PUBLIC MEETING
Between U. S. Nuclear Regulatory Commission O350 Panel
and FirstEnergy Nuclear Operating Company

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Meeting held on Tuesday, May 6, 2003, at 2:00 p.m. at the Camp Perry Clubhouse, Oak Harbor, Ohio, taken by me, Marie B. Fresch, Registered Merit Reporter, and Notary Public in and for the State of Ohio.

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PANEL MEMBERS PRESENT:

U. S. NUCLEAR REGULATORY COMMISSION

John "Jack" Grobe, Chairman, MC 0350 Panel
William Ruland,
Vice Chairman, MC 0350 Panel
Christopher Scott Thomas,
Senior Resident Inspector
U.S. NRC Office - Davis-Besse
Jon Hopkins, Project Manager Davis-Besse
Dave Passehl, Project Engineer Davis-Besse
John Zwolinski, Director of the Division
of Licensing Project Management
Brian Sheron, Associate Director for
Project Licensee and Technical Analysis

FIRST ENERGY NUCLEAR OPERATING COMPANY

Lew Myers, FENOC Chief Operating Officer
J. Randel Fast, Director of
Organizational Effectiveness
Michael J. Stevens,
Director - Nuclear Maintenance
Mike Ross, Restart Director
Mark Bezilla, Vice President Davis-Besse
Fred von Ahn, Vice President of Oversight
Bob Coward, Director of Nuclear Services,
MPR Associates
George Beam, Senior VP - Framatone

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MR. PASSEHL: Welcome everybody, 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.

I'm Dave Passehl, the Project Engineer and Assistant to the Branch Chief, Christine Lipa, who is responsible for NRC's Inspection Program at Davis-Besse. Christine cannot attend today's meeting due to other commitments.

Next slide, please.

The purpose of this meeting are to allow FirstEnergy to present the status of activities in their Restart Plan and to discuss NRC's Oversight Panel activities, focusing on these activities since our last public meeting.

Next slide, please.

The agenda for today's meeting includes the introductions, opening remarks, a summary of the April 15, public meetings, a discussion of significant NRC activities since that last public meeting, the Licensee's presentation on the status of their Return to Service Plan, and a short break, followed by public comments and questions of the NRC, and then we'll adjourn the meeting.

Before we go further, I would like to make some introductions. Immediately to my left is Jack Grobe, a Senior Manager in the Region III Office in Lisle, Illinois;

and Jack is the Chairman of the Davis-Besse Oversight Panel.

To Jack's left is Brian Sheron, aSenior Manager in Headquarters, who is the Associate Director for Project Licensee and Technical Analysis. Brian provides overall project management related to licensing activities associated with power reactors and he provides management direction of technical evaluations and assessment of technical issues.

Next to him, to his left is John Zwolinski, a Senior Manager in our Headquarters Offices, who is the Director of the Division of Licensing Project Management. John's group implements the policy, programs and activities, including coordinating licensing and technical reviews, associated with the overall safety and environmental project management for individual power reactors in the regions.

Next to John is Bill Ruland, a Senior Manager in our Headquarters Office. And, Bill is the Vice Chairman of the Oversight Panel. Bill's position is the Director, Project Directorate 3, in the Division of Licensing and Project Management.

Next to Bill is Jon Hopkins, our NRR Project Manager for Davis-Besse.

To my right is Scott Thomas, the Senior Resident Inspector at the Davis-Besse Plant.

And in the audience, we have Doug Simpkins, the Resident Inspector at the Davis-Besse Plant.

We have Nancy Keller, who is the Office Assistant for Davis-Besse.

Our Region III Public Affairs Officer, Viktoria Mitlyng.

Margie ~~Gonzales~~ Kotzales is a Technical Assistant to Mr. Sheron. She is with us in the audience. As is Ho Nieh, a Regional Coordinator in our Headquarters Offices, and he works in the Executive Director's Office in Headquarters.

Lew, would you please introduce the FirstEnergy personnel?

MR. MYERS: Thank you. In the audience today we have two guests with us. Bob Saunders, the President of FENOC is here for FirstEnergy Nuclear Operating Company. I see you, Bob, right there. Okay. And Gary Leidich, the Executive VP of Engineering Services is also with us.

To my left is Fred Von Ahn. I'm going to give you some new names and titles today, and as we go through the presentation today, it will be clear what's changed and why. Okay? Fred von Ahn is with us today. Fred is to our far left. Fred is the new Vice President of Oversight for FirstEnergy Nuclear Operating Company.

Mark Bezilla is next to him. Sitting next to me on

the left. Mark is going to be the new Site Vice President at the Davis-Besse Nuclear Plant. We'll talk about Mark later on in the presentations.

To my right here is George Beam. George is a Senior Vice President with Framatone.

And then Bob Coward is next to him. He's the Director of Nuclear Services with MPR, which is an Engineering Contracting Company that we use.

Mike Ross is next to him, I believe. And Mike is the, new title we termed the Restart Director. And Mike is filling that role.

Randy Fast is next to Mike. Randy's got a new title also; that's the Director of Organizational Effectiveness at our plant. And Randy is really going to focus on all the, the Management/Human Performance issues.

Then, Mike Stevens, the Director of Maintenance, is sitting at the end of the table.

MR. PASSEHL: Thank you, Lew.

Would any public officials or representative of public officials in the audience please introduce yourselves at this time?

MR. ARNDT: Steve Arndt, Ottawa County Commissioner.

MR. WITT: Jere Witt, Ottawa County Administrator.

MR. GROBE: Okay, before we proceed, I just wanted to take a minute to recognize a member of the Davis-Besse NRC team, who is going to be moving on.

Now you have to stand up Doug.

This is Doug Simpkins. I want everybody to recognize him for a moment. He's been a key member of the NRC team here at Davis-Besse for the past four years and has been a significant contributor to that team, based on his knowledge and experience, but also based on his diligence to ensuring the safety of the public from nuclear power operations.

Doug has been promoted to the Senior Resident Inspector position at a plant called Hatch. It's in Georgia. And those of us that are dyed-in-the-wool midwesterners can't quite figure out why he wants to go to Georgia. But, he is going to be taking on significantly additional responsibilities leading the NRC team down in, at the Hatch plant, Georgia.

In addition to Doug's commitment to his profession, he's also played a very significant role in the community here in Oak Harbor. His wife, Lisa, two boys and three girls, have been very active in the community. Doug has been an active father. He's been a Cub Master in Oak Harbor. He's coached the National Rifle Youth Camp here at

Camp Perry. He's organized the Youth Rifle Program in Oak Harbor. He's been a soccer coach and assistant baseball coach.

He's taught Sunday School. He's been very active in his church and he's even sung occasionally at Sunday school, which I didn't get any feedback whether that was a positive or a negative, but he's only been an occasional singer, so that might tell you a little bit about that.

We're going to miss him on the NRC team here at Davis-Besse. And, I want to recognize his commitment here and wish him the best as their family moves to Georgia in just a couple days. May 23rd, they're going to be pulling up stakes and moving south. So, thanks, Doug.

(applause)

MR. PASSEHL: Okay. This meeting is open to public observation. Please note that this is a meeting between the Nuclear Regulatory Commission and FirstEnergy. At the conclusion of the business portion of the meeting, but before the meeting is adjourned, the NRC staff will be available to receive comments from members of the public and answer questions.

There are copies of the May edition of our monthly newsletters and copies of the slides for this meeting in the foyer. The newsletter provides background information and also discusses current plant and NRC activities. On

the back page, there is some reference information on how to contact us, if you have additional questions or concerns.

We have included the email address and phone number of our public affairs officers. And there is also a web page address, where you can have access to numerous documents related to Davis-Besse.

We also have a public meeting feedback form available, which we use to solicit comments on aspects of the meeting that we can improve upon.

We're having the meeting transcribed today by Marie Fresch to maintain a record of the meeting. The transcription will be available on our web page. And usually, that's available in about 3 to 4 weeks.

It is important that speakers use the microphones to ensure that the transcriber and the audience can hear everyone.

Next slide, please.

Since our last meeting on April 15th, we discussed the status of ongoing plant and NRC activities. The NRC staff discussed initiation of a Safety Culture and Safety Conscious Work Environment inspection, the completion of the Containment Sump Inspection, and Integrated Leak Rate Test Inspection in Containment.

We mentioned that we were prepared to close Restart

Checklist Item 1-A, pertaining to reactor pressure vessel penetration cracking and reactor pressure vessel corrosion; and Items 6-A through F, pertaining to licensing issues associated with reactor vessel head.

We provided a status update on our ongoing inspections of System Health Reviews and Design Issues, Safety Significant Programs and Corrective Actions.

We discussed some upcoming activities, including the Undervessel Head Inspection, Fire Protection Inspection, a Restart Assessment Team Inspection and public meetings to discuss engineering issues and safety culture.

Later in today's presentation, we plan to provide an update on our recently completed and ongoing NRC activities.

FirstEnergy provided an update on efforts made toward restart. They discussed activities related to Operations Restart Readiness Assessments, including preparations to take the plant to Mode 4, which means the primary coolant temperature circulating throughout the reactor is between 200 and 280 degrees.

FirstEnergy discussed plans to resolve some engineering issues, including issues with emergency diesel generator loading, high pressure injection pumps, the electrical distribution system, and air-operated valves.

I want to mention that we are conducting another

public meeting tomorrow to discuss engineering issues. Information on that meeting can be found in our monthly newsletter.

Next slide, please.

April 15th, we held a public exit meeting to discuss the preliminary findings and conclusions of the special inspection and supplemental inspection that was conducted to review the utility's corrective actions for two white findings in the radiation protection area associated with inadequate radiologic controls during steam generator work in February of 2002.

On April 25th, we completed a one-week fire protection inspection which reviewed the Licensee's fire protection features and safe shutdown capability. The inspection results will be included in the Inspection Report for System Health Assurance Inspection, which is currently ongoing.

We closed Restart Checklist Item 1-A, which was, as I mentioned, the penetration cracking and reactor pressure vessel corrosion. The Davis-Besse Oversight Panel approved this checklist item for closure on April 29. FirstEnergy submitted its Technical Root Cause Report to the NRC staff in August of 2002.

NRC's review of the report is complete, and the results of the review will be included as an attachment to

the next Resident Inspection Report, which should be issued in the near term.

We also closed Restart Checklist Item 6-A through 6-F, which is licensing issues associated with replacement reactor vessel head. The Davis-Besse Oversight Panel approved this checklist item for closure on April 29th. The NRC staff reviewed and approved all six proposed licensing actions and the results of the licensing action review will be included in the next Resident Inspection Report.

Next slide, please.

First I wanted to discuss some continuing NRC activities, which involve our System Health Reviews and Design Issues Inspection. The NRC's inspection of this area is reviewing system health readiness. Part of this inspection includes safety function validation inspection of systems and topical issues, high energy line break, environmental qualification, seismic flooding and Appendix R. The inspection is being conducted by several inspectors and is ongoing.

We are also evaluating the Licensee's process ~~in~~ and tools for monitoring improvements in the Safety Culture, Safety Conscious Work Environment and the effectiveness of the Employee Concerns Program. The inspection is in progress this week. On April 7, the NRC issued a press

release and biographical information on the team members for that inspection.

The NRC's inspection regarding program effectiveness is reviewing certain key programs. Our reviews in this area include assessing the effectiveness of the Boric Acid Corrosion Control Program, In-service Inspection Program; Reactor Coolant Unidentified Leakage Program, Plant Modifications, Quality Audits and Operating Experience Programs.

To-date, we have completed our on site inspection of all programs, except for Boric Acid Corrosion Control, Quality Audits, and reviews of completeness and accuracy of required records and submittals.

Our Corrective Action Team Inspection is an inspection to review the effectiveness of the corrective action process at Davis-Besse to ensure that it is being effectively implemented and appropriate corrective actions taken to prevent recurrence of problems.

The inspection includes review of restart corrective action items to determine if items required to be accomplished prior to startup of the plant have been correctly characterized and actions have been completed in accordance with the Licensee's and NRC's requirements.

Our Resident Inspection is ongoing. We have two Resident Inspectors stationed permanently at the site, who

inspect a broad spectrum of activities, as is characteristic of all our sites, in the areas of Operations, Maintenance and Testing. And the Resident Inspectors issue reports every six to seven weeks.

MR. GROBE: Dave, before you go on, I just wanted to talk a little bit about the safety culture work that's being done by the company and also our inspection.

There's been a lot of confusion, at least I've sensed a lot of confusion on a number of fronts regarding whether or not the Licensee is required to improve their safety culture.

The NRC has requirements in 10-CFR-50, specifically focused on the need to fix problems. It's part of our quality assurance requirements, that's referred to as Criterion 16.

What it requires is that whenever the Licensee identifies a problem, a deficiency with safety equipment or safety processes, that it needs to be fixed, and it's required to be fixed. In the case of significant problems, we call them significant conditions adverse to quality; not only does the problem need to be fixed, but the root cause needs to be identified and the root cause needs to be fixed.

The NRC doesn't mandate how to fix the problems, but

it requires that they are fixed and that there is a reasonable course of action to address those problems to ensure they won't recur. Certainly the degradation of the reactor pressure vessel head at Davis-Besse was a significant issue adverse to quality. Consequently, the utility is required to fix that problem. Not only the specific hardware deficiencies, but also what caused the problem.

FirstEnergy determined that safety culture at the facility was a significant contributor to why that problem occurred. So, they're required under NRC regulations to address that issue. Again, we don't mandate how to fix the safety culture at Davis-Besse, but we do mandate that it be fixed.

The inspection, regardless of whether it's a piece of equipment that has a deficiency or program or procedure or process, or in this case a safety culture, there is many different ways to address hardware problems to address what I call software problems, programs and procedures, and to address people problems. We don't mandate how to fix it, but what we do is come in and inspect and make sure there is a reasonable path to success, that the specific actions the company is taking have a reasonable success path to ensure that these problems don't recur.

To ensure that we did an excellent job assessing

this area, as Dave mentioned, we brought in a team of experts. There is seven folks, who have a proven track record in the area of Safety Culture Assessment, Safety Conscious Work Environment Assessment; and two gentlemen who also have a proven track record in the industry of effectively managing safety culture at nuclear power plants.

That team's work is ongoing. We will have a public exit once they complete their work, but our goal in that effort is to examine, not to impose any requirements in the area of safety culture, we have no requirements, but to examine what the utilities is doing and make sure that it makes sense. That's what we'll be reporting out to you publicly and to the utility in several weeks.

Thanks, Dave.

MR. PASSEHL: Okay. Next slide, please.

Okay, the NRC will conduct a public meeting with FirstEnergy tomorrow, as I mentioned, in the Region III Office, where FirstEnergy will describe the status of its engineering reviews and address significant outstanding design issues and its plans for resolving them.

This is the second public meeting focusing on the status of design reviews of Davis-Besse safety systems. The first meeting was held in the NRC's Region III Office

in Lisle, Illinois on December 23rd of last year. Transcripts and presentation materials for that meeting are available, and for the meeting tomorrow, are available on the NRC's website.

The NRC is preparing to conduct an inspection of the lower reactor vessel head area. This inspection will review the procedures and related ASME Code requirements relative to the leak test of the reactor coolant system. The NRC will also observe conduct of the test and verify proper implementation of procedures.

As Jack alluded to, the NRC is planning to conduct a public meeting to discuss the Licensee's assessment of safety culture, once the Licensee has fully integrated their independent and internal assessments. That meeting will be held in the Region III Office in the May to June timeframe.

The NRC is preparing to conduct an assessment of backlog issues. The work Davis-Besse plans to defer until after the plant has resumed operations, or the work Davis-Besse plans to defer to future outages. This review will consider the appropriateness and safety of those proposed deferrals.

Next slide, please.

The NRC is preparing to conduct a Restart Assessment Team Inspection when the utility nears the point where it

will seek NRC authorization for restart. This inspection will review the readiness of the plant and the plant staff to resume plant operations safely and in compliance with NRC requirements. The inspection findings will be considered by the NRC Oversight Panel in making its recommendation to the Regional Administrator on possible restart.

The NRC is preparing its final Significance Assessment for the control rod drive mechanism cracking and reactor pressure vessel degradation identified for Davis-Besse. The NRC issued its preliminary assessment letter back on February 25th of this year in which we preliminarily determined that the performance deficiency resulting in that reactor pressure vessel head degradation and control rod drive mechanism nozzle cracking had high safety significance.

The final letter will be issued after NRC considers FirstEnergy's reply to our preliminary letter. And we received that reply on April 24th.

This summarizes NRC's activities since our last meeting. The inspections I discussed are part of our Restart Checklist, which is a listing of issues that need to be resolved prior to restart of the plant.

So, with that, I'll turn the presentation meeting over to FirstEnergy. Thanks.

MR. MYERS: Thank you.

When Doug gets to Hatch and he starts looking up all that environmental data, you know, history, you know; I think you'll find it had a lot of good rigor and was very thoroughly done.

MR. GROBE: You don't happen to know anybody that might have worked down there, do you?

MR. MYERS: Yes.

(laughter)

Okay. We have several Desired Outcomes today. We have, it's not been quite a month since we had our last public meeting, so let me talk a little bit where we're at now.

Since the last public meeting, we've completed our high head safety injection test. We pressurized the plant to 50 pounds pressure. And, at the present time, we're looking at going to 250 pounds and we're doing our near normal operating temperature pressure test later on. We're not at that point yet.

Today, we have several Desired Outcomes. You heard the new titles that we are using and there has been some management changes. We want to discuss those management changes and the reason for the management changes.

We also want to review the plant activities completed since the last meeting, and as it brings you up

to our present status; and then, there's some near term activities for plant testing that we want to discuss; and then, finally, we want to provide you an update of several of our issues and their resolutions.

If you look at our agenda, the next slide, specific areas we're talking about, once again, is Management Actions.

The Restart Test Plan. Mike Stevens will discuss that.

Challenges to Restart. You know, we talked a lot in here about our high ~~end~~ head safety injection pump issues, and the actions that were taken there. So, we have two people that are going to discuss those today; Mike Ross, George Beam and Bob Coward all focus in that area.

Operations Readiness. Mark Bezilla is sitting beside me here. He's been at the plant two days, but he's going to discuss Operational Readiness. You'll find Mark has been really working at the plant quite a bit since we've been in this issue.

The Quality Oversight Area. Fred Von Ahn will discuss. Fred is our new Vice President of Oversight.

Safety Conscious Work Environment. We had a couple of questions that we wanted to discuss from the last meeting, Jack. And, we're prepared to discuss those today. I'll do that.

Then, the Containment Closure. You know, that's really closure of the Building Block. And, as Randy will tell you, you never close the containment out. You know, what we have put in place is some new procedures and stuff that we think will keep the, not only fix the containment to standards we have today, but maintain those standards in the future.

The first area that I would like to discuss -- go ahead with the next slide -- is Management Actions. You know, Jack spoke awhile ago about the safety culture at our station. You know, we define safety culture as attitudes and attributes in the organization and people that ensure that safety-related activities receive the management attention warranted.

If you look back, when you talk about that today, I have my slides; if you look back at our actual root cause, we said, "There was a focus on production, established by management". So, it's a management issue of the plant. "Combined with taking minimum actions to meet regulatory requirements". Let's justify this and take the minimal action. "That resulted in acceptance of degraded conditions" as long as they didn't affect productivity. That was our original root cause.

If you'll look at some of the actions we've taken, we talked about before, you know, Bob Saunders created a

new position of Chief Operating Officer, which is my job, once we get the plant restarted.

Then, Gary Leidich is our Executive Vice President of Engineering and Service, which is Services, which is also a new position that helps standardize our programs and our approaches to the system health and stuff like that. So, a key part of ensuring that this type of issue doesn't happen again.

And then, finally, you know, if you look at our Oversight Organization. Our Oversight Organization, what we found, mostly reported to the site. So, we wanted to make that a FENOC organization; and we created the Vice President of Oversight. And, Bill Pearce had been in that position, and now Fred von Ahn is there.

If you go look at the organizational changes that we've made, first I would like to spend a couple moments to tell about some of the new players.

Fred, as the VP of Nuclear Oversight, has been with us for many years now. Worked with Fred at our Perry Plant. Fred has over 25 years of nuclear experience; both from the Navy and then commercial operations.

He graduated from the Naval Academy, so Fred was a naval officer in 1978 with a Bachelor of Science Degree, and while we were working together at Beaver Valley, went back and got his Master's Degree in Business.

Fred, after leaving the Navy, worked for General Electric for a period of time as staff engineer. He had a Senior Reactor Operator License in a plant in Switzerland for about two and a half years.

Fred worked at our Perry Plant since 1998, and he was a lead engineer there. And, when I left the Perry Plant, he was in the engineering department, was in charge of one of the departments of engineering management. He had escalated through several positions there in engineering, from project management to other management positions.

He went to our Beaver Valley Plant as the Director of Engineering, where he's been responsible for the System Health Programs and Latent Issues Programs for the last three and a half years, and some of the improvements we've made at that plant.

We have been talking for some time about announcing a Vice President for the Davis-Besse Plant. And, in order to do that, we wanted to put Bill Pearce back with his broad base experience on Westinghouse reactors, he's now back to being the Vice President down at the Beaver Valley Plant.

That allowed us to take the next person, Mark Bezilla, who is sitting to my left, and move him to, that would be the Site VP at our Davis-Besse Plant. Mark comes

to us with a, what we think is an outstanding background also. He has 26 years of experience in the nuclear program, including a position at Three Mile Island.

Mark was hired by Mike Ross and trained by Mike, so we're expecting outstanding things there.

After that, he came to Davis-Besse and was the Superintendent of Operations, moved up to the Superintendent of Operations position. He was moved over to Perry Plant to improve performance there for several years, and was the Operations Manager.

He then left us and went over to Salem, where he held numerous positions, from basically Plant Manager position to the Vice President of Operations, Vice President of Engineering.

And then, we brought him back about a year ago to work at our Beaver Valley Plant to take my place as Site VP, and he made good improvements there after I left.

So, he did so well, we decided to bring him over here and let him do the same thing here. So, he's coming here to be the Vice President, Site Vice President of this plant.

If you go look at Mark. Mark, once again, had an SRO in this plant. He has an Engineering degree and Associate degree in Nuclear Engineering Technology. We think that he knows the plant well. He's had good broad

based experience and will do us an outstanding job here as the Site Vice President.

So, that's some of the shuffles at the top. That's the reason we made those shuffles.

If you go look at the next slide, at our Davis-Besse station, we've worked pretty hard as a Senior Management Team over the last few weekends to figure out how to utilize the talents that we have here. You know, I'm basically located at the station full time, so between Mark and myself, we probably shouldn't be doing the same job. So, since I'm located at the station, I'm going to stay here until after startup. And, we tried to figure out ways to utilize our talents the best.

We wanted to take Bob Schrauder, Director of Support. Bob has been really working on projects since we've been here as a team. We wanted to get him really involved in Security, Regulatory Affairs, Corrective Actions and Quality Services.

Regulatory Affairs is an area we're very concerned with and needs Bob's talents. That's what we brought him out here to do, so he's really focusing on those things now.

Jim Powers filled the Director of Engineering, and there was no real changes there.

We took Mike Ross, and Mike will continue to focus

on Mark in his new position -- so, nothing has changed in the last 25 years -- as the Director of Restart. And what Mike is doing is, we're trying to do, we finished our discovery, if you will, walking all our systems down. We pretty well have our backlog done in the right direction.

But, but there is, as you get to the end, and, Jack, you know this, you start getting all those issues, the easy stuff is gone. So, we need to be focusing forward and making sure that we have good ownership, we have good fragnets in place, good schedules in place, the parts, the tools, equipment, and the people to get some of the work activities after the, up to the Mode 4 test; and then after that test, for those, the windows that we have, all the work we have after that.

So, Mike has got the leadership role in that area now. We've set up a place out in the Administration Building, where we're really focused now making sure all the mods are ready to go, all the issues are ready to go, and driving those things on a daily basis.

Randy Fast has moved over to be the Davis-Besse Organizational Development Director. Randy has worked hard in Operations in improving the areas there. And we've been getting very good feedback about some of the improvements we've made in Operations and ownership and all.

We need to really focus on the management issues

that we have ahead of us. And, Randy is here to focus on the SAP Project, which is a management issue; the new computer project moving into our plant, that the plant is going to.

Emergency Preparedness, Randy will be focused on that next week.

The Davis-Besse Human Resources Area, to make sure we're putting key people in the right positions.

Communications at our site, trying to improve that.

Safety training, our Training Department will report to Randy. Human Performance person will report to Randy. And, finally, the Restart Building Block will continue to report to Randy also.

Then, Mark Bezilla. Mark is going to sort of take over the position of Site Vice President and Plant Manager role combined. What he's going to do is focus on the stuff inside the fence. So, Mike Stevens, the Maintenance Director, Outage Management, and Work Control, will report to him, Chemistry, Operations, and Radiation Protection.

And what we feel right now, is that lays out and uses our talents to the best way we know how to use them. This has been a team effort to figure out, here's all the things we need to get done, and here's the way to approach it. So, those are the changes that we have in place at our plant.

The next area is Mike Stevens and Mike will provide you some information on Restart.

MR. STEVENS: Thank you, Lew.

I'm pleased today to talk about our Restart Test. The purpose of our plan is to improve the work performed thus far that's been effective to support safe operation of Davis-Besse.

Initially, we've taken lessons learned from the industry and validated our plan to ensure that the startup and safe operation of Davis-Besse goes smoothly through this restart testing.

Next slide, please.

Our test plan will test our primary system readiness. We will be performing detailed inspections at 50 pounds, 250 pounds, and 2,155 pressure. The detailed inspections will include all of the flange and bolted joints and Reactor Coolant System primary that's normally pressurized. Additionally, we'll validate the requirements of our new Reactor Coolant System Leakage Monitoring Program, which we had previously discussed.

MR. THOMAS: Mike, I looked through the packet here, and I didn't see where you discussed this in more detail. Would this be an appropriate time to talk about the ongoing 50 pound test and what challenges you may have prior to performing the

250 pound test?

MR. STEVENS: Yes, I could answer that, Scott. We're currently at the 50 pound per square inch pressure test, performing the inspections. The inspections are not identifying any problems. To go to the 250 pound pressure test, we'll have to get the air-operated valves on the air duct system completed. And, we're working through the design and part requirements to get those, get what we need to repair those valves. That's primarily makeup 3 and 38, I believe, which will allow us to have letdown.

MR. THOMAS: Thanks. Also could you talk to, just basically describe the interaction between the 50 pound, 250 pound, and the 2100 pound test, as far as what you're looking at for each, the specific things you're looking at?

MR. STEVENS: Well, primarily, at the 50 pound and 250 pound tests, we're looking for leakage and validating our leakage monitoring program. We also will be operating a lot of equipment on our primary system to achieve the 2,155 pound pressure.

Now, as we progress through that, that's when we'll be making sure we're ready to make the mode change to Mode 4 and Mode 3. Is that what you're asking, Scott?

MR. THOMAS: That will do it.

Thanks.

MR. STEVENS: Okay. We'll be operating our reactor coolant pump test, all four of our reactor coolant pumps. Additionally, after we hold that pressure at 2,155 pounds for 7 days, we'll go in and perform baseline inspection on our reactor heads using our inspection program, both the new reactor head that was installed, as well as the bottom head region of the reactor vessel. Also, we plan to test our control rod drive system by performing our insertion time testing.

Next slide, please.

MR. HOPKINS: Wait a minute. Let me ask a question here. In the beginning, you talked about taking lessons learned from others to validate your program. Where and what you just discussed do you take lessons learned from that?

MR. STEVENS: What we learned from some of the other units that were down for a prolonged time, that when we, when they went to start up without having a system integrated test to ensure that all the components were ready to operate, they found they had multiple equipment problem and were not prepared.

So, some of the things we're doing is taking those lessons learned, tie in with this startup plan as we bring systems on; what most likely could be a problem, preparing

for it.

For example, one of the scenarios is a small leak, maybe out of a packing of a valve or whatever. And I know our Operations Department has been performing different scenarios on our simulator. I was observing that last week, to ensure that we're ready. If they anticipate any equipment problems.

And, those are some of the lessons learned we're pulling out; not only the sequence of the components, but also the training and the contingency training we need to have should components not operate as expected, because they've been in lay-up or at extensive maintenance.

MR. MYERS: Let me help you out some too.

We took a document, and the document we got from the industry is lessons learned from extended shutdown. It talks about, you know, testing all of your equipment; coming up and finding problems. We haven't ran the plant for a year. Valves want to stick, we may not have worked on them. We worked on like I think five thousand components or so.

After we work on something, we do what we call post maintenance testing. We have all that post maintenance testing to do. So, as we get on up to 21, we do the pressure testing on the way up, and make sure we don't have

any leaks and everything at the two pressures. Then we get up and do what we call integrated testing. We're going to test our steam pumps, condensating pumps, feed pumps, anything we can test during that NOP test, and try to make sure that equipment is ready to operate.

Additionally, we'll take all these post maintenance tests and post modification testing and try to get that done too. So, then when we come back down and we do the undervessel inspection, and we do the diesel drain out that we have, and come back up. It should give us high confidence the equipment will work and perform not only as designed, but in a reliable manner.

MR. HOPKINS: That helps me most of all. I have a specific question.

Last month, when we talked about the NOP test, we had a slide item on the slide about control rod drive testing, and I asked what was that, and you were going to get back to me. Could you tell me now?

MR. MYERS: Do you want to do that, Mike? Or Randy?

MR. FAST: John, we went back and looked at our test, and as part of normal test sequence, we latched the control rods and verified their operation. That's a normal sequence for the plant. And, we've had further discussion about that, but we're not

deviating from our normal startup process.

As a matter of fact, one of the things we noted is while we're in the 7-day test, we'll be borated to maximum concentration, but we'll actually have shutdown banks that provide triple reactivity. It's actually a safety margin added to the plant. And that's in accordance with our normal startup operation. It's not a reactor startup, but it does verify rods, and that is one of the lessons learned as well from the industry.

So, we'll verify that the control rod drive mechanisms will latch and are movable and the shutdown rods will be in a condition where they can be tripped to add reactivity while the plant is in the 7-day demonstration.

MR. HOPKINS: Okay. Thank you.

MR. THOMAS: Randy, on the same, just to pursue that a little further. The first test is done in Mode 5, correct, it's normally in Mode 5, where the individual latch and pull and reinsertion. That's normally done in Mode 5, so that's not an issue for the NOP test.

The triple, you know, cocking safety group one, I agree is part of our normal startup process, but the bullet here is control rod system insertion time testing. Where is that going to fit into the picture?

MR. FAST: I was going to say, normally that's performed at normal operating temperature and pressure and that is a technical specification requirement that has a very specific time that has to be met in order to ensure compliance.

MR. THOMAS: Let me be more specific. Will that be done during the NOP test, the first NOP Test during that time period?

MR. FAST: I believe it is, as part of the full temperature and pressure operation.

MR. MYERS: I think it is. Yes.

MR. THOMAS: Okay.

MR. STEVENS: Thank you, Randy.

Initially, on our Primary System Readiness, we'll perform the Technical Specifications Surveillance Test, including the Integrated Safety Features Actuation System Test.

Additionally, we'll perform flow testing on the various systems. Here, we'll be using the special flow instruments to validate the proper flow is going to the components and that we have established operating plant conditions.

On the secondary side, the secondary system readiness places a majority of the secondary plant

components in service as required from startup and we'll be going from layup preservation to operational readiness.

Some of the systems we'll be having in service are the main steam system, the main condenser with the vacuum drawn, condensate, circulating water, feedwater, comprehensive auxiliary feedwater testing, as well as feedwater heating, portions of the feedwater heating system will be in service.

Any additional questions?

With that, I would like to turn it over to Mike Ross, who is going to talk about the challenges to Restart Test Plan, and our plant readiness for restart.

MR. ROSS: Thank you, Mike. Effective Monday, May 5th, as part of our refocusing of our efforts, I became Davis-Besse Restart Director. A new center has been established to address restart issues. The focus of that center will be on issues and modification for Mode 4 and those efforts that will be required after Mode 4. The Center will be located in DBAB, Rooms 209 and 210.

The Center is different and separate from the Outage Control Center under Outage Manager Greg Dunn. Greg will continue to have responsibility for the planning and execution of outage.

Next slide.

There are approximately 1,172 Mode 4 restraints at

this time. A breakdown of our progress for these items is listed on the screen. The major work remains in the area of CR closure, work order closure, and component testing.

Next slide.

MR. GROBE: Mike, before you go on, I want to make sure I understand the difference between outage management and this new function.

If I understand correctly, what your focussing on is not field work, coordination of field work and management of field work, you're more focusing on what goes beyond that; is that correct?

MR. ROSS: Yeah, think of it as issues management. We want to focus on appropriately addressing the issues and make sure when we do address them, it's the complete effort.

MR. GROBE: Okay. Once an issue is ready for field work, then it would be managed by the Outage Management Group?

MR. ROSS: That's absolutely correct.

MR. GROBE: Thank you.

MR. ROSS: Next slide. Looking to Mode 3, there are 509 restraints and we again show our work there.

We have maintained a list of issues affecting Mode

4. Our completion efforts have reduced this list to what's on the next two slides. I would think it's, what I would call a manageable list at this time. I'll discuss briefly each issue and kind of where we are on these issues.

HPI bearing or the high pressure injection bearing issues due to the postulated sump debris. A licensing amendment is being prepared for submittal that was designed to allow one time use of the existing HPI pumps and proceed to pressurize and heat up the reactor coolant system using the reactor coolant pumps as a heat source and complete the 7-day NOP and NOT Test.

Additionally, two options are being worked that will either install new HPI pumps that we already own or they will modify the existing pumps to fully meet all requirements. Later presentations will discuss these options in detail.

Safety Features Actuation System Relay Replacement is coming toward resolution, and probably have us put the original relays back in after obtaining spares from other utilities and other nuclear users. In completing a detailed quality check of each of the system relays, approximately 250, 60 relays involved in that effort.

The Electrical Transcient Analysis Program issues are receiving additional focus. It appears to be one of our major issues for Mode 4. Our project team continues to

work to improve delivery of this issue.

Next -- you have the next slide up, thanks.

The Low Pressure Injection Pump Cyclone Separator Clogging Issue appears to be on track and will not require work for Mode 4, but will receive an evaluation for our mod installation prior to restart.

4160 Undervoltage Relay Field Work started on the first bus, which is being done this week.

The Air Operated Valve Program Issues are receiving additional focus, and are presently holding out the reactor coolant 250 pound test, due to the need for seal injection and letdown valves that are involved in this issue.

MR. THOMAS: Mike, what's the present scope of that? How many valves are you down to, approximately?

MR. ROSS: There is twelve valves that need work. There is seven requires, seven of those require spring adjustments or adjustments of some kind, and I think we're going to end up with 12 valves requiring ECR's. That's kind of the scope of the work and that's after having looked at a total of 83 valves in our program.

MR. THOMAS: That's what remains still to do?

MR. ROSS: Yes. That's

correct.

MR. THOMAS: Okay, thank you.

MR. ROSS: Back on the Air Operated Valve Program Issues; we are putting additional focus on that. And, that in itself is what's holding a 250 pound test. We could go to 250 pound and do that testing, including pumping reactor coolant pumps without entering Mode 4 because that testing is done less than 200 degrees.

The Makeup Pump Over-current Relay Setpoint Issue appears to have been resolved, and we're waiting closure and documentation of that issue at this time.

The Emergency Diesel Generator Room Temperature Issues, while not a Mode 4 concern, or a concern due to the approach of warm weather; that continues to be a challenge to us and there is a lot of effort going on in that area.

The major issues for Mode 4, as we see it now, are the High Pressure Injection Pump, the ETAP Issue, and the Air-operated Valve Program Issues. All are receiving additional focus and resources, and we do believe we have workover resolutions for all of those issues.

Next slide.

Looking ahead to Mode 1 and 2; there is 396 mode restraints for Mode 2. And 39 mode restraints to complete for Mode 1. As you can see, the majority of that work lies on our Mode 4 and 3 preparation.

In closing, the high pressure injection pump, the ETAP and the air-operated valve issues are definitely solvable and receiving additional focus. Additionally, we have not identified any items that we would classify as unsolvable or not doable through total restart.

I'm open to questions.

No questions, I would like to turn back to Mr. Myers for discussion on the high pressure injection pump issues and options. Thank you.

MR. MYERS: Thank you.

We've talked in here several times about the issue of the high pressure safety injection pump that we've hypothesized. Basically, that issue has to do with potential debris. We're talking about debris so fine that it would pass through the sump strainer that we install; and over time, over a long period of time, would erode the internal clearances, specifically in the hydrostatic bearings, which are internal to this pump on each end of the pump shaft. And then -- I'm sorry. Hydrostatic bearing in the center, and then also debris on the bearings at the end.

We've looked at a couple of options today. The first option was to replace the pump. As we stated earlier, we went out and we bought two pumps that we found in the industry that were from plants that were not, not

ever completed. We have those two pumps. We own those two pumps as we speak. And, the second approach was to modify the existing pumps.

You know, we know our equipment that we have now. It's worked well. The pump that we have now is high reliability. If there is a modification that we can make to that pump to ensure that it would operate under a certain limited number of conditions, limited number of conditions we're talking about, is whenever the pump would be called upon to take water from the low head safety injection pumps, because it does not pump out of the containment sump.

We can go into what's called a piggyback mode, where we take low head safety injection pump water and pump that through the suction of the high head pressure pumps, and then we inject in long term core coolant at a high pressure, if we need to.

So, there is certain events, a certain limited number of events where we'd want to use that mode of operation. So, ensuring the reliability of those postulated -- of this pump during those postulated events is important.

If you go look at today, we've got George Beam here. George is the Senior Vice President with Framatone, next to me. What we did is, we went into a contractual agreement

for a sole source delivery of that pump, similar to what we did with the reactor vessel head, if we decide to replace the pump.

So, we have the new pumps. So, George is going to give you the status of that project as we speak now, which is ongoing.

Additionally, we also pursued the modification option. Bob Coward is with us today. Bob is the Director of Nuclear Services with NPR, which is a nuclear engineering company that we use very often. They've been focused on the modification approach, and that project is also ongoing. We're going to describe what that modification would look like today, and if we do decide to go that approach.

What's important, is that we've got to focus on what are the advantages and disadvantages of each approach. Every day we have different issues pop up, from anything from increases in temperature to the new pumps in our safety-related rooms, and would ~~root~~ room coolers take that, or changes in loading on our diesels. So, we've got to find the right technical issue, the right technical approach for the plant.

So, we're very confident these two approaches are both doable; and we've got to, in the next few weeks, decide exactly which one we're going to do, because after

we do the NOP test, we have to get started on one of them. Okay?

So, with that, I'll turn it over to George.

MR. BEAM: Thank you, Lew.

As Lew Myers said, I represent Framatone, the Nuclear Services Business. And I think you're aware, Framatone bought the former nuclear assets of the Babcock & ~~Wilcoex~~ Wilcox Company, which I've been a part of for 20 years.

Babcock and Wilcox designed the original HPI system as part of the primary system that was delivered to Davis-Besse, and provided those pumps and motors under a subcontract. So, we have a lot of engineering analysis already in support of the existing systems. So, when this came up as a potential self-managed task where Framatone would come in and work with the FENOC assets, it was easy to work our engineering capability in with the FENOC engineering capability, because of all the past design information that we had.

The challenge is to, is pretty straightforward, in that we basically will take pumps and put them back into the same place. The challenge is that these pumps are a different design, the motors are a different design, hookups are different, so it's a little bit more of a logistical challenge or technical challenge than just a straightforward replacement.

We're currently performing the following scopes for the replacement; the complete engineering design and analysis, including a safety analysis. As Lew mentioned, procurement of replacement pumps and motors. The pumps right now are at a facility in Charlotte, North Carolina. The motors are in Texas, and they're going, undergoing teardown, where we're looking at what is required to do the modifications and upgrades.

We also have done photogrammetry on the penetration room to look at what modifications we're going to have to do, procurement of required piping and components and fixtures to go in there. Photogrammetry, you know, is the precision measurement capability used a lot in steam generator replacement to do precision fitups for narrow groove welding. So, basically, we're down to ~~mills~~ mils in trying to measure the interferences that are required to put these pumps in here.

We will remove the existing pumps and motors, which is not an easy task by any means. It's very tight quarters in this room. Removal of interferences. The installation of the replacement pumps and motors, which are slightly bigger than what the existing pumps and motors are. The final acceptance test and procedure. And then, participate in final acceptance testing once the pumps are operational.

Next slide.

The current status is, the project is being self-managed task. We're working now with FENOC to define self-managed from a standpoint of QA Program in Lynchburg, Virginia, and QA at the site to do the work. We have procured the two pumps and motors. As I said, they're in the OEM shops for upgrades and checkout.

It's a four-party transaction right now, between Westinghouse, Flow Serve, Framatone and FENOC in designing the final configuration. The pumps are a little bit larger, not much larger, but just a little bit larger, and the motors have a greater horsepower. So, we're having to work that into the whole analysis scheme to figure out exactly how we're going to run them between the diesel and heat loads.

The last bullet is just simply to say, these, the safety analysis, design and construction work is all, getting the pumps and motors is the easy part. Trying to figure out how to get them in this room and get them tied in together, and doing all of that work, is probably going to be the most challenging thing for this whole project.

That's currently what we're working on in parallel with the other options being worked on.

Any questions?

MR. THOMAS: Is it too early to

tell, you're going to have to derate the pump in some fashion. Have you decided on a method to do that; and as well, a motor may or may not have to be derated from a horsepower standpoint. Has that decision been made yet?

MR. BEAM: As a matter of fact, that phone call was happening this afternoon at 4:00 to figure out the final configuration of both the motor and pump, between the electrical output and the heat load that goes on in that room, but we have not made a final decision on exactly what the final horsepower will be for the motor, or the pump output.

MR. THOMAS: Okay, thanks.

MR. BEAM: But it will be done this afternoon.

MR. GROBE: George, this is not really a question for you, but what you've described is a fairly complex engineering challenge, as well as a complex number of interfaces between different organizations.

Lew, it gives me an opportunity to ask a related question, thanks.

MR. MYERS: You're welcome.

MR. GROBE: Last December, individuals in your engineering organization surveyed a number of folks regarding the at-risk change process. And,

the question at that point was whether or not the extensive use of at-risk changes created a perception of production over safety. And there was a significant concern at that time that utilization of that process at the extent that was being done during this outage presented a challenge to the concept of production over safety and quality.

And more recently, during our inspection of the sump modification, we identified a number of issues regarding the quality of calculations, and those calculations were done by the subcontracted engineering firm, ~~Intercon~~ Enercon; and accepted through the ~~Intercon~~ Enercon review and approval process, and accepted through your review and approval process, and those problems weren't picked up.

I'm not sure if the at-risk change process contributed to that, but I would like to hear a little bit about the utilization of at-risk change at Davis-Besse and what you've learned from the experience with the sump modification and calculations, and where you stand on these issues?

MR. MYERS: You know, an at-risk change for us, you know, doesn't mean that the engineering is not done. What it means is, some of the, I would say the last part of the validation. So, there is a risk, financial risk of doing the at-risk change approach, you know. It is a more expedient process, but it doesn't

have all the rigor that a normal change process would have. And before you go to closure and use that, that component, you finalize that with normal mod process.

So, the checks and balances are in there to ensure that you don't put something in place that's not had the, the complete modification done, but it does put you some financial risk up front.

We've used that pretty extensively on the, many of the mods that we've installed to-date. What we're doing with this one, the approach is to do the test, the restart test that we talked about, NOP Test first. What that allows us to do, is take these pumps and the motors and make the necessary modifications and not use the at-risk change, because we would install the pumps and motors after the NOP Test.

So, on this particular change I wouldn't anticipate that we would be utilizing the at-risk change process.

MR. GROBE: Okay. Do you have any, maybe Fred, you can pipe in from the quality perspective, if you're aware of assessments that quality has done in this area. Do you have a sense of the level of challenge the at-risk change process presents to your organization?

MR. VON AHN: The at-risk change process, Jack, as you know is a generally accepted process

throughout the industry, and there are certain steps we take throughout that process that the product is not delivered and turned over and operationally accepted until all the I's or-- T's are crossed and the I's are dotted.

So, I'm not aware, I don't know, John, do we have any specific information on that?

MR. REDDINGTON: No, we have not done any correlation between any errors that we found in engineering and draw a correlation with the at-risk change process. We did bring that issue up ourselves from a quality standpoint early on, and, what we found is that they have the Engineering Assessment Board. There is checks and balances before even an at-risk change gets issued to the field. So, it does go through a certain level of rigor prior to the field guys giving it for implementation.

MR. MYERS: You asked the question last time about the calculation issue that we had on containment sump. I went back and looked. Now, my understanding, we had added up all the margins, we still had plenty of margin, but there was an issue there, I'm trying to remember what you call, the diffuser, that we had not taken in account for it in the calculation, but there was an issue.

I don't think that had anything to do with the

at-risk change. It really had more to do with the rigor that the vendor used in their validation process and how they, two things; how the vendor, when they developed the mod, where they got the, some of the information from. The sources of information, we found some other numbers that were not as on conservative active as we would like, and one of the accumulators.

So, we found several problems as we went through that validation process with the vendor and some of the numbers not being as rigorous what we would like.

Additionally, what they have is, that we pay them to do, was the validation process. They hand that off to another engineer, that other engineer validates that calculation as a thorough and adequate calculation. You know, that vendor controls, in this particular mod, I think, it's an issue more than the at-risk change process. Because it was, when we were reviewing, what you were reviewing as organization was a final product.

MR. GROBE: What have you done to strengthen your owners acceptance on vendor work products since the sump issues came forward?

MR. MYERS: You know, we tried to strengthen our reviews in-house. We've also tried to strengthen our engineering oversight review board reviews, some additional criteria there, where we've gone

back and tried to look at the mod calculation. We had owners acceptance. Owners acceptance is not a comprehensive review of the calculation. We're strengthening that also.

If you want to discuss that in great detail, I need to get Jim Powers involved.

MR. GROBE: Right, I didn't see him in the audience here with you.

MR. MYERS: No, he'll be with you tomorrow. Ask him that question.

MR. GROBE: Yeah. You had a number of complex engineering issues that you're beginning to bring to closure and a lot of engineering work is being done by subcontracted organizations. I think it would be useful to hear a little more about this subject at our next meeting.

MR. MYERS: We can add that to the agenda next time. Be glad to.

MR. COWARD: Hi, I'm Bob Coward. I'm with MPR Associates. MPR, I guess we're an engineering company formed about four years ago by Harry Mandil, Bob Panoff and Ted Rockwell. They were the three chiefs that built independence working for Admiral Rickover in the design and construction of the Nautilus and then

shipping port.

I think, you know, we provide a wide variety of engineering services in the nuclear industry, with the common theme being the concept of trying to take the rigor and depth and quality of the naval reactor's approach to engineering and apply it to commercial industry. So, that's sort of where we're coming from.

FirstEnergy asked us to take a look at this issue, the HPI pump issue, just because it's a fairly complex issue, and, you know, all the solutions seem to be difficult.

And, I guess, and also the idea that the pump we have works well. So, what we looked at was the idea of, rather that replace the pump, can we come up with an approach in which we modify the pump, so the postulated degradation mechanism won't occur. So we can be confident, a hundred percent confident, that in the event of a loss of coolant accident the pump will work acceptably.

Which given, I can just tell you my own personal opinion, we know several other people, pump experts who've looked at the pump, who think there is a very good chance that the pump would work as is even without modifications. But in order to be sure, in order to be safe, we want to make sure we have sufficient safety margins in the plant. The idea was, we would come up with a design approach to

modify it to get that level of confidence.

And, I'm going to show you in just a moment what the concept is, just so people, because people haven't seen it before, but basically, what it comes down to, the approach we laid out involves a number of steps. The first is to design modification. We do have to make some modifications to the pump itself.

Our approach involves not just modifications to the pump, but a rather detailed testing approach, using both mockup testing and some testing in the plant, to demonstrate that the approach is acceptable and the modification performs its intended function, and the pump would work acceptably under the design conditions.

We also have some analyses that we do to support the modification. We'll do some motor dynamics analysis to show the pump will still function properly; we won't have vibration problems; won't run at critical speeds.

We do some hydraulic analysis to demonstrate that the changes we're making won't affect the ability of the pump to perform its intended function from a pumping capability perspective. And since we're making some modifications to the pump; not the, what I'll call, ASME code pressure boundary parts, but there are parts in the pump in which would be, that do react a pressure difference. Since we're making modifications to them, we

want to do some stress analyses to confirm that the stress levels remain acceptable.

We've already done the preliminary versions of all those analyses. I'll talk about that later. But, moving forward, we have to do the final versions.

We would do the mockup testing. We'd implement the modifications, and once again, do a post modification test program to ensure everything worked out okay.

If I could get the next slide, Marla. Just to get everybody, make sure everybody is on the same page.

This is the fourth stage pump volute from the Davis-Besse HPI pump. This piece right here, this component is stationary inside the pump. It's a stationary part of the element. And, the pump is a multi-stage pump. I think there is 11 stages within the pump. This is the four stage.

And, if you look carefully, there is a hole there and hole there. Those are the take-offs for the flow which goes from this volute back to the hydrostatic bearing supply. And, that's sort of, you know, the flow is inside here, goes out that hole to the bearing, basically coming out this hole. They're 180 degrees apart; same basic function. And this hole is about 3/8 of an inch in diameter.

The tubing back to the bearing has an orifice in it,

which is only about 110 ~~mills~~ mils, .11 inches in diameter. And there are some clearances in the bearing itself, which are only I think about 15 ~~mills~~ mils. And so, given that the sump screen is about 3/16 of an inch, the mesh; clearly, I could get particulate into pump flow, which could plug not this hole, but could plug the orifice and could plug those clearances.

So, this is sort of what we start with. And, we say to ourselves, well, what are we tying to do? We're trying to keep debris from going down that hole, because if we can keep it out of that hole, the pump should work acceptably.

So, if I could get the next slide, Marla.

The concept we've come up with, and I apologize, we've sort of, for the hole in the top, this is a backwards view. This is a see-through, looking at the hole in the bottom right corner from the last slide.

The concept we've come up with is to basically go in and create a recess or small excavation on the volute, just enough room to allow us to put a strainer on the surface. If you want to think of it this way, it's essentially just another sump screen, just like inside containment.

This strainer has a considerable number of smaller holes, such that the overall flow area through the stainer is much larger than the port size, so that they prevent

getting debris through the hole into the port; and also a size, so in the event 90 percent in our concept, even if 90 percent of these holes got blocked with debris, we would still have satisfactory bearing operation.

And by inserting this screen basically flush with the surface, one of the key advantages this approach offers is that the pumped flow itself is going to make this sort of naturally clearing. We expect that what's going to happen as the pump is pumping, to use a phrase, it will be self-flushing. Any debris which is filtered by the strainer will just get reintrained in the pump flow and pumped right back into containment into the sump.

So, some of the earlier question, some of the earlier design concepts from a month or two ago, which had various filters and strainers installed outside of the pump itself, they had the problem of how do I get the particulate, filter particulate back into containment. This approach solves that problem by never letting it get out of the main pump flow.

So, if I could get the next slide, Marla.

It turns out, as Mike talked about before, one of the issues that is still being resolved, is cyclone separators on the low pressure injection pumps. Well, it turns out there is a very similar issue on the high pressure injection pumps.

If I remember correctly, I think the LPI pumps, it was found as the ~~extended~~ extent of condition on this one, where there is a cyclone separator in the flow path from the pump, pumped fluid back to the pump seal. And then in this design, this is a different location on the pump, but that right there, is a flow port through the pump casing itself, going out to the cyclone separator.

That is only about an 8th of an inch in diameter; smaller than the 3/16 inch sump screen. So, theoretically, I could also plug the intake to that port. So, the design concept is to take the same kind of approach where I take this strainer, I'm going to create a slight recess in that pump part, and install that over the flow path of the cyclone separator.

And, we believe that those modifications would work. We're very confident they can be made to work. We're confident that the strainers will be self-flushing. We've had discussions with the pump vendor. We've had discussions with other pump vendors to confirm those assumptions, and everyone is very confident.

So, what we would do is, we would do those modifications; and in parallel, we would go through a rather extensive testing, mockup testing procedure, to verify the pump will still function properly and the bearing will still work.

So, in terms of -- the next slide, Marla -- sort of where we're at, what's the status.

MR. SHERON: Bob, before you go on, how do you hold those strainers in place? Are they welded in or what?

MR. COWARD: As of right now, that concept is welded, but that's not been finally determined yet.

Where are we at? We have conceptual designs for the modification and the mockup fixtures. We actually need four or five different mockup fixtures to fully demonstrate the satisfactory satisfaction of this modification.

We've done preliminary analyses. We've done preliminary rotor dynamics analysis, preliminary ~~hydrolic~~ hydraulic analysis, and preliminary stress analyses. So, we've done the preliminary analyses, and we're in the process now of getting ready to do the final analysis.

At this point, sort of the key activity we're working on that we're just starting in the last few days is the detailed procedure and specification of the mockup testing. We think that's critical to demonstrating the success of this approach.

In particular, as an example, one of the things we have to come up with, is we have to come up with a recipe for the soup. I think people have used that phrase, where

we want to demonstrate that the hydrostatic bearing will still function properly with the strainers installed. And so, one of the things we have to do for our mockup testing is, we have to load the pump flow path with debris, which would, you know bound, considerably bound the type of debris we would expect to see in the plant following the LOCA.

So, that activity is in process right now to come up with that approach and we're confident we can do that. There has been a lot of work done by, you know, sponsored by the NRC in the last 20 years, plus there's been a lot of work done specific for Davis-Besse in the last year looking at the regeneration and retransport within containment within the sump.

And so, other than developing a test specification, you know, we're also finalizing the detailed designs for the modification and mockup testing fixtures.

MR. GROBE: When you say mockup testing fixtures, you're not actually going to use the pump?

MR. COWARD: No, what we found was, it was impractical to test this, although we think the pump would pass, it was impractical to test the pump, the actual pump.

Trying to take the pump out, take it to a test

facility, and test it with debris, given it's contaminated, was sort of, you know, it wasn't a nonstarter, but it was close. And, we don't want to test the actual pump with debris, because we don't want to introduce debris into the plant.

So, what we've come up with, it's actually a sequence of separate effects touch testing with some collective testing at the end to show that all the various features and portions, items of interest will still be acceptable.

MR. ZWOLINSKI: Bob, have you ever encountered an issue such as this before?

MR. COWARD: Such as?

MR. ZWOLINSKI: The problem with this HPI pump.

MR. COWARD: This specific problem?

MR. ZWOLINSKI: This, or something like it?

MR. COWARD: No.

MR. MYERS: Let me ask him a question. Is this same approach used elsewhere in pumps?

MR. COWARD: We've done some surveys; and clearly, the concept of installing a strainer in a flow line to the hydrostatic bearing is not unusual,

that's a common design approach. Installing it in the pump itself where we're installing it is not, I'm not sure if we found a specific application of that design; however, we've spoken with pump designers and pump vendors, and they've agreed there is no reason it shouldn't work.

MR. ZWOLINSKI: Are you far enough along with your thinking that you would be able to do this in place; or would you have to move the pumps?

MR. COWARD: That's mostly a workmanship issue. We would want to have people who are very good at doing pump breakdown and maintenance do this; and our expectation is they prefer to do that in a controlled setting, rather than in the pump room.

MR. MYERS: That's right.

MR. ZWOLINSKI: So, if you embarked on this particular fix, you would probably be taking the HPI pumps out of that room?

MR. COWARD: We would be taking the -- I'm not sure, are you familiar with the design of these pumps?

MR. ZWOLINSKI: Yes.

MR. COWARD: There is an element that's inserted into the casing.

MR. ZWOLINSKI: Um-hmm.

MR. COWARD: The element which

is inserted in, the pump part, the guts, we will be removing that component from the pump room; yes.

MR. MYERS: Not the whole pump.

MR. COWARD: Not the whole pump.

MR. ZWOLINSKI: I was trying to garner a sense of the amount of work required to get after that particular pump.

MR. COWARD: We had four people do walkdowns of the pump removal last Thursday and Friday. They were in there all day. And their conclusion at the end of the two days was they had developed an approach for taking the pumps out. There is some effort involved, yes, but they're confident they can do it.

MR. GROBE: Do you have a sense of the relative flow rates to these two ports?

MR. COWARD: Oh.

MR. GROBE: Just in rough terms. I would imagine it's fairly low.

MR. COWARD: Yes. The one to hydrostatic bearing, I think is measured in less than 10 gpm. If I remember correctly, the one to the cyclone separator I think is only 1 or 2, but don't quote me on that.

MR. GROBE: And in the, what you call soup in the concoction for the soup, the recipe for the soup.

MR. COWARD: Yes?

MR. GROBE: Are you considering the hardness of the materials as well as the physical size?

MR. COWARD: Yes.

MR. GROBE: I would think that would be a critical component.

MR. COWARD: That's, yes, that's in the full parameter; it's the size, the shape, and the hardness.

MR. GROBE: That's an interesting challenge.

MR. COWARD: Yes. The whole project is.

MR. PASSEHL: Yes, I have a question.

MR. SHERON: I'm sorry. We would probably like, once you firmed it up, learn a little bit more about your separate effects test that you want to run, in terms of how it would appear or compare with, say, the integral test, because my understanding is you don't plan on doing an integral test; right?

MR. COWARD: Not of the whole configuration, no. And, also, we already recommended to FirstEnergy that as part of the approach in the near term, although we feel very confident that this can be made to work, we also recommended to FirstEnergy that we suggest that they assemble a small team of experts, you know, a murder board, just to go through the whole concept to make sure that nothing has been missed.

MR. MYERS: We have to talk about Safety Conscious Work Environment, to use a different term.

MR. GROBE: I'm not sure I heard you, Lew. Your mike wasn't on.

MR. MYERS: We would use a thorough, rigorous hearing board, rather than a murder board. I've got to do a safety conscious work environment, okay?

MR. COWARD: Sorry, Lew.

MR. GROBE: You don't have a spare pump, spare HPI?

MR. MYERS: We have a spare rotating assembly, but we don't have a whole pump, no.

MR. GROBE: So, you really don't have the capability of doing integrated testing?

MR. MYERS: That's correct.

MR. COWARD: The spare was actually removed from the plant last year, so it's contaminated.

MR. MYERS: If you go look at the testing, what we would be doing though, and compare that, we would have more testing of this type than I think anyone in the industry for this particular application.

MR. ZWOLINSKI: I believe I heard one of you gentleman say something to the effect that a number of industry experts have looked at this particular pump and associated scenario, and call into question the need for any change whatsoever.

MR. COWARD: Correct.

MR. ZWOLINSKI: So, you all are talking about a lot of effort whatever way you go. The third option of not doing anything is off the table?

MR. MYERS: That's not something we have on the table at all now; not doing anything. No. It's off the table.

MR. ZWOLINSKI: So, you've concluded that, that you disagree with these experts and you want to go forward with one of these, at least two options, and whatever else you may come up with?

MR. MYERS: I think, I think it's important that we, we look at these options. Either

one of these two options gives us a very good, thorough and rigorous approach to make sure that the quality of our pumps for these designated efforts, the quality of our pumps would ensure good reliability.

And I think it's important that since we've had the issue, that rather than just have an opinion, that we go do something to improve the over, ensure that we have that reliability.

So, really, our intention right now is one of these two approaches now. The idea of doing nothing is not something we considered. I think that's correct; isn't that right, Gary?

MR. LEIDICH: That's right.

MR. MYERS: We believe the pump would work as is. We believe that. But we, you know, it would be very difficult to really validate. We think this approach would give us pretty thorough validation. And, also, the new pump installation, the way we're designing the new pump with the hardnesses, and the, the amount of clearances would give us a very good reliability too. So, both approaches are pretty sound.

MR. RULAND: As I understand it, you'll need to submit a license amendment for only one of these options; is that correct?

MR. MYERS: No, that's not,

that's not true. It depends on the, the approach we take for installation.

One of the things, if our Mode 4 Test slipped out, there were some technical issues, that would probably go ahead and make the modification or install the pump, one of the two.

But, you know, right now, the way we're looking at the situation, the Mode 4 Test, assuming it's near term, gets rid of a ton of issues. I mean, it ensures that equipment is working properly. It allows us to do a lot of PMT testing. Allows us to ensure the head we bought doesn't have any leaks in it, you know. There is a lot of components up there, and gaskets and stuff.

So, if you look at what the NOP Testing does, it allows us to do a bottom head inspection, ensure that we don't have any leaks there. So, assuming we can do that in the near term is something that we would go forward with.

MR. PASSEHL: I just had another question. You mentioned there is, you believe there is a self-limiting feature on the screen that would flush itself. Is part of your mockup testing intended to verify that?

And the second part of my question is, you mentioned a 90 percent debris loading where you feel you would still have the adequate loading to the bearing. Would your

mockup testing verify, you know, at what point your screen could be loaded and have debris on it and still have the proper flow to the bearing?

MR. COWARD: The mockup, the tests concept as we pointed out so far, would clearly validate that the strain, the strainer is self-flushing. I mean, that's a critical element of the whole approach. If we can't show that, then we can't show the thing will work.

And the second is, at this point, we had not planned on doing what I'll call the limit test, where how much can we block before the hydrostatic bearing stops working properly. We had planned on basically just demonstrating the 90, 95 percent blockage, it will still work properly. I guess, so, we're not, I don't know the firm answer to that question yet.

MR. PASSEHL: Okay, thank you.

After this section, and before Mark starts, we would like to take a ten minute break. Everybody gets a chance to stretch their legs.

MR. MYERS: I was going to suggest that.

MR. PASSEHL: Okay. So, 20 minutes until, we'll reconvene.

(Off the record.)

MR. PASSEHL: Okay, next on the agenda is Mark Bezilla.

MR. MYERS: You know, before you start, we were talking about the pump. And you know, if the no option was an option. I guess overall I thought about it during the break talking to Gary.

I think it's an issue that we have to address. And, I think from a Safety Culture standpoint, that we might be from an analysis process to demonstrate, or from an analysis standpoint, we think it's okay.

But we can gain a lot of margin by either installing a new pump or the mods to ensure the pump operates these couple of small scenarios in a very reliable manner. So, it's our intention at this time, you know, to go forward with one of the two options; and I validated that here for you. Okay.

MR. ZWOLINSKI: Thank you.

MR. BEZILLA: Okay, thank you.

I've got two Desired Outcomes today. First, I would like to tell you a little bit about my previous and current Davis-Besse experience. And also, I would like to present some of our recent Operations Section's accomplishments and our status on readiness for restart in the Operations Section.

As Lew stated, I was previously at Davis-Besse

during 1987, 1993 time frame, and I held an SRO, Senior Reactor Operator's License at Davis-Besse. I was a shift supervisor, and then I was the Op. Superintendent. And as Lew said, I had a couple of other stops on my way before I ended up at Beaver Valley as the Site Vice President about twelve months ago.

In my new assignment as Vice President at Davis-Besse, as well a Plant Manager, I'm excited about the opportunity to restore Davis-Besse to safe, reliable service. And even though I was a Site Vice President at Beaver Valley, I have been involved in the Davis-Besse restart activities for about six months or so.

Lew asked me to sponsor the Restart Readiness Review Process for Davis-Besse. I helped create the process and was involved in the Restart Review Meetings prior to Mode 6 and Mode 5. And this involvement helped me get up to speed on some of the challenges and issues.

Let me now shift gears and tell you about some of the recent Op. Section accomplishments and our status on Readiness for Restart.

We have developed and implemented Operations and Operations Leadership Plan. And, what we did was, we had the Institute of Nuclear Power Operations come in and do an assessment of Operations, as well as a number of internal assessments.

We bundled up those assessments and came up with, I'll say, an improvement plan. And we've accomplished about 90 percent of those actions to improve our performance; and there is about ten percent that will be an ongoing activity for us. We suspect it will take about 12 to 18 months to finish out those actions.

We've developed and implemented a comprehensive Expectations and Standards document. We trained all our operators on the Expectations and Standards, and we use shift turnovers to reenforce specifics out of those Standards and Expectations on a daily basis.

We've issued an Operations Leadership Statement; and what this is, I'll say, it's Management's expectations for the Operations leadership and the requirements for an operationally focused and operationally led site.

We've expanded the Operator Observation Program. What we want from each of our on shift Senior Reactor Operators is a minimum of eight observations a month. And we use these observations to watch our people, watch their behaviors and performance, and then coach those folks on those areas that need to be improved with the overall goal being the improved performance.

We've completed an NRC Appendix R Fire Inspection. And, some of the positives that were noted out of that inspection was that the plant support was recognized as a

positive in support of that inspection. The NRC also acknowledged that our self-assessments had been pretty thorough in regard to Appendix R and fire protection. And the NRC recognized our documentation process and website as a good configuration management tool.

Additionally, out of that inspection, there were a handful of questions that were asked that we've entered into our Corrective Action Program. We need to do some follow-up, and we will have interface with the staff to provide answers to those questions.

MR. GROBE: Mark, I appreciate you bringing up that inspection. Let me just provide some additional detail on that.

We have a routine inspection program called The Baseline Program; and that includes once every three years performing a very comprehensive design inspection. We always talk about this as fire protection, but it's really not fire protection per se, it's more focused on the ability to safely shut down and maintain the plant in a safe configuration in the event of a fire in various areas of the plant.

Davis-Besse was due for that inspection prior to restart. And as I mentioned, it's a very intensive inspection. And we evaluated the need for that inspection, and concluded that what we wanted to do was perform a kind

of a scoping effort, where we brought in three engineers that are expert in this area for a week and ran you through your ~~bases~~ paces. And the results of that inspection were fairly positive.

We concluded we don't need to do the Intensive Design Inspection prior to restart. We'll put that in the schedule for calendar year '04.

But what we did find, one issue, the panel received the results from the team in one of our internal meetings, and concluded that we don't need to do that full inspection prior to restart; but there was one issue that's outstanding that we need to come back and look at prior to our ability to close out that Restart Checklist item, and that's the firm hydraulic calcs that we expect to be done prior to us arriving on site. They weren't completed.

So, once those calculations are completed, if you make sure we are aware of that, and we'll schedule time to come back to take a look at those analyses.

MR. BEZILLA: Thank you. We'll do that.

Okay, Significant Training Accomplishments. Through the shutdown period here, we've continued our operator requalification training, and I think that's a positive.

Also, we've successfully completed the annual

requalification training and testing for all of our operators, both licensed and nonlicensed; and we did have a couple of failures, but we successfully remediated those individuals.

We completed License Operator Responsibilities Training. What this was, we provided training to the operators on what a Nuclear Regulatory Commission ~~issue~~ issued Senior Reactor Operator/Reactor Operator License meant to them personally, and we completed that training.

We also completed Operability Determination Program Upgrades and Training for our Senior Reactor Operators, select engineers and some select support staff that deal with Operability Determination. And as part of our upgrades, we used industry peers to help us upgrade our Operability Determination Process.

A couple of plans for going forward in regard to operator training; we're in the process right now of doing a Just-In-Time Training on our heatup to Mode 3, our hold at normal operating pressure and temperature, and then subsequent cooldown, as well as some casualty and contingency plans that may be encountered during those evolutions.

MR. THOMAS: Mark, I would be interested in hearing what having an SRO license means to you personally. What your viewpoint on that is?

MR. BEZILLA: Okay. I have had the opportunity to have two Senior Reactor Operator Licenses; one was on Three Mile, as you know, back in the early 80's; and Davis-Besse, back in the late 80's, early 90's.

The way I look at it, that was you all, the federal government, giving me permission to operate and oversee the operations of that facility, if you will.

I would say it's a lot of responsibility and authority. What it means to me is that I'm, as a Senior Reactor Operator holder, I'm imbued, I would say, with the responsibility of protecting the health and safety of the public. So, first and foremost, is making sure I'm operating that facility in a safe manner, so I would not challenge the health and safety of the public. Then, of course, I want to be as safe and reliable as possible.

MR. THOMAS: Thank you.

MR. BEZILLA: Back to the training that we're doing. The simulator instructors and evaluators; they're going to emphasize a few things for us. These are things we think are real important to, I'll say, successful error-free operations. And, that's proper communication techniques, Senior Reactor Operator command and control responsibilities, use and compliance of procedures, focus on technical specification compliance,

to reinforce other operation's expectations and standards, and thorough prejob briefs.

In addition, the training scenarios will closely match the planned evolutions to make sure that our guys are seeing how the plant is going to respond during the heatup, during the hold, and during the cooldown.

The operation superintendents will also evaluate each of those sessions and then provide coaching on areas that we can improve at the end of those training sessions.

And, finally, I would like to talk a little bit about some Operations led major evolutions since the beginning of the year. Since the beginning of the year, Operations has successfully conducted the following major evolutions; integrated electrical bus testing, and there were four tests that the guys performed. Integrated safety features actuation system testing. There were two separate tests there. Reactor Coolant System fill, drain, refill, and then pressurization here to 50 pounds to do our initial leak checks in the reactor coolant system, and comprehensive high pressure injection testing on both pumps.

The reason I mention those, is that those are fairly complicated integrated type of tests and it requires a lot of coordination between the Operations Department, as well as some other support organizations from the site.

Next slide, please.

Industry Feedback. I would like to spend a minute just to let you know about some of the industry feedback we've gotten in the Operations sections. The Institute of Nuclear Power Operation has made three assist visits to Davis-Besse. Two of them were specifically focused on Operations, and one of them was a site, I'll say, visit; and that site visit had twelve senior management members from other nuclear facilities as well as senior ~~INPO~~ INPO personnel.

Additionally, there were seven Operations assessment conducted by various management level personnel from other nuclear power stations. And you can see some of the power plants up there on the slide.

Then, lastly, the FENOC Corporate Nuclear Review Board Operations Subcommittee has recently performed an assessment of the plant looking particularly at Operations Department Readiness.

Next slide.

Some of the positives we received from those bodies that were taking a look at us; was that the "Shift Managers are stepping up to their new leadership roles." This is best evidenced by their challenging of engineering conclusions; physical involvement in an observation of field activities, most recently in some maintenance and

refuel sequence activities; pursue the plant proper resolution, and their ability to articulate their role.

"Standards are equal to or above industry norms." Operations is being recognized as the site's lead organization.

"Ownership of equipment in plant is improved."

"Vertical alignment in Operations is very good."

And, "Every interviewee complimented the greatly improved management attitude toward, and expectation to identify problems."

Lew will talk a little about Safety Conscious Work Environment, but that's what that's talking about.

Next slide, please.

The industry also left us with some areas of opportunities. I'll say these are the highlights. They said, we need to work on "Establishing consistent implementation of the Expectations and Standards when stressful situations occur."

What this is, we want our operators to behave the same way in a stressful situation as they do in a routine situation. We want habits and behaviors to be second in nature. We need to work on that.

We need to "improve facility housekeeping", overall cleanliness. We just can improve in that area.

"Improve use of Pre-job Brief Checklist" for routine

activities.

There are opportunities to improve in our three-way communication; and the implementation of our procedures is not always consistent with our standard. So, they saw areas and provided us feedback on procedure use and appearance.

The last slide, please.

MR. GROBE: Mark, before you go onto the last slide, were those last three issues related to stressful situations or are those separate issues?

MR. BEZILLA: Randy or Mike?

MR. STEVENS: Separate.

MR. BEZILLA: Separate issues.

MR. GROBE: Okay. What specifically are you talking about when you talk about consistent implementations of inspection, expectations and standards in stressful situations; what other observations were made that, where the operator's performance slipped, what areas did it slip in?

MR. BEZILLA: Lew would like to answer this.

MR. MYERS: There was some indications present when we were running drills in our simulator that our operators didn't, could have proofed the

plant more quickly than they did. There was some reluctance to, quickly to do that. So, we're going back and reenforcing that standard that, you know, if you're down, go to a conservative approach. So, that was one indication that they taught us.

They also indicated that, that three-way communication sometimes let down, while we were on duty. So, those are the kinds of feedback we got.

MR. GROBE: I understand now, I think. These were training induced stressful operations, stressful situations.

MR. MYERS: Right.

MR. GROBE: So, the rest of the findings were field work and that first finding was training oriented. Okay, got it.

MR. BEZILLA: Yes.

Okay, then this last slide.

Just like a minute to talk about continuing improvement plans within the Operations sections. We're continuing our Just-In-Time Simulator Training; and that's the heatup, hold at pressure, and then depressurization.

We're going to complete our assigned actions from the Ops Section's Business Plan, that's that ten percent of the improvement plans that are going to take us 12 to 18 months to complete.

We're going to have continued emphasis on Safety Culture and a robust Safety Conscious Work Environment.

We're going to continue to coach the operators in establishing their ownership role at the site.

MR. THOMAS: Mark, could you expand on that one a little bit?

MR. BEZILLA: Yeah. That's just we need to continue to reinforce, I will say, Ops leadership and Ops ownership at the site. I'll give you example today.

We had an activity planned to stroke a motor operated valve. And the on-shift SRO took a look at that, and based on the current plant conditions he said, I'm not sure if this is the right thing to do or the right time to do that. He raised that up through his Ops management chain.

They made the decision not to proceed with that activity. Then he went and provided coaching to the scheduling organization, provided them feedback on why they had decided not to do that evolution. And they thought there would be a better opportunity to do that the next day or two.

So, that's the kind of leadership we're looking for from our operators.

MR. THOMAS: When you say

operators, what does that include?

MR. BEZILLA: That includes Senior Reactor Operators, Reactor Operators, and the Field Equipment Operators.

MR. THOMAS: Thank you.

MR. BEZILLA: We're going to take look at our secondary plant startup plan and make sure if there is any additional training that we need to provide to the operators, that we will do that.

And then, lastly, I think this is a good news story here. We're going to be recommencing the initial Senior Reactor Operator and Reactor Operator License Class, and that's scheduled for the June time frame. And that's making the next group of operators for us; and that takes anywhere from, I'll say, 15 to 18 months to complete that training course. So, I think that's a real positive for us.

So, that concludes my remarks. Any questions?

MR. ZWOLINSKI: Mark, focusing in the control room, are there very many workarounds in the control room?

MR. BEZILLA: Mike, would you answer that for me, please?

MR. RODER: There are currently seven workarounds, all scheduled to be completed

prior to startup.

MR. MYERS: Gentlemen, we've been through our A-1 systems, our operator workaround, our temporary mods. Right now, I believe every one of those three, every one of those issues will be completed prior to startup and on schedule.

Is that correct, Mike?

MR. RODER: That's correct.

MR. THOMAS: So, you'll start up with no level one workarounds; is that a correct statement?

MR. MYERS: That's what I said.

MR. THOMAS: That's why I asked if that was a correct statement.

MR. MYERS: All the ones we know about we will solve. We could gain another one during the startup.

MR. THOMAS: Based on what you know now, the plant is not to startup with the current.

MR. MYERS: That's correct.

MR. ZWOLINSKI: I guess I asked the question in the context, if there were a lot of workarounds in the control room, have they been mimicked over on the simulator, but if you don't have many, and it

sounds as if you're essentially having zero, then the simulator reflects the control room as you expect it to be, and you are ready to restart.

MR. MYERS: That's a standard we would expect. If we have a temporary mod or it's a long term temporary mod or an operator workaround, we would mimic it during training.

MR. ZWOLINSKI: Thank you.

MR. GROBE: During February and March, there was a rather large work evolution that was underway related to reassembly of the reactor coolant pump motors and the reactor coolant pumps themselves. And there is, it's just an interesting story to read about.

There was a number of learnings that came out of this. There was some mechanical maintenance challenges. I'll just highlight a couple here; overtorquing flanges, incorrect bolt engagement, some differences between various alignment procedures for different components.

There was some planning issues, pump motor alignment checks weren't adequately identified in the initial scope and the plan for accomplishing work. There was some challenges with draining the reactor coolant system cold legs, some operational type challenges, coordination. There was some RP direction that deviated from the initial work plan as far as what RP believed was appropriate

radiologic protection practices. Then a number of delays in handoffs between work groups, operational tagging delays.

Like I said, in reading through this, there is a number of learnings I think that come out of this.

We heard about maintenance, mechanical maintenance and some efforts that are underway there to identify opportunities to improve and to implement some changes, but I would also, I would like to hear about what you've seen as a result of those changes in the maintenance organization.

But I would also like to hear a little bit about work coordination from the outage management group, operational support, and particularly in this activity, you're in increased risk configuration. And these various activities significantly extended the time period that you were in that increased risk configuration.

So, I would also like to hear from an Operations perspective as far as risk management what you've learned from this and what you've seen over the last month or two?

MR. BEZILLA: Jack, if I could, I would defer that to Randy.

MR. FAST: Jack, let me first, we'll start with the end in mind.

Working through that sequence of work, which was the

replacement of four reactor coolant pump seals, we went into that well knowing that we would be at reduced inventory. That represents a higher challenge of risk to the plant, because the time of boil is shorter. Through that evolution, we, as an Operations Group, noted that the work was not proceeding as we expected.

I was very pleased that our Senior Reactor Operators were very vocal about what was going on. And they elevated that immediately. In fact, Mike Roder, our Operations Manager, myself, and key leaders from the Operations staff looked at the work that was going on, and challenged the Maintenance Organization to complete that work in a timely fashion; however, it did do, I'll say there was a side benefit in that it changed Operations behaviors.

For subsequent work we have instituted a, measures that have the Shift Manager get directly involved in work preparation and implementation of the work.

And there are two key areas I want to highlight. The first of which is the work comes to the Work Support Center, and before Operations will sign on and grant authority to start that work, we are challenging the Maintenance Organization to deliver the work products, the work tasks that we have put hands-on materials necessary to ensure that the work can be completed in a timely fashion. We're ensuring that resources are allocated. And we're

talking directly with the crafts people to verify that they have every confidence that the work will go well.

I do have examples where the work was not in that configuration and the shift manager turned that work away. And that is the appropriate behavior for Operations.

There is a second issue I want to bring up as well, in this number of issues that you raised. That was the Return to Service after the work is complete, and meeting the standards of housekeeping that Operations requires. And what we've elected to do is walk down those housekeeping, those areas with the Maintenance Organization to ensure that housekeeping standards are managed and we're not releasing the clearance to allow that equipment to be returned until housekeeping meets Operations expectations.

And with that, I'll turn it over to Mike to talk about the things that, the Maintenance Organization has risen to the challenge to take on to ensure that they are ready to perform the work.

MR. STEVENS: Thanks, Randy.

We discussed a little bit last, as a result of that, we put a multi-discipline team together at varying levels, used our decision-making NOP to see what we could learn. There are three major areas.

The first one and largest was lack of preparation, and that was in the Maintenance Organization, as well as

all the supporting pieces, the parts and engineering products. Second was supervisory involvement. Third was work package quality.

From that, we put together an action plan in implementing it. The most recent success I would say we have is the current work we're doing on the [(D-1)bus] Delta one, or increased risk. We did not go into that maintenance activity, because we were not ready. We needed some additional engineering products. We needed some spare parts. There were issues with releasing the relays.

So, it looks like the activity from Operations' challenge and Maintenance thorough review prior to implementing the work is improving our performance; and currently that's going pretty smoothly.

MR. GROBE: Okay. Thanks, Mike.

Fred, have you folks had any observations both in the Maintenance and Operations Management area over the past month or so that you would like to add here?

MR. VON AHN: Yeah, I believe we have, and John, why don't you give us some specifics on those, and also some ones previous to that?

MR. REDDINGTON: John Reddington.

Okay, I'll talk loud. Is that all right?

We have seen Operations step up in their leadership

roles. We've seen, we being Quality Assessment. We have anecdotal evidence where Ops has, at a turnover meeting, at one of the 6:30 meetings says, hey, we don't feel comfortable with the status we're getting. We want better statuses, and it's kind of held the management accountable for that.

So, overall, I would say in the Operations area, we've seen a lot of progress being made.

MR. VON AHN: John, what about Maintenance?

MR. REDDINGTON: The problems we see in Maintenance are still schedule issues, I would say. Right now what we have is, we have a process that is designed for online scheduling. And if you're in an outage, as you guys know, you schedule everything ahead of time and then prepare for it. So, what we're finding ourselves in is, we're doing real time scheduling.

So, compensatory measures, like Randy and Mike have talked about, are really what's driving the schedule. And I see that as the biggest issue, the fact that we don't have a good tight scheduling process.

MR. ZWOLINSKI: What you just described for Operations is maybe some change in management; has nothing to do with the leadership. You're not running the 6:30 meeting the way it should be run, so

now you're going to run it a little bit better.

MR. REDDINGTON: Well, the point was, the operator stood up and said, look. I mean, the operator wasn't the guy running the meeting. The operator said, I need to know a better status of what my plant is, and he made sure everybody bellied up to the bar, so to speak.

MR. ZWOLINSKI: Okay. The question was associated with leadership. Leadership, not just within Operations, but leadership to the rest of the facility. You've already taken as a given that we want leadership coming out of the Operations Department.

MR. REDDINGTON: Right.

MR. ZWOLINSKI: How do we expect our Operations Department to act, and what attributes do we expect them to demonstrate to the rest of the entire Davis-Besse team?

MR. VON AHN: John, I'll talk about that a little bit in my remarks, because we do see improvements in the questioning attitudes of Operations, but you're exactly right, we need to review that in each of the other organizations. And we'll take a look, we'll do further monitoring, especially in the area of maintenance in the upcoming months to see how we're doing.

In my remarks, we see Operations leadership as broad

based at a variety of levels, and in improvements and questioning attitude and the example that, that John brought up where a shift manager was dissatisfied with the cursory level of work reporting, he gave, he demanded actually that the, that his expectations for a higher level of and a better reporting status be given.

That met with some initial pushback from the rest of the organization, but he overcame that. And as a consequence of that, we're getting much better stats. And, I actually talk about that in my slides coming up.

MR. ZWOLINSKI: So in setting the standard or raising the bar, that's leadership.

MR. VON AHN: That's right.

MR. ZWOLINSKI: I understand that one. But running a meeting is a little different or whatever, to me is another category.

MR. VON AHN: Yeah, it's just, right.

MR. ZWOLINSKI: I look forward to hearing some of your comments on leadership.

MR. REDDINGTON: Anything else?

MR. GROBE: No, thank you.

MR. VON AHN: Well, why don't I just roll right in now.

MR. MYERS: It's your turn,

Fred.

MR. VON AHN: Good afternoon.

As Lew indicated, I am Fred von Ahn, the new Vice President of Oversight. And, although, I am most recently from Beaver Valley, I'm not new to Davis-Besse. I was the manager responsible for the original technical root cause on the reactor pressure vessel head event with Steve Loehlein, who is now the Oversight Manager at Davis-Besse.

Additionally, I've worked extensively with Bill Pearce while he and I were at the Beaver Valley Power Station. And I would like to discuss our observations, and we heard some of them from John, for the oversight period from January of 2003 to March 2003. And these activities have been debriefed with the Davis-Besse Management Team in mid April.

First Operations Leadership. There have been noteworthy improvements in operations leadership. We see this as broad based at a variety of levels in the operations organization.

How we see improvements and a questioning attitude, and I talked about the one shift manager demanded that he get a better status on the activities associated with his plan in the work status, was brought to bear on the organization, and the organization and as a consequence we've stepped up the, elevated the report to meet higher

standards.

Shift briefings are improving with better discussion of abnormal action, contingency actions and what can go wrong.

We've additionally seen improvements in safety focus. Operations generated over 400 Condition Reports in the first three months of this year. We see more engagement in this process at all levels in the Operations organization.

One noteworthy condition report I would like to discuss is the Collective Significance Condition Report that Operations wrote on the reliability of the diesel generators. Operations saw a number of lower level issues, and because they saw these lower level issues on the diesel, they questioned the diesel and the collective significance of those issues, so they generated that type of Condition Report. That's what we expect to see out of the organization; that questioning attitude and questioning the safety of our, of our systems.

As well, another example where Operations stepped in, where we were having problems with our fuel handling equipment. Operations stopped all activities until they were satisfied and there was adequate resolution to those issues.

Additionally, we see improved ownership. For

example, on the reactor coolant system cleanliness, Operations championed removal of a part of the reactor to allow vacuuming debris from the bottom of the head area to ensure proper cleanliness.

So, we see a theme here that we've been building on. We've seen previously from previous quarters of Operations taking a leadership role and demanding excellence out of their, out of their plant.

Next --

MR. ZWOLINSKI: I think the, I think the sensitivity I have to management and leadership; at least, I want to talk about it just a little bit.

You're using leadership in the way I would use the word management; and you're trying to manage more effectively. Leaders tend to lead people, and managers tend to manage programs and projects and what have you.

Your last bullet on reactor coolant system cleanliness sounded like someone took a leadership role. And, if you're saying your folks, you're observing a leadership role being taken, exhibiting the attributes of a leader, then that's played out in the way the individual's managing these other tasks.

So, I think you're really talking about Operations management in some of those successes.

MR. MYERS: Can I help with

that maybe a little bit?

MR. ZWOLINSKI: Sure.

MR. MYERS: Sometime ago, Bob Saunders and the Senior Team of FENOC signed a letter on Safety Culture. Shortly after that, we at the VP level, myself, we worked very, a lot of long hours, and carried things around the country on duties and responsibilities of our shift managers, on shift, and their role in the organization, and from a leadership perspective.

But the way we, I would sort of in my career define leadership is the ability of a person to get someone to jump off a cliff or something, not follow in our standards, you know. And, I think relative to root cause, that we shared earlier, that was an example of maybe not the best leadership in the world, you know.

Finding and fixing problems, setting the right standards are all examples of good leadership. What we see nowadays with our shift managers, we've worked, our shift managers have all been interviewed by the CEO of our company. I've taken every one of our shift managers at Davis-Besse up to Pete Berg's office, and he's even met with the shift managers and gone over responsibilities.

What we see is a willingness to stand up and say, we're not going to tag equipment out if the work is not ready to go; and setting that standard. We had really

difficult problems with, with operators performing a tag-out; then we get halfway through it and we find out the work wasn't really ready to go, which is a reflection of the maintenance walkdowns for readiness that we have, right?

And, they put their foot down there. And, that's what we want them to do. And shift manager is the senior person on site when this plant is running by itself at night. Okay? They've got to have the authority and decision-making to call in the resources they need, call the duty team at home, and get us out of bed and into the plant to help them when we need them, you know.

I think that our shift managers feel they can do that now. They're not hesitant of doing that. I also see them not accepting the status quo on risk management. You know, well this is going to be out this much longer.

Talk about the reactor coolant pump job, all right? That job really went on event, we didn't have any events there -- if you had to grade, probably grade it as a C minus, C plus, something like that. But was it carried out in a timely manner, organized properly? You know, we have to have those standards when we take that pump out.

The big thing that I want to talk about is skill of the craft, you know. I mean, that craftsman that worked that job did not demonstrate the good ownership and good

skills of that job. Okay?

And we had some vendor support on that. So, our shift managers willingness to stand up and take a stand when they see poor performance with any organization in our plant; that's maintenance, that's engineering giving them a sloppy operability review, or something like that; that's what we consider leadership.

And we've seen good examples of them taking a leadership role in our plant; better than we saw before. More rigor, more, we're requiring more rigor in people bringing them.

We had operability concerns being closed out in engineering, and they would just call the shift manager and tell them. That was what was happening. Now, those engineers come over and convince the shift manager that this operability call is correct. That's what we consider our leadership role; that they have standards, they demand those standards, and help us implement our standards at the site. And we're seeing good improvement in those areas.

Does that help?

MR. ZWOLINSKI: Leadership is difficult to measure.

MR. MYERS: Leadership is difficult to measure.

MR. ZWOLINSKI: And having metrix

and how do you know when things are a little better, are far less clearer in leadership than in management, because if I'm an effective manager, I'm getting a lot of things done. And there is metrix to that. The metrix in leadership are far, far less obvious and much more soft.

MR. MYERS: One example, you see in the past from a leadership perspective, Operations willingness to let tag-outs, tag equipment out, put it back in service when the work hasn't been thoroughly ready. They're standing up and saying, we're not going to accept that standard. In my mind, that's leadership. That's setting the requirements. And, we see evidence of our shift managers taking on that responsibility fairly regularly now.

They, when we were getting ready to load the core, you know, the shift supervisor came to us and said, you know, we only have to have one RHR pump to load the core, but we would like to have two. Guess what? We stopped and waited a week until we had two decay heat pumps, based on that discussion.

So, they're willing to take that leadership, and that's what we're after them to.

MR. ZWOLINSKI: Thank you.

MR. MYERS: I don't know if I helped or not. Tried.

MR. VON AHN: Next we'll discuss Corrective Action and the Condition Reporting process.

Here, implementation continues to be challenged. Effectiveness of Corrective Action needs work and has room for improvement. As oversight, we've taken a look at a number of Condition Reports and Corrective Actions that we have tagged for post closure review, and in some cases we see the issue has not been fully addressed.

We've made two process improvements recently to help us in this arena. We've started an internal assessment writing trending Condition Reports, so we have a database or data readily available to support conclusions and allow us to readily evaluate that. As well, we've put into place previously Condition Report analysts in each section, and we're expecting these Condition Report analysts to evaluate these Condition Reports and take a look at the trends in each section to help the section with this issue that we see.

MR. ZWOLINSKI: Fred, in the area of Condition Report, when we have somebody raise an issue, does it go through a review board in which it gets prioritized as high, medium and low, or 1, 2, 3, 4?

MR. VON AHN: Yeah, there are several conditions. The three conditions we have are, there is November, Charlie or Sierra. Significant

condition adverse to quality, condition adverse to quality, not a condition adverse to quality.

So, there is that high, medium and low ranking, as well as a multi-memory board actually takes a look at that, so you don't have tunnel vision. A management team looks at those on a daily basis, evaluate those, and as a peer group decide which ones are significant or conditions adverse to quality or simply not significant.

Finally, at the end, a Corrective Action Review Board will take a look at those Condition Reports that are of higher significance to ensure that the issue has been fully addressed.

MR. ZWOLINSKI: Does the higher category require that you do a root cause?

MR. VON AHN: Absolutely. There is a matrix we use and the higher category will require root cause.

MR. ZWOLINSKI: Can you give us a sense of the type of Condition Report you are seeing today versus all the Condition Reports that you saw yesterday? I would, without, without giving an answer, I would like to think you should not be finding very many significant issues that would require root cause, so you're in that middle or even low group. That would be my instinct.

MR. VON AHN: Yeah. We would

want to identify the problems at their lowest possible level, so we see that, and we see that we're addressing the problems at the lower levels, so they're not becoming more significant. That's what we strive for.

We look at that with a number of different ways. We look at that with a number of Condition Reports we generate to see that we're identifying problems and fixing them at a low level, as well as taking a look at and grading certain Condition Reports which we're doing.

Do we have specific data, John, on that for Davis-Besse?

MR. REDDINGTON: Since I can't handle that microphone again -- I'm John Reddington.

The threshold is very low, the initiation rate of Condition Reports has been good. What we're seeing, what QA has been seeing is the implementation. When they go out and they generate a Corrective Action, they actually go out and do that corrective action. So, that's the kind of problems that we're finding.

The actual initiation is very good. Shop people, I mean, all over, everybody.

MR. VON AHN: So to answer John's question, we are identifying questions at a lower level. It doesn't sound as we're getting as many root cause or the higher level Condition Report.

MR. MYERS: We have way over the industry average of root causes. If you look at the number of engineering causes and things we have had, come identify all these walkdown teams and all the Building Blocks; our total number of root causes, and I don't remember the number, is way high compared to industry.

MR. VON AHN: Right. We would expect that to be high, but is it trending down is John's question?

MR. MYERS: I know it's trending down. The number of CRs we're generating is trending down, but that percentage of open Condition Reports requiring, requiring root cause is still very high. But they're not new ones, they're issues that we identified as part of our Building Blocks.

MR. ZWOLINSKI: At some facilities when you have Condition Reports that are at that lowest level, Licensees are not required to necessarily get after that particular issue during this outage, and may defer and may openly say, I don't really need to do it because the safety significance is very low.

Where I was going with today's environment, feeling that you may have exhausted many of the more safety significant issues is, are you looking at common, common threads amongst medium and the lows that would argue maybe

we do want to get after that and put an end to this particular outage? I mean, I know what you're doing with the highs, you're going after those for a fact.

MR. MYERS: We evaluate issues and categorize them.

MR. ZWOLINSKI: Yes.

MR. MYERS: And look for similarities, is there a root cause. And we see that trend, we'll go write a higher level threshold root cause type of CR.

MR. ZWOLINSKI: So, you would actually roll several of those up?

MR. MYERS: We had issues we roll, yes.

MR. VON AHN: That's similar to what I discussed with the Operations, the collective significance of the issues that they saw. They saw a number of issues with the diesel. Hey, what's going on here? Let's go with collective significance, a higher level Condition Report that would address that, see if we have a common thread or some issue that we don't see with those singular items.

MR. ZWOLINSKI: Thank you.

MR. THOMAS: Fred, as part of the corrective action process, selected Condition Reports

have to be reviewed by SROs as part of the process.

MR. VON AHN: Correct.

MR. THOMAS: Has your organization done any kind of look at the quality of the SRO evaluations and can you comment on that, if they have looked at that?

MR. VON AHN: In my larger organization, yes, I can. SRO's do review those on the front end at Beaver Valley and we actually review them on the back end as well. They're part of the Corrective Action Review Board. There is an Operations Rep on that board that will take a look at those.

That board is a multi-discipline board, again, of Operations, Maintenance and a number of folks take a look at that.

MR. THOMAS: You missed the question.

Has your organization looked at the quality of those reviews at Davis-Besse?

MR. VON AHN: I believe we have, and, John, do you want to go over this.

MR. REDDINGTON: Yeah. Scott, we've looked at that. I would say about a year ago, we identified that was a weakness, that the SRO's were not given enough verbiage when they would call something

operable or inoperable. We also noticed that that didn't translate effectively into the unit log, because when a guy comes in, he doesn't necessarily read Condition Reports, he reads the unit log before he takes the shift.

So, we've been focusing on that, and as part of Program Review of Operability Determinations we've been monitoring that. I would say we've seen a marked improvement, a significant improvement. They've instituted peer checks and things like that that's helped that, but it has definitely improved significantly over the last year.

MR. THOMAS: Okay, thank you.

MR. VON AHN: Any other questions?

Finally, Quarterly Reviews. In our Quarterly Reviews, one area we're starting to focus on, ~~our~~ are Procedure Compliance Issues. We did identify this during this quarter's activities, and we know this was a contributing issue to the ~~RPD~~ RPV head root cause, one of the contributing issues were procedural adherence issues.

We will start to develop comparative data in this area, and we are looking at the, we'll look at subsequent CREST Condition Report reviews to validate what we're seeing. Again, we identified it with our observations. We've looked at some comparative data in CREST. We see some things here and we're going to continue to monitor

that.

In summary, we see improvements in key areas like Operations. The plant is making headway on resolving Containment Health Issues. The challenges still remain with Corrective Action Process, and we'll continue to monitor this area.

Finally, I would like to introduce Lawrence Martin.

Lawrence, could you stand up. Thank you.

Lawrence joins the team with over 40 years of total nuclear experience. Lawrence also has extensive experience at a number of sites upon restart after an extended shutdown. And Lawrence will be stationed full time at Davis-Besse. His main focus will be to assist me, not only in the oversight of the Davis-Besse restart activities, but putting into place measures that assure long term continuous performance improvement at FENOC in Quality Assurance Programs and Safety Culture.

I would like to turn the program back over to Lew Myers for Safety Conscious Work Environment discussion, unless there are any other questions?

MR. ZWOLINSKI: I know you tried to cover it. I maybe didn't get the full thrust on the procedure compliance issues.

MR. VON AHN: We saw some procedural compliance issues in our review.

MR. ZWOLINSKI: If I understood correctly, you're dedicating a team that will be responsible for procedures going forward --

MR. VON AHN: Yes.

MR. ZWOLINSKI: -- in Bob Schrauder's organization?

MR. MYERS: That's correct.

MR. ZWOLINSKI: Is that accurate?

MR. MYERS: That's accurate.

MR. ZWOLINSKI: So, he'll have the opportunity to look backwards and see what kind of problems you've identified and Lessons Learned, take that forward and make that robust?

MR. MYERS: We have a procedures group at our other plants, and we're able to monitor a number of procedures changes, the top procedure changes, problem areas and all that. We expect Bob to check that out.

MR. ZWOLINSKI: Okay.

MR. GROBE: Lew, before you go on with Safety Conscious Work Environment, could you comment a bit on the efforts you have underway to understand better the impact of the CR rollovers and where that stands and what you've done from that?

MR. MYERS: Yeah. I think

there is like five thousand CRs that were restart type CRs, gone back and looked at, what we did is, we had some questions about the rollovers, where we rolled several CRs together and performed one root cause. And the question was, we look at the original CR, once you rolled it into this big bunch, do we really solve the problem with the original CR.

What we've done is gone back and looked at that, out of that 5,000 population, about 500, 490 something, the rollover, rollovers as I understand right now. We're taking and reviewing each and every one of those rollovers. We have a team together, that we pulled together from our other sites, and went over each and every one of them and traced the issue to make sure the corrective action finally addressed that issue, so it's not lost. So, we got that team together now.

MR. GROBE: When do you expect that activity to be completed?

MR. MYERS: Probably the next couple of weeks. I hope.

MR. GROBE: Thank you.

MR. MYERS: Safety Conscious Work Environment. At the last meeting, we talked about the March survey, and we were very pleased with that survey and improvements in the performance that we saw.

At that meeting though, there was two questions that were of concern; Question 35 and 36, which weren't as positive as what we've seen in the past. In fact, the performance in those two questions were worse. So, we took an action to take and evaluate the results.

Let me tell you what we did there. We took, what we did, is response analysis. What we did there, we took the responses to several questions, we grouped those questions together, sort of asked the same thing, looked at the questions, not only similar questions, but by group; and maintenance, electrical line, contractors, so First FENOC employees versus contractors.

So, we did that. Then, we went out and did a comparison with other programs from those two questions. We looked at our Employees Concerns Program, Quality Assurance Program, and our NRC Allegations Program; and, how does this stuff correlate. And then, finally, we went out and talked to some people and did some personnel interviews about these two questions.

So, the next couple of slides, I'll share with you the results.

If you go look at the questions that are positively correlated, this question 7, 25, 30, 35, and 36.

The question 7, "I can raise a nuclear safety or quality concern without fear of retaliation." We went from

a negative response rating total of 18.5 percent to 7.1 percent. We were pretty pleased with that. And especially, when we go look at it in the FENOC area, which we went from 22 percent to a 4.2 percent.

If you go look at the next question, "I feel free to raise nuclear safety or quality issues on CRs without fear of reprisal." We had a negative rating overall of 16.1 percent. And when we go back and look at FENOC by itself, we went from 18 percent down to 3 percent. So, we're pretty pleased with that. And the total rate, we went down to 5.6 percent.

"I can use the EC Program without fear of retaliation." We had 14.6 percent total, and 5.1 percent, but when we look at just FENOC, we went from 18 to 3.2 percent negative rating.

Now, the next two questions, concerned intimidation, harassment issues. And we didn't get the response in those two questions. I guess the response sort of surprised us, because we went from a negative response of 7.1 percent to 8.1 percent. "I have been subjected to an HIRD within the last six months." and "I'm aware of others who have been subjected to HIRD within the last six months." That's question 36. We went from a 7.1 percent or 12.4 percent negative response, to an 8.1 and 15.3. That's what generated the issue.

So, when we went back and broke that apart, we looked at FENOC, we actually went from a 8.9 FENOC rate to 5.1 percent FENOC rate, which was a positive trend. And from a FENOC standpoint on Question 36, we went from 14.6 percent down to a 10.2 percent negative, which is another positive trend.

Now, contractors are the areas where it tended to poke out in red, and we tried to analyze that somewhat.

Go to the next slide, please.

We went back and looked at the survey analysis with interviews and stuff. If you look at the survey question on harassment, intimidation, retaliation, and discrimination, what we found is there was a clear focus on [10CFR] 50.7 issues.

When people, when contractors, most of the contractors responding to this, were hourly type. We went from, if you look at the original survey we did a year ago, most of the contractors in there were longer term engineering type contractors, down to more of an hourly type contractors that we have on site right now, in work area.

And when you go question them about harassment and intimidation and 50.7, their knowledge of that is not as thorough. And if they do something that they don't like, you know, they consider that harassment, intimidation, for

a job they didn't want to do. So, we got a lot of feedback there from that question.

Then we went back and asked them about the term HIRD, question was not clearly stated, when you use the term HIRD, it wasn't terms like harassment, intimidation, that's the name of a bird or something. So, you know, the question was not clear in their mind when they read that from a contractor standpoint. That's some of the feedback we got when we talked to employees.

Responses are more consistent that we found in FENOC with ECP and Safety Culture survey results. Worker concern about schedule pressure and directive management rather than 50.7 HIRD concerns; are one question.

When you read that again to question people, you know, what you heard was, a lot of pressure to get the work done from a schedule pressure standpoint, and the management approach right now is more directive than what they've seen in the past. And that's, they would answer that from a HIRD concern as being a negative trend. So, they're not clearly understanding what that meant.

So, that was the two areas that they focused on.

MR. GROBE: Could you go back to the last slide, Lew?

MR. MYERS: Sure.

MR. GROBE: So, what I hear

you saying, is the questions 35 and 36 --

MR. MYERS: Are correlated to 7, 25 and 30, and got different results overall.

MR. GROBE: Right. So, going forward, if you plan on using those questions again, you're going to restructure them?

MR. MYERS: We might spell out what HIRD means in the question. So, yeah, we would restructure the question, something like that.

MR. GROBE: But FENOC question 7, 25 and 30, if you look at your contractors, it either has stayed the same or got worse.

MR. MYERS: That's correct.

MR. GROBE: What are you doing about that?

MR. MYERS: Well, I was going to answer that question earier.

MR. GROBE: Good.

MR. MYERS: The contractors are our concern. What we have to do in our contractor training program; when we bring them in, we have to be more clear about our programs and our terms, and address these results. Maybe that's improve our training programs, I'm not sure, but we are going to put an action plan in place that goes to try to understand what that's telling us

about, you know.

MR. GROBE: Okay, is there a CR on that, that I can?

MR. MYERS: I don't think so.

MR. GROBE: Randy is nodding yes.

MR. MYERS: Okay. There is, Randy? Okay.

MR. GROBE: So, I can go find that.

MR. MYERS: Okay.

If you look at the next slide, the NRC Allegations. One of the things, we go back and look at our other program, like allegations, and there is a negative trend there, which would substantiate from an NRC allegation standpoint, it's an improvement.

Next slide shows that, really gets into the Retaliation Category, and we see a negative trend there, which would substantiate, tend to substantiate in the First FENOC areas we're seeing improvement and even in the contractor areas, overall we're seeing an improvement.

If you go to the next slide, we went back and looked at ECP programs, that work in progress. Remember, back a few months ago when we looked at ECP versus NRC type

concerns, people would use the NRC Concern Program before they would use our own in-house.

That's greatly changed. You see the trend now where our ECP Program is really taking off and people are feeling free to come forth and use that program. We think that's a positive trend from an intimidation, harassment standpoint also.

Next slide.

Overall, you know, we base our overall conclusions on looking at these two questions. We think our workers recognize the responsibility to raise nuclear safety concerns and quality issues. And you can see our CR process has a low threshold, and overall certainly noticed that people will bring stuff forward.

I can tell you in my 4-C Meeting too, I ask that question routinely. I get extremely, I think, a hundred percent results without raising concern.

"Workers feel free to raise nuclear safety and quality concerns without fear of retaliation through their chain of command, through the Condition Report process, and through the Employee Concerns Program."

We tend to see that all across the board, that the first thing you would like people to do is use the Corrective Action Process. Next thing, there is chain of command; either one of those two; and up to my level if

they need to. Then, finally, the Employee Concerns Process. We see all three of those having a fairly positive trend right now.

There is still pockets of negative perception. Sometimes in the RP/Chemistry Maintenance and Engineering Departments. Survey people, we recognize those are pockets and areas we need to continue work on.

And then "Contractors have a more negative overall perception than the FENOC employees." That's something we need to get action plan on, look at our in-processing, make sure they understand the processes and how to use them; you know, and are willing to work with our contractors. We're taking an action on that.

And additional senior management needed attention to Safety Conscious Work Environment. Once again, RP, Chemistry and Maintenance, we found still some hot pockets there, especially on specific shifts and stuff. Okay?

But overall, once again, we told you last time, we were pretty pleased with the results of that survey. The purpose of this is just to answer the question to us as last time about those two. Okay?

MR. GROBE: Appreciate that.

So, you're going to be taking some additional actions in some areas. What is your plan? Are you planning on doing this type of evaluation again in six

months or a year or what is the plan?

MR. MYERS: We'll continue to use this type of evaluation, as well as others.

MR. GROBE: Okay. Thank you.

MR. MYERS: You know, the term convergent validity, really caught on.

MR. GROBE: Yeah.

MR. MYERS: Next area, Randy.

MR. FAST: All right. Thank you, Lew.

Good afternoon. I'm pleased to provide an update and final report on our Containment Building Block progress. First slide, please.

The bullets represented here are the actual scope of the Containment Health Building Block. Of those, those that you see on the lefthand side, Emergency Sump, Containment Coatings, Fuel Integrity, Environmentally Qualified Equipment, FLUS, and Boric Acid Inspections are complete and ready for Mode 4.

On the right side you'll see, Decay Heat Valve Tank, we still are sealing conduits there. That work is progressing well and will be completed within the next week.

Containment Air Coolers, we've done a final air balance test on all three Containment Air Coolers and results are being evaluated by Engineering.

Refueling Transfer Canal. We've implemented our implementation plan -- or excuse me, our discovery plan. We still have some actions that we'll do, you know, future outage, not required to be done now as part of restart.

Containment Pressure Vessel. That's the sealing of the annular space in the lower portion of containment in the steel, steel pressure vessel and the concrete. And we're still evaluating that work. That may be done after the first Mode 4.

As well, Corrective Action, Evaluations and all of the Corrective Actions are in their final stages of closure. So, that's very close coming to an end.

Next slide, please.

MR. SHERON: Randy, before you go off that slide.

MR. FAST: Yes.

MR. SHERON: On the FLUS System, where is, I'm still kind of trying to understand where that fits in your overall scheme of things. When you came in, I think, the agency several months ago, it was not going to be a tech spec requirement on it or anything like that. And so, the question is, I mean, NRC has no

requirement, okay, for it.

You know, in terms of, okay, you start up, and let's say this thing starts giving you a lot of false positives or something, is it your plan to fix it or just say, it's a failed experiment, and turn it off, or?

MR. FAST: Brian, let me try to answer that question. We don't have any reason to believe it's going to be a failed experiment. And, principally, the reason we feel that way is we have looked at it extensively. It is used in Europe. It's been used very extensively. In fact, we look at that closely because we would be concerned about installing a monitoring system that could not provide the right level of reliability.

This project has really been a model for installation and the calibration. We brought over a Ph.D. that was part of the development of this program. We've calibrated it. And, we have a lot of confidence in it.

It has a lot of self-check features built into it that will allow us to monitor the humidity levels under the vessel. So, we did a lot of analysis of this. And, although, not required from a regulatory standpoint, it really requires the right standards for us in monitoring undervessel performance.

So, I know obviously my optimism might be overzealous here, but based on the kinds of results that

we've seen from the industry, we have a pretty high confidence this is going to work well. Part of our test plan Mike talked about previously is injecting the test signal and actually monitoring the system's performance so we have some real time data and we'll do that during our normal operating pressure and temperature test.

There is another element of this. We believe that by looking at industry best practices, we've developed a Leak Monitoring Program and we have, one of our engineers, system engineer, a program owner for that; and that will go through a validation process of looking at Reactor Coolant System leakage, which is done on a daily basis by the Operations staff. And then, correlating that information with the information we get from the FLUS System.

So, that as well provides a validation of the leak integrity of the Reactor Coolant System.

MR. SHERON: I'm not trying to be, you know, rain on your parade or anything, but that does depend on your understanding of, say, crack behavior on lower penetrations. I mean, for example, the type of leakage that has been seen in South Texas, which they haven't confirmed yet, as far as I'm aware. I'm not sure, would that even be detected by this system?

MR. FAST: Brian, I understand, the correct propagation would have earlier

indications of higher humidity, which could subsequently be dismissed, because of the close after some period of time.

So, that's something that, we understand the phenomenon, we understand the crack propagation of the J-groove weld on the undervessel attachments. And well --

MR. SHERON: Where I'm going is there is two aspects to this whole thing. One is obviously leakage and, say, accumulation of boron, okay, the potential for any corrosive environment. The second is understanding the crack growth phenomenon. In other words, will I have a crack, you know, the stress fields are different and so forth on the lower head and the like, and there are residual stresses which we may not even know about.

For example, when we met with south Texas the other day, they told us about the installation of the, of the thermal tubes that they put in on the lower head. They said, there is a streaking process in there where they physically have to bend them over to get them straight so they're aligned. That's introduces residual stresses, which obviously, nobody can put their finger on in terms of knowing, you know, is it large, small, or the like.

The point I'm driving at is that, you know, unless we know about crack behavior and whether cracks will always

go through the wall and exhibit leakage before they, for example, turn circumferential; is there a stress field for turning circumferential. There is still an uncertainty. Do you follow that?

MR. FAST: I understand that. You're absolutely right, Brian. This will only provide us the opportunity to monitor for humidity and changes in moisture content.

We were able to mockup in Lynchburg with Framatone very, very small leaks in the area of .01 gallons per minute, and be able to detect that very small leakage. Although, your points are that we may not understand the crack initiation, propagation and leakage elements, we do have some confidence that the equipment is able to measure changes in the humidity undervessel.

MR. SHERON: Yeah, I'm certainly not advocating taking it out or anything, but I just recognize there could be some limitations on it. That's all.

MR. FAST: I understand. Thank you, Brian.

MR. MYERS: I think what it does, if you had a real leak, it would tell you, there is a very, very low leakage, like .01, so it could be early warning. Okay?

MR. SHERON: Right.

MR. ZWOLINSKI: I saw that equipment. I guess maybe somebody said it, I apologize. Where is it going to read out at?

MR. FAST: Reads out on the plant computer system.

MR. ZWOLINSKI: Is that right?

MR. FAST: Yes, sir.

MR. ZWOLINSKI: Okay.

MR. GROBE: Randy, before you go on, we actually had a question from a member of the public, but it fits right in here. If you don't mind I would like to.

It says, with the recent findings at the Texas plant, has that changed the way you'll be checking for leaks on the bottom of the reactor?

And, secondly, are you confident the scheduled tests will be able to detect any leaks on these nozzles and once the plant is restarted, how would you monitor the bottom for leaks?

MR. FAST: The answer to the first question is I believe our Leakage Detection Program is comprehensive, and we believe we will be able to detect any minor amounts of boric acid that would collect on the floor annular space for the attachment to the lower

vessels.

And the second question again, was?

MR. GROBE: The first question was, with the recent findings at the Texas plant, has that changed the way in which you will be checking for leaks on the bottom of the reactor at Davis-Besse?

MR. FAST: It does not, our program is comprehensive.

MR. GROBE: Once the plant is restarted, how will you monitor the bottom for leaks?

MR. FAST: That is the FLUS System, as well as doing the Reactor Coolant System Inventory Test and the leakage management.

MR. GROBE: Brian?

MR. SHERON: I'm not sure who asked this, but I just, for people that are saying what's going on with South Texas. South Texas Project was inspecting the lower head. I guess it was now several weeks ago. And they found slight traces of Boron on two penetrations. One, basically right in the center of the lower head and one on a periphery.

There was a very small amount, one was about 3 milligrams of Boron, one was about 150 milligrams of Boron. They said to put that in perspective, 150 milligrams of Boron is like half an aspirin.

They don't know, they've pretty much concluded that the Boron came from primary coolant leaking. It wasn't something that ran down the side.

What they don't know yet is the root cause of this leakage. There is several possibilities that one could postulate. Stress corrosion cracking is one. The other might be fatigue, it could be a fatigue crack; for example, due to a flow induced vibration. Could be, just be a bad weld.

We don't know yet. So, we're waiting to see what the Licensee finds out, what their root cause. They have come in. They were in for a meeting, I think it was just last week, and talked to us about their entire program.

They're actually doing a mockup of the penetration down at the EPRI Research Center to better look for ways that they could do UT on the lower penetrations.

So, basically, until we find more and understand better what the root cause of this is, you know, NRC is not for example off, going to ask all Licensees to go off and inspect their lower head penetrations and the like at this time. But again, we have to wait and see what the Licensee comes up with on their root cause.

MR. GROBE: That's correct.

MR. MYERS: My understanding, they're looking at a FLUS System.

MR. FAST: Brian, we have been in regular contact with South Texas as well. Our lead engineer, in fact, I got a call today that they identified that, and I hooked them up with our guy, and we've been in regular communication. I've seen pictures as well.

So, I know they're working through that issue. We'll certainly want to understand what they're dealing with and share that with the industry.

MR. GROBE: One other issue on that, Randy, if I could.

One aspect of the findings at South Texas that complicates understanding the applicability of those issues at Davis-Besse is that the design of the penetrations are substantively different on that reactor, on the lower head from the Davis-Besse design penetrations. So, there is not a direct correlation at all between South Texas and Davis-Besse.

MR. FAST: I understand that. Thank you, Jack.

Last slide, please. Containment Closeout. Physical work and paper closeout in support of Containment Health is in the final closure phase.

I want to make a comment that we have team meetings with our staff before we have public meetings, so that we can disclose information. One of the things I mentioned,

we do this kind of off the cuff in front of our folks and talk, I made a comment that as the sponsor for containment health, we were getting out of the containment health business.

I really thought it was kind of interesting that I had one of the system engineers come up to me afterwards and say, Randy, we're never getting out of the containment health business. I said, well, that's a great comment.

The reality is, the project may be coming to a close, but we have institutionalized the right standards through our Maintenance folks, our Operations folks and our Engineering folks. We have what we believe is a good Boric Acid Corrosion Control Program and Owner; and we're using our Corrective Action Program to identify those issues, evaluate them, and take the appropriate corrective actions.

So, certainly, those Lessons Learned at Davis-Besse are going to be long held to the future. So, we're not getting out of Containment Health business.

The last I wanted to identify, is you see the American flag is painted up in our containment dome. It's quite impressive actually.

John, I think you had a chance and Brian to see that today.

Really a tribute to our great country. And, also to

the hard work and dedication of all the men and women who have worked so hard in our containment to get that work done. As you saw, our containment is in pretty good shape. We're proud of it. And we'll be glad to set new standards for our containment health.

MR. SHERON: They assured us, it was painted with qualified coatings.

MR. FAST: Yes, sir, I checked the spec myself. You know, they sent it to me, and I verified it. It's actually Old Glory Red and Blue, but it is a qualified coating.

With that, I'll turn it over to Lew for closing comments.

MR. GROBE: Any other questions?

MR. ZWOLINSKI: Lew, can I go back to Graph 44 on your ECP trends?

Just so it's clear to this person and maybe others. Do you put these kind of issues when they're raised either to NRC or to ECP, do you put those in the Corrective Action Program?

MR. MYERS: The answer is no, not normally. We have on occasions.

MR. ZWOLINSKI: And, do you, does somebody take look at these, as far as the safety

significance; and I'm going back a little bit to the CR Program. In other words, someone wanted to raise a significant issue, and you found a lot in here, they're not going to the right place, but you know, the lightbulb isn't fixed or something.

MR. MYERS: If we look at one of our ECP issues and we found a concern, that can generate a CR, safety-related CR. It would. In other words, if we were looking at the issue, and we found that it was a CR type issue, we would generate one.

MR. ZWOLINSKI: Okay. So, and I think the short answer to this, these two graphs, is that you handle these issues outside the normal CR process though.

MR. MYERS: Yes.

MR. ZWOLINSKI: Okay. Thank you.

MR. MYERS: In closing, our intention today was to talk about the Management/Human Performance, Root Cause and Safety Culture. We continue to improve, we think, in the overall quality of our management team that we have in place, and management ownership of problems that we find at our plant. We think our management continues to bring quality people in, and we're seeing improvements in the fragnets and ownership.

It's our intention to modify the HPI pump or replace the existing pump. We feel that will gain us a reliability margin. It's probably the right thing to do.

We will continue to focus on our Mode 4. That tends to answers a lot of questions for us, and the activity that we need to complete, complete prior to restart.

One of the comments I have here; you know, if you go look, a lot of extended shutdown plants, they just put things in bucket; restart, nonrestart. We continue to work about 50 percent of the stuff off, that are classified as nonrestart. So, we have not stopped working off our nonrestart items throughout this outage.

What we believe that will do for us, we'll start the plant back up, we'll do it in good stead from a backlog standpoint, better than we typically see before. We are pleased with that.

And that's also true in the maintenance work order area. We believe our total maintenance backlog for corrective maintenance will be somewhere in the 275 range when we start up, which was the goal in the original outage. So, we're just not letting backlogs continue to build.

We believe that our station performance, both from a physical and people standpoint, continues to show good progress. Randy gave a good example awhile ago that, about

the containment and not closing our containment. You know, our Building Blocks were put in place in our restart plan, not just to close a bunch of actions out, but to take the necessary actions and implement those actions to ensure sustained performance for each and every Building Block after restart.

I mean, and a lot of times we've added programs in place. For example, our Leak Rate Program is really state of the art. It really is state of the art.

You go over and look in our engineering area, our system walkdowns and program reviews, we think are pretty unique for the industry. For each of the these Building Blocks our intention is sustained performance.

And Brian, John, Bill and Jon, I thank you for coming to the plant today. We appreciate you coming there, and appreciate it.

MR. PASSEHL: Okay. Okay, that concludes the meeting. We would like to take five minutes break and let FirstEnergy people leave or whatever they want to do, then we'll take questions from the public.

Thank you.

(Off the record.)

MR. GROBE: This part of the meeting is intended to receive questions and comments from members of the public.

I do have one card, while you all are queuing up in front of the microphone. The question is, have these meetings been a help or hinderance to the NRC's inspection or investigations? It's really an interesting question.

These meetings have several purposes. Folks like Dave Passehl and Jon Hopkins and Scott, the Senior Resident Inspector, and Christine Lipa in the Region, have very close daily connection with what's going on in the plant. Other members of the panel have a less close connection with day-to-day activities.

For the panel as a total, these meetings serve the purpose of getting a broad update on topics that are of interest. We work with the utility on the agenda, so we're discussing things publicly that we have a particular interest in.

They don't directly help or hinder the inspections or investigations, but what it does do is occasionally helps us bring focus. You may see me slip a note to Scott every once in awhile during a meeting. Those notes are usually, hey, take a look at such and such next month or take a look at this, or put some more time in that. We do the same thing in region.

So, it does give us some assistance in planning on some of the inspection type of activities we do. But as far as hindering or helping the inspections, they don't

really have a significant impact on that.

The other purpose to these meetings is we're doing them publicly. That gives you an opportunity to see what we're doing, what kind of issues we're addressing with the utility, seeing the way in which we do our jobs. So, those are the purposes to the meetings.

Does anybody else have a question or comment? This is the only other card I have.

MR. RULAND: Could I add something? See if this works. How is that?

Okay, as somebody that's basically come new to this process, this is my second panel, you know, the kind of discussion here is, while it provides us sufficient detail, it's to a certain extent topical. Behind our judgments about all these items, you know, a very large amount of NRC inspection has to go on.

If you heard me ask a question about license amendments, just finding out about license amendment is not really going to make or break what we're going to do, but it's sure going to get us to mobilize our folks back in headquarters to get them ready to review that license amendment. So, for me, it has helped me get up to speed, hopefully, relatively quickly and it helps us plan our resources.

But again, it's not going to form our judgment

ultimately on the acceptability of what the Licensee is doing. It keeps us posted, and the inspections support that.

MR. GROBE: I don't see a whole line of folks queueing up.

Ah, there we go. Amy Ryder.

MS. RYDER: Actually, just two questions. One is just a logistical question. This was a question I had at the last month's meeting that I have again this month with regards to the survey that was taken by FENOC, the worker survey.

The numbers still don't seem to add up with the number, total number of surveys that were collected and then broken down between FENOC and contractors. Was there a third category of people that were included in that survey?

MR. GROBE: Is Randy still here?

MR. RULAND: You mean it doesn't add up to a hundred percent, is that what you're saying?

MS. RYDER: No, it says 666 FENOC employees and 337 contractors were surveyed in 2003, which would be a 1,043 individuals, but on here it says 1,139 surveys were distributed.

MR. GROBE: Amy, I'm not sure that we have that level of detail. Randy Huey for the company --

Mike, do you know the answer to that?

MR. STEVENS: There's Randy. Let him answer.

MR. GROBE: Yeah, what I would suggest is that, for that kind of question, you chat with Randy Huey, fine looking fellow in the blue shirt, after the meeting and he knows every little bit of data that goes into it.

MS. RYDER: Can he answer it now, so everybody can hear?

MR. GROBE: Sure, why don't you ask your question again?

MS. RYDER: I'm trying to understand why these two numbers don't add up to that?

MR. HUEY: Randy Huey.

The answer is that this is just showing the people that we knew were FirstEnergy and the people we knew were contractors. There were 95 people who took the survey, who didn't indicate whether they were FirstEnergy or contractors.

MS. RYDER: So then, these numbers reflect just the ones that you knew?

MR. HUEY: Right. Each of these are reflecting -- actually, it's like this number is 666 total FirstEnergy people identified themselves as such on the survey. Now, for each question, all of those didn't necessarily answer each question, so the percentage for each question is based on the number of people that actually answered that question.

MS. RYDER: Good, thanks.

My other question is whether or not, will there be a public meeting to hear about the results of the Haber study?

MR. GROBE: Yeah. Well, yes. There is going to be two different public meetings. I anticipate a meeting sometime in the next month or two. I think Dave Passehl alluded to it earlier in his presentation.

The focus of that meeting, it will be in the Region III office, but there will be availability through telephone lines, or if you happen to be in Washington or Chicago. We would love to have you out to Chicago. You can sit in. There will be a public meeting in Chicago. For the Utility to present the results of their Safety Culture Assessments, as well as what those assessments informed them of, what actions they're taking as a result of those, and what long term plans they have, specifically

with respect to continuing improvement in Safety Culture, as well as continued monitoring of Safety Culture?

MS. RYDER: Do you know when the NRC's inspection of Safety Culture will be completed?

MR. GROBE: That's the second public meeting. We'll have a public exit. The when is not clear. Next several weeks, I would expect the inspection will be complete as far as the on site work. There will likely be some additional work that's done off site. And, our expectations is that we will have a public exit meeting. That will probably be conducted at the Davis-Besse Administration Building.

MS. RYDER: Actually one more sort of general question. I understand there is, this is sort of a follow-up question to the South Texas issue, but I understand that corrosion has been found on the lids of two other plants. I know one is in Florida. I can't remember where the second one is.

MR. GROBE: I've been kind of foresighted on Davis-Besse.

Brian?

MR. SHERON: Yeah, the Saint Lucy Plant did an inspection and they found several cracks, as I understand, on two, I think it was two penetration so far. They may have found some more today.

And there, I think, I'm trying to remember, I think they're scheduled to replace their head in 2000 -- Unit One is 2005, Unit 2 is 2006. And so, they'll probably be looking at repair options with regard to their head.

MS. RYDER: It sort of leads me to wonder whether or not these plants are really built to last the 40 years they were licensed to operate, if we're starting to see cracks a lot sooner than that.

MR. SHERON: Remember, the 40 years for a license was principally based on economic considerations, rate of return, and depreciation, and so forth. When we licensed the plants, there was every expectation, I think at the time, that they would perform for 40 years; although, we did put in place programs and requirements for inspections for the very reason that we were, you know, obviously didn't know everything at the time.

I think the cracking of Inconel 600 is something that was not fully expected when the plants were designed and built; and, as such, you know, as we find the degradation, we are putting in place appropriate, you know, inspection requirements. The order that will now, back in I think February, I think as an example of that.

We are looking at the operating experience as these plants like Saint Lucy do inspections, to see if there is,

if they learn anything that would say we need to modify the order. For example, we had susceptibility criteria in there, which was time and temperature, and we had rankings of plants, and the inspection requirements were sort of graded in accordance with their susceptibility.

If we come across a plant that, for example, has degradation that maybe is in a low or medium susceptibility category, we may have to consider modifying these requirements as we move forward.

Certainly, with South Texas, once we learn more about what the root cause of that is, we'll have to see how we move forward in terms of inspection requirements for the lower vessel heads.

MR. GROBE: There is actually a broader context to that answer too, because a license exists for 40 years, didn't mean that the expectation was that all the equipment would last for 40 years. There is regular preventative maintenance and replacement of equipment. There is many modifications that occur every year which improves systems.

Some utilities have actually been able to replace, for example, feedwater control systems with new systems that are more effective. They engage on that for one of two purposes; one, is they no longer have replacement parts for a system that might be twenty years old; the other is

they might get more power out of their secondary plant.

So the, there is not a nexus between the 40 year license and expectation of all the equipment would last for 40 years. That wasn't, there is no connection between those two concepts.

MS. RYDER: Well, will the conditions of the plants be considered when companies start applying for relicensing?

MR. GROBE: Right. There is not only about a year and a half's worth of effort that's done in headquarters looking at plant license renewal applications, there is also a series of two or three very large team inspections, upward of ten folks, looking at specific age-related type degradation, maintenance activities, before license renewal is granted.

MS. RYDER: It just seems that at some point, they're going to have to close the plant. You know, I drive a twelve-year-old car and it's a Honda, it's a very reliable car, but at some point I'm going to have to turn it in for a safer vehicle. It seems the same principle does apply to these plants.

MR. SHERON: That's true. First off, as you know, there are some components that will probably limit the life of the plant; for example, the reactor vessel.

MS. RYDER: Right.

MR. SHERON: We do have requirements for the reactor vessel in terms of embrittlement, for example, 5061, which is the pressurized thermal shock rule, okay.

As plants get older, as they become irradiated, okay, their ability to withstand pressure as normal shock decreases. When it reaches a certain level, then they have to make a choice; either they can anneal the vessel, for example, to restore a lot of that toughness, okay, or they can replace it, if that's even a feasible thing, or they can shut down at that point.

When we do renewed licenses, one of the things that we focus on is making sure that plants have in place age-related degradation programs to monitor it, to replace components, and the like. That's the whole focus of the license renewal reviews is to make sure that these plants, the utilities have in place programs that will either replace components or monitor at least the components for age-related degradation.

MR. RULAND: And a number of the programs, Licensees already have in response to the maintenance rule, as an example, already do, do do that monitoring.

MR. GROBE: These are usually

economic decisions. As Brian said, essentially every part of the plant can be replaced, simply an economic decision whether it's economically feasible to replace those components or upgrade them or deal with age-related degradation, or if there is some other approach that's more cost beneficial. Those are company decisions, not NRC decisions.

MS. RYDER: I understand, thank you.

MR. GROBE: Okay, thank you.

Anyone else?

Okay, I guess the only final comment I would make, I'm working my own personal age-related degradation program, and I encourage you each to do the same.

We'll be back here at 7:00 if you're interested in coming back.

Our next public meeting is June 3rd. That will be here at the Camp Perry Clubhouse. And, we're currently scheduling meetings through the summer. Those will likely be back over to the high school, if we can procure that facility.

Thank you very much.

(Off the record.)

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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 17th day of May, 2003.

Marie B. Fresch, RMR

NOTARY PUBLIC, STATE OF OHIO
My Commission Expires 10-9-03.