all the seal cartridges in the pumps with  
6 the new 9000 series; major accomplishment there.

7       There is these Thermowells in our Reactor Coolant  
8 System that had cracks in them, been a long time concern in  
9 our plant. Those Thermowells have now been replaced and  
10 repaired with permanent replacements on both the cold leg  
11 and the hot leg.

12       From a Containment standpoint a lot of work went on  
13 in our Containment. Reactor Vessel Head replacement and  
14 support stand has been, is completed. The Containment  
15 structure, I talked a little bit about. The Boric Acid  
16 Extent of Condition Inspections in the Containment. If you  
17 want to go look at the event that we had, where most of the  
18 damage was done, was probably in the Containment.

19       So, we walked down every inch of that Containment,  
20 all the ventilation systems and tons of cable trays. And  
21 the Containment right now I think anyone that seen it is,  
22 what I would call, in excellent material condition.

23       Containment Emergency Sump Modification was a major,  
24 major modification. It allowed us to, you know, increase  
25 the size of our sump from like 50 square feet to 1300

1 square feet. So, that gives us a ton of margin that we  
2 didn't have before from a safety standpoint.

3 And then finally, we discovered along the way that,  
4 we didn't think fiber was too good in Containment, so we  
5 could have probably tested it away, but we made a decision  
6 to go ahead and just remove all of the fiber that we had in  
7 our Containment and replace that with newer insulation.

8 That effort is complete now. If you go look at our  
9 Containment, that's probably one of the lowest fiber  
10 Containments that I know of in my experience.

11 Also from the Containment standpoint, the  
12 Containment Air Coolers, we showed those pictures several  
13 times. We have replaced the coolers basically in all of  
14 our Containment Air Coolers, so they've got a lot more  
15 margin. They were 20-year-old heat exchangers and we  
16 replaced the registers and also a couple of the motors on  
17 the Number 2 and Number 3 Containment Air Coolers.

18 There is this area between the Containment and the,  
19 the shield building that you see from the road, the  
20 Containment steel wall called the annulus. When you go in  
21 there, it's sort of a hot, muggy place. We decided to go  
22 in there and apply some coatings to make sure that that  
23 area stays water tight. And we've installed a new membrane  
24 around the annulus.

25 The Containment dome, if you will, is I think about

1 an acre. We had people laying on their backs for months up  
2 there with chipping hammers, I guess you would call them,  
3 chipping the paint off the Containment dome and we  
4 completely restructured that dome with new coating. As you  
5 recall, the coating on the dome was probably 20 some years  
6 old. So, putting this new coating up there will give us a  
7 lot of additional margin.

8 Also, from a Containment standpoint, we worked on  
9 our Bridges, our Polar Cranes, the In-Mast Sipping Mast has  
10 been improved, fuel handing equipment has been improved,  
11 fuel transfer equipment has been improved.

12 And I remember we had some issues back when this  
13 outage started on refurbishing the Polar Crane. We've used  
14 that crane now for like 18 months now, or 15 months, and  
15 it's really working well. It's a much better tool than we  
16 had before; the controls on it, it's greatly improved.

17 The Containment moisture seal is a, if you go look  
18 at where the Containment steel wall touches the ground of  
19 the base, there was some questions about that connection  
20 there. If you just think about an area in your house, like  
21 around your bathtub or something, you can see a little ring  
22 there connecting. So, we went back and put a seal in place  
23 around the entire Containment.

24 The purpose of that is, there is some questions  
25 about a possibility of during the event of moisture getting



1 down between the concrete and the liner. And, once again,  
2 this was not in the original design but it adds additional  
3 margin to our plant.

4 From an Emergency Core Cooling standpoint, we've  
5 done a lot of discussion here about the High Pressure  
6 Safety Injection System in our plant. In general, we've  
7 had a tremendous facility down in Alabama, of all places,  
8 running for the last few months. I've been there several  
9 times. And we've been testing all the components on our  
10 High Pressure Safety Injection Pump.

11 I think we probably know more now about bearings and  
12 wear rings than most plants in the United States. At  
13 least, I believe we do. But it's an elaborate test  
14 facility, the facility at Wiley Labs. That's coming to  
15 fruition. We now have a bearing in place that we've  
16 tested, we've looked at; we know that bearing would work  
17 during an event. And we probably know more about our  
18 bearings and our pressure injection pump than any plant in  
19 the country, I think.

20 From a Decay Heat standpoint, we made  
21 modifications. Our Decay Heat System, we've added a better  
22 filter.

23 Post-LOCA Boron precipitation is an issue after a  
24 LOCA, where you, the Boron that shuts your reactor down can  
25 precipitate out, and there is a Boron precipitation mod

1 that we installed, we think greatly enhances the Boron  
2 precipitation system that we had installed in this plant.  
3 That was a major modification.

4 Decay Heat Pumps, once again, the Cyclone  
5 Separators.

6 And finally, there is a big pit that we showed  
7 several times in the basement of our plant where decay heat  
8 valves are and the two motor operated valves, and that pit  
9 is under water during an event. So, it's always been an  
10 issue of leak tightness of the pit. And we went in and put  
11 a stainless steel tank in. I called it the Gary Leidich  
12 tank. He'll appreciate that.

13 The tank is it's no longer a pit, it's a tank. It's  
14 a stainless steel tank. We've tested that, the leak  
15 tightness of that tank now, and it is in good stead. And  
16 that does away with a longstanding issue at this plant that  
17 I know Mark was glad to see us get rid of from his earlier  
18 days here.

19 Electrical Systems. We went through and did a  
20 system review of our electrical systems. We had to replace  
21 batteries, Electrical Transient Analysis; you heard about  
22 ETAP. It would have been very easy for us to go back and  
23 take the electrical program that we had in place and  
24 upgrade that program, and, but we'd still have been left  
25 with an antique program with a lot of money in it.

1       We made a decision to install this new ETAP  
2 software. There was days I wondered if that was a good  
3 decision or not. We've basically proven with ETAP now.  
4 There is two or three issues we had to go and test.

5       I got a page a while ago, we just tested one of the  
6 devices; work lines. So, out of thousands of devices,  
7 we're down to a handful, like four items, and that we're  
8 testing to make sure they would operate under a lower  
9 voltage than the normal grid voltage. Preliminary results  
10 indicates that this equipment is working fine. And  
11 assuming that's the case, then the ETAP program will be  
12 complete.

13       What that does is leaves us with a very  
14 sophisticated Electrical Distribution Monitoring Program  
15 where we can analyze what happens in the plant during about  
16 any condition you come up with. So, from a safety margin  
17 standpoint, in my mind, we're much, much better off with  
18 this program than what we had in the past.

19       One of the other things we did, is we had 28 Motor  
20 Control Centers that we installed Thermal Overloads on.  
21 The reason we installed the Thermal Overloads on this  
22 equipment was during the System Reviews, and part of the  
23 NRC reviews, a question came up about a piece of equipment  
24 of thermal -- not having Thermal Overloads, and it could  
25 actually cause the bus trip.

1           So, we went back and looked at that and wound up  
2 agreeing with it; installed about 28 of these Thermal  
3 Overloads. We're having to adjust some of those now. And  
4 to ensure that they don't cause equipment reliability  
5 problems, but that work is accomplished.

6           Additionally, from an Emergency Diesel Standpoint, I  
7 remember sitting in here a year or so ago talking about our  
8 emergency diesel pumps. And, you know, that's one of  
9 Ms. Lipa's favorite areas. It probably didn't meet  
10 industry standards that I thought we could meet. And I  
11 think we made good progress there today.

12          If you go look at our room, we've installed a new  
13 motor operated Potentiometer. We had issues about  
14 temperatures in the room. We ran ventilation systems down  
15 to the control, control boards for the emergency diesel  
16 generator, installed duct work there.

17          But what I'm most pleased with is this new, for  
18 years, the diesels had been on the (a)(1) list, I think  
19 since like early 90's, because of the emergency diesel  
20 generator air start system; it did not have dryers.

21          What the purpose of dryers is, you know, as you  
22 compress air, you wind up with a lot of humidity in the  
23 system, and that humidity can get in your carbon steel  
24 lines and cause rust over the years. We went back and  
25 replaced all the air supply lines to the diesel and I think

1 there was 200 welds that we had to install.

2 And we installed air dryers. I'm really proud of  
3 these air dryers. I can't figure out how they work, but  
4 they're mill style type air dryers. I'm used to the old  
5 style air dryers. I think all the older people like  
6 myself, ask me, how do these work. What we find is,  
7 they're giving us very good quality air to our diesel.

8 MS. LIPA: I have a question  
9 for you, Lew. Another one of my areas I'm interested in  
10 are batteries. I see here you have Train 1 Station Battery  
11 Replacement. Was that based on performance or age or what  
12 was the reason you replaced Train 1 and what is the  
13 condition of Train 2?

14 MR. MYERS: Right now, I think  
15 it's based on age. And, Train 2 is, it's fine, I think.  
16 Do you know?

17 MR. RODER: It's set to be  
18 replaced.

19 MR. MYERS: We tested it and  
20 it's slated to be replaced at the next outage. So, it's  
21 coming to the end of its life also. So, it's been awhile  
22 since I looked at that. Anything else, Christine?

23 MS. LIPA: No. Thank you.

24 MR. MYERS: Then, finally, the  
25 last area -- from a -- is our Instrument and Control

1 Systems. I brought with me today, I think I brought with  
2 me, a relay that caused us a lot of grief along the way.  
3 This is a 20-year-old relay that goes in our emergency  
4 safeguard systems.

5 We've ordered replacement relays using the same  
6 model number. They came back and the internal relay is  
7 quite a bit different than the older relay. It's not as  
8 heavy duty. We questioned the performance of that relay.  
9 Wound up going back and getting another set of relays of,  
10 similar to this and installed them.

11 That testing is complete. We wound up testing our  
12 emergency equipment during the integrated testing that we  
13 do as part of going to Mode 4. So, our new relays work  
14 well.

15 Radiation monitoring upgrades have been completed in  
16 both the control room and in some of the obsolete Victoreen  
17 equipment that we had, has been replaced.

18 Another area that I'm extremely proud of right now  
19 is the Air Operated Valve Program. If you go look at our  
20 systems, our Air Operated Valve Program really didn't sort  
21 of exist. We've gone in since the outage started and  
22 looked at 83 valves. So, we have what I think is a state  
23 of-the-art Air Operated Valve Program now. We wound up  
24 functional with 83 valves; from a functional standpoint,  
25 there is 17 valves we had to do quite a bit of physical

1 work to, but now we have a complete functioning Air  
2 Operated Valve Program.

3 Next slide.

4 From a Plant Systems standpoint, one of our goals,  
5 there is a term called Maintenance Rule. Maintenance Rule  
6 (a)(1) means a system is not performing to the standards  
7 and the reliability that you would expect. We had several  
8 of our systems in the (a)(1) what we call red Maintenance  
9 Rule Status; Aux. Feed, Instrument Air -- I mean Instrument  
10 Isolation Valves on the Reactor Protection System, the  
11 Station and Instrument Air, Containment Air Monitoring  
12 System, Emergency Diesel Generator Air System, and  
13 Essential and Miscellaneous AC.

14 And we'll come out of this outage, we believe, with  
15 every one of those systems in the, what's called the  
16 Monitoring Mode. In other words, we've done the fixes. We  
17 think we fixed the problem, and we should be in the  
18 monitoring mode. So, we've addressed all those issues.

19 Next area.

20 From a Management/Human Performance --

21 MR. GROBE: Lew, will there  
22 be any systems that are not in the monitoring phase?

23 MR. MYERS: Our intention is  
24 no, unless we find something along the way that's put  
25 there, but our intention is no. We think we've addressed

1 all the systems that we knew about that were in the a(1).

2 Another thing, if you go look, I don't know if I  
3 have it here or not, but, but I think all the operator  
4 workarounds, the temporary mods too, we've done all those.  
5 So, we should be coming up basically pretty clean.

6 MR. GROBE: Just a quick  
7 question on the Air Operated Valves, we were waiting for a,  
8 there was one pair of Air Operated Valves that was a bit  
9 more risk significant than the remainder of them, they were  
10 component heat exchanger outlet valves.

11 MR. MYERS: Right.

12 MR. GROBE: And we were  
13 waiting for an analysis of those valves and whether they  
14 would function. Do you know what the status of that  
15 analysis is?

16 MR. MYERS: Greg, you got  
17 that?

18 MR. DUNN: No, sir, I don't.

19 MR. MYERS: I did, but it's a  
20 little outdated.

21 MR. BEZILLA: Jack, I think  
22 you're referring to SW1356, 7 and 8 valves Containment Air  
23 Cooler Outlet Valves, and the issue has to do with Nitrogen  
24 backup?

25 MR. POWERS: Jim Powers, let me



1 answer that.

2 MR. GROBE: I'm not sure it's  
3 on, Jim. (microphone)

4 MR. POWERS: We've been  
5 proceeding with the analysis, Jack. We targeted to finish  
6 it at the end of September, but some of the emergent issues  
7 in preparation for the Mode 4 change and Normal Operating  
8 Pressure Test have delayed getting it done, but it ought to  
9 be complete in the coming weeks. So, that's underway with  
10 Ken Bird's safety analysis group at the plant.

11 MR. MYERS: Is that the cross  
12 valve?

13 MR. POWERS: That's the  
14 cooling water valve, decay heat --

15 MR. MYERS: Okay, decay heat.

16 MR. POWERS: -- exchanger  
17 service water 1424, and the other two valves in that  
18 series.

19 MR. MYERS: Okay.

20 MS. LIPA: So, you're  
21 estimating about two weeks?

22 MR. POWERS: Approximately.

23 MS. LIPA: Thanks, Jim.

24 MR. THOMAS: One other  
25 question, I didn't see service water on your a(1) list,

1 what's the status of service water?

2 MR. MYERS: You know, going  
3 back, that's a system we had tested when we had some, the  
4 instruments we used to test with, the flow rates, we had  
5 some questions about that. We also have some questions  
6 about the, the amount of uncertainties we've added into the  
7 calc.

8 What we know is the flow going through the service  
9 water system today is probably better than we've seen  
10 before, which added on that service in. And the PSC now,  
11 we'll have that resolved probably in the next week or two.

12 Isn't that right, Mike? Was that the timetable set  
13 for that?

14 MR. ROSS: Yeah, that's  
15 correct.

16 MR. MYERS: So, it's an issue  
17 that we have to get resolved yet.

18 From a Management/Human Performance standpoint, we  
19 completed all of our Root Cause Training, Corrective Action  
20 Program, which we have had some there. And we know there  
21 is still work to be done there, but we believe our program  
22 is sound.

23 And I tell you, we done, we could have made some  
24 management decisions at the very beginning not to put  
25 everything in our Corrective Action Program. I remember

1 talking about that. I said, no, the Corrective Action  
2 Program is what got us into this mess and it's what needs  
3 to be to get us out. So, we dumped all of our issues into  
4 our Corrective Action Program, where I thought it  
5 belonged.

6 The Problem-Solving Decision-Making Nuclear  
7 Operating Procedure was used a lot during this 7-day, more  
8 than I hoped during this 7-day period. I can tell you that  
9 my belief is that if we'd have taken a structured approach  
10 when we found the reactor vessel head issue during the  
11 refueling outages or something, doing CR's; those two  
12 programs changes alone, we would not be sitting here today,  
13 because we would have got enough people involved in the  
14 reactor head issue had we asked that question on where it  
15 came from, and got in more detail.

16 So, I really believe that the Corrective Action  
17 Program and Problem-Solving and Decision-Making Operating  
18 Procedures is fundamental in the way we do business, and  
19 standards that we set to ensure that we properly address  
20 issues.

21 Standards and Expectations Training has been  
22 completed for all our employees.

23 We have a Safety Culture Model, once again, we  
24 modeled our Safety Culture Model after the INSAG-4. That's  
25 the best model we'd seen.

1           Then, we brought Doctor Sonja Haber in. She used  
2 behavior rather than characteristics. We did an analysis  
3 of our model compared to that. Made sure we had  
4 cross-functioning addressed, all of the behaviors with  
5 their characteristic.

6           So, we've made changes to that, but we think that  
7 our Safety Culture model now is, I mean, I really believe  
8 it's a state-of-the-art model and I think it's a tremendous  
9 management tool; another way of looking at things that  
10 would help ensure the plants do have a positive Safety  
11 Culture and safety-related activities receive the attention  
12 warranted on a daily basis.

13          Operability Training of all of our SRO's and  
14 engineers is complete. That's where we had questions on  
15 our Operability Review. We needed to put more rigor in  
16 that area. We're always striving to improve in that area.  
17 We think we've seen good progress, and then we've brought  
18 in a new management team I'll talk more about in a second.

19          One of the things that I do consistently to try to  
20 ensure that our organization is functioning well from, with  
21 all these Management/Human Performance changes we have, is  
22 I have what I call 4-C's meetings, and the purpose of those  
23 meetings is to get direct feedback from our employees.

24          What I'll do is, I'll allow a private facilitator to  
25 meet with a group of about 20 employees, write down all

1 their concerns, so they're not telling me their concerns  
2 that they want to specifically. I take their concerns,  
3 their issues, and work on them, and then come down and  
4 spend about four hours with individuals.

5       You know, if I go back and look at the end of the  
6 meetings, I always take a survey. So, right now, I have  
7 survey results from about 700 people, over 700 to indicate,  
8 and I'm really pleased with some of the things that I see.  
9 About 99 percent of our people, in fact, would say they  
10 would use the Corrective Action Program without fear to  
11 address the safety-related issue. It would not bother them  
12 to use our program. About 98 percent of our people said  
13 they would raise an issue to their supervisor.

14       Now what I think has changed is we're also getting  
15 the same response now from the management standpoint; that  
16 they would raise their issues to the management team of our  
17 plant. In my mind, from a Safety Culture standpoint, is  
18 one of the most important issues that I know of is people  
19 are not afraid to raise issues to management.

20       97 percent would raise concerns to the NRC, if  
21 needed, and that's a good sign. And then 80 percent said  
22 they thought that the communications that we're having with  
23 our employees now has improved from the good to fair  
24 category. So, we continue to make progress in that area, I  
25 believe.

1 From a management standpoint, we've worked hard to  
2 increase the technical skills. One of the things we  
3 thought was missing from a Safety Culture standpoint is  
4 technical qualification of management experience here; you  
5 go back and look at Root Causes.

6 Years ago we used to have a Management Training  
7 Program consisting of getting an SRO and getting  
8 operational experience on your plant. I don't know how you  
9 manage your plant if you don't have good operational  
10 experience on it.

11 You know, if you go look, we brought in a team now I  
12 think is as good as any. If you go look at the managers  
13 that we have in place now, they're proven. There is like  
14 186 years of experience in these seven managers. And all  
15 have SRO experience of some kind.

16 So, they have strong operational experience, and  
17 that tells them how to use their technical specifications,  
18 how to address those safety-related issues. A lot there to  
19 gain in that SRO experience. Even Joe has a strong  
20 operational background. So, we consistently look at that  
21 for the executive levels at our company now.

22 Five of the seven managers have extended outage  
23 experience; myself, Mike Ross, Bob Schrauder was here for  
24 the original startup, Randy Fast was here for, involved  
25 with South Texas restart.

1       If you go look at the manager area, we've also  
2 worked to strengthen that area a lot. All the line  
3 managers now have engineering degrees, that's a level 13.  
4 Ten of those managers are SRO's.

5       Our human -- our personnel are, Lenny Price is in  
6 charge of our Human Resources now. That's a position where  
7 you need an SRO. Ten of our managers are at the SRO level,  
8 SRO Cert. or something. They have over 300 years  
9 experience and proven experience, and two have extended  
10 outage experience also. So, we thought it was important to  
11 have a few people down there.

12       Once again, if you go back and look at the original  
13 page I showed you, now, the purpose of the journey is not  
14 to get the plant restarted; the purpose of the journey is  
15 better and beyond.

16       So, increasing our management talent and having the  
17 kind of people there that will do good succession plan,  
18 make sure we have good managers in the future is extremely  
19 important to FirstEnergy Organization.

20       With that, I think that pretty well covers what I  
21 think are all, some of the, you know, that's just a few of  
22 the accomplishments that's taken place during this outage.  
23 The other day when I started putting this together, I  
24 decreased the number of slides I had by 50 percent. So,  
25 that gives you the stuff I took out of here. I still

1 didn't cover all the stuff on my slides.

2       So, there's just been a lot of things accomplished  
3 both from a hardware standpoint and software standpoint and  
4 people standpoint and program and process standpoint. And  
5 today I'm sitting here, and my overall conclusion is that,  
6 you know, the sum of all these things are serving us well  
7 and could have prevented this reactor vessel head issue  
8 from happening. Thank you.

9       Greg.

10           MR. DUNN:           Good afternoon.  
11 I'm Greg Dunn. I'm the Manager of Outage Management and  
12 Work Control. My desired outcome is to communicate some of  
13 the equipment challenges that we faced during the normal  
14 operating pressure and temperature test during that 13-day  
15 period.

16       Those items for the most part were addressed  
17 utilizing our Problem-Solving Decision-Making Process that  
18 Lew had mentioned previously; utilizing that tool to bring  
19 to conclusion the cause of the problems and effect  
20 corrective actions. Some of those corrective actions were  
21 completed during the testing activities. Some of those are  
22 yet remaining, and I'll cover those as we go through each  
23 challenge.

24       The first challenge -- next slide, please -- is our  
25 Containment Spray Pumps. Containment Spray Pumps serve to



1 perform a function of quenching steam to control pressure  
2 inside the Containment building on a post-accident  
3 condition. The issue that we encountered was the  
4 Containment Spray Pumps failed to start on several  
5 occasions when they were demanded under tests.

6 Initially, prior to the Mode 4 or the NOP Test, we  
7 had done some initial problem solving on those components  
8 and our focus was on the over current or instantaneous  
9 current trip function. Several adjustments were made in  
10 the trip set points and in fact some components were  
11 replaced to address the potential for faulty Solid State  
12 Trip Device in the electrical switch gear.

13 One trip did occur once we were in the Mode 4 or NOP  
14 Test; that was on the #1 Pump, and we put together  
15 Problem-Solving Decision-Making Team to further focus into  
16 the cause of the failure. We also engaged the vendor for  
17 assistance in that, because we knew that there was  
18 something additional other than the instantaneous trip,  
19 which was our focus previously.

20 The probable cause was concluded to be a spurious  
21 trip from that same solid state trip device, what is called  
22 the ground fault trip device. In that circuitry, there is  
23 a ground fault detected between the phases of the operating  
24 circuit and it causes the trip function to occur.

25 We assessed that and evaluated that that was a

1 nuisance trip for our station. Several years ago, more  
2 than ten years ago, modification was done to the station to  
3 improve the ground circuitry. We have high resistance  
4 ground circuitry in the Davis-Besse station, and that  
5 ground fault trip is not a necessary function for our  
6 application.

7       So, as a result, the application for pump 1 and  
8 modification was implemented which replaced the breaker and  
9 replaced the solid state trip device with one that did not  
10 contain the ground fault trip.

11       We then subsequently tested those components and  
12 restored them to service after demonstrating reasonable  
13 assurance of operability. We elected not to modify the  
14 sister pump or Pump #2. That pump had had its solid state  
15 trip device and breaker replaced with refurbished  
16 components prior to Mode 4 and our conclusions of cause for  
17 the failure of that solid state trip device was the ground  
18 fault portion of that. And once demonstrated reliable, the  
19 component was acceptable as installed. So, we elected not  
20 to replace that component.

21       We did however want to demonstrate the reliability  
22 of those components, and so for the next ten days  
23 alternating days, both Pump 1 and Pump 2 were tested to  
24 demonstrate their ability to start on demand.

25       Ongoing corrective actions yet remaining, we have

1 engineering change that's under development for the  
2 evaluation of eliminating those Solid State Trip devices  
3 for the ground fault trip, so that's our extent of  
4 condition.

5 We have not reached conclusion on the need to  
6 implement that as once the Solid State Trip device or  
7 ground fault trip is demonstrated to be reliable, it's  
8 acceptable in its application; however, it is or could be a  
9 nuisance trip that is unnecessary, and we're reviewing  
10 that, for potential for eliminating that in up to 15  
11 applications.

12 The decision for or the review and extend of  
13 condition, we do consider a restart item, we have not  
14 concluded whether the elimination of that trip is in fact a  
15 restart item.

16 MR. GROBE: Before you go  
17 on. There was a couple, maybe even two or three, breaker  
18 trips prior to entering into Mode 4. Was there a  
19 Problem-Solving Decision-Making Procedure implementation on  
20 those breaker trips?

21 MR. DUNN: Yes, sir, there  
22 was; and the conclusions there were that it was the Solid  
23 State Trip Device that was initiating the trip. We were  
24 not able to repeat that trip upon test.

25 The components were replaced with refurbished

1 replacement components and then demonstrated up to 25  
2 different cycles of the breaker to demonstrate reliability  
3 of the component. And also set points were adjusted, the  
4 spray pumps were running at an in rush current on start  
5 close to the instantaneous trip set point and so the  
6 instantaneous trip on that Solid State Trip Device was  
7 increased in the belief that that was the cause of the  
8 trip.

9 We believe we are correct that the cause of the trip  
10 was a Solid State Trip Device, but instituted by the ground  
11 fault not by the instantaneous trip that we had originally  
12 thought.

13 MR. THOMAS: How many starts  
14 under load? The 25 cycles weren't under load. How many  
15 cycles were under load?

16 MR. DUNN: Starts under load  
17 I believe were three.

18 MR. MYERS: We saw a failure  
19 of about nine times. You went back and look at this chart  
20 you look at, there was like nine cycles between failures.  
21 So, we put the spreadsheet together and looked at, here's  
22 the number of cycles that we see before we see a failure.

23 MR. GROBE: What's the  
24 critical path on elimination of Solid State Trip, ground  
25 fault trips; you said you're still evaluating?

1           MR. DUNN:           We're still  
2 evaluating the appropriateness of eliminating that trip.  
3 We believe in our initial assessment that it is a nuisance  
4 trip or unnecessary. We need to complete that review.  
5 There are 15 different applications, the spray pumps being  
6 two of those, the Containment Air Coolers being four  
7 breakers of those, and there is some distribution motor  
8 control centers that make up the balance of those  
9 components.

10         The Containment Spray Pumps are unique in the  
11 application that they do in that they have their own motor  
12 starter; essentially utilize the breaker as the motor  
13 starter for that application. So, we need to conduct that  
14 extent of condition review and validate the appropriateness  
15 of elimination prior to making that decision.

16         I don't believe the physical work of eliminating  
17 that, should that be the option that we choose, would  
18 affect the critical path sequence for our restart.

19           MR. RUTKOWSKI:       Greg, you  
20 sent some Solid State Trip Devices out for testing, I  
21 believe. Have you got the results back yet?

22           MR. DUNN:           We have some  
23 preliminary results.

24         Help me out, Mike, it's NLI.

25           MR. ROSS:           That's right.

1 Nuclear Logistics Incorporated.

2 MR. DUNN: Nuclear Logistics  
3 Incorporated, and we were able to repeat on the bench the  
4 ground fault trip. Unfortunately, when we attempted then  
5 to repeat that on the bench with instrumentation attached,  
6 we have not been successful. So, I said, this is a  
7 spurious-type trip item. Again, we were able to repeat it  
8 on the bench on two occasions. And that's the input that  
9 we have at this point in time for the testing.

10 MR. RULAND: Your slide said  
11 that your initial problem solving was focused on the over  
12 current trip. Was that a problem with the way you were  
13 doing the problem solving? Maybe you could amplify like  
14 what that statement implies.

15 MR. DUNN: I believe our  
16 focus was as a result of the indications we were receiving  
17 from the field in the initial in rush current on the  
18 component when it was being started, the current draw was  
19 near the trip set point of the Solid State Device for the  
20 instantaneous over current. So, that's what drew us to  
21 that being the focus.

22 We unfortunately do not have the instrumentation for  
23 detecting the phase-to-phase ground fault condition on the  
24 circuitry. So, that is not something that we have the  
25 ability to monitor and to detect that as an input. So,

1 based upon our field information, that's why our focus was  
2 on the in rush current.

3 MR. RULAND: I appreciate those  
4 technical details, but I'm more interested in, in  
5 retrospect, as you think back on your initial  
6 problem-solving focus, did it indicate to you a problem  
7 with how you were doing the problem solving, or not? If  
8 not, why not?

9 MR. MYERS: That statement  
10 bothers me. Our most probable cause, because the closeness  
11 of that in rush current was the over current. That was the  
12 most, that's the highest probability. So, if you look at  
13 what are the causes, because it was spurious; it was not  
14 something we saw every time. So, what can be causing  
15 this?

16 Our most probable issue was the over current, and  
17 that's the reason we attacked that first. We figured out  
18 that wasn't, then we went to the next area and that was the  
19 plan. So, it was a process of elimination.

20 MR. RULAND: But it didn't  
21 indicate, Lew, that there was a problem with the way you  
22 were approaching this problem-solving problem. I think I  
23 have too many problems in there. You get the idea.

24 MR. DUNN: I would agree and,  
25 probably, your question in retrospect was the involvement

1 of the supplier of that Solid State Trip Device and the  
2 insights provided there on the function or nuisance-type  
3 failure of this, of the ground fault circuitry; and that  
4 was information that could have been made available  
5 earlier, should we have engaged that vendor more  
6 rigorously.

7 MR. RULAND: So, maybe I should  
8 infer from that, that your problem-solving process wasn't  
9 perfect; you've learned something about how you might  
10 approach it differently in the future. Is that a fair  
11 characterization of it?

12 MR. DUNN: Yes, sir, it is.  
13 And, I believe Steve later in the observations that he has  
14 during our NOP Test also covers some improvement  
15 opportunities on how we apply the Problem-Solving  
16 Decision-Making Process. I agree with that.

17 MR. RULAND: Thank you.

18 MR. GROBE: Greg, I believe  
19 there were two breaker problems during the NOP Test, and  
20 two on Containment Spray Pumps just prior to the NOP Test.  
21 Weren't there two other breaker problems on pressurizer  
22 units also?

23 MR. DUNN: Yes.

24 MR. GROBE: You talked about  
25 in rush current, that would be on a motor start. What was



1 the conclusion of your problem solving on pressurizer  
2 heaters?

3 MR. DUNN: We have not  
4 reached a conclusion on the problem solving on the heaters;  
5 that was on the nonessential heaters. On that portion of  
6 our electrical distribution is not high resistance ground  
7 pole protected, so those components we believe  
8 appropriately do have the ground fault protection in the  
9 Solid State Trip Device.

10 The troubleshooting that we have done to-date has  
11 not been able to repeat the fault under monitoring  
12 conditions. That is an ongoing item that's on our restart  
13 issues, but it does address the nonessential heaters to the  
14 pressurizer and we have not reached any conclusions on  
15 those components to-date, Jack.

16 MR. GROBE: When did those  
17 failures occur?

18 MR. DUNN: Within the last  
19 six days.

20 MR. GROBE: It's the exact  
21 same equipment, right? The equipment, regardless of  
22 whether the function is a safety-related function or not  
23 safety-related function, it's the same equipment?

24 MR. DUNN: The breaker is the  
25 same, yes, sir.

1 MR. GROBE: Okay.

2 MR. MYERS: One thing about  
3 these Solid State Trip Devices, they're not new, they're  
4 refurbished. Internals are something like 20 years old.  
5 So, there may be some enhancements later on we want to go  
6 look at there too, send them back to the manufacturer to  
7 get refurbished. They're putting parts in there, old ones  
8 that are probably the same age, so we may be seeing some  
9 age-type degradation.

10 MR. GROBE: Lew, you made a  
11 comment a few minutes ago about failure after nine cycles.  
12 I'm not sure I understand that.

13 MR. MYERS: Well, went back,  
14 what we did is put a matrix together with all the starts  
15 and failures we had, restart, off start, you get failures.  
16 You look at it; you say, how often do you get failures?  
17 About one out of nine, which you have to restart it. You  
18 restart it, it would work okay.

19 So, I remember looking at that matrix; and that was  
20 Gary Leidich and myself; it was about one out of nine times  
21 when you start out the load and you see a failure.

22 Is that pretty accurate, what I'm saying?

23 MR. DUNN: Yes.

24 MR. GROBE: It just seems  
25 extremely odd that within the past two and a half weeks or

1 so, there has been four failures on these breakers with  
2 these Solid State Trip Devices and no significant prior  
3 failure history.

4 MR. MYERS: Once again,  
5 understand, you got to get through this. Maybe it's  
6 something phase-related; we just don't know. We've got to  
7 keep checking out until we figure out what's going on.

8 MR. GROBE: Okay, thank you.

9 MR. MYERS: Once again, we  
10 pulled one of them out, we sent it down to the labs for  
11 testing. We're doing everything we possibly can to figure  
12 out what's going on with those Solid State Trip Devices.

13 MR. RULAND: So, it's still  
14 more follow-up. This is not completely resolved.

15 MR. MYERS: No.

16 MR. DUNN: That's correct.

17 Next slide, please.

18 The next challenges we incurred are the thermal  
19 overload relays. The thermal overloads, Lew mentioned  
20 previously, were installed as a portion of our design  
21 change to the facility to improve our overall electrical  
22 distribution. The intention of the installation of the  
23 design change was for protection of the bus for the  
24 electrical distribution.

25 During the NOP Test, and we did experience some

1 loads where the thermal overload tripped during normal  
2 operating current conditions, and during that thermal  
3 overload trip, the component is supposed to be removed from  
4 the bus or from service, and some of those loads remained  
5 running following the overload trip. In particular, it was  
6 the service water pump discharge strainer, of particular  
7 note.

8 Our investigation into this also utilized the  
9 Problem-Solving Decision-Making. What we learned there was  
10 the sizing of our thermal overload relays. We canvassed  
11 the industry and manufacturer for the standard for sizing  
12 of these overload relays, and the basis for that is based  
13 upon protection of the component. Recall, however, our  
14 purpose for installation of the thermal overloads was  
15 protection of the bus.

16 We also discovered that we had introduced a relay  
17 race condition utilizing latching relay which is energize  
18 trip, also energize to start. We had a condition where we  
19 had a spare, or excuse me, an auxiliary contact which was,  
20 then caused the load to be maintained energize even after  
21 the thermal overload had tripped. So, that was an  
22 unintended consequence of the design modification that we  
23 had made.

24 Problem-Solving Decision-Making collected data over  
25 several components which had been tripped. Service water

1 Number 3 Discharge Strainer, Service Water Number 2  
2 Discharge Strainer and Emergency Diesel Air Compressor  
3 Number 2 of particular note. What we learned is our  
4 operating currents on those components are very close to  
5 the trip set point for the thermal overloads. As a result,  
6 that sizing close to the normal operating current resulted  
7 in nuisance trips or premature trips for those components.

8 The corrective actions implemented in the immediate,  
9 which addressed Service Water Number 2 and Service Water  
10 Number 3, were testing thermal overloads validating their  
11 ability on the bench to not trip at the normal operating  
12 current and then replacing those thermal overloads in the  
13 field.

14 We did subsequently test those thermal overloads on  
15 the bench after they were removed and demonstrated that  
16 they would trip at the normal operating currents exhibited  
17 by the components. So, that was just a, this is my opinion  
18 on this item, is the variance in the component and its set  
19 point and what its actual trip is at.

20 Corrective actions addressed 28 different circuits,  
21 where these thermal overloads were installed, which raises  
22 their set point to 115 percent versus the 100 percent  
23 thermal overload setting in the original design. And there  
24 are 15 separate circuits where we need to make wiring  
25 changes to eliminate the potential for that relay race

1 condition.

2 Those are restart items to be completed prior to  
3 restart of the station.

4 Next slide, please.

5 MR. GROBE: Just a quick  
6 comment. Why are the overloads sized close to the normal  
7 operating current?

8 MR. DUNN: When we looked out  
9 in the industry for information on what the set points for  
10 the thermal overloads should be, that included other  
11 nuclear stations as well as the manufacturer of the  
12 component, and the normal application of the thermal  
13 overload was to protect the component. So, it is set just  
14 above the operating current, so it would trip out before  
15 the equipment or component would do damage as a result of  
16 an electrical issue on the circuitry.

17 Our purpose of installing this was to improve the  
18 protection of the electrical bus, so the fault which did  
19 not result in an over current trip of the component, but  
20 running in an overload condition, would in fact trip on a  
21 thermal overload and protect the remainder of the  
22 components on the bus.

23 So, it was our information from the industry on the  
24 normal set points of that and the set conservatively to the  
25 over current condition of the component. And several of

1 those service water strainers in particular were set very  
2 close to the normal operating current. And some of that is  
3 some variance in what the name plate value should be versus  
4 the actual conditions in the field.

5 MR. MYERS: When we finish,  
6 we'll wind up with the best load. We'll have a relay  
7 protect the bus and also protect the component,  
8 particularly when you find these things based on your  
9 component.

10 MR. RULAND: Can you go back to  
11 the previous slide just for a minute?

12 You list two causes there and I would call these, if  
13 I may, you know, technical causes of the problem. Do you  
14 go beyond that and answer the question why you had this  
15 problem?

16 MR. DUNN: Those Condition  
17 Reports remain in the Corrective Action Program. I don't  
18 know that I can say that we have completed and come to the  
19 conclusion. On the surface or the apparent cause is the  
20 design application did not take into account in one  
21 particular instance the relay race. We introduced that by  
22 activating an auxiliary contact that should not have been  
23 activated.

24 MR. RULAND: And, I mean, this  
25 was a design mod that you had done relatively recently?

1           MR. DUNN:           Yes, sir, but I  
2 would say, on the apparent surface, the design modification  
3 was not as good as it should have been, and we learned some  
4 things by the actual testing of those components once  
5 placed in service.

6           MR. MYERS:           You asked, are we  
7 going to do a preop test on these things. When you buy  
8 these things, you buy them. What we know, how you buy them  
9 based on the component. That's the standard textbook you  
10 go to buy one, you know. So, the components run. More  
11 than ever, you wind up when you install them, you have to  
12 adjust them, you have an adjustment on them.

13         So, when we bought these, we bought them based on  
14 the component, what we know right now. In other words,  
15 adjust them to 115 percent. Then they trip; still protect  
16 the component and protect the bus also, so we could go to a  
17 larger, we could go to a larger thermal point.

18           MR. RULAND:           I understand.  
19 Again, the technical details are not my focus. I'm more  
20 interested in the --

21           MR. MYERS:           The mod.

22           MR. RULAND:           -- the  
23 modification process, how you did that selection. And,  
24 again, you're saying that you're not done yet --

25           MR. MYERS:           Right.



1 MR. RULAND: -- doing the root

2 cause.

3 MR. MYERS: We also know, we

4 have with us Sergeant & Lundy, who did the mod for us.

5 They did the mod at other nuclear plants. They bought

6 these thermals for other plants. And, you know, how they

7 buy the mod, the thermals; you know what I'm saying. So,

8 they buy them based on the component, you know. That's a

9 lot of the issues right there. We're not through, but

10 we --

11 MR. RULAND: Okay, you just

12 said, that raises some other questions, about, okay, if

13 they made this mistake here, did they make this mistake

14 anyplace else, right? Once you've told me that Sergeant &

15 Lundy, they've made these mods other places, so -- and

16 you're continuing to pursue that, right?

17 MR. MYERS: Right, right.

18 MR. RULAND: Good.

19 MR. MYERS: What you expect to

20 find, you expect to find them tripping earlier than.

21 MR. RULAND: I understand.

22 MR. MYERS: Okay.

23 MR. DUNN: Next slide,

24 please.

25 Next item I would like to discuss is the Auxiliary

1 Feedwater Pump Testing, and the problem incurred was  
2 surveillance test of the Auxiliary Feedwater Pump Number 1;  
3 response time exceeded the acceptance criteria of that  
4 surveillance.

5 Again, utilizing the Problem-Solving  
6 Decision-Making, the ultimate cause we learned was  
7 misalignment of the governor valve linkage coupled with  
8 installation of the new valve.

9 During this extended outage period, the governor  
10 control valve for that auxiliary feedwater pump turbine was  
11 replaced. That, we believe, coupled with misalignment of  
12 the governor valve leakage, which had been we believe in  
13 place since approximately the year 2000, resulted in the  
14 response time exceeding the acceptance criteria.

15 Acceptance criteria is 40 seconds. The testing that  
16 was conducted on the auxiliary feedwater system included  
17 the prior to NOP Testing, which is done with auxiliary boiler  
18 border steam, and also demonstrated flow capability from  
19 the storage tank to the steam generators once in Mode 4.  
20 And then upon reaching Mode 3, having sufficient energy in  
21 the steam generators to drive the response time testing,  
22 doing a response time testing of the auxiliary feedwater  
23 pumps.

24 The timing associated with that was approximately 40  
25 seconds as the acceptance criteria. First test, I believe,

1 was in approximately 40.3 seconds with added time placed  
2 onto that due to instrument inaccuracies.

3 What we had done initially is thought the steam admission  
4 ~~emission~~ valve was the cause of that issue. We had done  
5 some adjustments to that steam emission valve and saw  
6 improved performance. We were however concerned with  
7 what's called the preconditioning and that the testing had  
8 taken place on the component and you could get improved  
9 performance just simply by having it warmed up and having  
10 recently cycled the valves.

11 So, we set up for a subsequent test following  
12 reaching ambient conditions upon the component, and once  
13 again, we exceeded the acceptance criteria on that occasion  
14 of 40.1 seconds.

15 So, continued with the Problem-Solving  
16 Decision-Making efforts. What we learned through attempted  
17 adjustments of the governor linkage that we actually made  
18 the performance degrade, and as a result of that we were  
19 into the cooldown in accordance with our license amendment  
20 requirements and the cooldown was in progress to go back to  
21 Mode 4/Mode 5 conditions.

22 We continued in our problem solving, essentially  
23 concluded what was required was complete disassembly of the  
24 linkage of the governor, to the governor control valve. We  
25 utilized our existing maintenance procedures to readjust

1 and realign that linkage while it was reconnected and then  
2 demonstrated significantly improved performance of the  
3 component.

4 So, what we believe, is eliminated a longstanding  
5 issue with the adjustment of that linkage and that had not revealed  
6 ~~avail~~ itself by exceeding the acceptance criteria until the  
7 new governor valve was installed during the outage.

8 We also then demonstrated reliability of the  
9 component by doing repeated demonstrations of performance  
10 and successively longer times following, allowing cooldown  
11 with the last test performed approximately 30 plus hours  
12 beyond the last test and demonstrating good performance and  
13 repeatable performance of the component.

14 So, what we learned there is we had an issue with  
15 the linkage adjustment. That linkage adjustment did not  
16 affect performance from exceeding the response time once  
17 the new valve was in there this outage, it did ~~avail~~ reveal itself  
18 needing to be addressed.

19 We've also looked at the Number 2 Auxiliary  
20 Feedwater System and both systems are now performing  
21 equally; whereas, the number one system had always had --  
22 Lew won't like this term, but we utilized the term  
23 "giddy-up", where essentially the turbine would come up to  
24 speed and once the governor would take control, it would  
25 initially ramp down by clamping down on the steam flow and

1 then before it continued up in its ramp. So, you would  
2 have a hump in the revolutions per minute, as the turbine's  
3 coming up to speed.

4 MS. LIPA: Greg, now that you  
5 know what you know on that, do you think that there  
6 probably should have been an opportunity to identify that anomaly  
7 ~~and not only~~ on the trace it previously, even though it meant the  
8 time, that there was something strange about the trace that  
9 should have been pursued?

10 MR. DUNN: In retrospect, I  
11 would say that's correct. We have had that delta between  
12 the two systems and did not reconcile that delta as to, and  
13 for quite some number of years. So, there could have been  
14 an opportunity, this is only conjecture on my part,  
15 identifying that during our initial testing and returning  
16 the system to service this outage.

17 MS. LIPA: Do you think  
18 that's something to share with the industry or something  
19 unique you learned there? I'm sure you'll provide me with  
20 that.

21 MR. DUNN: Yes.

22 Next slide, please.

23 MR. GROBE: Greg, I  
24 apologize. Was this the first time that the auxiliary  
25 feedwater pump had been tested since the shutdown in

1 February? Did you test them on aux. ~~border~~ boiler?

2 MR. DUNN: We did test them  
3 on aux. ~~border~~ boiler. Initial testing on the aux. ~~border~~ boiler also  
4 initially had some issues with the governor control valve  
5 where we had two suspected issues; one was the replacement  
6 of the valve and it is physically tighter, tighter  
7 tolerances since it's new than the other component on the  
8 number 2 side; and also that we believe we had bumped the  
9 trip throttle portion of that during the conduct of the  
10 testing.

11 So, we were able to repeat the auxiliary ~~border~~ boiler  
12 testing and not redemonstrate the deficiency. I don't  
13 believe that that was any preliminary indication, but  
14 there is always that potential.

15 But, yes, we did do auxiliary ~~border~~ boiler steam testing.  
16 We also did the flow testing once achieved in Mode 4 and  
17 then the response time testing in Mode 3.

18 MR. GROBE: Okay, thanks.

19 MR. THOMAS: You spoke to  
20 about every issue, every challenge so far except for one,  
21 and that is your breaker coordination issue. And I was  
22 wondering if that's going to be, if you're going to talk  
23 about that, or is that, you're going to talk about it now  
24 or is it somewhere else?

25 MR. MYERS: It's in my

1 presentation.

2 MR. ROSS: I'll also talk

3 about it.

4 MR. THOMAS: Okay.

5 MR. DUNN: The last item I

6 would like to discuss is equipment challenges, the actual  
7 results of our walkdown. One of the main objectives we had  
8 for the Mode 3 NOP/NOT Test, the Normal Operating Pressure  
9 and Temperature, was to do a complete walkdown of the  
10 Reactor Coolant System and also the main steam system,  
11 secondary, essentially the entire plant to determine and  
12 validate the leak tightness and determine what rework would  
13 be required prior to restart.

14 The walkdown during the Normal Operating Pressure  
15 Test looked at approximately 1342 items. There is another  
16 400 and some items which are still ongoing inspection,  
17 which are being inspected once achieved cooldown  
18 conditions.

19 Of that, we identified 163 items of note and that  
20 breaks down as indicated on the slide. Some of those are  
21 at very low threshold. Just documented in accordance with  
22 our Boric Acid Control Program, that is 31 items.

23 We had several items which were addressed during the  
24 Normal Operating Pressure Condition. What we had done was  
25 expanded our Fix-It-Now Team or our maintenance team, which

1 addresses issues as they arise, and several of these were  
2 packing adjustments or tightening of bonnets or valves, et  
3 cetera, that were addressed on the spot.

4 There were 47 of those that were completed and  
5 reinspected satisfactorily during the test. Another 24  
6 that were completed that required reinspection now that  
7 we're in Mode 5. And there are 61 items that require  
8 addressing prior to restart.

9 Those break down into many items, such as additional  
10 adjustments per packing glands that are required. There  
11 are several items in there which are air operated valves,  
12 motor operated valves, where we elected not to make any  
13 packing adjustments while at the Normal Operating Pressure  
14 Condition, because that would then challenge the potential  
15 for affecting stroke times for those components. So, those  
16 will be adjusted and retested in the mode, in the shutdown  
17 condition.

18 And then we have 24 items which will require repack;  
19 meaning the adjustment was not successful and repack of the  
20 packing gland will be required.

21 No items will require a deep drain condition or  
22 draining below the flange level of the reactor vessel. I  
23 consider that a success in that we did over one hundred  
24 valves which were first off isolations to the reactor  
25 vessel which required the deep drain to implement that



1 work, and none of those items will require rework during  
2 this shutdown condition.

3 So we do have those to address and will be addressed  
4 as part of the restart.

5 With that, I would like to turn it over to  
6 Mr. Roder.

7 MS. LIPA: Before we go on to  
8 Mr. Roder, this will be a good point for a break. Let's  
9 see if there is any questions on this equipment issue.

10 MR. GROBE: Thank you. I did  
11 have a question. During the inspection of the pressurizer,  
12 there was I believe an instrument valve, isolation valve,  
13 approximately a foot off the pressurizer that a body to  
14 bonnet leak was missed by an inspector, picked up by NRC  
15 inspector that was accompanying him. You decided to  
16 perform some additional inspections after the down pressure  
17 and repressurization.

18 How did you go about doing those additional  
19 inspections and what were the outcome of that?

20 MR. DUNN: Essentially, what  
21 we had done, since there is a question as to the ability of  
22 the inspectors to identify items, we had regrouped the  
23 inspectors, done a brief, essentially swapped the teams.  
24 The teams were made up based upon the work inside the  
25 D-rings or the enclosures around the steam generators or

1 the building. And we swapped those teams so there was a  
2 different set of eyes going in and inspecting those same  
3 areas.

4 That was completed. There were several items of new  
5 leaks identified; however, we're not certain whether those  
6 were as a result of the temperature transient in having new  
7 leaks or whether they were actually items that were missed  
8 by the previous inspectors. Nonetheless, we do have  
9 pretty, we have high confidence, based upon our low  
10 threshold for identifying boric acid on components that we  
11 have a good tight Reactor Coolant System.

12 I think Lew mentioned earlier, and Mark's going to  
13 cover later in the testing, our Reactor Coolant System  
14 Integrated Leakage Test measured at .006. So, we're very  
15 confident that the Reactor Coolant System is in a very  
16 tight condition, and those leaks were properly identified,  
17 but do concur there was some challenge and there were some  
18 items with the inspectors that identified items that could  
19 have been missed by our inspectors.

20 MR. GROBE: Could you give me  
21 a sense, are we talking, obviously with that low leak rate,  
22 there couldn't have been big leaks that were missed, but  
23 were there five items or 50 items that were identified on  
24 the second walkdowns?

25 MR. DUNN: I don't know an

1 exact number. My recollection is four, but I don't know  
2 that for sure.

3 MR. GROBE: Approximately  
4 five would have been good enough. I was looking for an  
5 order of magnitude. Okay, thanks.

6 MS. LIPA: Anybody else have  
7 questions for Mr. Dunn?

8 Okay. So, we'll take a ten minute break. I'm  
9 showing 3:35. So, 3:45. Thank you.

10 (Off the record.)

11 MS. LIPA: We're ready to  
12 begin.

13 Are you ready? Okay, go ahead.

14 MR. RODER: Okay, can  
15 everybody hear me? Okay, good.

16 My name is Mike Roder. I'm the Operations Manager  
17 at Davis-Besse.

18 My desired outcome is to demonstrate confidence in  
19 addressing recent operating issues.

20 First, going to talk about two of the issues we've  
21 had and I'll follow-up with our plan to address those  
22 issues.

23 Next slide, please.

24 The first issue was an event that is, was an  
25 inadvertent opening of valve Core Flood 1B, which allowed

1 inventory back flow through the decay heat system. Because  
2 of the pressure in the decay core flood tank, one or more  
3 relief valves lifted and the inventory ended up in the  
4 reactor coolant drain tank.

5 Subsequent to the event, Core Flood 1B valve was  
6 closed by the control room operators and shift manager  
7 directed Reactor Coolant System pressure to be reduced to  
8 about 575 to 600 pounds. At that point, I put a hold on  
9 Reactor Coolant System heatup activities to investigate the  
10 event.

11 A problem solving decision-making team was  
12 established to address the equipment impact and a root  
13 cause investigation was initiated to assess the  
14 performance.

15 The causes of the event were found to be poor  
16 procedure and that there was no specific section to put the  
17 core flood tanks into service. The applicable steps were  
18 located in various places in the procedure and were not  
19 grouped well to prevent this type of an event.

20 Operator performance was another cause in the prejob  
21 brief did not identify the potential for this inadvertent  
22 opening of Core Flood 1B, and therefore, the crew was not  
23 monitoring the flow pressure that was interlocked with the  
24 valve.

25 Although Just-In-Time Training for the heatup was

1 done, no -- this evolution, this particular evolution was  
2 not trained on.

3 Immediately actions taken were that the heatup  
4 procedure was changed to place all the applicable steps  
5 required to put the core flood tank in service in one  
6 location and in sequence to prevent this event from ever  
7 occurring again.

8 The on-shift licensed individuals were, received  
9 training on the simulator to cover this event, the lessons  
10 learned, and the new procedure revision to prevent  
11 recurrence.

12 The second event -- next slide, please.

13 The second event in the Reactor Protection System  
14 Trip was shut down bypass by high pressure. This caused a group  
15 one control rods to insert. These rods had been removed  
16 for trippable activity which was seen as a conservative  
17 measure.

18 A root cause investigation for this event was also  
19 conducted. The causes were found to be, again, poor  
20 procedure and the specific sequence of activities were not  
21 dictated by procedure, rather it relied on operator  
22 knowledge and memory to carry out the actions to avoid  
23 pitfalls. Another cause was operator performance with  
24 regard to awareness in monitoring of the Reactor Coolant  
25 System pressure and how the plant cooldown activity could

1 cause this trip to occur. And an incomplete prejob brief  
2 was performed, which did not cover the shutdown bypass high  
3 pressure trip or its set point.

4 Subsequent to this, our relief crew created a  
5 specific sequence on how the cooldown activities were to be  
6 performed. That specific sequence then became the road map  
7 and we aligned the procedure, the cooldown procedure to  
8 that road map. We also created prejob brief reports for  
9 each and every evolution in that new cooldown sequence. We  
10 conducted simulator training for each and every evolution  
11 in that sequence.

12 Then, additional measure, we added some intrusive  
13 FENOC or First Nuclear Operating Company oversight to the  
14 simulator and to the control room.

15 Next slide, please.

16 The cooldown activity was then completed event-free  
17 and error-free.

18 To address these issues, we created a Collective  
19 Significance Condition Report and put together a team  
20 consisting of industry peers, our FENOC Operations Program  
21 Manager, some Human Performance expert help from our Perry  
22 station, and some others, including operators, to aid in  
23 this review.

24 An Operations Action Plan has been developed, which  
25 includes interviews of each licensed operator on

1 expectations and standards, conducting an interview of a  
2 team that consists of senior management individuals, and  
3 the assessment of these interviews will help us in  
4 reconstructing the operator crews to maximize the crews  
5 teamwork.

6 Key operation procedures will be strengthened by the  
7 intensive review, the same intensive review we went through  
8 with the cooldown procedure; operator training will be  
9 improved by installing newly named training manager to his  
10 position; also utilizing the simulator training on each  
11 task in the heatup/startup sequence and focusing on  
12 operator fundamentals through this process, such as  
13 communications, briefings, and identifying the box or the  
14 limiting parameters that we need to stay in to do the  
15 process.

16 Also, operational oversight will be strengthened by  
17 establishing specific expectations of oversight, selecting  
18 peers from top performing plants, and they will be required  
19 to report shiftly to senior management on their  
20 observations.

21 Next slide, please.

22 In conclusion, the Restart Test Plan was  
23 successful. We exercised the equipment, process, and  
24 people to achieve Normal Operating Pressure and Normal  
25 Operating Temperature conditions. And then we were cooled

1 down ~~and apparently~~ on our Decay Heat System.

2 So, equipment challenges were identified and Greg  
3 discussed those, and some operator performance challenges  
4 were also identified.

5 I am deeply disappointed in these operator  
6 performance issues; however, I am also confident that the  
7 actions we've taken will in the next few weeks, will  
8 strengthen my people, strengthen the teamwork, strengthen  
9 our integrated plant procedures, and strengthen the  
10 oversight to assure an error-free start.

11 Questions?

12 MR. THOMAS: Yeah. A couple  
13 times you mentioned performance issues and you weren't very  
14 specific. Could you be more specific in the types of  
15 performance issues that you identified?

16 MR. RODER: There were, I will  
17 say there was two main performance issues; one was the  
18 operator not understanding their limiting parameters of  
19 what we have been calling the ceiling, floor, and walls  
20 temperature/pressure parameters they need to stay in; plus  
21 fundamental operator knowledge should be, where is the box  
22 that I need to stay in. That's one performance issue.

23 The other issue was prejob briefing, and those  
24 parameters and the appropriate indicators to watch, were  
25 not discussed, were not anticipated, and therefore, another



1 fundamental operator action that should have been done, the  
2 prejob brief was not adequate.

3 MR. THOMAS: I understand that  
4 the root cause is still underway in determining all these  
5 issues associated with this. I was wondering if you've  
6 reached a point that you can, to where you can discuss the  
7 corrective actions that you'll implement for the first item  
8 that you talked about?

9 MR. RODER: First item being  
10 the core flood?

11 MR. THOMAS: No, the  
12 watchstander, inattentative.

13 MR. RODER: There is several  
14 items we're doing. I mentioned the Operator Action Plan,  
15 and several items in there. First of all, we're going to  
16 be interviewing, as I mentioned, the licensed operators, so  
17 that we can form our four shifts. We're doing that to  
18 optimize the teamwork on the shift. We're also doing that  
19 to ensure that the interviews will be on expectations and  
20 behaviors.

21 So, we are also ensuring ourselves that the licensed  
22 operators understand expectations and behaviors, because  
23 there is examples here where they do not meet  
24 expectations.

25 We'll also be doing some intensive review of those

1 procedures on plant heatup, startup, shutdown and cooldown,  
2 to understand and develop prejob briefing forms that  
3 specifically identify the limits of where the box is for  
4 each evolution. That will go into our simulator training  
5 and that will be trained on to identify those areas.

6 We will also have management oversight in the  
7 simulator to ensure that the operators understand and  
8 adhere to expectations and the fundamentals which I  
9 mentioned are adhered to. One of the fundamentals being  
10 understanding plant parameters, where you're at, and what  
11 limits are applicable at the time of the evolution.

12 MR. THOMAS: Okay.

13 MR. GROBE: I misunderstood on  
14 your slide 34, the just prior slide of this one.

15 The interviews with the Senior Reactor Operators and  
16 the Reactor Operators, I thought you were talking about  
17 interviewing them in the context of what might have gone  
18 wrong to understand the cause, but it seemed from what you  
19 just said a minute ago, these are something else. Could  
20 you go into that in a little more detail?

21 MR. RODER: That's correct.

22 The causes are still under way, and applicable people are  
23 participating in those root causes. This interview is more  
24 of an assessment interview to ascertain what, what  
25 strengths and what weaknesses individuals have, and that

1 will help us to optimize the crews. We're going to be  
2 restructuring our operating crews, and then we'll be  
3 training as a new crew. So, that's the purpose of those  
4 interviews, to ensure the operators understand expectations  
5 and assure they have the appropriate behaviors, optimize  
6 the crew by placing specific individuals together.

7 MR. GROBE: Is there some  
8 reason that you believe that the procedural challenges that  
9 you've found in these procedures is limited to the  
10 Operations area? I believe there is some complex  
11 Maintenance procedures and Testing procedures also.

12 MR. RODER: One of the  
13 outcomes we're looking for out of Collective Significance  
14 Team is to address that issue on procedures.

15 MR. GROBE: Okay, so that's  
16 still an open question.

17 MR. RODER: Work in progress,  
18 that's correct.

19 There is no doubt in my mind, that the plant  
20 integrated procedures need work. Beyond that, I don't have  
21 the total scope yet.

22 MR. GROBE: Now, these are  
23 procedures, I don't believe that would change substantively  
24 from prior to shutdown. Is there something new and  
25 different now that resulted in these procedures not being

1 sufficient?

2 MR. RODER: Well, I think the  
3 procedures are merely one piece of the puzzle that led to  
4 these events. One of the other pieces is the operators in  
5 the performance had ongoing simulator training, but some of  
6 their skills have degraded over the last twenty months, and  
7 I think it's, that's part of it, the procedures have not  
8 been updated, and they need to be looked at.

9 There were several equipment challenges along the  
10 way, which certainly challenged us. I think we operated  
11 and made appropriate decisions with those, but I don't see  
12 that there is, like you said, there is nothing substantive  
13 that's changed in the procedures.

14 MR. GROBE: Okay. Could you  
15 talk a little bit, there was an uncanny similarity between  
16 the two issues, the one that occurred on heatup and one  
17 that occurred on cooldown. Could you explain why the  
18 actions that you took on the heatup situation were not  
19 effective? Go ahead.

20 MR. RODER: Your  
21 characterization is right. That's what's most disturbing  
22 about these two events, is they appear to be almost  
23 identical, different situations, but identical causes.  
24 That is, that is the whole purpose behind our Collective  
25 Significance Review and the Operations Action Plan is being

1 put together, is to address those issues.

2 MR. GROBE: Okay. So, I  
3 guess the bottom line is, it's too soon to tell, because  
4 you're doing the Collective Significance Review, and until  
5 the root causes are understood, but you have identified  
6 several actions that you've already initiated regarding  
7 training, crew oversight, and some procedural enhancements  
8 and some assessment and optimization of the crews.

9 We have a public meeting tomorrow to talk about  
10 System Health, and we'll have one the next couple of weeks  
11 on the Corrective Action Program. Maybe at the time of  
12 that Corrective Action Program, would you be ready to get  
13 into a little bit more detail on what plans you're taking  
14 and how you're going to monitor the effectiveness of those  
15 plans prior to restart?

16 MR. RODER: I would be happy  
17 to update you on that, yes.

18 MR. GROBE: Okay, any more  
19 questions?

20 MR. MYERS: Jack, we do  
21 thousands of evolutions a week, you know. There are a  
22 couple here that we've seen, when we did this Mode 4 test,  
23 we do all of our surveillances; Integrated Leak Rate Test,  
24 Integrated ESS Surveillances, all these events, all the  
25 calibration procedures and everything. What we don't do is

1 those procedures for reactor startup and normal plant  
2 operations and some of those we should do. And so, there  
3 is a population there we need to go back and look at.

4 But we get a lot of them and a lot of the activities  
5 perform very well, you know, start up Reactor Coolant  
6 Pump. There is a few here that, that causes issues. When  
7 we look at these, what I see, we built more flexibility  
8 into the way we operate than what I'm accustomed.

9 Once we saw each one of these, what support items,  
10 they were able to take that same issue as a very easy  
11 management approaches, and now then after cooldown,  
12 pressure back up, and cool back down again. It was not  
13 only event-free, we did it completely error-free, you  
14 know.

15 So, you know, and the same thing was true of the  
16 cumulator. The cumulator in/out, in/out, in/out. You  
17 know, we put those cumulators in and out.

18 You know, and a lot of this goes back to the balance  
19 point between supervision, adult supervision, training and  
20 procedures, you know. And that triangle is something  
21 that's widely used in the industry. And if you go and look  
22 at it, our operators have not been operating the plant for  
23 two years. That's a long time. In fact, that's longer  
24 than the normal training program for a licensed operator.

25 So, we have to get them back into a very controlled

1 operational mode, you know, and really control that mode  
2 very well, and make sure we got the right teamwork on  
3 shift.

4 My belief is this Mode 4 test really helped us a  
5 lot. I know there is things for us to go do here, but you  
6 know, I'm the president and I'm pretty excited about it, I  
7 think it's going to really improve the startup of the plant  
8 once it's all said and done. We ought to be making  
9 improvements to the plant, because we have to do that error  
10 free.

11 MR. GROBE: Okay.

12 MR. DAME: Okay, can everyone  
13 hear me back there, in the back of the room?

14 Okay, my name is Rick Dame. I'm going to be talking  
15 about Operational Readiness Assessment results and we're  
16 going to carry through with the theme talking about people  
17 and processes and behaviors. We talked about a lot of  
18 technical stuff earlier, so we're going to be focusing on  
19 people, processes and behaviors.

20 So, for folks who aren't familiar with my particular  
21 background in the role of helping out at Davis-Besse, as  
22 I've talked previously the past couple of meetings with  
23 regards to an integrated Restart Test Plan. What that was,  
24 is a detailed test plan from Mode 4 through the 7-Day NOP  
25 Test that we've been talking about, back down to cooldown

1 and then up to a hundred percent.

2 Background which allows me to be successful in  
3 helping out in that area, I've done that at the Perry  
4 Nuclear Power Station, used my vast background as a Senior  
5 Reactor Operator and planning for refuel shutdowns and  
6 startups, as well as I've been involved with a number of  
7 big integrated tests going all the way back to pre-Ops test  
8 days through power upgrade. So, a little bit of background  
9 as far as why I was brought in to help out in that area.

10 However, what I'm here to talk about today is  
11 Operational Readiness; and again, as part of my background  
12 I've been an Assessor for World Association of Nuclear  
13 Operators as a host peer at the Perry station, focusing  
14 specifically on conduct of Ops and Organizational  
15 Effectiveness.

16 So, with that setting the stage, Desired Outcome of  
17 my presentation is to share with you the observations and  
18 conclusions of the Operational Readiness Assessment that we  
19 did during the 7-Day Normal Operating Pressure Test.

20 One thing with regard to the duration of the test,  
21 we talk about 7 days, but we heard Lew talk about 13 days;  
22 the assessment team we assembled actually had the luxury of  
23 looking at the organization for almost 25 days. So, we'll  
24 talk about a lot of the information we found here and the  
25 results and some of the conclusions from that.



1           The assessment methodology we used was an Integrated  
2 Assessment Team. You'll see from an upcoming slide, we set  
3 up a very diverse integrated team to take a look at the  
4 organization. We'll take a look at that here shortly.

5           We applied industry recognized standards of  
6 excellence, and again, I mentioned World Association of  
7 Nuclear Operators. Their standards look very much like the  
8 Institute of Nuclear Power. We have some of the people  
9 from INPO, which is better known here today. So, they're  
10 very familiar with those standards.

11          Also mentioned, I was brought in to set up the  
12 Integrated Restart Test Plan. This assessment is actually  
13 a portion of that plan. So, with that, we'll go to the  
14 next slide.

15           MR. GROBE:           Rick, before you  
16 go on, you're mentioning of INPO reminded me of something I  
17 wanted to ask Mike. I apologize for interrupting.

18          I think awhile ago there was a program that INPO  
19 introduced called something like Human Performance  
20 Evaluation System or something. I don't remember the exact  
21 acronym. Does that system exist within Davis-Besse as far  
22 as looking at precursor activities and things of that  
23 nature?

24           MR. RODER:           Yes, in fact, most  
25 notably, it's part of our prejob briefing expectations,

1 where we would look for the precursor activities, those  
2 type of things; also comes into play as far as the  
3 evaluation of the root cause and on the trail end, if you  
4 will.

5 MR. GROBE: Okay. I think  
6 I'm going to want to learn a little more about how you're  
7 applying that system in this context.

8 MR. RODER: All right.

9 MR. GROBE: Okay, thanks,  
10 Rick.

11 MR. DAME: This slide up  
12 here, I want to thank Fred von Ahn, who is part of our  
13 corporate oversight that actually put this slide together.  
14 It depicts the Integrated Assessment Team.

15 If you take a look at this particular diagram,  
16 you'll see a block where it's labeled "plant staff." When  
17 we originally set up this assessment, we weren't quite sure  
18 how many types of issues we would run into, so we actually  
19 assembled a team that had some planned exercises. I can  
20 tell you over the 25-day duration that we looked at the  
21 organization, we saw more than enough activities to make a  
22 thorough and critical assessment.

23 So, that particular block diagram plant staff  
24 actually became the Davis-Besse Line Organization and we  
25 set up management oversight to confirm activities and other

1 evolutions associated with the 7-Day Test; and the  
2 Davis-Besse staff actually performed 165 observation cards,  
3 which is going to be part of the actual assessment  
4 reports. So, we have a lot of information from the in-line  
5 staff as far as what they saw, some of their behaviors for  
6 what they saw.

7 Associated with the Integrated Assessment Team,  
8 you'll see down at the bottom lower lefthand side "External  
9 Operational Assessment." What this portion of the  
10 Assessment Team functioned as, it was more or less peers  
11 from outside the Davis-Besse organization. We brought in  
12 four highly seasoned nuclear executives that have been very  
13 successful at a number of plants helping to turn around  
14 their performance.

15 This team also included nonDavis-Besse individuals  
16 within FirstEnergy Nuclear, including myself, and we also  
17 had the luxury of having input from INPO peer and  
18 operations that helped out with regards to looking at  
19 organizational effectiveness and conduct of Ops.

20 Off to the lefthand side, and Steve Loehlein, our  
21 Quality Manager, will talk about this one as it comes time  
22 in the presentation, but Quality was doing a large number  
23 of observations during this period of time.

24 I want to back up just one more step. I mentioned  
25 165 observations by the internal line management, the

1 external team did a total of 76. So, we have a lot of data  
2 and a lot of information to look at.

3 Currently, where we're at, I held up a book talking  
4 about all the data. We're up in the upper righthand side,  
5 sort of product finalization. I have the task of  
6 assembling the final report with observations, conclusions,  
7 and then corrective actions going forward will be in our  
8 Corrective Action Process here at Davis-Besse. And my task  
9 is to get that done in about a week or so for Mr. Lew  
10 Myers.

11 Next slide.

12 Okay. I talked a little bit about how we informed  
13 some of these observations, summaries, and conclusions. It  
14 was mentioned we had a lot of information available to us,  
15 but most of these observations are supported by three  
16 independent observations from members of the team. Most of  
17 these have come from the external team; several did come  
18 from the internal team, which we'll talk through.

19 The first observation, and if you look back at the  
20 history of how we got into the situation that we're trying  
21 to recover from, one of the things that we were, wanted to  
22 look at very closely was Critical Assessment of  
23 Organizational Performance.

24 I mentioned we did a lot of observations by the  
25 in-line peers. And in general, if you compare the

1 observations from external to internal, the external peers  
2 tended to look and find the equal amount of things that the  
3 station is doing real well, but at the same time they also  
4 found about half of the areas, again, of pretty much equal  
5 balance of things that were opportunities for improvement.

6 The Davis-Besse line organization, when we started  
7 out taking a look at this, it wasn't necessarily that same  
8 balance, but there is some opportunities to improve there.

9 For example, if you take a look at the Davis-Besse  
10 organization, the data bears out that a lot of the new  
11 management team is more self-critical than what I would  
12 call some of the older line Davis-Besse team members. What  
13 that does is create an opportunity that can be, you can  
14 sort of shrink that differential or delta through things  
15 like coaching and observations.

16 This observation program is actually a great tool to  
17 do that and through this 25-day duration, as we kept  
18 talking about some of the observation results, we did see  
19 an increase in some of the additional coaching that was  
20 being done by team members to help raise the  
21 self-criticalness of the organization.

22 I know Kathy Fehr had helped me out quite a bit with  
23 this. She was very excited to say, hey, Rick, people are  
24 paying attention to this program that I'm in charge of.  
25 So, it's something we have to keep the momentum going and

1 we'll be looking at that going forward for our Corrective  
2 Action Process.

3       Additionally, I mentioned about the new management  
4 team. This is also a big opportunity for a lot of the  
5 in-line long term Davis-Besse individuals who are now in  
6 positions of management and supervision to help create a  
7 change in the organization. In fact, one of the words that  
8 one of the external peers uses, a great opportunity. Now,  
9 we've been looking at a lot of equipment issues, but for  
10 this new management team, we're really going to focus on  
11 being change agents.

12       So, again, it's a great opportunity. We saw some  
13 information here, and again, it's been shared across the  
14 board with the management team at Davis-Besse and senior  
15 management.

16       Moving on to the next bullet. One of the things --  
17 no, back.

18       Shift management oversight of operational activities  
19 can be improved. Every external peer took a hard look at  
20 Operations, conduct of Ops, and a lot of the items that  
21 Mike Roder just talked about in regard to the action plan  
22 and improvements, the external team has supplied some input  
23 to the root cause teams and also the operations management  
24 on ways that we think we can get better.

25       So we've utilized this opportunity to assess the

1 organization to more or less pick the brains of some of the  
2 best in the industry, again, some of these senior execs,  
3 INPO peers, to help out and improve the level of  
4 performance within the Davis-Besse Operations area.

5 So, again it's something we picked up on, one of the  
6 observations to characterize some of the things we saw, was  
7 sometimes we would see shift management oversight drop down  
8 a level to try to help out. That's admirable, but at the  
9 same time part of the role is to maintain proper oversight.  
10 Again, I'm very confident that Mike Roder is taking a look  
11 at all our observations and understands fully what needs to  
12 be done to help improve that situation.

13 Next slide.

14 MR. RULAND: Rick, did you go  
15 into this process thinking that this was part of the way  
16 you were going to examine this, was not only benchmark your  
17 staff, but benchmark the assessment folks too? Is that  
18 true? I guess I didn't understand that going in.

19 MR. DAME: Yeah, one of the  
20 things, again, because of the number of different issues  
21 and for, put it this way, lack of opportunities to do  
22 exercises because we were actually watching real life  
23 activities, is I decided as part of this assessment plan to  
24 go ahead and put this database in place.

25 It was used during the deep drain evolution that was

1 done before I got here to work on some valves, proved to be  
2 a very valuable tool. I thought it would be a very good  
3 way of assessing how the organization looked at itself and  
4 how it interacted.

5 So, again, I sort of added this, I guess, as I went  
6 along, saw it as an opportunity to do this.

7 MR. RULAND: Actually, I've  
8 never seen that done before where you're assessing how the  
9 assessors worked.

10 MR. DAME: I think it's real  
11 good information.

12 MR. RULAND: Yeah, it's good  
13 information.

14 MR. MYERS: Could I? We did  
15 go into this with that in mind, you know. We got our  
16 management observation working. I have the data here. I  
17 can sort it all different kinds of ways. How effective is  
18 it? I believe the outside people don't know that.

19 MR. DAME: And, again, we see  
20 opportunities based on the data we got here to improve our  
21 overall performance.

22 Talked about some of the things we saw in  
23 Operations. One of the characteristics or observations and  
24 this was overlapped by a number of the external peers,  
25 including myself, is we saw performance shortfalls and sort



1 of how you view things relative to standards of  
2 excellence. Identified the monitoring of plant parameters  
3 and trends and in turn anticipating the operational impact  
4 of these trends.

5 So, again, the team has shared some of the  
6 recommendations for how to get better in this area with the  
7 operations staff.

8 Probably the most significant differential we saw as  
9 part of this assessment is wanting to look at standards to  
10 make sure what we were doing at Davis-Besse was aligned  
11 with industry best practices. And probably the one very  
12 tangible piece of evidence we saw, and again, it was  
13 observed by a number of peers, was the briefing process  
14 used here in Operations.

15 They have a very seasoned staff of SRO's and we  
16 watched a lot of briefs; and what would happen is those  
17 individuals will provide in great detail the evolution,  
18 where we're going, but sometimes based on the observations,  
19 we weren't quite sure if everyone was totally engaged with  
20 the activities.

21 So, there is a technique that's used throughout the  
22 industry called reverse briefing. And how that would work  
23 is, let's say I'm an operator working for you. You would  
24 say, Mr. Rick Dame, we're going to carry out this operation  
25 of activity.

1           And what I would do is go out and take a look at all  
2 the procedures, review them, understand all my precautions,  
3 limitations. Ask questions of myself, what's the worst  
4 things that can happen; what are some of the parameters I  
5 should be sensitive of as I'm moving the plant. Then I  
6 would come back and I would explain to you, my supervision,  
7 that this is the direction we're heading.

8           It gives an opportunity also for the shift  
9 management oversight to calibrate or reinforce certain  
10 expectations if they didn't hear them correctly. So,  
11 again, it's a nice interactive approach. And again, we've  
12 sat down and talked with Operations. The Root Cause Teams  
13 are in motion, have also seen this. But we're going to go  
14 ahead and institute that.

15           And it's worked in the industry. We mentioned INPO  
16 lessons learned. We have a lot of information that those  
17 root cause teams are looking at, Human Performance and  
18 Operations. And one client in particular, I.3-2000, they  
19 had a lot of similar issues with what we're seeing here at  
20 Davis-Besse, and we're going to apply a lot of lessons  
21 learned there; one was used to institute reverse briefing.

22           So, we think that's going to be real successful  
23 going forward. It's used at our three FENOC stations and  
24 Mike is going to be rolling that out as we go forward.

25           Last bullet sort of piles on to the previous bullet

1 in regards to preoperational briefs, the delta we saw.

2 Again, we have plans to fix that going forward.

3 Next slide.

4 MR. GROBE: Before you go on,  
5 Rick, you found examples other than the two that resulted  
6 in equipment maturations that Mike talked about in the area  
7 of monitoring plant, monitoring of parameters and trends,  
8 and anticipating impact of those trends?

9 MR. DAME: Yeah, we saw, I'll  
10 bring out one example of what we saw; it was actually a  
11 post-maintenance test that was being conducted by an  
12 operator that was on the service water system. There was a  
13 Condition Report written to evaluate. Unfortunately, I  
14 don't have all the details, but the observation was done by  
15 one of our senior executives that was out in the field  
16 watching the evolution.

17 There was really sort of a lack of questioning  
18 attitude with regards to what was going to happen once the  
19 valves got manipulated. A relief valve ended up being  
20 opened, which was not an expected occurrence during the  
21 post-maintenance test evolution that was being witnessed.  
22 And, again, a Condition Report was written.

23 But there is another example where if you had a  
24 prejob brief before you went out in the field, improved  
25 communication, one of the things you ask is what is the

1 expected response when you manipulate these valves. So,  
2 again, that's just one example. We saw several others.

3 MR. GROBE: Mike, the  
4 Collective Significance Review, which you had mentioned on  
5 the last slide of your presentation, Root Cause and  
6 Collective Significance Teams are formed. What's the scope  
7 of the data that they're looking at?

8 MR. RODER: They're using  
9 several additional Condition Report, other than the two I  
10 talked about. In addition, they're using the observation  
11 database, and also the quality field observation database.  
12 So, it's quite extensive. Essentially covers a time frame  
13 for the scope. That time frame is from initial vacuum  
14 down.

15 MR. GROBE: So, all of the  
16 data that came out of Rick's group and Quality group,  
17 Steve's group, all of that will be put into this?

18 MR. RODER: That's correct.

19 MR. GROBE: Good.

20 MR. MYERS: If you wanted to  
21 talk, Mark Christian is back there with us, he's the leader  
22 of that team, so he's the sponsor of it.

23 MR. GROBE: That's the only  
24 question I had right now, but I am keenly interested in the  
25 outcome of that activity.

1 MR. DAME: Okay. Next slide,  
2 please.

3 A couple other things that we heard of previously  
4 that Mike Roder talked about, with regards to operational  
5 procedures, a lot of the folks on the outside took a look  
6 at these and we felt overall based on the observations and  
7 quality of operations procedures below that observed in  
8 industry leading performers.

9 Some of the actions that are being taken, we've  
10 heard about, especially take a look at integrated  
11 procedures; it's a good action to move forward with. And  
12 again, the briefing process that we just described, the  
13 reverse briefing, should help flush out some additional  
14 issues as you go forth.

15 Again, the behavior that's stressed at this station  
16 and every other station in the nuclear industry is when you  
17 find a procedure issue, you should stop, contact your  
18 supervision, correct the procedure going forward. And  
19 that's something that we got to make sure that we're  
20 doing. Again, it's part of that observation coaching  
21 activities that need to be occurring to make sure that  
22 we're not proceeding without making sure that our  
23 procedures are correct and support the activities that  
24 we're performing.

25 The next area bullet, weaknesses were observed in

1 the procedural compliance area. These two sort of go hand  
2 in hand to some degree. In talking to some of the  
3 operators, there has been a lot of operator savvy that's  
4 probably been lost through the years. Again, the reverse  
5 briefing process can help find out some of these areas  
6 where maybe we need to make more details with regard to  
7 procedures, but again, if your procedures aren't good,  
8 there is probably some tendency in the past to try to get  
9 from point A to B with the procedures that you had in  
10 hand.

11 I think that was some of the procedural compliance  
12 issues that we saw. Again, it's fixable. It's correctable  
13 with the actions that are going to be taken by the  
14 Operations staff, but we need to be sensitive about that;  
15 we do everything at this facility through procedures.

16 MR. GROBE: Before you go on,  
17 you indicated a failure to stop when procedures were found  
18 to be not adequate and weaknesses in the area of procedural  
19 adherence. This sounds like a dialogue that we had maybe  
20 three months ago in the Maintenance area. I was wondering  
21 if you had any thoughts or observations regarding the  
22 similarity between what was being seen in the Maintenance  
23 area and what was in Operations are?

24 MR. DAME: Okay, I'm not  
25 familiar with the details of Maintenance observations, but

1 with regards to procedural compliance we did have some  
2 other observations in areas; one was in the Maintenance  
3 area and one was in the Engineering area, but there wasn't  
4 a number of them that tended to overlap. There was more  
5 seen in Operations than other areas.

6 MR. GROBE: I was looking more in  
7 the context of extent of condition. If you've addressed  
8 this problem in the Maintenance area and now you're seeing  
9 it in Operations, are there other areas where it hasn't  
10 been flushed up yet?

11 MR. MYERS: We would have  
12 Engineering, we would have Chemistry and HP, Operations,  
13 then we look at Maintenance, and now we're able to refocus  
14 in the Operations area. I guess we're seeing some of the,  
15 some of the same type of issues.

16 Once again, I hate to say I expected that, but I  
17 expected to see some issues in Operations, when you ask  
18 Operations to run for the first time in two years. So, I  
19 think we've seen some of the things that we did see in  
20 other areas. I guess, I'm just not overly, I guess Lessons  
21 Learned, I've looked at, has told me to go look for them.  
22 So, we're seeing some of the indications that I sort of  
23 expected.

24 MR. GROBE: Okay.

25 MR. MYERS: And whatever it

1 takes, strong corrective actions there, that's what we're  
2 doing, making step changes in performance, is what we'll  
3 do.

4 MR. DAME: Okay, next slide  
5 please.

6 I've heard a lot this afternoon about the  
7 Problem-Solving Decision-Making Process. I've been talking  
8 about a lot of opportunities for improvement. I want to  
9 talk about a couple good things here with regards to the  
10 problem-solving process that we saw. One, it's firmly  
11 ingrained in the organization when they're running into a  
12 complex problem, they're almost immediately thinking  
13 Problem-Solving Decision-Making Plan and putting a team  
14 together.

15 What was particularly pleasing to the Assessment  
16 Team, one of the problems we had when we first started this  
17 assessment was shift managers looking out, asking for help  
18 from the organization, because there had been some  
19 indications based on some previous Condition Reports that  
20 maybe that wasn't always occurring.

21 I can tell you that every situation that the Op  
22 staff ran into was, let's stop, and make a conservative  
23 decision, okay, let's engage the organization, let's use  
24 the entire team to help out.

25 One of the byproduct as you see in this



1 problem-solving process that hasn't been talked about  
2 either is just teamwork. When you start pulling various  
3 disciplines together, you gain a firm appreciation for  
4 maybe what a maintenance technician has to do if you're  
5 maybe an engineer; or if you're an operator, what a design  
6 engineer has to do with regard to solving problems.

7       So, it's sort of a byproduct. Again, we saw a lot  
8 of good teamwork throughout a lot of these different  
9 Problem-Solving Decision-Making processes.

10       With that said, we saw a number of opportunities for  
11 implementation of the Problem-Solving Decision-Making  
12 Process. Again, we had a lot of good external talents,  
13 who were taking a look at this, and some of the  
14 recommendations that came out of this should probably be  
15 used across the fleet at FirstEnergy Nuclear, facilitator  
16 or program owner for problem solving.

17       It was talked about at one time, but I think now we  
18 have some run time on this fairly new process, that that's  
19 something that would certainly help out with not only the  
20 efficiency, but also the quality, the consistency with how  
21 we approach problems. So it's something that will probably  
22 end up in our Condition Report Process, Corrective Action  
23 Process.

24       There is some opportunities to improve the  
25 flexibility of the process. That was observed by not only

1 our team, but also the Quality team that was taking a look  
2 at the different problem solvings.

3 When we go to address a problem, this was a  
4 suggestion from Mark Bezilla, you look at the way we run an  
5 outage, we have a dedicated center, work support center.  
6 Maybe we should start thinking about doing that for  
7 problems, because a lot of the tools you need during  
8 initial setup, it would be good to have in one nice place,  
9 a nice area to go ahead and congregate to solve problems.  
10 So, again, a lot of suggestions came from the team we had  
11 on the outside.

12 Along the lines of Quality also, we had this new  
13 Engineering Assessment Board. One of the individuals said,  
14 why don't we start using some of the complex problems,  
15 putting those results in front of the EAB, we call them, to  
16 see if the quality is where it needs to be. Again, a lot  
17 of good ideas were kicked out as we watched this process.

18 Again, throughout the evolution, the assessment  
19 period, some of these problem-solving plans I would say  
20 were textbook, others we had some room for improvement and  
21 we recognize that.

22 Next slide, please.

23 MR. GROBE: Could you address  
24 in a little bit more detail on the flexibility of the  
25 process? You indicated there is opportunity to improve the

1 flexibility process. I'm not sure I understand that.

2 MR. DAME: Yeah, as one of  
3 the co-authors of the process back at the Perry station,  
4 eventually became a FirstEnergy product. One of the things  
5 when we laid it out, was let's say you have a problem that  
6 has five potential causes. The way the instruction is  
7 written, the way it's being interpreted, you almost have to  
8 work through all five of those simultaneously before you  
9 can start getting it rolling.

10 The original intent was, when we put it together,  
11 was, okay, let's say the first possible cause involved was  
12 maybe checking some instrumentation in the field. Well,  
13 there is no reason why you can't go ahead and get a  
14 notification, work order going, get some INC technicians,  
15 maybe an engineer out there to take a look at that. That  
16 will get some data that will help the team continue to move  
17 forward to some of the other potential cause, at least  
18 proving or disproving them.

19 Again, that flexibility, when you read through the  
20 procedure right now, isn't apparent to everyone. Again,  
21 being involved when we initially drafted it, that was the  
22 original intent. I think we can improve there. What that  
23 does is improves the efficiency of the process and also  
24 obtains information as quickly as possible to help the team  
25 solve the problem. So, when we look at flexibility, it's

1 more or less what was observed, Jack.

2 MR. GROBE: Okay.

3 MR. DAME: Okay, next slide,

4 please.

5 Couple other observations here, and this was one  
6 that the station is firmly aware of, and it's an  
7 opportunity to use our corporate assets and also fleet  
8 assets; and there has been strength in certain technical  
9 disciplines we feel needed to get replenished. This was an  
10 observation mostly from our senior and nuclear executives,  
11 and they felt this was necessary to sustain organizational  
12 improvement going forward.

13 One specific area was electrical engineering. I'm  
14 glad to hear your background, Joe, as far as what you bring  
15 to the table, because that's one of the things the station  
16 recognizes we're going to have to get better going forward,  
17 and Assessment Team also saw that based on some of the  
18 problem-solving efforts in the electrical area.

19 So, that's something the station recognizes, they  
20 understand it; and again, we'll be looking to improve in  
21 that area.

22 Next bullet, Engineering/Operations Interfaces,  
23 not as strong as observed in industry leaders. This was  
24 again picked out by the external peers, and one of the  
25 things I'm very confident to say is Davis-Besse has now got

1 a new System Engineering Manager that I know very well,  
2 Brian Boles, who is from my station, the Perry plant. And  
3 some of his career moves; he's been a System Engineer  
4 Manager at the Perry station, he's been the Ops Manager, so  
5 he's played both sides of the fence and he understands the  
6 expectations and the needs of the Operations organization  
7 with regard to System Engineering support.

8 As one of the first actions we're going to do to  
9 make sure that support is there during our power ascension,  
10 we're going to make sure we have system engineers and also  
11 Maintenance support scheduled, staged, and ready to support  
12 Operations in the startup of all major pieces of equipment  
13 through startup.

14 That did not occur on every instance through this  
15 Normal Operating Pressure Test. Case in point, Aux.  
16 Feedwater Pump Number One Program. We have people out  
17 there ready on station. It certainly allows an  
18 organization to be more effective to respond to issues if  
19 they happen to occur. So, again, I think that's a good  
20 addition to the team, that will help that interface.

21 Last bullet item, improvement opportunities exist in  
22 performance of Management observation and coaching. Again,  
23 they have a great tool here, this observation database.  
24 They're using it, but one of the things with the  
25 assessment, and again, me digging into details, sometimes

1 you'll see in the comments some observations that would  
2 require coaching. Sometimes that coaching is applied;  
3 sometimes that coaching isn't documented and there is a  
4 dropdown list where you have Sat, Unsat, and Aid.  
5 Sometimes we are providing coaching, but the data isn't  
6 reflecting it, because we're not selecting the proper  
7 buttons so to speak.

8       There is some opportunities there potentially just  
9 improving our training in that area. The other thing is an  
10 intervention. One of the toughest things when you're  
11 watching something is sometimes understanding when an  
12 oversight role to intervene, that's something we could  
13 probably brush up on, because there was several good points  
14 brought up by managers or supervisors observing things and  
15 it didn't look like there was a proper action taken to  
16 intervene; let's talk about this right now; let's coach;  
17 let's improve our standards and performance and go  
18 forward.

19       So, again, those little details that we saw in the  
20 database from the line management we dug through.

21       Last slide, please.

22       In conclusion, and again, the recommendations, a lot  
23 of them are going to go into the Corrective Action Process,  
24 a lot of them are already being used by the Root Cause  
25 Team, specifically in the area of conduct of Ops, but the

1 Assessment Team to a whole felt processes and programs used  
2 at the Davis-Besse station supports safe and reliable  
3 operation when implemented properly. So, that was  
4 comforting to hear from our external peers we brought in.

5 Station Management demonstrated effective  
6 operational decision-making when collectively engaged. The  
7 caveat "collectively engaged" the reason we put it down  
8 there, maybe more of a function of how we're set up as an  
9 outage organization, being a day shift/night shift type  
10 crew, but the management team very, very effective when you  
11 get everybody on the same page, initially, promptly, when  
12 an issue comes up.

13 A lot of good dialogue was observed; everyone  
14 from senior managers to managers challenging each other.  
15 Concerns of Ops was always part of that discussion, so that  
16 is a great thing to see. And people on the Observation  
17 Team picked that up.

18 Last, but not least, we've already talked about it,  
19 there has to be some improvements in Operations'  
20 performance going forward. Got an action plan. So, we  
21 need to address that prior to restart.

22 So, that's probably the big thing if you think  
23 restart what needs to happen, at least in the views of the  
24 Assessment Team.

25 In the area of organizational effectiveness, I did

1 ask some of the external peers if they felt we had  
2 everything in place, the right actions moving forward to  
3 support plant restart from organizational effectiveness.  
4 Maybe some fine tuning, we get the Corrective Action  
5 Process, and we'll learn from that and go forward;  
6 although, primarily the concerns were in Ops' performance  
7 and I'm real confident with Mike's plan and also the team's  
8 plan to help improve Ops performance.

9 That concludes my presentation. Any questions?

10 MS. LIPA: Any questions?

11 Okay.

12 MR. LOEHLEIN: Okay. Can

13 everybody hear me in the back?

14 Thanks, Rick.

15 There is a lot of commonalty of, obviously since we  
16 are a part, QA was part of the assessment.

17 MR. GROBE: Hold on just a

18 second.

19 Lew, we need to do a time check. You still have  
20 quite a bit to cover, and I'm particularly interested in  
21 getting Steve's insights and I think Mike Ross is going to  
22 wrap it up with what's left before restart, but I think  
23 it's important that we get done in a timely basis, so we'll  
24 be able to accept public comments before dinnertime.

25 MR. LOEHLEIN: What I could do --



1           MR. MYERS:        Don't keep asking  
2 questions. (laughter)

3           MR. GROBE:        If the  
4 organization were comprehensive enough to answer all the  
5 questions before we asked them.

6           MR. LOEHLEIN:     Jack, what I'll  
7 try to do, since there is so much that you heard before  
8 from Rick Dame and others, since we have a lot of common  
9 observations, I'll try to do things more by differences  
10 perhaps.

11          MR. GROBE:        Okay, thanks.

12          MR. LOEHLEIN:     Go to the next  
13 slide right away.

14         We were looking at, here's the one thing we were  
15 doing different from others, we're also, in addition to  
16 looking at the same things everybody else was looking at,  
17 we're evaluating the effectiveness the Restart Test Plan  
18 itself.

19         Next slide, please.

20         Here I would say we're in general agreement over, QA  
21 was, in terms of the plant condition, equipment  
22 performance. Generally, the plant showed itself to be leak  
23 tight, and the plant walkdowns were effective in  
24 identifying the issues requiring attention on the Boric  
25 Acid Corrosion Control Program.

1       And if you want a comment, maybe nobody has  
2 mentioned yet; the walkdowns that were done at 50 pounds  
3 per square inch and 250 pounds per square inch were really  
4 beneficial to these teams now going through high  
5 temperatures and the plant at elevated mode. It was much  
6 more efficient. I think we got a better outcome as a  
7 result of those walkdowns that had been done before.

8       Next slide, please.

9       Under Organizational Effectiveness, high points  
10 there is that this was an opportunity for the organization  
11 to demonstrate its ability to focus around supporting  
12 operations, it seemed to do.

13       The organization also recognized the need for  
14 problem-solving teams. I would say that problem-solving  
15 process is clearly now embraced by the organization. And  
16 we thought the decision to stop heatup whenever there was a  
17 question on safety-related equipment was a good decision  
18 from a Safety Culture standpoint, sent the right message to  
19 the organization.

20       In terms of some things that maybe we saw different;  
21 there were several examples in the last number of weeks in  
22 which QA's feeling is that they demonstrated somewhat of a  
23 weakness in understanding at configuration control,  
24 configuration management, particularly as it relates to  
25 mods process, and we're recommending that some trending be

1 done there. I'll get to that on my recommendations slide.

2 In terms of problem-solving process, a lot has been  
3 said about how good the organization has gotten on  
4 recognizing when to use it. There was some really good  
5 examples how it was applied, particularly from a blown fuse  
6 issue which they found in a lamp socket. That was a  
7 textbook case we think of the process working exactly as  
8 intended.

9 Where we saw areas for improvement were when, when  
10 dealt with a challenge of a very short tech spec compliance  
11 issue, the organization would have a tendency to do, as  
12 Greg mentioned, have as a priority the need to do some  
13 troubleshooting. They had a tendency to drive them away  
14 from the more specific requirements of the process, and  
15 that's why we recommended to Rick that the process be  
16 revised to say in it what you do about improving these  
17 teams so that you can separate out troubleshooting  
18 activities more clearly from those that belong to the  
19 team.

20 Another area along there is, the team would finish  
21 its job as it saw it, and during the initial problem  
22 solving, sometimes the handoff to those that were going to  
23 finish up all the work in the Corrective Action Program's  
24 base wasn't as clean as it needs to be. So, that's another  
25 area for improvement.

1 Procedure compliance is one you were asking about  
2 before, Jack. You know we reported on procedure compliance  
3 here the last few months and QA looked at it last quarter  
4 already, and we are getting more and more data, much more  
5 data than folks have that were involved in the Normal  
6 Operating Pressure Test.

7 We are getting more insights. And one of the clear  
8 ones is in Operations procedures that are performing  
9 testing. These are generally done, or written by the  
10 engineers, but performed by Operations. And we are seeing  
11 in those cases where the Operations crews tend to use the  
12 existing, what I would call, interim processes to get  
13 through the procedure, but we really need to have for the  
14 future is Engineering and Operations working together on  
15 making permanent improvements. So, that's one of the  
16 advice we're providing on procedure compliance area.

17 And we're, we have been focusing on procedure  
18 compliance as part of this core's assessment activities  
19 too, and procedure compliance, so we're wrapping up this  
20 quarter now. We'll have more to share with the  
21 organization on that shortly.

22 Next slide, please.

23 Conclusions on the Restart Test Plan was, we believe  
24 the Restart Test Plan did succeed in providing the insights  
25 that Management needed on the plant equipment and on the

1 processes and the people. There was however an emphasis on  
2 control room activities, and organizational response to  
3 emergent issues.

4 Reason for putting that in there is part of what we  
5 were talking about earlier and the importance of the  
6 collective significance of the operations issues, I think  
7 partially comes out of this. We were getting a lot of data  
8 on control room activities and emergent issues, but maybe  
9 some of the data that would have helped us see what had  
10 gone wrong in heatup, were in the barriers and perhaps in  
11 training and procedure content. And we didn't get a lot of  
12 data from, from this plan to support that.

13 That was something that this particular Restart Test  
14 Plan did not give us data on, but we'll have to get from  
15 elsewhere and the Collective Significance Condition Report  
16 should give that to us.

17 Our observations and conclusions overall are similar  
18 to the rest, or to Rick Dame's team; mentioned that the  
19 cooling system is tight. Organization has learned how to  
20 respond to emergent issues. We also conclude there is some  
21 additional work remaining in some organizational weakness  
22 areas.

23 Next slide.

24 And, those are in the area of talking about  
25 organizational weaknesses appears to have factors in the

1 performance shortfalls, specifically occurred on Operations  
2 procedure, content and compliance, Operations training and  
3 fidelity.

4 What I want to talk about that's different, maybe  
5 haven't heard about, is if we're going to prevent  
6 unintended plant responses, we really don't want to be down  
7 to the last barrier as the only place where they can  
8 prevent it. So, oversight I think needs to be improved in  
9 areas of procedure content, training, and the simulator  
10 exercise that follows it, and prejob brief just prior to  
11 evolution. Those things should follow in sequence all  
12 singing the same song, make sure the right things are going  
13 to happen and we need to do more oversight on how those  
14 things happen in that sequence and remain intact.

15 Next slide, please.

16 This slide just lists the bullets that are under the  
17 Collective Significance. We're recommending and clearly  
18 it's self-evident, they follow through on collective  
19 significance to find the causes and implement the  
20 appropriate Corrective Actions. That's what this is.

21 Now, this is a combination of recommendations that  
22 we have, from having observed the Normal Operating Pressure  
23 Test and what we observed over the last quarter. I  
24 mentioned earlier the training on Configuration Management  
25 Process. The implementation of effective trending is the

1 one that we have been discussing here, that we believe the  
2 necessary component in Corrective Action Program.

3 Ensuring the quality and execution of key Operation  
4 procedures has been discussed before here today.

5 And, improve the coordination of Problem-Solving  
6 Process with the Corrective Action Program, I mentioned.

7 And that last bullet is just something I'm going to  
8 continue to relate to the organization, that's the need for  
9 interdepartmental management challenges. That's managers  
10 challenging each other on why we know what we think we  
11 know.

12 Next slide, please.

13 Now, here's where I talk about what I think we  
14 learned about oversight of this whole evolution.

15 Rick mentioned, and I see the same thing. We do  
16 better as an organization as an oversight role if we have  
17 assistance from outside. That's true, whether it's us in  
18 Quality Assessment or whether it's Line Management, so I  
19 think we should continue to do that.

20 And, I mentioned earlier that second bullet. I'm  
21 going to change the focus somewhat on Quality Oversight, so  
22 that we are going to be looking more at cross-functional  
23 activities and interfaces as opposed to being in our  
24 individual function areas. I think that will help us pick  
25 up some of the organizational weaknesses.

1 I think that's my last slide.

2 MR. MYERS: We're trying to  
3 finish this in about 20 minutes?

4 MR. GROBE: Actually, Mark, I  
5 think this might be a question for you. I was just looking  
6 at your slides. Could you make sure that you identify in  
7 your slides a little bit more detail of what Steve  
8 addressed on slide 51? He kind of lists a number of steps  
9 there in increment appropriate actions. I guess I'm  
10 interested in your thoughts on how you're going to monitor,  
11 measure, and evaluate the readiness of the organization to  
12 support effective operations activities that prevents  
13 unintended plant responses.

14 Do you understand my question?

15 MR. BEZILLA: I think so, Jack.  
16 Let me get through there and at the end if I haven't  
17 addressed that, just ask that again; is that okay?

18 MR. GROBE: Yep.

19 MR. BEZILLA: Okay, very good.

20 Okay. My next slide.

21 My desired outcome for today is to provide you with  
22 an overview of what we learned from the Normal Operating  
23 Pressure Test.

24 Next slide.

25 First, let me start by reflecting on what our



1 Restart Test Plan consists of; and Lew talked about this,  
2 so I'm not going to go into it again. We had the  
3 Integrated Leak Rate Test, and as Lew said, that was very  
4 successful.

5 We did the 50 Pound Reactor Coolant Test, found  
6 items and addressed them. 250 Pound Test, found items, and  
7 completed them. And then we did this Normal Operating  
8 Pressure Test, which allowed us, I'll say, to uncover  
9 additional plant issues that we needed to address.

10 All right. And, the bottom line here is, that from  
11 our Restart Test Program standpoint, we're well along on  
12 completing our Restart Test Program.

13 Next slide.

14 Just a little detail here. We commenced the plant  
15 heatup on September 13th and we were excited in that we're  
16 now able to assess our plant, our people, and our processes  
17 in action and operation. We had some challenges, and Greg  
18 and Mike talked about those, and Rick and Steve talked  
19 about some of the conclusions and recommendations.

20 What I would like to note is that when we were  
21 confronted by these issues; we stopped, we ~~complimented~~ implemented the  
22 problem-solving and decision-making efforts, and we worked  
23 the problems to resolution, at least in the interim stage.  
24 All right.

25 I believe our responsive in most cases established

1 an overriding priority towards nuclear safety and ensured  
2 that the issue received the attention warranted by its  
3 significance.

4 My conclusion is that the plant issues were  
5 investigated and managed.

6 Okay. Next slide.

7 Our NOP Test was greater than 8 days at, I'll say,  
8 normal pressure. As Lew said, it was 13ish or so, for the  
9 duration, but we were greater than the 7 days.

10 During the test, we inspected over 1300 components  
11 with good results. And as you heard, we actually did an  
12 additional check through on the D-rings after we had had a  
13 slight cooldown and then a recovery due to the Aux.  
14 Feedwater Pump issue that we had covered earlier.

15 Our overall Reactor Coolant System leakage, I  
16 believe was the best in the plant's history and it was  
17 approximately .006 gallons per minute, when we did the, it  
18 was either a 6 or 8 hour test.

19 We were also able to demonstrate the responsiveness  
20 of our undervessel leakage monitoring equipment, which is  
21 the FLUS System. And this use of the FLUS System is a  
22 first for a U. S. nuclear plant. We'll currently be the  
23 only U. S. nuclear plant that will be able to continuously  
24 monitor for Reactor Coolant System under vessel leakage.

25 We also proved that our new and improved Reactor

1 Coolant System Leak Monitoring Program worked and it worked  
2 pretty well. We put in a .08 gallon a minute leak **right rate**  
3 through the sample system, and our program showed a .06  
4 something leak rate. And that was the correlation that we  
5 were looking for.

6 Next slide, please.

7 MR. THOMAS: Quick question  
8 about FLUS. So, did you get enough data and have you  
9 evaluated its performance sufficiently to place it on line  
10 for the next heatup?

11 MR. BEZILLA: Scott, we know  
12 that it's sensitive to steam, okay. When we put a little  
13 bit of steam up there, it responded; when the steam went  
14 away, it quit responding. The answer to your question,  
15 I'll have to get back to you. I've not talked to my guy  
16 since we performed the test.

17 MR. MYERS: We plan to use it  
18 during startup. It's our intention to use it.

19 MR. GROBE: So, your Reactor  
20 Coolant System Leakage Monitoring Procedure will be amended  
21 to include the FLUS and actions?

22 MR. MYERS: That's our  
23 intention.

24 MR. GROBE: Okay.

25 MR. BEZILLA: We performed over

1 700 post maintenance and modification tests and inspections  
2 and that was an item in the Restart Test Plan.

3 Most of our primary and secondary equipment was  
4 exercised at essentially normal operating pressure, near  
5 normal operating temperature and secondary system was  
6 essentially ready to go, other than spinning the main  
7 turbine.

8 I also believe that we demonstrated a positive  
9 Safety Culture and teamwork amongst our staff.

10 We focused on nuclear, radiological, industrial, and  
11 environmental safety, and we worked together to resolve  
12 problems and issues. And as the team said earlier, we've  
13 exercised our problem-solving and decision-making skills.  
14 Some are real good; some we needed some improvement with,  
15 but nonetheless, we did have opportunities to exercise  
16 those skills.

17 MS. LIPA: Mark, what's your  
18 assessment of the reactor coolant pumps? I know we talked  
19 about the gaskets at previous meetings and are you willing  
20 to give us a specific inspection of those at this time?

21 MR. BEZILLA: I was going to  
22 cover it in a little bit, but I'll answer it now, if you  
23 like.

24 The Reactor Coolant Pumps, what we did is we  
25 monitored those on the way up at various pressure levels.

1 I think it was five hundred, a thousand, fifteen hundred  
2 and then normal pressure. And what we saw was that the 1-1  
3 and 1-2 were dry between the seals and the pump covered  
4 bowl; and on the 2-1 and 2-2, we saw a little bit on the  
5 way up on 2-2, and we saw a little bit up on the 2-1; and  
6 then 2-1 stop, and 2-2 stopped, and then 2-1 started.

7 So, what we ended up with was normal pressure. We  
8 had a little bit out of 2-1. And we're into removing  
9 insulation and taking a look at the outer surface area now  
10 to see if there was any issues with that outer gasket on  
11 the 2-1 pump. 2-2 was our initial concern, but it was, it  
12 was not leaking at normal pressure.

13 MR. GROBE: Let me make sure  
14 I understand what you said. A little bit of leakage you're  
15 talking about is from an inner seal.

16 MR. BEZILLA: That's correct.  
17 We went in at those various pressures, opened up the drain,  
18 and what we saw was a cup or thereabouts. We have pictures  
19 of it. In less than a minute, the guys had a camera, they  
20 were taking pictures of it, and it was less than a minute  
21 from the drain and stop standpoint. 2-1 was the only one  
22 that we saw any leakage out, when we were sitting there at  
23 2155, normal pressure.

24 MR. GROBE: Okay.

25 MR. THOMAS: Just one more

1 question on the coolant pumps. So, when they open the  
2 leak-off valve, was it pressurized or did it, I guess the  
3 question that I'm trying to ask here is, how can you verify  
4 the, I guess, integrity of performance of the outer gasket  
5 if the space in between is not pressurized?

6 MR. BEZILLA: That's a very good  
7 question, Scott. What we did is about two days into the  
8 normal pressure, we stopped, opened up the valves, and we  
9 didn't open them up again until we were on the way down.  
10 Okay. So, we left them there for like 5, 6 days, which we  
11 believe was sufficient to pressurize the inner space and  
12 give it a chance to see if there would be any through  
13 leakage on the outer gasket.

14 MR. THOMAS: Okay.

15 MR. BEZILLA: Okay. Next slide,  
16 please.

17 Upon completion of the Normal Operating Pressure  
18 Test, we commenced the plant cooldown. During that  
19 cooldown, we experienced reactor trip. Mike previously  
20 discussed that. And as Mike said, although this was  
21 disappointing, I believe our response was good.

22 Again, we stopped the evolution. We commenced  
23 fact-finding with a crew. We implemented problem-solving  
24 and decision-making. We took prompt action with the crew.  
25 And, on remediation of the things that we believed were

1 necessary to ensure an eventless and error-free cooldown,  
2 which included procedure changes, prejob brief  
3 preparations, training of the crews that we're going to do  
4 the evolutions, and changes to, I'll say, the cooldown  
5 window and segments of that cooldown.

6 And then, as Lew had mentioned, we did conduct the  
7 remainder of that cooldown evolution event-free and  
8 error-free.

9 MR. THOMAS: Mark, since we, in  
10 prior public meetings, discussed that this NOP Test would  
11 be done without reactor heat, could you just clarify why  
12 control rods were, or one safety group was out and clarify  
13 reactor trip, just...

14 MR. BEZILLA: Sure, Scott. Our  
15 procedure, we had talked about the flexibility in our  
16 procedure, which is one thing we're going to tighten up on,  
17 in our heatup and cooldown procedure, it allowed us to  
18 withdraw one group of control rods; in this case, it was  
19 safety group one, which was four rods.

20 And our license amendment request also stated that  
21 you could even do the test with trip breakers open and rods  
22 in, or with trip breakers closed and one safety group  
23 withdrawn.

24 We had a Boron concentration such that we could pull  
25 all the control rods out and wouldn't have a critical

1 reactor. So, the decision to pull the control rods, Scott,  
2 was, I'll say, a very conservative decision.

3 In the cooldown, when we did that, we pulled that  
4 one group of rods, and when you do that, you invoke a new  
5 lower pressure, high pressure trip, and which lowers it  
6 from 2300ish, .350 something, I don't remember the exact  
7 number, .350 some pounds to like 1900 pounds; and that was  
8 the new high pressure trip.

9 Then when we were doing our cooldown, we got above  
10 that parameter, 1900 pounds, and caused a reactor trip and  
11 had those four rods inserted in the core.

12 Okay. Next slide.

13 So, conclusions. Christine, just a couple items  
14 that I know you had talked about before, you all were  
15 interested in. Decay Heat 11 and 12 Valves, which are the  
16 two first off valves from the Reactor Coolant System to the  
17 decay heat removal system. There was a concern about  
18 body to bonnet leakage. And we did not see any body to  
19 bonnet leakage upon inspection yesterday, I believe,  
20 yesterday or the day before.

21 And if you'll remember, we had gone and done a  
22 torque adjustment on the bolts, had actually gotten some  
23 additional torque on the bolts; inspected all the bolts, et  
24 cetera. So we believe that issue is complete. There is no  
25 issue, no further action required on those valves.



1       And on the bottom nozzles, which I know everybody is  
2 interested in, we didn't see anything when they were  
3 pressurized. Myself and a few others, we didn't see  
4 anything obvious.

5       When we cooled down, we took the insulation off and  
6 took a visual look, didn't see anything obvious there. And  
7 we're in the process of doing our crawler robotic camera  
8 inspection. And we're about 80 percent complete, and have  
9 not had any adverse results so far. So, we're almost done  
10 and really have not seen anything yet. Okay?

11       And the other item of note would be the control rod  
12 drive flange area. And, we were installing shielding and  
13 then we were going to get into the inspection of those  
14 areas. I don't believe we've done that yet. Have not got  
15 the results of that.

16       And then the reactor coolant pumps, covers to bowls  
17 area, we had to remove some insulation to take a look at  
18 those. We haven't gotten results. I don't believe, based  
19 on overall Reactor Coolant System leak rate, I don't  
20 believe we're going to see anything on those areas, but we  
21 will check those thoroughly. Okay.

22       So, I'll say, my conclusion from this Normal  
23 Operating Pressure Test is it did enable us to assess our  
24 plant, people, and processes. And you've heard about a  
25 number of the issues, right, and the recommendations on

1 what to do with those issues. On a positive side, I  
2 believe we focused on safety, again, nuclear, industrial,  
3 radiological, and environmental.

4 We demonstrated the Reactor Coolant System's  
5 integrity. We demonstrated improvement in a number of our  
6 programs. We demonstrated our advance technology, the FLUS  
7 System, Under Vessel Leakage Detection System response in  
8 this, and we demonstrated good Containment and System  
9 Health.

10 All right. And the final thing that I would like to  
11 say, is we're confident we know what the issues are, right,  
12 and we're taking action to address those issues and our  
13 focus is going to be on improving our performance. If we  
14 ever think we got to where we need to be, that probably  
15 means we're in trouble, right? So, our focus is on always  
16 getting better.

17 And that's how we looked at this Normal Operating  
18 Pressure Test. We understood that others had had  
19 problems. We didn't want to have problems on the restart.  
20 We did this Normal Operating Pressure Test and we found  
21 issues. That's exactly what we wanted to do. We weren't  
22 happy with some of the issues we found, but that's exactly  
23 what we wanted to do, and we set about solving those  
24 problems.

25 That's really all I had, Jack, I think.

1           MR. GROBE:           I have just one,  
2 and, again, I'm very interested in a couple weeks hearing  
3 the progress and focus going forward in these  
4 organizational effectiveness areas.

5           And maybe it's just a question for that and not  
6 today, but I would be interested in your assessment of  
7 whether the operating performance -- and it's really not  
8 the operators, it's the organization.

9           It would be like blaming the offensive production of  
10 the football team on the quarterback. You need the  
11 blocking and running backs and you can't drop the ball,  
12 receivers have to run routes, and it all works together.  
13 It's organizational effectiveness is what we're talking  
14 about.

15          I would be curious at that meeting, or now if you  
16 want to respond to it, whether or not you believe the  
17 organizational effectiveness was sufficient to support  
18 restart; and, and if not, how you're going to measure the  
19 effectiveness of these improvement actions that you have  
20 kind of very briefly sketched out here today and we'll talk  
21 in more detail in the future how you're going to measure  
22 the progress of those.

23          So, again, I'm not sure if that's a fair question  
24 for today since you've got so much work still ongoing in  
25 Root Cause and Collective Significance area.

1           MR. BEZILLA:       Jack, I think a  
2 couple weeks would probably be more appropriate. Based on  
3 the preliminary findings and my loose involvement, we  
4 weighed out an action plan, but we need the Collective  
5 Significance Team and the Root Cause Team to complete their  
6 assessments. Then, we need to look at their  
7 recommendations and make sure we have things captured and  
8 we have it couched appropriately, because it will probably  
9 be adjustments in our Action Plan. I suspect there will be  
10 some additional things we want to put in there based on the  
11 teams' conclusions.

12           I would say we're pretty close with the teams.  
13 They've given me some of their preliminary findings, and we  
14 used that to, say, draft the action plan. More work to  
15 follow. I think a couple weeks would be most appropriate.

16           MR. GROBE:       Okay, good.

17           The other thing is, I think it's clear that in a  
18 number of aspects that I don't like the phrase safety  
19 culture, it's become kind of a term of art; I prefer the  
20 one you folks use, is better organizational effectiveness  
21 in human performance.

22           You have a Restart Readiness Review Process that you  
23 go through, looks like it's just a wealth of attributes of  
24 the organization in both of those areas; organizational  
25 performance and human performance. And I'd be interested

1 also in whether there were any things that occurred during  
2 the NOP Test that when you reflect back on your assessments  
3 caused you to focus differently on the information that you  
4 were gaining from those assessments. Okay.

5 MR. MYERS: Mike?

6 MR. ROSS: Thanks, Mark.

7 Good afternoon. I'm Mike Ross, the Davis-Besse  
8 Restart Director, and I'll be addressing the remaining  
9 activities needed for plant restart.

10 Some of these items were previously discussed at the  
11 public meeting on Safety Culture. They include completion  
12 of 10CFR 50.9 training on the Davis -- by the Davis-Besse  
13 staff. This effort does include training of the general  
14 work force, not just a supervisory staff and is scheduled  
15 to be completed by October 17th.

16 The day long site alignment/teamwork sessions with  
17 all employees. These meetings start on October 12th and  
18 are scheduled to finish by October 24th.

19 The Strengthening of the Calculation Program; our  
20 contractor for this activity has completed the requested  
21 assessment and we are reviewing their recommendations.

22 Next slide.

23 Strengthening our Condition Report Process. The  
24 actions include; Apparent Cause training for Condition  
25 Report evaluation -- evaluators; establishment of an

1 Apparent Cause Review Group consisting of report analysis,  
2 of Condition Report Analysts; and Corrective Action Report  
3 Trending.

4 Trending of the Corrective Action Program has been  
5 started with the issuance of our first report and the other  
6 items that we rolled out in November.

7 Shifting to plant activities, modifications that  
8 need to be completed. ETAP. The remaining items resolve  
9 establishment of a minimum operating voltage for six  
10 hydromotors. Testing will determine, that will determine  
11 the voltage requirements is in progress and complete on one  
12 of the two different types of motors we have at  
13 Davis-Besse. The second type will be tested near the end  
14 of the week, and preliminary results on the first test show  
15 it meets the minimum voltage requirements as built.

16 The cable replacement contingency has been developed  
17 if needed and this issue is scheduled to be resolved by  
18 October 16th.

19 Testing has shown that there is no need to replace  
20 several motor-operated valve contacters that were in  
21 question. That issue has been brought to conclusion  
22 without additional field work.

23 The electrical system as it relates to ETAP issues  
24 and final approved calculations should be ready for restart  
25 the second week of November.

1 High pressure injection pump, final modifications.  
2 Pump removal activities are in progress with the first pump  
3 being prepared to be shipped today. The Wiley Lab testing  
4 is near completion and the results continue to support our  
5 present course of action. The testing of the modified  
6 pumps and project completion is beginning of November.

7 Repair of the Containment Air Coolers. This  
8 includes the replacement of all Containment Air Cooler  
9 Bellows, the reenforcement of the return piping trees and  
10 supports. Additionally, electrical modification of the  
11 motor operated valves at the inlet of the caps to close on  
12 loss of power and slowly reopen on restart of the coolant  
13 will be required.

14 These items will give a final repair that addresses  
15 the water hammer damage that did occur at Davis-Besse.  
16 Scheduled completion of this work is the end of October.  
17 There is an outstanding relief relay of the available issue  
18 on that mod, and we were assessing schedule impact, if any.

19 Electrical Breaker Co-ordination. The approved  
20 course we're taking will involve changeout of 81 motor  
21 control center bus and incorporate a drum reset --  
22 (Request to go off the record.)

23 MR. ROSS: As to the  
24 Electrical Breaker Co-ordination, the approved path we are  
25 taking will involve changeout of 81 motor control center

1 breakers, or buckets, to incorporate a properly sized fuse  
2 protected disconnect breaker. This will ensure electrical  
3 coordination of 14 different plant motor control centers.  
4 Complete new bucket assemblies for these 81 loads are  
5 expected on site the last week of October, with field  
6 installation by the second week of November.

7 We do have some air-operated valve work to complete  
8 yet. That work is scheduled and not expected to impact the  
9 overall schedule.

10 Next slide.

11 MS. LIPA: Before you go on,  
12 Mike, the first part of your slide talks about the  
13 Condition Report Process, and this is an area we'll want to  
14 get more detail on when we have the Corrective Action Team  
15 Inspection Public Meeting to understand specifically, more  
16 detail on what things you're doing in that Corrective  
17 Action Process.

18 MR. ROSS: We understand that  
19 we will provide that.

20 MS. LIPA: Thank you.

21 MR. ROSS: Additional items  
22 that will need to be completed are the actions to address  
23 the NOP Test Lessons Learned and additional testing of the  
24 Restart Readiness Review.

25 In conclusion, our Restart activity list is getting



1 smaller with resolution of all issues in progress.

2 I'm open for questions. If not, I'll turn back to

3 Mr. Myers.

4 MR. MYERS: Let me sort of

5 summarize, before I answer a question you asked earlier. I

6 think the purpose of management is to define the big

7 problems, activities are performed in a safe, effective

8 manner, and improve the overall reliability of our plant.

9 We made technical changes that we went over earlier,

10 have been made to improve the overall safety of the plant.

11 Containment sump, one of a kind; new safety system

12 improvements in RHR, high pressure injection, are

13 impressive. I think our Electrical Distribution System is

14 going to be state-of-the-art much better than many of the

15 other plants that are out there.

16 The NOP Test demonstrated a lot of things.

17 Demonstrated areas of improvement that we made in light of

18 our people to safely operate the plant. We have some

19 operational issues that we need to address. I would direct

20 those into the, more the reliability and ensure effective

21 operations. And at no time do I feel the public health and

22 safety was threatened by any of these issues that I saw

23 during the NOP Test.

24 The response to emergent issues, I thought was quite

25 good. There's areas for improvement there, which need to

1 come out of the box real quickly, you know, but we used our  
2 Nuclear Operating Procedure and Decision-Making Process  
3 effectively. Had it been used earlier, we wouldn't be  
4 sitting here today.

5 Condition of the plant equipment. We were able to  
6 run off our secondary equipment; the feed pumps, the  
7 condensate pumps, circulating water system, there's a plume  
8 coming out of the cooling tower, was a pleasure to see.  
9 All our equipment ran well.

10 Integrated integrity of the Reactor Coolant System.  
11 We replaced the reactor vessel head. That was a major,  
12 major accomplishment in the time we did, replace it, and  
13 have it work as well as it did. New control rods are in,  
14 they move effectively. Look for leaks, that was  
15 effective. Incore monitoring instrument nozzles are being  
16 inspected now. We're about 80 percent of the way through  
17 that. And we've installed the FLUS System, one of a kind.  
18 We'll be the only plant in the United States that can  
19 monitor for small leaks under the vessel. We think that  
20 demonstrates a positive safety culture.

21 Next slide.

22 Davis-Besse personnel are demonstrating a good  
23 safety culture. We demonstrated the right level of  
24 management attention to safety-related activities. Even  
25 when we had problems, you know, Mark and myself both were

1 out here at 1, 2:00 in the morning. We understood our  
2 problems, the breaker problems. We were there when they  
3 recycled the breakers, what, 66 times. We watched them  
4 cycle about half of those ourselves.

5 We continue to own with the, with the Containment  
6 Spray issue until, when we told engineering, swapping the  
7 components out is not another acceptable answer. We're  
8 going to do something different. So, we knew our problem  
9 and we tried to address it.

10 We did that on the reactor trip. I'll have to talk  
11 about that for a second. We had the rods pulled out as a  
12 conservative measure. If we had had the rods in, which we  
13 did when we cooled back down, we wouldn't be talking about  
14 this issue today, you know. We would not have got an  
15 actuation and you wouldn't be saying anything about it. We  
16 did that as a conservative measure.

17 Looking back on it, our operators were not as  
18 responsive as they should have been. They shouldn't have  
19 left the trip come in. We should be able to operate and  
20 cool down with the rods withdrawn; no doubt about it. But  
21 we'll fix that problem. It's an issue we have to go  
22 address.

23 Davis-Besse is completing the action necessary to  
24 move safe operations. The HPI pumps are still outstanding,  
25 the breaker coordination is still outstanding, and I think

1 the final and most important thing we talked about today is  
2 effective implementation of our operational activities.  
3 We've got to get that so we demonstrate that we can do that  
4 better.

5 But, once again, I don't know of a single situation  
6 sitting here today with the public, where we didn't  
7 demonstrate the necessary management attributes to protect  
8 the health and safety of the public. Thank you very much.

9 MR. GROBE: Lew, thank you.

10 Just one question, actually maybe a concern.

11 At this point, in the plant recovery effort, it's  
12 easy to see the light at the end of the tunnel from a  
13 hardware perspective. It's more challenging to see the  
14 light at the end of the tunnel from what I call a software  
15 perspective.

16 I noted that you put many hard dates on the hardware  
17 discussion. And I didn't see many dates on the software  
18 action necessary for restart. So, maybe when we talk in a  
19 couple of weeks, you can flush that stuff out.

20 You talked about Corrective Action Program,  
21 Engineering Program; I know you'll talk about that some  
22 tomorrow. And these other activities, in particular the  
23 Lessons Learned from the most recent several weeks work.

24 MR. MYERS: That was  
25 intentional. I think we have a game plan on Corrective

1 Action. I think our Corrective Action is much improved.  
2 We've used it throughout this process. We've gone back to  
3 look at a lot of engineering issues and stuff, and the  
4 apparent cause issues and we've got action we're going to  
5 take there.

6 From an operational standpoint, it would be unfair  
7 for me to tell you right now all the actions we're going to  
8 take in Operations to ensure effective implementation of  
9 the processes and procedures, but we'll nail that. Okay?  
10 And we did nail it when we cooled back down. And we nailed  
11 it when we put the other cumulator in service. So, we'll  
12 just continue to nail the issues.

13 MR. GROBE: Okay. Any other  
14 questions? Okay, very good.

15 MS. LIPA: Good, thank you.  
16 What we're going to do now is take a ten minute break and  
17 we're going to be ready for public questions and comments.  
18 Thank you.

19 (Off the record.)

20 MS. LIPA: We would like to  
21 open up the microphone for anybody who wants to address the  
22 NRC folks up here. We'll start with local members of the  
23 public first and we would like to limit each person to five  
24 minutes, and state your name for the transcriber.

25 So, go ahead, is there anybody who has a comment or

1 question for us?

2 While you're thinking about questions, I would like  
3 to let everybody know that we'll be back here again  
4 starting at seven to provide a brief recap of what we  
5 talked about this afternoon, and then also allow anybody  
6 who couldn't make this afternoon's meeting to come back, to  
7 come this evening, and find out what's going on and ask us  
8 questions.

9 Was there anybody who had a comment or questions for  
10 us this afternoon?

11 Come on up.

12 MR. KORFF: Okay. My name is  
13 Joseph Korff. I live on Lake Erie. I boat a great deal  
14 out here. My background is in electrical engineering. And  
15 I toured this facility when it was under construction,  
16 whenever that was in the late 60's.

17 What I'm hearing here does not give me a lot of  
18 comfort right now. What I'm hearing is that they basically  
19 have a new management team, and by their own admission,  
20 operators either lack the savvy or have forgotten how to  
21 operate the plant over the last 20 months. One of the  
22 quotes was "they're extremely disappointed".

23 I also see a timeline over there that says they  
24 expect to start up November 25th. Well, if that happens, I  
25 want to be in Florida when it does, because I don't think

1 they're anywhere near ready to do this yet.

2 I think your question, do they have the  
3 organizational structure to support the startup. If you  
4 ask me, I get one vote; my answer is no, it's not there.

5 They haven't demonstrated it out there by their own words  
6 and admissions.

7 I'm also, I've got to take a shot at you guys a  
8 little bit on this too. I mean, the hole developed while  
9 you were on duty. Okay, you had Resident Inspectors here,  
10 as I understand it, and the hole that all this is about was  
11 while your Resident Inspectors were out and about looking  
12 for holes, I would hope. It didn't happen.

13 So, you're trying to get comfort from them that they  
14 know what they're doing to start up, and I really need to  
15 get some comfort from you that when you have your Resident  
16 Inspectors here, that they're actually going to snoop and  
17 look and poke and prod to make sure a football size hole  
18 doesn't open up again.

19 And these are more statements than questions, but if  
20 you find a question in some of these things, I would  
21 appreciate your responding. Thanks.

22 MR. GROBE: Thank you very  
23 much.

24 MS. LIPA: Thank you. Let me  
25 just address a couple things and then you can go ahead,

1 Jack.

2 We did have some discussions today about some of  
3 these operating and performance issues that you mentioned;  
4 and as you noted, the Licensee plans to do what they call a  
5 collective significance.

6 First of all, let me tell you we share your concern  
7 and we had dialogue on the same topics with the Utility  
8 earlier today. So, we're really planning to see what comes  
9 out of this collective significance and what kind of action  
10 the Utility has in the works. They expressed today that  
11 they have confidence that they will find what needs to be  
12 found and take some actions, but we haven't seen those  
13 actions yet and we plan to. So, I want to let you know  
14 that part.

15 The other thing is, with the Residents on duty, I  
16 just want to let you know that we do have a very good  
17 inspection program. We're certainly trying to learn from  
18 the Lessons Learned Tasks Force on what happened here and  
19 how we can strengthen that inspection program, but we do  
20 have Residents. We now have three. And, they do snoop,  
21 look, poke, prod. Those are the words that you used. They  
22 do that.

23 I can't explain why the hole wasn't found  
24 necessarily, but I can tell you that we do have highly  
25 trained inspectors that are out here every day looking at



1 multiple activities and multiple components readily.

2 MR. GROBE: Thank you. Just  
3 a couple of other comments. It doesn't matter and it  
4 hasn't mattered throughout this entire process what dates  
5 FirstEnergy puts up. Those dates have changed over the  
6 months, the many months, and you can rest assured that this  
7 plant won't restart until this panel makes a recommendation  
8 to our leadership that we think sufficient actions have  
9 been taken that the plant can restart safely and can  
10 operate safely into the future.

11 That approval process includes our Regional  
12 Administrator in Chicago, as well as consultation with the  
13 Director of our Headquarters Office that's responsible for  
14 all 103 reactors in the United States, and the deputies,  
15 Deputy Director of Reactors in Washington.

16 So, the plant won't restart until we're convinced  
17 it's safe. So, you can go to Florida, if you like, that's  
18 fine, but you don't need to go to Florida because this  
19 plant is going to restart. We will make sure that it will  
20 be safe at restart.

21 To address your question regarding what happened in  
22 the past, we equally are concerned about that. And the  
23 head of our agency chartered a, what we call a Lessons  
24 Learned Task Force. I think this occurred early fall last  
25 year. And they conducted a couple public meetings out here

1 in the Oak Harbor area to gain insight, and into their  
2 charter, as well as all the activities that they were  
3 conducting from local folks. Spent several months looking  
4 at why this happened, from the standpoint of the NRC's  
5 inspection and oversight programs. And, those encompass a  
6 much broader spectrum than just the two Resident Inspectors  
7 that were here at the time.

8       There is a whole host of structure that supports the  
9 Resident Inspectors, including region based inspectors, our  
10 office of research at headquarters, our Office of Nuclear  
11 Reactor Regulation that analyzes generic issues and  
12 communications with Licensees.

13       There is a whole host of things that didn't work as  
14 optimal as it should have, and we would have loved to  
15 identify this earlier. It was identified as a result of an  
16 agency generic activity that we charged all licensees  
17 similar to Davis-Besse to do inspections of the reactor  
18 head, because of a generic concern regarding head nozzle  
19 penetration cracking. So, this was identified as a result  
20 of an NRC regulatory activity.

21       So, the Lessons Learned Task Force issued a report.  
22 That report was reviewed by a Senior Management Team. They  
23 accepted, I think it was, 49 of the 51 recommendations.  
24 Those were signed and the commission itself receives an  
25 update every six months on the implementation of those

1 actions, that were necessary to improve the NRC regulatory  
2 oversight.

3 So, I just wanted to make one other comment. It's  
4 very easy to single out the operators, as I said earlier,  
5 as you might single out the quarterback. If the Cleveland  
6 Browns or the Detroit Lions, for example, are not producing  
7 enough offensive fire power. But, the operators, they  
8 can't perform their functions unless they're supported by  
9 an organization that's doing the blocking and tackling and  
10 running the pass routes and all of those other things that  
11 are necessary for organizational success. The operators,  
12 like the quarterback, also have to throw the right pass, so  
13 they have a responsibility here too.

14 It is not appropriate to single out the operators in  
15 isolation of the other elements in the organization that  
16 have to contribute to success. I expect when in a couple  
17 of weeks when we hear FirstEnergy's Root Cause and  
18 Collective Significance, that there will be many actions in  
19 many aspects of the organization.

20 Thank you very much. Those were very good  
21 questions.

22 MR. RULAND: Jack, just one  
23 thing I would like to add. Recently, the office, basically  
24 the staff of the NRC sent the commissioners a semi-annual  
25 update on the actions that the staff is taking on the

1 Davis-Besse Lessons Learned Task Force. That is a public  
2 document. We're on track on the actions, and we're going  
3 to make sure that this goes on the Davis-Besse website, if  
4 it isn't already there.

5 You're welcome to take a look at this, to look at  
6 all the actions that the NRC plans on taking to, to clean  
7 our house, to look at what we need to do to, to do our  
8 inventory program.

9 So, those actions are on track and we'll work and  
10 make them public, the status of those actions.

11 MR. GROBE: Thanks, Bill.

12 That was excellent.

13 MS. LIPA: Any other  
14 questions or comments for us?

15 One more chance.

16 Okay. Well, like I said, we'll be back at 7 tonight  
17 for another opportunity for comments and questions. And,  
18 we'll be around for a little bit here yet, if you want to  
19 come up and ask us questions.

20 Thank you.

21 (Off the record.)

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1 CERTIFICATE

2 I, Marie B. Fresch, Registered Merit Reporter and  
3 Notary Public in and for the State of Ohio, duly  
4 commissioned and qualified therein, do hereby certify that  
5 the foregoing is a true and correct transcript of the  
6 proceedings as taken by me and that I was present during  
7 all of said proceedings.

8 IN WITNESS WHEREOF, I have hereunto set my hand and  
9 affixed my seal of office at Norwalk, Ohio, on this  
10 20th day of October, 2003.

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Marie B. Fresch, RMR

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NOTARY PUBLIC, STATE OF OHIO  
My Commission Expires 10-10-08.

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