PUBLIC MEETING

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

- - -

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.

- - -

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

- - -

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. MYERS: Thank you, Christine.

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

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

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

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

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

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

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

MS. LIPA: Go ahead.

MR. MYERS: My first two

slides.

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

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

Everybody hear me okay?

AUDIENCE MEMBER: No, your voice is garbled.

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

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

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

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

Do you have anything you want to add, Joe?

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

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

MS. LIPA: Thank you, Lew.

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

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

MR. ARNDT: Steve Arndt, County Commissioner.

MR. KOEBEL: Carl Koebel, County Commissioner.

MS. LIPA: Okay. Thank you.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

So, these are the upcoming NRC activities and that

completes my portion of the presentation.

I'll turn it over to you, Lew.

MR. MYERS: Thank you, Christine.

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

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

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

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

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

Human Performance problems that we did have.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Basically, all the equipment we think ran well. We

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

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

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

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

Next slide.

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

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

The Control Rod Mechanism Nozzle Inspection Repair is complete.

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

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

The Service Structure and Access Openings are there.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Decay Heat Pumps, once again, the Cyclone Separators.

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

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

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

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

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

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

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

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

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

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

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

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

there was 200 welds that we had to install.

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

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

MR. MYERS: Right now, I think it's based on age. And, Train 2 is, it's fine, I think.

Do you know?

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

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

MS. LIPA: No. Thank you.

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

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

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

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

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

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

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

Next slide.

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

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

Next area.

From a Management/Human Performance --

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

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

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

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

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

MR. MYERS: Right.

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

MR. MYERS: Greg, you got that?

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

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

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

MR. POWERS: Jim Powers, let me

answer that.

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

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

MR. MYERS: Is that the cross valve?

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

MR. MYERS: Okay, decay heat.

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

MR. MYERS: Okay.

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

MR. POWERS: Approximately.

MS. LIPA: Thanks, Jim.

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

what's the status of service water?

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

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

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

MR. ROSS: Yeah, that's correct.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

didn't cover all the stuff on my slides.

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

Greg.

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

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

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

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

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

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

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

We assessed that and evaluated that that was a

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

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

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

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

Ongoing corrective actions yet remaining, we have

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

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

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

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

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

The components were replaced with refurbished

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

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

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

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

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

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

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

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

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

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

MR. DUNN: We have some preliminary results.

Help me out, Mike, it's NLI.

MR. ROSS: That's right.

Nuclear Logistics Incorporated.

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. RULAND: Thank you.

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

MR. DUNN: Yes.

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

the conclusion of your problem solving on pressurizer heaters?

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

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

MR. GROBE: When did those failures occur?

MR. DUNN: Within the last six days.

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

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

MR. GROBE: Okay.

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

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

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

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

Is that pretty accurate, what I'm saying?

MR. DUNN: Yes.

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

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

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

MR. GROBE: Okay, thank you.

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

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

MR. MYERS: No.

MR. DUNN: That's correct.

Next slide, please.

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

During the NOP Test, and we did experience some

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

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

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

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

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

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

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

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

condition.

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

Next slide, please.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. MYERS: The mod.

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

MR. MYERS: Right.

MR. RULAND: -- doing the root cause.

MR. MYERS: We also know, we have with us Sergeant & Lundy, who did the mod for us. They did the mod at other nuclear plants. They bought these thermals for other plants. And, you know, how they buy the mod, the thermals; you know what I'm saying. So, they buy them based on the component, you know. That's a lot of the issues right there. We're not through, but we --

MR. RULAND: Okay, you just said, that raises some other questions, about, okay, if they made this mistake here, did they make this mistake anyplace else, right? Once you've told me that Sergeant & Lundy, they've made these mods other places, so -- and you're continuing to pursue that, right?

MR. MYERS: Right, right.

MR. RULAND: Good.

MR. MYERS: What you expect to find, you expect to find them tripping earlier than.

MR. RULAND: I understand.

MR. MYERS: Okay.

MR. DUNN: Next slide, please.

Next item I would like to discuss is the Auxiliary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. DUNN: Yes.

Next slide, please.

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

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

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

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

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

MR. GROBE: Okay, thanks.

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

MR. MYERS: It's in my

presentation.

MR. ROSS: I'll also talk about it.

MR. THOMAS: Okay.

MR. DUNN: The last item I would like to discuss is equipment challenges, the actual results of our walkdown. One of the main objectives we had for the Mode 3 NOP/NOT Test, the Normal Operating Pressure and Temperature, was to do a complete walkdown of the Reactor Coolant System and also the main steam system, secondary, essentially the entire plant to determine and validate the leak tightness and determine what rework would be required prior to restart.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. DUNN: I don't know an

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

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

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

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

(Off the record.)

MS. LIPA: We're ready to begin.

Are you ready? Okay, go ahead.

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

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

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

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

Next slide, please.

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

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

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

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

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

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

Although Just-In-Time Training for the heatup was

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

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

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

The second event -- next slide, please.

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

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

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

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

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

Next slide, please.

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

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

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

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

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

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

Next slide, please.

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

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

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

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

Questions?

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

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

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

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

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

MR. RODER: First item being the core flood?

MR. THOMAS: No, the watchstander, inattentative.

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

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

We'll also be doing some intensive review of those

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

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

MR. THOMAS: Okay.

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

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

MR. RODER: That's correct. The causes are still under way, and applicable people are participating in those root causes. This interview is more of an assessment interview to ascertain what, what strengths and what weaknesses individuals have, and that

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

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

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

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

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

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

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

sufficient?

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

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

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

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

put together, is to address those issues.

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

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

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

MR. GROBE: Okay, any more questions?

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

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

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

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

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

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

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

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

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

MR. GROBE: Okay.

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

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

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

and then up to a hundred percent.

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

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

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

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

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

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

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

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

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

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

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

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

MR. RODER: All right.

MR. GROBE: Okay, thanks, Rick.

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

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

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

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

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

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

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

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

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

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

Next slide.

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

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

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

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

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

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

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

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

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

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

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

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

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

So we've utilized this opportunity to assess the

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

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

Next slide.

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

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

It was used during the deep drain evolution that was

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Last bullet sort of piles on to the previous bullet

in regards to preoperational briefs, the delta we saw. Again, we have plans to fix that going forward.

Next slide.

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

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

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

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

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

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

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

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

MR. RODER: That's correct.

MR. GROBE: Good.

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

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

MR. DAME: Okay. Next slide, please.

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

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

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

The next area bullet, weaknesses were observed in

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

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

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

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

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

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

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

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

MR. GROBE: Okay.

MR. MYERS: And whatever it

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

MR. DAME: Okay, next slide please.

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

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

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

One of the byproduct as you see in this

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

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

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

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

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

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

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

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

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

Next slide, please.

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

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

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

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

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

more or less what was observed, Jack.

MR. GROBE: Okay.

MR. DAME: Okay, next slide, please.

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

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

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

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

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

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

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

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

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

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

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

Last slide, please.

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

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

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

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

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

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

In the area of organizational effectiveness, I did

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

That concludes my presentation. Any questions?

MS. LIPA: Any questions?

Okay.

MR. LOEHLEIN: Okay. Can everybody hear me in the back?

Thanks, Rick.

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

MR. GROBE: Hold on just a second.

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

MR. LOEHLEIN: What I could do --

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

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

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

MR. GROBE: Okay, thanks.

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

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

Next slide, please.

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

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

Next slide, please.

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

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

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

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

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

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

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

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

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

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

Next slide, please.

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

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

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

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

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

Next slide.

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

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

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

Next slide, please.

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

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

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

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

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

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

Next slide, please.

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

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

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

I think that's my last slide.

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

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

Do you understand my question?

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

MR. GROBE: Yep.

MR. BEZILLA: Okay, very good. Okay. My next slide.

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

Next slide.

First, let me start by reflecting on what our

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

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

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

Next slide.

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

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

I believe our responsive in most cases established

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

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

Okay. Next slide.

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

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

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

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

We also proved that our new and improved Reactor

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

Next slide, please.

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

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

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

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

MR. MYERS: That's our intention.

MR. GROBE: Okay.

MR. BEZILLA: We performed over

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

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

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

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

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

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

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

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

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

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

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

MR. GROBE: Okay.

MR. THOMAS: Just one more

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

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

MR. THOMAS: Okay.

MR. BEZILLA: Okay. Next slide, please.

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

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

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

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

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

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

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

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

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

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

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

Okay. Next slide.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MR. GROBE: Okay, good.

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

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

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

MR. MYERS: Mike?

MR. ROSS: Thanks, Mark.

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

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

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

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

Next slide.

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

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

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

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

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

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

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

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

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

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

Electrical Breaker Co-ordination. The approved course we're taking will involve changeout of 81 motor control center bus and incorporate a drum reset --

(Request to go off the record.)

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

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

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

Next slide.

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

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

MS. LIPA: Thank you.

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

In conclusion, our Restart activity list is getting

smaller with resolution of all issues in progress.

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

MR. MYERS: Let me sort of summarize, before I answer a question you asked earlier. I think the purpose of management is to define the big problems, activities are performed in a safe, effective manner, and improve the overall reliability of our plant.

We made technical changes that we went over earlier, have been made to improve the overall safety of the plant. Containment sump, one of a kind; new safety system improvements in RHR, high pressure injection, are impressive. I think our Electrical Distribution System is going to be state-of-the-art much better than many of the other plants that are out there.

The NOP Test demonstrated a lot of things. Demonstrated areas of improvement that we made in light of our people to safely operate the plant. We have some operational issues that we need to address. I would direct those into the, more the reliability and ensure effective operations. And at no time do I feel the public health and safety was threatened by any of these issues that I saw during the NOP Test.

The response to emergent issues, I thought was quite good. There's areas for improvement there, which need to

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

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

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

Next slide.

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

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

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

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

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

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

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

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

MR. GROBE: Lew, thank you. Just one question, actually maybe a concern.

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

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

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

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

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

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

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

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

(Off the record.)

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

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

question for us?

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

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

Come on up.

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

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

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

they're anywhere near ready to do this yet.

I think your question, do they have the organizational structure to support the startup. If you ask me, I get one vote; my answer is no, it's not there. They haven't demonstrated it out there by their own words and admissions.

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

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

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

MR. GROBE: Thank you very much.

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

Jack.

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

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

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

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

multiple activities and multiple components readily.

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

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

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

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

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

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

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

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

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

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

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

Thank you very much. Those were very good questions.

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

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

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

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

MR. GROBE: Thanks, Bill. That was excellent.

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

One more chance.

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

Thank you.

(Off the record.)

- - -

CERTIFICATE

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

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

Marie B. Fresch, RMR

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