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

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Meeting held on Tuesday, March 11, 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 Dean, Vice Chairman, MC 0350 Panel
Christopher Scott Thomas,
Senior Resident Inspector
U.S. NRC Office - Davis-Besse
Jon Hopkins, Project Manager Davis-Besse
Anthony Mendiola,
Section Chief PDIII-2, NRR
David Passehl,
Project Engineer Davis-Besse

FIRST ENERGY NUCLEAR OPERATING COMPANY

Lew Myers, FENOC Chief Operating Officer
Robert W. Schrauder,
Director - Support Services
James J. Powers, III
Director - Nuclear Engineering
L. William Pearce,
Vice President FENOC Oversight
Craig Hengge, Engineer - Plant Engineering
Kathy Fehr,
Owner-Management Observation Program
Lynn Harder, Project Manager
Containment Health Inspection
Clark Price, Owner-Restart Action Plan
Greg Dunn, Manager
Outage Management & Work Control

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MR. PASSEHL: Welcome everybody. Welcome to FirstEnergy and members of the public for coming to this meeting today. This is a public meeting between the NRC's Davis-Besse Oversight Panel and FirstEnergy Nuclear Operating Company.

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

The purposes of today's meeting are to inform the public of the NRC's Oversight Panel activities and to discuss the Licensee's progress on implementing their Return to Service Plan.

On today's agenda, we'll be doing introduction and opening remarks. We'll have a short summary of the February 11th public meetings, which was our last 0350 public meeting. We'll discuss significant NRC activities since that February 11th public meeting. The Licensee will present the status of their Return to Service Plan. And then we'll adjourn the NRC meeting with FirstEnergy, take a break. And, then we'll come back for public comments and questions of the NRC; and then we'll adjourn the meeting.

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 this 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 March edition of our monthly newsletter and copies of the slides for this meeting in the foyer. The newsletter provides background information and also discusses current plan in NRC activities.

We also have a public meeting feedback form, which is a good tool to allow us to get feedback from people who are here to let us know aspects of the meeting we can improve on.

We have been doing that since our public meetings started in May of 2002, and we've made some changes, and we think that, that we think have made this a better meeting. Copies of the feedback forms are also available in the foyer.

We're having this meeting transcribed today by Marie Fresch, to maintain a record of the meeting. The transcription will be available on our web page and we usually have that available on our website in about three to four weeks.

Before we get started, I want to make introductions. First on my far left is Jon Hopkins, who is the NRR Project Manager for Davis-Besse.

Next to him is Tony Mendiola. He is a Section Chief

in the Division of Reactor Projects in our headquarters offices.

Next to him is Bill Dean, Deputy Director for the Engineering Division in NRR located in our headquarters office in Rockville, Maryland. He is Vice President of the Davis-Besse Oversight Panel.

And, next to him and to my left is Jack Grobe, Senior Manager in the Region III office in Lisle, Illinois; and he's the Chairman of the Davis-Besse Oversight Panel.

Next to me is the Senior Resident Inspector, Scott Thomas.

And, also with us in the audience, we have Nancy Keller, who is the site secretary at Davis-Besse; we have our Public Affairs Officer, Jan Strasma, in the audience; and we have our Region III State Liaison Officer in the audience as well.

We also have Jack ~~Raczkowski~~ Rutkowski, who will be replacing Doug Simpkins as the Resident Inspector later this spring.

MR. GROBE: Stand up, Jack. Let me embarrass you a little bit. Turn around. We're very grateful to have Jack here. He and his wife are in the process of moving to the area. Jack will be full time with us here at Davis-Besse in the next couple of months.

Jack has, is a highly educated, highly experienced individual. He's got degrees from three different

universities. He was an officer with the nuclear Navy. And he's had about 25 years of experience working for a variety of utilities in the nuclear power industry. And, starting with us a few months ago and we're grateful to have him assigned out at Davis-Besse. So, you'll be seeing more of Jack over the next few months.

MR. PASSEHL: Lew, if you wanted to introduce FirstEnergy and return it back to me, please.

MR. MYERS: Okay, thank you.

We're going to be changing some chairs around at the break. So, I'm going to introduce the people now at the table. To my left is Bill Pearce, the VP of Quality Assurance.

To my right is Kathy Fehr. She's in charge of the Management Observation Program, is going to status us on that today.

Craig Hengge is the Manager of our new Leak Detection System. We'll talk about that today also.

Greg Dunn, next to him, is the Outage Director and also the Manager of Work Management. And he's with us today to status us on upcoming activities. We're actually going to try to get around to that today. You can see our package is considerably thinner than it was the last time.

Bob Schrauder is next to him. Bob is our Project

Manager for the System Review and also Director of Support Services.

Then, Jim Powers at the end of the table and Jim is the Director of Engineering.

We have Lynn Harder who is with us today. He will be, he will status us on the Containment Health Project.

And finally, Clark Price is the Owner of the Restart Action Performance. He'll status on that today also.

MR. PASSEHL: Okay, thank you.

MR. MYERS: Thank you.

MR. PASSEHL: At this time, I would like any public officials or representatives of public officials to introduce yourselves, please.

MR. PAPCUN: John Papcun, Ottawa County Commissioner.

MR. ARNDT: Steve Arndt, Ottawa County Commissioner.

MR. KOEBEL: Carl Koebel, Ottawa County Commissioner.

MR. WITT: Jere Witt, County Administrator.

MR. FLIGOR: Dennis Fligor, for United States Senator George Voinovich.

MR. PASSEHL: Okay, thank you very much.

Next slide, please.

Okay, we'll discuss a summary of our last public meeting. During the meeting on February 11th, we discussed the status of ongoing plant and NRC activities.

The NRC staff discussed the status of Restart Checklist items. We described the inspections that we've done and those that are upcoming regarding the adequacy of safety significant structures, systems and components. We mentioned a Resident Inspection Report and a Special Inspection Report that we issued.

The Special Inspection Report concerned the adequacy of Root Causes and the Human Performance area. We discussed the status of ongoing System Health Review Inspections, which are particularly focused in the engineering areas.

We highlighted some inspection activities that remained, including the normal operating pressure tests, the containment vessel integrated leak rate test, the inspection of the emergency sump, inspections of various Licensee programs, and adequacy of organizational effectiveness in human performance.

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

The Licensee provided an update on efforts made

toward restart. They discussed activities related to fuel reload and the containment integrated leak rate test. The Licensee also covered from a system health standpoint, their Safety Function Validation Project and described the basis for increasing the scope of their system health reviews.

The Licensee recapped our January 30th public meeting, which was held to discuss Safety Culture and Safety Conscious Work Environment. And they discussed how they grade their own Safety Culture. The Quality Assurance Organization discussed some of their observations. And finally, the Licensee discussed their schedule and where they were at and where they were going in the next few months.

Next slide, please.

MR. GROBE: There has been a number of activities that have occurred on our side of the table over the last month, and we wanted to just update you on a few of those. Work level activities for the NRC has gone up significantly and will continue to go up over the next couple of months as this project wraps up.

The first thing I wanted to talk about just briefly is we issued a preliminary significance assessment of the performance deficiency of Davis-Besse. On February 24, we issued this letter. It contained what we call a

performance deficiency.

That performance deficiency at Davis-Besse was the failure to properly implement the Boric Acid Corrosion Management and Corrective Action Programs that allowed the reactor coolant system pressure boundary leakage to occur undetected for a prolonged period of time, resulting in the reactor pressure vessel head degradation and circumferential ~~tracking~~ cracking of the control and drive mechanism penetration nozzles.

We carefully articulate that performance deficiency and then assess the risk significance of that. Under NRC's Reactor Oversight Program, we have four colors that we use to describe the relative significance of findings. The least significant is what we call green, and it ranges up white, yellow, and the most significant is red.

Our preliminary decision is that the performance deficiency that resulted in this extended outage was characterized as a red significance finding or a finding of high safety significance.

Before the NRC makes its final decision on the significance, we publish our significance letter and give FirstEnergy an opportunity to comment on the analysis that supported that determination, give us any additional information that would provide further insights that would be useful; and FirstEnergy is in the process of evaluating

our letter, and I understand they will be responding with a letter to us.

So, another option that FirstEnergy would have, would be what we call a Regulatory Conference. That would be a public meeting. And, I understand that FirstEnergy has opted not to do that, but send us a letter with some comments; and we'll receive that letter and make our final significance determination.

Thanks, Dave.

MR. PASSEHL: Okay, the next item there, on February 19th of this year, Region III issued the final significance determination letter for two white findings associated with radiological controls related to steam generator work back in February of 2002.

The findings involve failures by plant staff to conduct an adequate evaluation of the radiological hazards in order to characterize radiological work conditions, take timely and suitable measurements to adequately monitor the intake of radioactive materials by workers during and following installation of nozzle dams and steam generators.

A public meeting was held back on October 16th, 2002, to discuss the findings and observations from our inspection of this issue. Inspection report was issued on January 7th, 2003. FirstEnergy agreed with the NRC's

characterization of the risk significance of the findings and declined the opportunity to provide additional information or discuss the issue in a regulatory conference.

After considering the information developed during the inspection, the NRC concluded that the inspection findings were appropriately characterized as white, which is an issue with low to moderate increase importance to safety.

The NRC is currently conducting inspections in the radiological protection area, which I will mention in the next slide.

MR. GROBE: We also had an opportunity to respond to your governor, Governor Taft. The governor requested a briefing on what's happening at Davis-Besse from the NRC's perspective.

On February 27, my boss, Jim Dyer, the Associate Director of our Headquarters Office responsible for Nuclear Reactor Safety, Brian ~~Sherrod~~ Sheron, and myself briefed the governor and about 15 of his staff on a variety of topics, including some historical information on control rod drive mechanism penetration cracking, boric acid corrosion, as well as specific information regarding what's going on here at Davis-Besse, including the significance assessment letter that I just discussed a moment ago.

The NRC's response to the reactor head situation at Davis-Besse characterized the FirstEnergy's activities that are ongoing, as well as discussed in a broader context the nuclear industry's response to what happened at Davis-Besse and actions that are occurring at other plants around the country.

We completed the briefing with a discussion of our Lessons Learned and the improvements that the NRC is making in its programs and processes to ensure that this kind of situation doesn't happen again in the future.

MR. PASSEHL: On February 26th, 2003, the NRC issued two Special Inspection Reports on review of activities as described in the Davis-Besse System Health Assurance Plan. That inspection examined the Licensee's actions relative to NRC Restart Checklist item Number 5B, which is associated with assuring the capability of safety significant structures, systems and components to support safe and reliable plant operation.

The Licensee's System Health Assurance Plan consists of three review programs; an Operational Readiness Review, a System Health Readiness Review and a Latent Issues Review. Our inspection included reviewing the plans and procedures for the three review programs, monitoring the work of the teams in progress, monitoring nuclear oversight activities, attending review board meetings, and reviewing

condition reports generated by the teams as reviews were conducted and discrepancies were identified.

The inspectors also monitored training of reviewers, conducted walkdowns of systems, examined emergent issues, reviewed independent self-assessments of systems and reviewed various reports. We also performed our own Independent Design Review.

The NRC concluded in the inspection reports that the System Health Assurance Plan was well designed, with acceptable procedures and oversight; however, because the majority of the System Health Assurance Plan reports were still under development at the time of our inspection, and because several unresolved questions remained involving calculations, analyses and testing, the NRC kept Restart Checklist Item 5B open pending the outcome of some more additional inspection.

Next slide, please.

Cover some continuing NRC activities. Under Organizational Effectiveness and Human Performance, our inspection in this area is reviewing the Licensee's Management and Human Performance Excellence Building Block, which is part of their Return to Service Plan and is an NRC Restart Checklist item.

This inspection is being performed in three phases. The first is an examination of Root Causes. The second is

an examination of Corrective Actions for the Root Causes to ensure that FirstEnergy has identified appropriate Corrective Actions to address the causes, and the third is an examination of those Corrective Actions once they are in place to assess the effectiveness prior to restart.

Phase one of the inspection is complete. Phase two is under way. The inspection is being conducted by three inspectors and should be completed within the next week or so. The third phase is expected to be conducted as Licensee activities are completed in the upcoming weeks.

NRC issued ~~an~~ inspection report Number 02-15 on February 6th, 2003 and provides an update, status update in this area.

Under System Health Design Reviews, this is an NRC inspection of the Licensee System Health Assurance Plan I discussed earlier. We continue to perform inspections of this area. The inspection is being conducted by two inspectors, and is scheduled to be completed in the upcoming weeks prior to restart.

Under Safety Significant Program Effectiveness, this is an NRC inspection that is reviewing the Licensee's implementation of their Program Effectiveness Building Block. Our reviews include assessing the effectiveness of the Boric Acid Corrosion Control Program, the In Service Inspection Program, Reactor Coolant Unidentified Leakage

Program, Plant Modifications, Quality Audits and Operating Experience.

The inspection will also evaluate the Licensee's program for assuring completeness and accuracy of required records and submittals to the NRC. Three inspectors are reviewing the area, and except for the reviews of completeness and accuracy of required records and submittals, the inspection should be complete by the end of next week.

There are two Resident Inspectors stationed permanently at the site, who inspect a broad spectrum of activities, and that is characteristic ~~as~~ of all our sites at the NRC. They primarily look at areas of operations, maintenance and testing on an ongoing basis, and they issue inspection reports every six weeks.

We're also performing an inspection of radiation protection and it's also a supplemental inspection.

I mentioned earlier the findings associated with the inadequate radiological controls during steam generator work in February of 2002. We are performing a follow-up inspection to ensure that the root and contributing causes are understood by the Licensee, that they independently assess the ~~extended~~ extent of condition, and ensure that their corrective actions are sufficient to address the root and contributing causes and prevent recurrence.

We're also reviewing the scope, depth and quality of the Licensee's Radiological Controls Program and associated corrective actions, and we are reviewing the readiness of the Radiation Protection Organization to support restart and normal operations. Four inspectors are reviewing this area and the inspection should be completed by the end of next week.

We're preparing for a couple of upcoming inspections. First of which is the Integrated Leak Rate Test Special Inspection. We are planning to perform a review of the plant's integrated leak rate test of containment. The test is intended to show the leak tightness of their containment vessel. Our inspection is scheduled to be conducted by two inspectors from March 17th through March 23, 2003.

We're also preparing for an Emergency Core Cooling System and Containment Spray System Sump Inspection. That inspection is intended to review the design and implementation of modification made to the emergency core cooling system and containment spray system sump. That inspection is scheduled to be conducted by one inspector from our headquarters office from March 24th to April 4th.

And, we're preparing for Corrective Action Team Inspection to review the corrective action process at Davis-Besse to ensure that it's being effectively

implemented and appropriate corrective action is taken to prevent recurrence of problems. The inspection will include a 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 our NRC requirements. This is an extensive inspection, which is scheduled to be conducted by 8 inspectors from mid March to mid April.

This briefly summarizes the activities that NRC currently has ongoing. The inspections I covered address part of our Restart Checklist, which is, as I mentioned, a listing of the issues that need to be resolved prior to restart of the plant.

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

MR. MYERS: Good afternoon. I would like to make a statement concerning the Preliminary Significance Assessment finding of red. It is our intention to respond back and agree with that finding; we're in complete agreement.

We're also in the agreement with the scientific finding which related yellow. However, due to the breadth of the issue, we agree it was red, and it is our intention to discuss the strong actions that we've taken since the event of February of last year. So, that's our position.

With that, we have five Desired Outcomes today that we would like to accomplish. First, Craig, Kathy and I would like to provide you with a status of our milestones since the last meeting from a hardware perspective and a management perspective.

Second, Bill Pearce will provide you a status of our Safety Culture, Safety Conscious Work Environment activities; and then he'll provide you some perspective of some of the Quality Organization's observations since our last meeting.

Third, we'll provide you an update of several of the Building Blocks. Bob Schrauder will discuss System Health. Lynn Harder will discuss Containment Health. Clark Price will provide some views of our Restart Action Performance. That's on the graphs. And, Jim Powers will discuss the Program Compliance.

And fourth and finally, hopefully this time we'll get around to Greg Dunn. We're looking forward to that Return to Service Schedule. With that being said, I would like to talk about the Return to Service Plan progress since the last meeting.

Since last meeting, we have accomplished several milestones in returning the plant to service. I would like to take a few moments to summarize some of these accomplishments in our programs, and in our plant

activities.

First, we start our preparation for fuel load. As part of that activity, we performed a thorough inspection of our reactor vessel. We found a small amount of foreign material, including a small cap screw in the bottom.

We formed a Decision-Making Team using our Nuclear Decision-Making Operating Procedure. We made a decision to remove our core support assembly, so that we could perform a thorough cleaning of both the plenum and the reactor vessel itself prior to moving forward. This is an infrequently performed activity with significant potential at our station because of the high potential of radiation exposure; and also, the plenum weighs about 140 tons.

The core support assembly is a container that's used to support the reactor fuel itself and the alignment of the reactor core assemblies. It is a very activated, and took us about five days to remove that assembly and return it to service, but I think it demonstrates a proper safety culture at our plant.

After cleaning the reactor vessel, we began the core load, if you will, of 177 fuel assemblies on February the 19th. As we told you in our last meeting, we had developed a core load pattern to reduce a known design issue of fuel grid, fuel grid interaction, and reduce the damage to those grid straps due to that interaction.

With only four fuel assemblies remaining to finish our core reload, we did have interaction of two assemblies. We stopped. We formed a decision-making team, using our Decision-Making Nuclear Operator Procedure and performed a detailed inspection of the assembly being loaded. Additionally, we removed the assembly with the interaction. We did find some minor damage to one of the grid straps. We spent three days bringing in Framatone to perform the repairs of the damage assembly. Once again, demonstrating good sensitivity to the safety related activity.

This slide shows our fully loaded reactor core. As you know, the fuel assemblies, fuel assembly is normally out of the, in the core for about three cycles or six years. The shiny fuel assemblies observed here are the new fuel assemblies and represents about one third of the core, core load. We completed our fuel load on February the 26th, 2003, error free.

Our new reactor head is now sitting on the reactor vessel. We are ready for Mode 5, which means the nuclear reactor is intact. This week, we'll be installing the new manways on the steam generators. At that point, the reactor coolant system, as well as the reactor will be ready to be returned to service. Once again, there is much more to do before we do that.

Several months ago -- next slide. Several months ago we told you about a Flus Leak Monitoring System that FENOC was planning to install under the insulation of our reactor vessel. This option is unique to the industry. The Flus System demonstrates our commitment to improving the station's operational and safety margins. At this time, we have installed the system and we'll be testing it during our upcoming first heatup of the plant.

Craig Hengge, our Project Manager, will provide you a status of the system. As you know, in previous meetings, we were not sure we would be able to buy this equipment, much less get it installed. Once again, we think that's a positive approach.

We have completed many other activities this month. We have performed the Safety Features Actuation Test to prove that our safety related equipment would respond as designed.

We completed our Integrated Diesel Testing to assure that the diesel would start and load to all the emergency core cooling water system equipment. We instrumented the diesel to monitor both the voltage and frequency, and did find some voltage and frequency issues, drops in voltage and frequency that were not expected and were analyzed as we speak.

We improved and implemented our Improved Corrective

Action Program on March 1st, 2003. This program and the changes ensure that the proper classifications of condition reports are made and that their proper evaluations get completed. This procedure is critical to the restart of the plant and its implementation.

We implemented our new Decision-Making Nuclear Operating Procedure and Problem Solving Procedure this month also; and we'll talk about that later on in the meeting.

Next slide.

We have installed new containment air coolers with stainless steel coils. Each of the three cooling units has twelve new cooling coils. You can see them there.

We also installed a new stainless steel air plenum below that directs the air to the coolers. We are presently experiencing some problems where the service water trees that supply cooling water to the units. We will not be satisfied until we get the design so that it is both robust and maintainable.

We're completing our, an upgrade of the long term problem with the containment decay heat pit. We have lined this pit with stainless, as shown in the picture. It is now a decay heat tank. Once again, we believe the upgrade demonstrates Davis-Besse's commitment to ensuring safety related equipment receives the attention it deserves.

We spent six days performing a Mode 6 Restart Readiness Review to ensure that our engineers, our mechanics, and our managers all have a common understanding of our readiness for fuel load. We believe that effort, that our effort to continue to support the performance of our scheduled activities are necessary, but safety and doing the job correctly the first time is the gate that we must pass through to go forward.

Now, let me turn the meeting over to Craig Hengge who will perform our new Flus Leakage Monitoring System. Thank you.

MR. HENGGE: Thanks, Lew.

Good afternoon. My name is Craig Hengge. I've been an engineer over at Davis-Besse since 1981; had a variety of responsibilities, a lot of which have been involved with project management.

One of my responsibilities this outage has been overseeing the activities associated with inspection and remediation of the lower portion of the reactor vessel.

As you'll recall when we did our initial inspections back in April, we identified some staining down the side of the vessel, which obscured the view of some of the incore nozzles on the bottom of the vessel.

I'm here this afternoon to update you on two of those activities. One, as Lew mentioned, we committed to

pursue installation of the Flus Leak Detection System. I'll give you an update on those installation activities, as well as a brief description of the system. As Lew mentioned, we're the first in the country to install this system and we're pretty excited about its potential.

First, I'm going to talk about some leak detection testing that we also committed to pursue down at Framatone. And the purpose of this testing, as you're aware, we committed to do a Mode 3 full temperature and pressure test as a way of confirming whether or not we actually have any leakage down at the bottom of the vessel.

As you recall, we had done some sampling and analysis of those samples, and the results of those were inconclusive. One of the things we wanted to determine was, given the annulus configuration on the in-cores, what type of leakage down there would we expect would result in visible deposits at the surface of the vessel which we can visually identify at the conclusion of our test.

We were also curious about what other types of chemical residue might result from the leakage from those nozzles. We were also curious to take those results to compare back to our samples and see if they would add any further clarification on the results we got from our earlier samples.

To accomplish this testing, we built a ~~1-2~~ 1 tube mockup down at Framatone that would pressurize the full RCS temperature and pressure. The actual tube we used was actually a four-inch diameter tube, as opposed to the one-inch diameter that the tubes actually are. We did that to accommodate using capillary tubing to actually control the leak rate that we were simulating.

We feel the large diameter is conservative and that it gives the leakage residue more volume to accumulate in before it's forced to the surface where we can detect it during our post test inspection.

The leakage we detected, we simulate a leak in the tube as opposed to the leak in the weld. Again, we thought that was conservative, because a leak through the tube is going to impact the vessel surface, dissipate its energy; whereas a leak in weld, which we think is a more likely scenario given the material, the leakage there would tend to eject material up towards the surface which would enhance our ability to detect it.

We ran a number of tests, as indicated on this slide. We varied the Boron concentration, the leak rate and duration. The first four tests were eight hours in duration. Two principle Boron concentrations. The 2680 was representative of the Boron concentration we expect to have during our Mode 3 test. We ran one test at 1134 ppm,

which is what we expect to have prior to our midcycle outage.

We picked those numbers to get a feeling as to, for different Boron concentrations, how we expect that to affect the residue that might be at the surface.

We also monitored several leak rates as indicated, .015 being the highest leak rate. We managed to get the leak rates down to .0004 gallons per minute, which equates to slightly over half a gallon per day.

To achieve that leak rate, we actually went back and flattened a portion of the capillary tubing that we had installed to get a leak rate that low.

For all four of those tests, at the conclusion of the eight hours, we were able to identify visual source of, visible residue on the surface, both on the tube and the vessel surface.

We committed to do one longer test. We had hoped to run the last test for 120 hours. Since we already had visual results from the first four indicating they would result in residue at the surface, we attempt to get a lower leak rate by actually running the capillary tube through a milling machine to flatten it out to try to get a lower leak rate.

And, we were successful in getting a lower leak rate during the cold testing, but when we put the capillary tube

into the system, our initial leak rate was actually a little higher, .0006 gpm, but it was very erratic during the test; and at 47 hours, the leak rate went to zero.

We terminated the test at 55 hours, and determined that the capillary tube we had built had actually clogged. That's what caused the termination of the leak rate. But again, at the conclusion of that, that test number 5, we did have visible residue again at the surface, both on the vessel surface and the tube surface.

The other significant result we got from all of these tests, one of the things we noticed as we were capturing the leak-off from the test, we noticed the Ph continued to decline of the liquid we were capturing during the duration of the test.

At the conclusion of test five, what we determined is that the lithium that was in the liquid was not coming clean with the leakage; it was actually staying at the vessel surface. At the conclusion of test five, we actually identified lithium concentrations at the tube and vessel surface of 17,000 parts per million.

That's important to us for two reasons. One is, one of our concerns was, if we were to get a leak late in life where we have very little Boron concentrations would there be some visible residue, some identifiable residue that we could trace back to that. The lithium now seems to

indicate that that would be a clear fingerprint that would be a conclusive indicator of a leak.

The other thing that will be helpful for us, when we go back and look at the samples that we took back in June, one of our inconclusive results was, due to lithium concentrations up to the 10,000 ppm range that we got in one of our tubes, but again that's far below what we saw even following this 55 hour test.

MR. HOPKINS: Craig, I have a question. Do you have any pictures of the visible residue from this test you did here that we could see?

MR. HENGGE: I didn't bring any with us, but we are looking at coming to Washington to present more detailed results of this test activity.

MR. HOPKINS: Okay, thank you.

MR. GROBE: Do you have a time frame for that?

MR. HENGGE: I think we're looking at later this month, somewhere around the March 28th time frame.

MR. GROBE: Okay. The sooner the better.

MR. HENGGE: I understand.

Next slide.

I would like now to talk a little bit about the Flus

Monitoring System that we're going to be installing. Again, as Lew mentioned, we're the first utility in the state to install this system. This is a state-of-the-art system.

MR. GROBE: Craig, One more question. I apologize. I'm not familiar with how you would measure lithium. How do you measure that? Do you take a wipe and then -- how do you get a lithium concentration, in a residue?

MR. HENGGE: We took wipe samples of the surface, surfaces that were outside the annulus at the conclusion of the test.

MR. GROBE: And what analysis technique is used for that?

MR. HENGGE: I believe they use ICP.

MS. FRESCH I'm sorry, I believe they use?

MR. HENGGE: ICP. I used to -- if there is any chemists in the audience that can help me out, I don't remember what the acronym stands for. I'm not a chemist, sorry.

The Flus System as mentioned will be the first to be installed domestically. The system has been installed in twelve other facilities; ten over in Europe and two in

Canada. It's had a very successful life so far from a reliability and detection standpoint, in terms of being able to detect leaks in the vicinity of where it's been monitored.

Flus is an acronym. I'm not going to embarrass my German by trying to pronounce it. It stands for humidity leak detection system. A couple of the words are fairly close to our version, the other two are not.

Next slide.

Again, where we're installing the system is to monitor the under vessel portion of our reactor dealing with the in-core. It's a fairly simple system to install; three cabinets and conduits and tubing. The actual implementation is only going to take us about three weeks. The issue of concern for getting it installed was getting the equipment here and getting the design done, and we were successful in accomplishing both of those.

The element identified there is kind of the heart of the system. What this is, is a piece of the sensory tubing. The sensor element depicted there, what that actually allows -- it's more coil than actual sensor, but allows the dry air that is inside the tube to communicate with the ambient air around the area where you're trying to sense for a leak.

What it allows is humidity or moisture in the

ambient air to diffuse into, saturate the air that is inside the tube. And these ~~senator~~ sensor elements are located about every foot or two on the sensor tubing that you mount in the area you're trying to monitor.

And, where we're going to have these installed is two areas. They will be installed in a ring underneath the reactor vessel. They will also have a short section of sensor tubing mounted in the cavity area, to monitor ambient humidity in the cavity area. I'll spend a little more time about the principle of operation in a later slide.

The system itself has eight available channels of which we'll only be using one, which is one of the reasons we're kind of excited, because it does have the capability for future expansion. Once you have the cabinets installed, really to utilize additional channels is just a matter of running some additional tubing to the other areas you want to monitor.

The expected sensitivity of the system is between .004 to .02 gpm. And the principle difference between that is how tight your insulation is around the area that you're trying to monitor.

We are going to be doing an actual sensitivity test of the system when we do the commissioning test during our Mode 3 Test. What we're going to do is we're going to have

an extra tube actually mounted to allow us to inject a known quantity of moisture into the bottom of the vessel. We will begin that test actually at .002 gpm. We can step that up, so we can monitor how a system responds to a known leak rate. We'll use that to help set the system up when we return to operation.

The last slide I'm going to talk about is a schematic of how the system is laid out. As I mentioned, there is three cabinets, two of those will be mounted inside containment. Those cabinets are connected by tubing to the sensors that are mounted underneath the reactor vessel, as well to the sensory tube that is going to be mounted in the cavity area.

How the system works is periodically dry air is purged into the tubing, forcing out the air that's been in the tubing. As that air is forced out, it's forced through a humidity detector, which calculates and produces a humidity profile of the air as it returns.

At the beginning of the curve cycle, the system injects a known humidity spike, called a test spike. That's used for two reasons. One is it helps calibrate the system when it sees it on its return, it knows what that spike is. It also tells it when the first cycle is over.

What we'll be able to do with these humidity profiles, once we establish a known profile, what would

happen is, if you got a leak in the area that you're monitoring, obviously the humidity and moisture content is going to change, it's going to become much higher. That will be reflected by the humidity profile increasing with time.

One of the things we'll do with the information we'll get from our threshold test is calibrate how that humidity profile change, or given the leak rates we're going to simulate during our test, we use that information to set up alarm set points. So, if we were to get a leak in the area at a known leak rate and a known humidity threshold, we would get a LOCA alarm that we can take action on.

The other cabinet that will actually monitor and track and be able to trend the humidity profiles, we mounted outside of containment and they're only accessible to our personnel.

MR. GROBE: Does this give you the capability to identify which of these sensor elements, since it's purged over time and you have this spike; can you tell which sensor element is detecting the higher humidity?

MR. HENGGE: We're going to determine that. Dependent on how you set up the first times. If you have the first times fairly close together,

it does give you the accuracy where you can really pick up which individual sensors, but you lose some sensitivity by increasing that.

We're more interested from a sensitivity standpoint on going to the longer purge time to detect any leakage, much less than, more so than we are interested in which sensor is picking it up. But the difference, we would be able to sense a difference between what we're seeing underneath the vessel and what the RST, the Root Sensor Tube will be detecting. We built that in, because we put a delay coil between the two sensors.

MR. THOMAS: Did I understand you correctly when you said this system wouldn't be on line and calibrated during, for service during the NOP and NOT Test, that you're actually calibrating it during that time; is that correct?

MR. HENGGE: Correct.

MR. PASSEHL: At the time of plant restart, will you have the alarm functions working and the indications in the control room that you would normally expect to have, or once the system is up and running?

MR. HENGGE: We'll have procedures in place for the system, we'll have alarms set. We will not have an individual alarm in the control room.

Right now, we're looking at a computer alarm that would be available in the control room.

MR. PASSEHL: And will the profiles, will they be available like on the plant process computer or how eventually will you have that?

MR. HENGGE: Profiles will be locally generated on the computer in the process cabinet that we can retrieve locally at that computer. I'm not sure if the system is capable of generating that on our process computer. That's something we'll be looking at.

MR. PASSEHL: Thank you.

MR. HENGGE: Any other questions? Thank you.

MR. MYERS: Okay. I would like to take a few moments to discuss a new Nuclear Operating Procedure that we are using to provide a systematic approach to addressing our station issues.

This particular procedure has been effectively implemented at our other two plants. And, if we had had the system, this process in place here several years ago, I think our approach to asking questions, harder questions on the Boron that we found on the reactor head, we might not be here today.

The problem solving and decision-making procedure was already effectively implemented, once again, at our

Perry and Beaver Valley plants. And when we developed it, we used the best industry experience that we could find to develop this procedure.

Let's take a few moments to discuss the purpose. The purpose is to ensure the plant issues are addressed consistently and effectively without consequences to plant safety or reliability.

Now, what does that mean? We do a lot of troubleshooting on the plant while it's running. And understanding what we're doing in preventing errors is very important. That's what that's about.

We, the purpose is to evaluate the significance of the issue and the potential impact on nuclear safety. What you see is, we'll take each issue and categorize it, and finally to determine the level of management approval based on the significance of the issue.

Next slide.

As you remember, we defined Nuclear Safety Culture as characteristics and attitudes that ensure that the organization and the people provide the correct attention to safety-related activities. Pretty important, both the organization and the people.

In this procedure, we characterize issues as either low, medium or high significance. A low significance issue has the following attributes. No personnel or radiological

issue should be present. Not likely to cause damage to plant and components or systems while we're doing our troubleshooting or testing. Not likely to effect the operations of the plant or an increase in the probalistic safety assessment, risk assessment, if you will.

Medium significance, next slide.

Now we're going a little more towards the safety issues. There is a potential for personnel or radiological concerns here. Without controls, one could cause damage to plant equipment; without controls. That's not unusual for us to be troubleshooting what would cause a reactor trip or something like that. Controls required to prevent undesirable change of state of components -- no plant transients. When we're troubleshooting, out doing tests, we should prevent plant transients. Often put jumpers in, pumping water to different locations. So, that's a question we have to ask. And finally, reevaluation of the risk associated with the activity.

High significance activity is one that could cause damage to critical plant equipment, or could result in either personnel or radiological safety issues. Then finally, without proper controls, will not result in reactor changes, generation or runback, runbacks of power. So, you have to have those controls in place.

Next slide.

The pride of this process is that we form a team each and every time when issues arise with our best people to work through the six principles shown on this slide to make, and then finally to make recommendations to our managers or our senior managers, management team, if you will, based on the significance.

Now we recently used this several times. We have consistently used the process over the past several weeks in addressing the issues; for example, the high head safety injection pump or the leak that we had. We had a leak on one of the nuclear instrument tubes prior to flood up. And then finally that was an option; we formed a team when we removed the upper plenum that I talked about earlier.

So, once again, this is a new FENOC procedure that we have in place. It's a Nuclear Operating Procedure. It's important that we demonstrate that we take this, this approach as part of our Safety Culture. Each and every time we have plant issues, we use this procedure religiously. That's the reason I wanted to talk about it today. Thank you.

MR. GROBE: It sometimes is hard for folks to understand the importance of something like this. I think your initial comments regarding Safety Culture were very appropriate.

Good people can make bad decisions because they

didn't carefully approach the process of making decisions. I haven't seen many procedures like this in the past, but I think it's very important that you put something like this in place and it just is a continual reminder of the importance of discipline in decision-making for a high risk activity like nuclear power plant operation.

MR. MYERS: Even on something like, you know, the Boron on the head, I think if we went through a thorough process of asking all the hard questions, we would have come up with a conclusion that may not have come from the managers. So, probably would have taken a different approach than what we did and may not be here today.

So, I agree with you, from a Safety Culture standpoint, demonstrating and using this approach consistently every time is an important step. Thank you.

MR. GROBE: Any other questions?

Craig, I thought of a question. I apologize for coming back to you while Lew was talking, not that I wasn't listening, Lew.

I don't recall a discussion of using chemical wipes after the NOP/NOT Test. Is it your plan now to use chemical wipes as well as visual inspection following that test?

MR. HENGGE: Yeah. Very good

point. One of the issues that I have approached with Framatone, one of the concerns I had was the amount of residue we expect to see could be very small, and we know when we were doing our vessel cleaning activities, pressure washing, that we probably managed to pack some of those old deposits up into the crevice area. And when we heat the plant up and have our Mode 3 test, go through thermal cycle, some vibration, we expect to see all those nozzles; some of that debris is going to come back out and end up on the tubes.

We want to be able to differentiate that stuff from something that might be indicative of a real active leak. What we're going to use is the results from these lithium concentrations to accomplish that.

Before we do the Mode 3 test, we're going to go down to a number of tubes and actually take some wipe samples from the surface of the vessel and the tube, use that as our baseline, and we'll repeat that on those same suspect tubes, as well as any others, and use those results to verify whether any deposits that we see are indeed old or new.

MR. GROBE: Okay, very good. Thank you.

MS. FEHR: Good afternoon. I'll start out by introducing myself. My name is Kathy

Fehr, and I've been out at Davis-Besse since 1986, and I'm the Observation Program Owner at Davis-Besse.

I have my Associate's Degree in Nuclear Power. I have a Bachelor's Degree in Business Management. And I'm currently working on my MBA.

I've had various positions at Davis-Besse since I've started out there. I have worked in Emergency Preparedness; I have worked in Engineering, Operations and Performance Improvement.

I've been working on the Observation Program for over two years at Davis-Besse. It's a FENOC program. And we have the program implemented at all three sites, all three FENOC sites. We implemented the program at Davis-Besse in September of 2002.

The purpose of the Observation Program is to provide management oversight on activities and influence desired behaviors.

What I wanted to do is go over some of the categories that we have on the Observation Program, some of the, or some of the answers when they are out observing. Some of them will have satisfactory -- we have satisfactory coached, unsatisfactory coached and satisfactory.

The satisfactory means the observer saw conditions that meets or exceeds expectations and no comments were

made by the observer.

The satisfactory coached means it meets or exceeds expectations, but comments were made by the observer; would probably be the positive feedback and interaction with the field.

Unsatisfactory coached is when we provide feedback for areas of improvement and we influence desired behaviors.

And what I'll do is I'll give you a couple of examples of some unsatisfactory coached, so you can see what we see.

One of them, an example of unsat coached would be if an observer was watching a prejob brief and the briefer started the brief without a checklist. We had an observer stop, have them use the checklist, and correct the situation right on the spot.

Another example would be, we had the Operating Experience Program Owner at the, at a prejob brief, and there was no operating experience provided in the work package. That resulted in an unsatisfactory observation.

Another example is when the observer saw a hard, a person working out in the field with his hard hat turned around and his brim was on the opposite side it should have been. The observer stopped him, told him that the FENOC safety manual had him to wear it the proper way. And they

did fix the situation right on the spot.

Another example is we've had an observation where the operator was using slang to identify a component.

We also have an unsat observation that was conducted by Bob Schrauder.

Bob, did you want to talk about CACs?

MR. SCHRAUDER: I had done an observation out in the field on the work in progress on containment air coolers. It was during that observation that we observed plant workers actually climbing on the equipment, which is not acceptable under any condition, but in this particular one, it was particularly troublesome, because the connections from service water to the containment air coolers is a bellows-type arrangement made out of stainless steel. That has very limited capability for flex. It's made to flex, so it can take up thermal expansion on the supply line to it. And it's only rated for about two hundred pounds of pressure on the thing.

The individual climbed and actually stepped right in the center of the bellows, which required a significant amount of preanalysis and in fact some change-out of some of the bellows on the containment air coolers.

In that instance, I was able to bring the gentlemen down off of the cooler. I did query him as to whether they had been sensitized, first of all discussed policy pretty

clear; you don't climb on plant equipment, we use ladders and the like.

Talked to him to see, to get a sense of the workforce as to whether supervision had in fact discussed with him the sensitivity of the equipment that they were installing. Did not gain a sense that they were knowledgeable enough in that area. So, we went forward and talked to the supervisor also, got Design Engineering involved in creating a better installation approach and workability constructability.

So, that's an example of inappropriate actions in the field that we were able to observe and correct.

MS. FEHR: Next slide.

MR. GROBE: Kathy, before you go on. I'm glad you asked Bob to speak, because I had a note that I wanted to ask about containment air cooler work.

So, this program applies to contract workers as well as plant staff; is that correct?

MS. FEHR: They are not using it right now, the Observation Program.

MR. SCHRAUDER: But we do observe --

MS. FEHR: We observe contractors. We observe everybody.

MR. GROBE: All right. The contract organizations are not required to use it, but you use it.

MS. FEHR: Correct.

MR. GROBE: You've had a number of challenges with the containment air cooler work over the last several weeks at least. I was wondering if maybe you could comment on that a little bit, and comment on the effectiveness of this program in that context.

MS. FEHR: I have an observation that was conducted by the Human Performance Advocate too on the cast. And, I brought it with me.

And this happened on 2-4-03. And part of his observation, I won't go through the whole thing, but he said the copper fins on the new cooling coils have been dinged, and they appeared, or appeared over the last couple days.

So, what they did right away, immediately they roped off the situation, and that way it wouldn't, people couldn't get in there. Then they hung sound proofing blankets around all four walls of the CACs, so those are, that's an example of what they did with the CACs.

MR. GROBE: What I was trying to get at was a little more comprehensive. There has been a continuing challenge with quality of work on the

containment air coolers, and I was wondering how the feedback process or the Management Observation Program feeds into a broader assessment that would get at this kind of an issue?

MR. MYERS: Yeah, we've seen several workmanship problems, problems with maintainability. I mentioned that on the, on the, what we call the Service Trees; the connections, waterline connections, which we're building in the field. And that's basically with our contract vendor.

What we've done since that time, we collected all those issues, sat down with Engineering already, looked at the Lessons Learned, for the next two we're installing.

Where there are some changes in the way we're going to build stuff in the field. There is also changes in the way we'll pressurize the system. We went out pressurizing the system after putting everything in place the last time. We're going to be pressurizing sections this time as we build it, to make sure it's leak free as we build it.

Also there is some questions about maintainability with the Service Tree Structure. What I say was, the Engineering Department really did a good job building it robustly, because it could never be moved, you know, the first one. So, it must be robust.

So, we probably don't want that, so they're going

back and looking at how to make a bolted change down below that allows you to move the structure out of place in case you ever want to go pull a cooler or something like that.

So, we have collected those issues. I've already had one meeting on how we go forward here on the next two, and we'll see if we can't improve the performance there.

Okay.

MR. DUNN: Jack, I can speak a little about that from the work implementation. Part of what we learned from the Lessons Learned, we also utilized the problem solving decision-making tool when we captured up those observations and Lessons Learned to collectively look at that. And, as Lew mentioned, we have some constructability items where the design is good to respond to the post accident conditions necessary, but how constructable is that and how maintainable is that were some of the challenges.

What we found was some improvement opportunities and the methodology in which we do the installation. So, we're changing our methodologies for installation. We also had and instituted stop work activity on the actual conduct of the containment air cooler service water pipe side, got the craftsman involved with that problem solving decision-making team. So, actual participation of the craftsmen, so that they could provide their input as to

what the corrective measures going forward are.

Many times we pull the engineers together and come up with a solution as to how the craftsmen can do work better, and failed to bring those folks into, bring the customer, if you will, into the participation role.

So, this instance, we definitely made sure we accomplished that and came up with a collective corrective measures which involve both how we want to do the installation in the field and how the design will be conducted, so that the workers have a more simpler installation technique.

MR. GROBE: Okay, thanks Greg.

MR. MYERS: I knew he would give better answers than I do.

MS. FEHR: Another thing we do for the Observation Program is we have focus areas and that's in scheduled observations, and I'll get to that in the next slide.

This slide represents the February results for the observation program, who is doing observations by title. You can see The VP/Director level did 7 percent of the observations. The Manager/Shift Manager did 18 percent of the observations. Superintendent was 11 percent of the observations. Supervisors, 49 percent of the

observations. And the Other is 15 percent of the observations.

The Other would be Project Managers, or visiting people from the other sites, or maybe the Human Performance Advocates and stuff like that.

Next slide.

The next slide talks just in general what the total observations we had this month was 350 observations. Scheduled observations for February was 90 percent average participation, and that's the same as what we had in January.

Some examples of the scheduled observations that we do. We do them on a weekly basis. We -- I'll call the Human Performance Advocate. I'll talk to people in the field, find out focus areas we need to concentrate on for the following week. I'll then schedule the observations and notify the people that they do have an observation for the next week.

Some of the activities that we have chosen have been the activities that are going out in the field, going on out in the field, relating to the schedule. I schedule Ops hanging and restoring clearances, Ops turnovers. We do containment walkdowns, check for FME. We sit at the entrance of the RRA entrance and make sure people know what they're doing when they go in there and they're sure of

themselves. Check for housekeeping, safety in PPE. We do scaffolding checks. We do about any kind of observation, what the focus area maybe for the next week.

We also have special activities that are scheduled by Project Managers, which we've done, and use the Observation Program; and three examples of that would be the deep drain valve work, we've scheduled critical path activities, and we've also scheduled observations for fuel movement.

The next slide talks about the Condition Reports that we have. This is a live data base, so the numbers do change a little bit, but 6.21 percent of the February observations generated Condition Reports. I believe that number is up just a little bit right now.

The number is up from the January observations. And, actually on a year-to-date total, we have, I think it was 92 observations created; they generated CRs from observations.

Okay. The next slide talks about the coaching, and that's what I described earlier with the definitions. February we had 12.2 percent coaching, 9.4 was satisfactory coached and 2.8 was unsatisfactory coached. And the numbers there are for January, so you can see the comparison. We had 10.9 percent overall coached in January.

What I wanted to talk about too was some strengths and weaknesses that we have in the program and I brought some observations along too, to read some of them to you.

The biggest weakness that I see right now in the observations is the housekeeping in containment. And I have a couple examples of some observations from people that went into containment. I was going to tell you what they found and what they did about it.

The first example I have is a shift manager went out and conducted a paired observation with a couple of other people in Ops. And they found that the conditions were unacceptable. And they added the containment sump and the 565 level inspections back on to the Mode 6 restraint list.

Another example is a superintendent in Ops was out doing a safety and PPE usage in containment observation. He found debris, such as tie wraps, loops plastic, tape, et cetera, and they were removed from the 565 level. So, what he did about it was he contacted the project manager, and they drafted up a paper; it was a position paper; on what conditions are acceptable.

And he wrote this position paper and it describes, like I said, the acceptable conditions and it also has a handout to it. They gave this handout at turnover and they gave it to all the containment managers. So, this is a

sheet of paper that they are using. It's a summary of what is acceptable and what is not acceptable.

MR. THOMAS: Kathy, you're discussing housekeeping issues and lower level of containment. Maybe someone could describe why that's important, based on your present plant conditions. I don't know if that's clear why those are important issues.

MR. POWERS: Housekeeping is important down there, Scott, because we've got our containment emergency sump construction complete to the point where the upper portions of the sump is available to the systems, and we utilize that sump as part of our defense in depth for shutdown risk.

It's a piece of the equipment of the plant that we want to make sure is available to us, should we need it from a shutdown risk perspective. So, we keep the areas clean, so that the sump remains available and wouldn't be clogged by any potential construction debris.

MR. THOMAS: Thank you.

MS. FEHR: Another one of the observations that I brought along was, a manager was out in containment and they were surprised that the lack of supervision around the RRA area. So, what I did was scheduled observations and I had people sit out there for, I think it was, I think I scheduled five observations that

week for that.

And one of the people did an observation. He went out there for six days and sat at the entrance of the RRA. And he sent in an observation with his statistics on what he found.

He said he saw 34 people entering the RRA and 53 exit. And the bottom line was, two persons were turned back to their supervisors due to inadequate understanding of work scope.

So, the weaknesses are being found out in the plant and there is on the spot correction of the problems.

Some of the strengths that I found is a lot of teamwork going on. This is, this is what I see of the observers writing about the observees. They see a lot of teamwork going on in the plant. I have a few observations here to give you examples of when they were, I think this was maintenance, they were lifting some barriers, and they wrote in their observation; they stopped and they went to get engineering assistance, so they could ask what size pipe to use.

I have an example of another person who was told that they needed to get engineering involved in the walkdown, along with RP, so they all agreed on how the situation would be done to begin with, at the beginning of the, at the beginning of the project.

I have another observation, and the activity was unplugged drain lines in the collection box. This observer mentioned notifying chemistry, RP was notified to take readings, and they stopped and they contacted Ops to make sure the flow was reestablished. And the strengths that this person did identify was teamwork and support from other groups. So, the groups are working together out there. We're seeing that in the observations.

Another example of teamwork was a core support assembly, when it was moved from the deep end of the refueling canal to the reactor vessel, this observer noticed great teamwork by FTI, and, which is Framatone and RP.

The other strength that I find in this program is, I can see a lot of what the observers, which is what management is doing out there within the field, and how they're reacting to what they're finding. The things I find is they're doing follow-up observations with what they're finding. They're going out there correcting on the spot. They're writing CRs. And, I have a couple of them just from this past month where they would go out a couple days later and they would find out if the situation was still occurring.

I have that, some examples of a superintendent of Ops that did that. He was out watching fuel handling in

containment in the spent fuel pool. He noticed the self-checking for the containment side operator of the transfer mechanism; they didn't stop; they didn't pause before their peer check.

So, this observer went out and he went over and he checked both sides of the spent fuel pool and the other operators out there to see if this was common; if they all knew this was just a problem. He found out it was just a problem with the one operator. What he did was he discussed it, discussed it from becoming complaisant and standards for self-check. That's what he discussed with them.

Then I noticed a couple days -- it was the following day, he went out and did an observation on self-checks just to make sure it was satisfactory.

So, I have some more examples of the follow-up that the managers are doing. Here's one from a person. I love these.

He was doing an observation of a prejob brief. And, what he did was -- I'll read it to you. The prejob brief form was completed and the work order package. The prejob brief form was not signed by both technicians on the job; however, both technicians stated that they attended the prejob brief. So, this observer questioned the technicians to determine if they were properly briefed; and he

determined that they were, but he questioned them for follow-up.

So, in conclusion, I think the Management Observation Program has had some positive, positive effects on what we're finding in the people at Davis-Besse. I do believe there is room for improvement with the situation with housekeeping in containment. That's why we do the scheduled observations.

Did you want to add anything to it, Lew?

MR. MYERS: I think, I just think it's, in September at these meetings you kept asking us, you know, what are you seeing; what are you getting out of the program. It was new and we had a little trouble, difficulty answering that. But I think today our data base is much improved, and we can tell you what we're finding, and I think we demonstrated that. So, that was the intent here.

MR. GROBE: Okay. Questions?

MR. DEAN: I have a couple questions. One is, you know, in your slide where you have the observation percentage by title. You have varying levels within the organization that are out there doing observations.

How do you assure that there is some consistency in the way these managers look at what it is they're looking

at in the field? Is there something to find that they can refer to for expectations in particular, work activity that they're looking at, or are they just out there kind of winging it in terms of...

MS. FEHR: We have set questions on the cards in which they answer. They all read the field observation card or the Ops observation card or the training observation card.

MR. DEAN: So, you've got several categories, so that gives you kind of a checklist approach.

MS. FEHR: Correct. We go from prejob -- there is probably two hundred questions on each one of the cards, and they go from prejob briefs to housekeeping to safety to FME. There is a lot of questions on those.

MR. DEAN: Second question I have is, obviously, a program like this sets itself up for collecting all sorts of data, you talk about percentages of this, coached, uncoached, so on and so forth.

Have you set some goals or expectations of the program itself that you would consider to be valuable measures? Like, for example, you talked about 90 percent were done as scheduled. I mean, do you have some goals that you have for yourself in terms of things like that?

MS. FEHR: We do have goals for the scheduled observations, which is 90 percent or better. We also have a goal for coaching within FENOC; and we go with ten percent or better is what we're looking for with coaching. And that's all interaction with the field.

MR. DEAN: And then the last question is really one maybe more for Bill, is obviously, you talk about generating CRs out of this, which is good. You want to see these types of things, feed them to the Corrective Action System.

Bill, in the observations of your organization, do you see some sort of congruence here in the types of observations that you have had from your people in terms of in-field observations and the types of things that are coming out of this program?

MR. PEARCE: Yes, we do and I'll go through some of these in just a moment when I talk.

MR. DEAN: Good, thank you.

MR. SCHRAUDER: I think the challenge for us going forward, we are doing observations. We are doing better, but a lot of us aren't as trained. That's not been our forte of doing focused observations. Organizations like ~~INPO~~ INPO, the NRC, their inspectors or their observers seem to have their skills honed much better than

we do. So, we're looking at methods to hone our skills in the art, if you will, of observation.

Some of the things will jump out at you. Like a guy standing on a CAC, it's not too difficult to figure out that's probably not the right thing to do, but there are some other subtle types of things that can come out of field observations and stuff; and that's where we have to hone our skills a little bit better.

MR. GROBE: Feed them raw meat. (laughter)

A couple of questions, you sort of by percentage have who is doing the observations. Do you also have the capability to sort by departments or functions or work groups?

MS. FEHR: Yeah, we have that, that's a candid report. Some of the reports that are in the program right now are available by anybody who uses this program. And they can just, any time, at any time and place, they can get these reports of the departments.

MR. GROBE: And can you do that both on the who is doing the observing as well as what the outcomes are?

MS. FEHR: Correct, we can check the observee and we can have the departments check on what people are finding about their departments.

MR. GROBE: Do you produce a a periodic report of some nature that you provide?

MS. FEHR: I don't currently right now. What I do, is the managers go over it weekly or monthly with their people and their departments, and they discuss their findings. I know maintenance and I know operations go over weekly and they go over them.

MR. GROBE: If you could just pull together a set of the various standard reports that you have, pages, I would like to see those at some time.

MS. FEHR: Okay.

MR. GROBE: Thanks.

I think it's one of the observations that you highlighted, the individual used the word complacency, and I think that's real important. I hope folks aren't taking these numbers and trying to say, you know, 2.8 unsatisfactory coached is not good, and 2.7 is good, because I think that's, that's kind of silly. As soon as you stop looking to improve, that's when you start declining in performance. And it's very important to have coaching in the field.

So, we've just got to be a little careful with some of these numbers, I want to make sure we don't inappropriately use them.

Any other questions?

MR. THOMAS: I have one more question. The discussion about the CACs, I was looking through the program and I didn't see a better place to ask it, so I'm going to ask it here.

Specifically, with the service water tree installation, and with a lot of your other projects that are ongoing, you've used the at risk change process, significantly, ~~due~~ to a large extent. You used it liberally, I guess. Specifically, with the CAC service water tree installation work, and you can expand to other projects if you like in your answer, have you seen that that's, the use of that process has caused any challenges?

MR. POWERS: I would say, what we're talking about, what Scott is alluding to on the at risk change; it's an engineering work release to the field that is, it's like a preliminary engineering design. We haven't completed all the details of the full package yet, but it's been worked enough that we feel comfortable that we can release work and begin working in the field, and if we find any changes that need to be made as we finish up the formal package, then we have to suffer the cost of rework, but there is no nuclear safety or industrial safety risks associated with it. If there is a risk, commercial risk is what we're talking about.

But, yes, the CAC service water distribution trees

have been the most significant issue that we've had with our process for work release to the field. The expedited process under the at risk has not had the level of interaction with the installers, the field craft and supervision, as well as what we found recently in evaluating this, the plant engineers and operators or others that we need to engage in this process.

And so, we found some good lessons learned with that process with the CAC trees, but we haven't seen that level of issue in many other projects that we've had. This one has given us an opportunity to improve in those areas.

MR. MYERS: Let me answer that question too. The answer is yes.

MR. GROBE: That's a very interesting question. I appreciate that, Scott. Let me take it a little further, if I could.

You had a number of observations in the containment air cooler design issues that might have to do with interface between design and system engineering, interface between design and maintenance, interface between design and operations. Was that process less effective because you were using the at risk modification approach, or did those reviews occur before the installation began?

MR. POWERS: In the case of the CAC trees, the process was less effective with the at risk

change. So, the answer again is yes, there was some issues there that needed process.

MR. GROBE: I need a little more of an answer there. When you do an at risk mod, you're doing at risk because you don't have all the design work done, but has op -- are you doing that modification before you've integrated the insights from Operations, Maintenance and Plant Engineering?

MR. POWERS: In some cases, yes, Jack.

MR. GROBE: So, you really have some substantial financial commitment before Ops, Maintenance and Plant Engineering get involved.

MR. POWERS: That's right. And in cases such as the emergency sump or the decay valve tank, now that we've lined, it's a static structural component and there is not a lot of input in terms of Operations and Plant Engineering and such.

For the CAC tree, it was a rather special case in terms of the long term inspectability in taking those CAC trees off. And what we found was, it was really found in the field once the craft began working with the ~~fellows~~ bellows trying to maintain alignment and control the welding distortion, welding up the stainless steel work piping connections. That began to become apparent that

disassembling that and controlling that alignment would be, would have some difficulty. So, that's what arose on that particular issue.

MR. MYERS: If you go back and you look at the entire outage, you know, typically, outage you would build your modifications months and months and months before you come down, order all your parts, do your feasibility reviews up front, all your walkdowns and everything else. We're doing a lot of discovery and we're building the ice while we're here. So, that's driving some of the at risk changes.

But, even early on, if you think back, you know, we're cutting the containment. We had some issues with some modifications. We had some issues, installation of the head. Had the crane issues, you know. That was an at risk mod. You know, it is not a, this is not a typical outage. This is not a situation that I think is the best way to do modifications. That's where we're at.

MR. GROBE: Sure. It's important to understand that. That this outage is not a normal outage, and these modification approaches are not what you would normally expect to occur, but it's, you still have quite a few modifications out there, that you're installing under this at risk program. Have you gone back to look at those, as to whether or not there might have

been some, there might be some additional benefit with respect to Operations and Maintenance in particular, Plant Engineering?

MR. POWERS: We'll be doing that. The issue on the CAC has really come up over the past several weeks, I would characterize it. This interface has become evident we need to do it. So, yes, there is cases we need to go and look and see if there is better interface needs to occur up front.

MR. GROBE: Okay, good. Thank you.

MR. PASSEHL: Okay. I think we'll, if it's okay, have one more presenter, Bill Pearce, and then we'll take a short break. So, go ahead, Bill.

MR. PEARCE: Okay. I want to talk about three subjects today. First one I want to talk about is Safety Culture Survey. And, as you remember, this is an independent assessment that's being coordinated by Fred Giese out of our Human Resources Organization in Akron. So, what I'm going to read is his statement where we are on this assessment.

Doctor Sonja Haber and her team have completed the on-site portion of the Davis-Besse Culture Assessment. And the activities that are completed are they interviewed approximately 90 FENOC employees. These included Senior

Management Team, FirstEnergy corporate executives, all Davis-Besse site managers, and representatives from various job titles and organizational elements throughout the plant.

The second part of that was they observed, her team observed a number of normal plant activities, including morning and evening meetings, control room turnovers, manager meetings, prejob briefs, planning meetings and restart readiness meeting.

In addition, they conducted a pencil and paper survey, which included approximately 80 percent of the site employees, the permanent employees. That's approximately 661 of 830 employees that actually filled out the survey.

Doctor Haber and her team are currently analyzing the information they gathered in those activities. And, as you remember, they do a process they call Convergent Validity. That's where they bring all those elements together and come to conclusions how they may relate to the culture, the safety culture aspects of the plant.

So, that's what they're in the process of now doing; and we expect that we'll get some initial results in the next several weeks. And, that's really the status of just to give you, because I know everyone has a lot of interest, as we do, to get that back.

The next subject --

MR. GROBE: Bill, before you go on, just a couple of questions in that area.

Lew, I know that this assessment that's being done by Doctor Haber is very important, but it's important to keep it in context. And, prior to entering Mode 6, you folks did your own assessment of where you were, using your model, and I think that was the first time you tried to use it. And, you presented that last month, I believe.

MR. MYERS: Correct.

MR. GROBE: Lew, I know that you sent out the first formal procedure for going through that process, and you're going to use it again next week. Then, I think, I understand that after that, you're going to revise the procedure appropriately after running it through its paces and then submit it on the docket; is that correct?

MR. MYERS: That's correct.

MR. GROBE: Okay, good.

And Doctor Haber's work is somewhat of an independent check, not, it's important to make sure that folks understand, it's not a go-no go. It's not a light switch, yes or no. That it's going to provide insights and inputs to further enhance the broader assessment tool that you're going to be using on a regular basis going forward.

That being said, it's also very important though

that Doctor Haber's work be completely independent so that her observations have validity and haven't been influenced by your processes and activities.

Could you talk a little about the process and how she's going to, how there is going to be independence maintained through the process. I don't know if that's a fair question for you, Bill?

MR. MYERS: I can't talk about it, because I don't know.

MR. PEARCE: We can say some things about it. I think what you may be referring to, is when we do get the initial report back, the NRC and site management will view that report simultaneously, even the initial report. The first time we see it, the NRC will be involved. We've made that agreement, so that we make sure that it is done independently, and it doesn't get, we don't have undue influence on it. I think that's probably what you're asking for.

MR. GROBE: Yeah, that's good. I appreciate that, Bill.

MR. MYERS: Let me add. We went out and developed our process. We think it's a good model. We shared that with you. It gives some framework. But the last thing, from my perspective, you know, the reason we put it up for the human employee development

organization, was because from a leadership in action standpoint, that's how we use our training program, to develop our managers, supervisors, that's where it's owned at; they're doing the core sponsors for that.

So, the last thing from my perspective anyway, sitting here, I can tell you I've been interviewed. Other than that, I have had no contact with Doctor Haber since she left the site. Other than being interviewed and taking the, looking at the survey that we did, that's, it's completely independent. And, it will stay that way.

MR. GROBE: Okay, good.

Bill, you mentioned something that's important. Doctor Haber is going to provide you a written draft. And myself and Christine and probably ~~Jeff~~ Geoff Wright, our team leader for that inspection will be there to hear her presentation.

Do you know if, have you considered whether that written draft report will be an attachment to the final report, so that if there is any changes in the interpretation or conclusions that that can be clearly understood?

MR. PEARCE: Jack, we don't know. We haven't seen it. We need to see it and understand, when we've got it, we can talk about that at the time.

MR. GROBE: Maybe you can mention that to Fred and he can give me a call.

MR. PEARCE: Okay.

MR. GROBE: Credibility on this is very important.

MR. PEARCE: Absolutely, we agree with that.

MR. GROBE: You folks lost some credibility over the last few years and so has the NRC.

MR. PEARCE: Yeah, and you know, one of the things that's really important to us, I think, is the congruence between what she comes up with and how we've evaluated ourselves. We really are anxious to see that, to see where that congruence is; not so much to try to change it, but to understand are we looking at ourselves properly in using the tool that we're using. That's what we want to try to validate. That's what's really important, I think.

MR. GROBE: Yep, I agree. If you could mention that to Fred then.

MR. PEARCE: I certainly will, I'll be glad to do that.

Okay, the next subject I would like to talk about is Safety Conscious Work Environment Survey. We've talked

about this on several occasions. I know, Jack, you had some interest in when we were going to do the next survey. As I told you in previous meetings, we intended to do the survey after we did the heat up and cool down. That's moved out some now, and it's gone further than we thought it was going to go a couple of months ago.

So, we've decided to go ahead and do one now, because we want to get one periodically and have the opportunity to do yet another maybe sometime near the time we restart.

So, you know, our Safety Conscious Work Environment Action Plan provides for periodic surveys and the next one, as I said, is going to be on March 24th. The survey will consist of 30 questions. The majority of the questions will be the same as the August of 2002, and the January 2000, and November of 1999 surveys.

Another point about the survey we're going to do, is all the 21 questions that are in the standard industry document will be included in that survey. So, it will have all the standard questions. And, in addition, we're going to add some questions, nine more questions to that survey, surround, that surround some specific issues that we seem to try to get some more insight into the Safety Conscious Work Environment.

The rating scale will be the same as the previous

survey. And it's to be a pen and pencil, or pencil and paper method. The same as the survey that was just done on the Safety Culture. In fact, we're going to use a similar methodology, because we got a lot of good participation in the Safety Culture survey. So, we would like to use that same methodology, how to set up people that they can take it, that kind of thing, is what we're going to do on the 24th.

Of course, it will be anonymous. It's voluntary, but we do encourage all, all our site employees to participate.

You got any questions about that? We're going out of that subject now.

MR. GROBE: No. Great.

MR. PEARCE: Okay. The next thing I want to talk about is Quality Assurance. And, as you know, we committed to do a Quality Assurance Program Review, I think it was last October. And so, we started doing that review, and it started on November 1st of 2002. And, we brought a team of people, expert in this area, and we wanted to look at our program, and determine, you know, what are the, make sure we had everything in it that the best programs in the country have.

So, we found some improvements we could make in the area of implementation of commitments, audit checklists,

use of operating experience and auditing, training, qualification of auditors, escalation of inadequate actions to audit findings, and interference interface issues with American Society of Mechanical Engineers QA Program were areas that we found we could do some improvement with.

It was initially completed and went before the Program Review Board on February 10. When we got it before the Program Review Board, they thought we, that we hadn't focused enough on the ASME, or the American Society of Mechanical Engineers QA Audit Program. We didn't have enough focus in that issue.

We went back and revisited that area again. We completed that re-review. And it went to the board again yesterday. And of course, I haven't got the update in here, but I'll tell you the update. The update is, it went successfully through the board yesterday. Not saying it didn't have any comments. It did have some comments to it. And Thursday, it is expected that we'll get the final review of that Thursday morning. That's the status of that.

Lastly, I would like to talk about a few things that Quality Assurance has seen, what we've looked at. We've done oversight of the new reactor head. And you asked about the, in fact, you led in quite nicely with the At Risk Program. Of course, it all has to come together at

the end with a modification package, so it doesn't miss any of the steps.

We've been reviewing that with the new reactor head. What we found as the package was put back together, there were some, we did have some issues of process. They were, they were fairly minor in my opinion. I looked at them.

There is a small amount of work remaining, which is installing the seismic plates on the top of the drive for the control rods, and post insulation testing, which is part of the pressure tests of the reactor vessel that we'll be doing later on. So, that remains to be done.

Restart Station Review Board Oversight. We believe that conservative decisions are being made during that board, and good safety culture discussions are being done in our observations. No major issues. We do see a few minor things, which we gave feedback on or wrote CRs as appropriate.

Another area I would like to talk about is fuel handling. Lew talked earlier about a, about the fuel handling that was being done. And, in fact, we loaded the core. And I would like to talk about that a minute.

As you know, we had a stop work on fuel handling, and it was about what Lew talked about, about some of the design issues and we'd done some minor damage to some of

the fuel in the past. And we lifted that. And we lifted that stop work before we loaded fuel.

What we lifted it on was these four issues. We reindexed the spent fuel racks to have more precise indexing to make sure that we didn't have any interaction between the fuel grids and these fuel racks.

Fuel assemblies were required to be moved in slow speed in the refueling equipment throughout. That was a change to the process.

The core reload sequence was designed to maximize open water moves and minimize potential for unnecessary fuel assembly interaction. So, consciously, we're trying to make sure we didn't have those interactions that we did have one of.

And most fuel assemblies would be loaded with a, into the core with what's called an open water move, but we have a device where we can actually move it around, and make sure that it moves exactly in the right spot and is not subject to interaction between the grid.

So, those were the corrective actions that were put in place, as a result of our stop work. And we lifted the stop work. And then I think we had a fairly successful core load.

One of the things I would like to say on the positive side, is Lew talked about the fact that the core

support assembly was removed from the reactor. We oversaw that activity, trying to clean, make sure that the reactor vessel, the entire internal of the reactor vessel were clean.

The station spent a lot of effort trying to clean with a core support assembly in place, and, in fact, they did remove a lot of minor material from the reactor. And, I really believe that they could have evaluated the condition that it was in to be okay, and justified that it was all right to go on. That's what I want to give. I give a lot of negative, I want to give a positive. They actually stopped and took a five day hit in the schedule in order to make sure that the, that the reactor internals and the reactor itself was absolutely clean before we went forward.

So, I saw that as a good thing. I'll go down through a few more issues. The In-Service Inspection, see some implementation issues and Condition Reports we've issued in that area.

And the Quality Control area. We previously rated the Quality Control Department as marginal for the previous quarter, and the issue was lack of use of Corrective Action Program. That just wasn't enough activity, we didn't believe, to, for where it should have been for the type of things we're seeing in the plant. And, since that time, we

saw a marked improvement.

Contractor Control. We still saw issues with Contractor Control. We'll talk about that more in a minute. I think that's been an issue we've had ongoing, and we continue to have, and we're trying to provide a lot of oversight in that area.

We did a, an assessment of Safety Culture, an independent assessment that we did ourselves in QA. And, we didn't -- and I think we talked about it, I don't remember if we talked about it at the last meeting or the last public meeting, but we assessed about ten percent of the site population, and we looked at Safety Conscious Work Environment and Safety Culture. And we believe from the assessments we've done previously to this one, that we're seeing an improving trend in what we're getting.

These were all face-to-face interviews and a specific set of questions that were asked, and we think that we're seeing an improving trend in that area.

Corrective Action Program implementation, we're still noting problems with clear and concise corrective actions, and incorporating appropriate level of detail. Traceability, you can look at the condition report always, and we're seeing a lot of them, and there is a few of these that, where we'll see the condition report and the issue identified as the corrective action. Actually go back and

fix the problem clearly without having to find out a lot more story besides what's written down. That's one of the major issues.

Last summer, you may be familiar with, we identified a compliance issue in the fabrication code for the feedwater flow modification that needed to be radiographed. Well, the radiograph was performed and identified that three welds needed to be repaired, and that's ongoing as we speak.

And the last thing I wanted to talk about, and this is probably one of the most significant things that I'm concerned with; is we're concerned with the quality of work being performed on mechanical equipment. You said something about several instances of that. What we witnessed is inconsistent results on equipment. And sometimes it comes out pretty good, and other times it doesn't.

We have an issue with that; talked to Lew in depth about that. One of the options we're considering, I'm just telling you we're considering it; one of the things about moving the Quality Control Department back under the Quality Assessment, so we can get more field observation time. We're a limited size group, and to combine those two we get more time in the field in not only the Management Observation Program, but in addition, the Independent

Program to see if we can see what we need to do to improve the quality in that area.

And that's my comments, unless you have any questions.

MR. HOPKINS: I have a quick question. You mentioned the feedwater flow modification. Is that connected to a power upgrade request at all, Jim?

MR. POWERS: That is the caldon, excuse me, Jon, that is the caldon, the install power ~~upgrade~~ uprate request, it's related to that. And these were field weld installations and the MBE interpretation on whether radiography was required on those.

MR. HOPKINS: So, radiography was done on that?

MR. POWERS: Yes.

MR. PEARCE: And the weld that remained, trying to get the radiography rescheduled now after the repair.

MR. HOPKINS: Just, just so you know, we essentially have suspended review of power ~~upgrade~~ uprate at this time. I mean that's coming later, if it happens.

MR. POWERS: Very good. As well with us, that's not our first order of affairs either. So, we'll be in contact when we want to reactivate that.

MR. HOPKINS: Okay.

MR. GROBE: Other questions?

MR. PASSEHL: Okay, let's take a --

MR. GROBE: I was asking for questions from you guys. I have a couple other questions.

MR. PASSEHL: Oh, okay.

MR. GROBE: Bill, on the Quality Audit Program Review, was that a review of both the program and the implementation of the program?

MR. PEARCE: Just a review of the program. It puts the program together in place. Now, we're putting all the actions that came out of that in place is what we're doing now.

MR. GROBE: Okay. Good.

I was looking through a little booklet that you folks have for your Operations Organization. I can't remember what it's called. It's got a yellow cover on it. It has all the procedures and standards and expectations in it. In the org chart in there, I notice that Mike Ross' name was in the Ops Organization. Is he back in the Ops Organization now? I ~~now~~ know that you took him out for awhile.

MR. MYERS: No, he's not back in yet.

MR. GROBE: Okay.

MR. MYERS: But Jack, he's still providing coaching.

MR. GROBE: That really gets to my question. There is a couple of areas that I would appreciate some independent observation from your folks on, thoughts on how you're doing, maybe at our next meeting. One is the area of operations ownership and leadership, and the second is operability evaluations.

And, I thought if Mike was back in Ops, maybe he could provide some input. And Bill, I would put that to you to provide some input, but those are areas where I don't have a good read on how things are going and there has been some issues coming up, and I would like to get a better, we'll be focusing a little bit more in that area, and I would like to get a better sense from you folks in what you think.

MR. PEARCE: We'll try to give you some insight on the next meeting, Jack.

MR. GROBE: Okay, thanks. Thank you, Dave.

MR. PASSEHL: Let's take about -- everyone be back by 4. Thank you.

(Off the record.)

MR. MYERS: We have a couple new players here. Lynn Harder is here to talk about

Containment, and Clark Price will go through our performance indicators later on, so we've done some rotation of people.

MR. PASSEHL: Bob, are you going to talk System Health progress?

MR. SCHRAUDER: Yes.

MR. PASSEHL: Okay. Go ahead.

MR. SCHRAUDER: Thank you.

System Health Progress. We continue to make good progress on answering the questions, the Condition Reports that were generated during the System Health Readiness Reviews, the Latent Issue Reviews, the NRC Inspections and the Safety Function Validation Project.

A lot of the analysis for the operability and functionality of those systems are starting to come back, and looks like we're going to be able to demonstrate for the most part that the systems will and could have performed their intended function.

Not all of the analysis is back and not all of the systems are as far along as others. One notable one that we're, I would say behind schedule on is the Electrical Distribution System, and the calculations for that; they're similar to the water flow calculations with the flow electrons. And so, we're behind on the electrical distribution, but we have some corrective actions in place.

We'll try to get that more organized and completed.

We have scheduled a meeting, I think the meeting is scheduled now. I'm not sure of the date, but I know we're working on scheduling a meeting to go over in more detail all of the design issues that we've identified. But today's meeting topic I want to concentrate on are the topical issue reviews we've done. I would say in adjunct to the Safety Validation Project.

There were five of those topical issues that we had identified. Four of them are through the review process and are ready for Lew's signature. In fact, I believe he signed one of them. The final one, Appendix R - Safe Shutdown Analysis is in what I'm calling the final stages of review, and I expect that will be ready here very soon also.

Just real briefly again, the Collective Significant Reviews, how they came about, we had done the System Health Assurance Plan Reviews and they had identified some potential cross-cutting issues. The initial Collective Significance Review identified five topical areas that warranted further evaluations. They were Seismic Qualification, Station Flooding, High Energy Line Break, Environmental Qualification and Appendix R Safe Shutdown Analysis.

I went over this last meeting very briefly, but we

did institute a NOP, Nuclear Operating Business Practice, for collective significance reviews and had the process we used to evaluate these topical areas. The process was to look at all the Condition Reports, that had been identified, ~~been~~ "bin" in common areas; evaluate each and determine its significance to the program, and then conduct ~~extended~~ extent of condition evaluations where warranted.

We didn't just look at the Condition Reports that were generated as a result of those System Health Readiness Reviews and Latent Issue Reviews, each of the program owners actually went into the ~~CRS~~ CREST Database and searched that database and pulled out and identified Condition Reports that went back to, I believe it was, January of 2001 is what's the ~~CRS~~ CREST Database. So, we went back an additional year and pulled those issues out, and also reviewed those in the Collective Significance Process.

I forgot to ~~mentioned~~ mention as we finished those, I don't know if we forwarded them yet, but we had told Marty Farber that we would send those reports to him as part of his inspection plan on the System Health Building Block.

I'll go through each of these five topical areas. And, again, I want to remind you that when I talk about Appendix R, that that will be preliminary information, but I don't expect it to change significantly in the review process.

What I have done is broken down each one of these categories into actions that we found that we need to take to support restart, and then what I call enhancement items to go forward. I'll talk about how we get out to those actions, what we found, and why that's an action.

So, under the first program or topical area I talked about is the Seismic. Reactions to support that, I would say, evaluate impact of Cooling Tower Makeup Pump not in accordance with the USAR. We found some seismic category one issues on that, where that, the documentation, if you will, the USAR and PID identified that that ~~typing~~ piping, which is in the proximity of the service water pumps, it was supposed to be seismic category one. The Condition Reports said it wasn't; it wasn't installed seismic category one.

So, we did, first of all, we evaluated that Condition Report, applied SQUG methodology and found it would withstand the appropriate response spec for the earthquake.

We did find some improvements that there was a higher than expected stress at the mounting bolts in that pump; that we'll be changing the bolting configuration on that. But as a result of that issue, we did an ~~extended~~ extent of condition review ~~seeing~~ screening, looking at other potential impacts of ~~doable~~ two over one criteria, particularly impacting multiple trains or multiple systems. We did that review and found

no additional problems in that area.

The next one is ~~revolving~~ resolving boundary conflicts between Seismic and Quality classification. That came as a result of a couple Condition Reports that identified what I'll call conflicts that was introduced into the database system where a Q boundary ends, quality boundary ends, but seismic category needs to extend down stream further to an instrument.

We looked at that once before and addressed it pretty well for pressure gauge, but hadn't addressed it I'll say thoroughly enough for other interests. It also may need to perform a pressure retention for seismic readings.

We went through that, looked at ~~extended~~ extent of condition on that one also, identified where those Q boundaries were and what down stream instruments might need to be assessed. We have about two hundred instruments that we have to go back and look at to make sure that the seismic properties and the pressure retained properties of those instruments are appropriate. That activity is in progress.

The next one that was another example we did. HFA relays, that's an issue where very early in the life of the plant, General Electric had sent out a service information letter on these relays identifying that they need to be calibrated.

We didn't get the information from the vendors because we had purchase ours through a third party. That third party did not forward the information to us. We're looking at the process to make sure we plugged that gap, so we get all that information.

We did an ~~extended~~ extent of condition on those HFA relays. Identified there were in fact six of them that we had to calibrate to make sure, these were chattering in the relays, and whether it could prohibit actuation of a safety function that the relay needed to do. We hadn't had any problems with those, but some of those did need calibration that were identified in that service information.

Then, the other ~~extended~~ extent of condition, which is actually part of the Containment Health Walkdown was impact of boric acid on the side supports. We did that and found that was not a problem for us. Each of those had some activity in the containment to work on.

Other improvements we're going to make in seismic going forward is, we'll fix this confusion on the database, Q boundary, and seismic boundary.

Procedural requirements of control of temporary equipment, we found this begin is two of one type of issue; work in progress, we weren't being as diligent as we should have been retaining that two over one criteria. So, we're beefing up procedures in that area, and also for storage of

breakers and the like and their impact on seismic qualification equipment.

And then we're going to pull together all the seismic information programs, procedure to get through that information. And we'll be looking at using the SQUG methodology for new and replacement equipment. So, that's kind of what we found in the seismic area.

There is a lot more details and stuff in the report. We'll give that to you, go over that, and assess the impact of that.

Next area, I have is station flooding. I put that one next, because it really is very closely related to the seismic issue. In fact, you see the very first issue is the same issue I talked about on the Cooling Tower Makeup Pump, which is because the impact is, if that breaks, then you flood the service water, so the same issue becomes a flooding issue also. So, I've already talked about that. I won't go over that again.

There was another Condition Report that questioned the flooding in the service water tunnel. Now, user identified service water tunnel under certain conditions floods. And equipment was evaluated in there. This, originator of this Condition Report questioned two specific valves that were, let's see, I forget what valves they are, but isolation valves for other buildings.

We had to go out and evaluate those specific valves and make sure that they were adequately assessed and that they could perform their function prior to any flooding occurred. And no problems were found in that or any of the other equipment in the service water tunnel that we've already identified that that condition can occur.

And the final thing in there, we did an ~~extended~~ extent of condition on functionality of critical floor drains. We had an issue that came up, identified by a condition report, that specifically addressed the diesel generator and the day tank drains in the room, as to whether a flooding issue occurs, whether the room will drain or not.

We looked at those, and in fact the diesel generator drains were plugged. They needed to be unplugged. Now, the day tank was fine, but we did additional ~~extended~~ extent of condition review ~~or condition~~ on that, particularly concentrating on essential rooms and the cooling water room was one we had to look at; ~~panic~~ mechanical penetration rooms were another.

We found no additional problems. We did water tests on those, and did not find any additional drains plugged. But in the improvements in that one, on the next one, we will implement, we are implementing improving the requirements throughout and will periodically check those floor drains in the process also.

MR. GROBE: That will be part

of your maintenance program?

MR. SCHRAUDER: Yes. That's what I would equate it to. I don't know if it would actually be with pm, but I expect it will be. But maybe some programmatic tie to go out and periodically check for those.

Other improvements; installing these flood seals and conduit penetrations. That issue involved, identifies there were certain conduits penetrating below the station's flood plan. And when they installed the work on the junction box and the like, rubber gasket and seals and stuff, they were found to be acceptable to maintain the water tight enclosure; however, once again, there were no pm's, I'll say, to go out and periodically check that barrier, if you will, which is a flood barrier. And, also that rubber starts aging, you could start getting some leakage.

So, what we decided to do, is to go in and install some flood seals in the conduit itself where you can actually seal where it comes in and not rely on the rubber gasket seal any longer.

Then, one of the other things that came up, we looked at was the, we have a formal inspection program for barriers in the fire protection program. You know, something everybody has you go out and you have a routine

inspection of your barriers. We don't have that formal program aspect of inspecting other barrier like flood barriers and the like. So, we're going to incorporate that as part of our barrier inspection program; where it will be the same type of inspection we do on our independent inspections.

Do you have a question?

MR. GROBE: Yeah, I was just thinking about what you were talking about, in the context of the reactor pressure vessel head. You were probably wondering what kind of activity there is here.

All of the things that you've talked about that you're putting preventative maintenance activities in place, are passive components; floor drains, seals, barriers. And one of the reasons we didn't focus on the reactor head as part of our inspection program is that you focused more on active components that have real significance.

Is there some learning here that there might be other important but passive components that aren't part of your preventative maintenance program? Kind of a wide open question. I don't expect an answer.

MR. SCHRAUDER: I haven't thought of any.

MR. GROBE: I was wondering

if that was something that may be we should take a look at?

MR. SCHRAUDER: Yeah.

MR. GROBE: Okay.

MR. SCHRAUDER: Again, most of these, as we talk about it, are not in the containment building itself, most of these are really in the other buildings; and most of these, there are seismic concerns, obviously, contained in other, these particular ones are not in the containment building itself.

The High Energy Line Break is another one in the Actions to Support Restart. Complete reanalysis of turbine building breaks. And this was, we had already started this in response to Information Notice 2000, 2000 Information Notice Number 1. And so, we need to complete that analysis, and in fact, determinability of analysis will demonstrate a crack or break in a location that we have to further analyze the impact on the feedwater pumps. So, we're looking at that.

The issue there, we have a high energy line, impacts on the environmental qualification of the equipment, whether it can take that. We'll complete that, and any impact on the environmental qualification or any new postulated crack or break in the building as a result of that. We'll get that done and complete prior to restart. Again, I consider that to be an ~~extended~~ extent of condition type of

evaluation.

The next issue on revise calculations effecting line breaks and cracks. We had an issue that came up that identified that we had misapplied a stress factor, revised stress factor. We applied a new stress factor to an old equation, and impacted the calculations. We did an ~~extended~~ extent of condition on that, where we had applied that stress factor. It did impact some calculations. Most of the calculations, it didn't change anything. I mean, it was wrong in the calculation, but it didn't change the outcome, because the old equation still postulated a break or crack in the same location. So, this would still have identified a crack.

But one calculation did show, when we applied the proper stress factor, that we could have a crack in an area that was not previously postulated for it. And it was in an area that we didn't, didn't feel like we, there was too much equipment in there to allow that to happen. The amount of qualification impact would have been pretty significant.

So, we moved where that stress would occur in the system, basically to soften the system a bit and move the stressers out into another location. And that required to replace some rigid supports with snubbers and also to move some other supports to move that stress into a more

palatable location.

Then the other one is in building free space, we found a high energy line barrier, happened to be an elevator door credited as a high energy line break barrier, and the analysis challenged that. We found it -- I forget what we found, whether it was acceptable or not. I believe it was not. It was not acceptable.

We did an ~~extended~~ extent of condition for the rest of the auxiliary building on that; found no other unacceptable barriers in that; but that did lead to another assessment of all the free space volumes and openings in the auxiliary building.

I was told before I did come up here, I did have one lifeline to go out to the audience for additional information. I almost had to use it there.

So, that's, that was what we did in response to high energy line break.

MR. THOMAS: Bob, before we move on, you addressed the Aux feed water pump room. I believe there is also issues of the component cooling water pump room. Are those, has that been resolved or will that be resolved prior to restart?

MR. SCHRAUDER: There is issues in the component cooling water room. I forget whether they were due to high energy line break or there was some --

MR. THOMAS: There were high energy line break issues.

MR. GROBE: The steam line break right outside the doors there. There is a block wall right behind.

MR. SCHRAUDER: We had high energy line breaks --

MR. BYRD: It was due to a pipe width in the steam line break outside the wall and it was resolved.

MR. GROBE: It was resolved?

MR. BYRD: Yes, was resolved.

MR. GROBE: Through analysis?

MR. BYRD: Through analysis, that's correct.

MR. SCHRAUDER: I remember that now. It was a pipe width judgment and it was found to be acceptable.

MR. GROBE: That's it. That was your lifeline.

MR. MYERS: That's your lifeline.

MR. SCHRAUDER: Future improvement for high energy line break. When we did that review of the

auxiliary building, we did found our model could be updated and made more user friendly in the auxiliary building. We're going to do that.

We are going to revise those calculations. I told you we reviewed the calculations and found certain of the calcs didn't impact a crack or break location, but they are in fact incorrect. We'll revise those calculations.

We had some USAR design criteria manual changes to make that need to be updated in there.

And, then one other issue that came out was a time critical operator actions and bases. There were eight condition reports that initiated, that were questioned or challenged whether we could get the operator action done or not. We ran those on the simulator and determined that we could in fact achieve those, net per time critical operator actions.

We're going to get the whole list of time critical operator actions to Operations to make sure they can periodically use those in their simulator training scenarios, and make sure that we're in good shape there.

We don't believe that there is any problems in meeting those times, but it's good to have a compiled list of all of them and the basis for those times for the operators, so they have better access to the information.

Environmental qualification is the next issue.

Again, this one is related to the high energy line break. Any time you do a reanalysis of where your high energy line breaks are, that can have an impact on your qualification of equipment. So, as we complete those analysis, we'll feed that information to the environmental qualification people to update their files and make sure we haven't impacted any of the environmental qualification for the equipment there.

Vendors license with EQ Splices on the Containment Limitorque Actuators. One of the things we did as part of the ~~extended~~ extent of conditions, we did a dedicated environmental qualification ~~extended~~ extent of condition in the containment building as a result of the boric acid dispersion in containment.

We opened up virtually all of the op, limitorque operators in the containment. One of the things we found in that ~~extended~~ extent of condition review was certain of these limitorque actuators, limitorque supplies when they're dual voltage actuators, they can not provide a qualified splice in there. And it's up to the user to upgrade that or to supply a qualified splice. We found I believe six limitorques that that splicing had not occurred in. We needed to replace those vendor splices or qualified splices.

This is probably a good time to mention, we haven't

completed this review though. Any of these actions or any of these issues I talked about where we found something not up to snuff with the, like EQ equations or equipment, or the high energy line break, we are reviewing those for past operability reportability concerns for those also.

MR. HOPKINS: Let me ask, Bob, in that regard. Are you going to be reviewing your IPEE ~~run Triple E~~ at all to see as to, if that's still correct or not?

MR. SCHRAUDER: Ken Byrd, of the individual plant external examination; how does that relate to that?

MR. BYRD: Yeah, actually, we're going to be, we have been doing quite a bit of work on that, both on our seismic and the fire part of it; in fact, we're putting those in the PRA. That should be complete rather shortly, so that is actually ongoing right now.

MR. HOPKINS: So, your PRA is then like a living document?

MR. BYRD: That is correct. And we'll include fire and seismic. We already have seismic completed. Fire should be completed by the end of year. That was already ongoing at the time this occurred.

MR. HOPKINS: All right, thank

you.

MR. SCHRAUDER: Okay, we also found in our reviewing containment four Raychem splices where the bend radius exceeded the bend radius and we need to correct those prior to restart.

And then we found one, the containment purge inlet isolation solenoid valve had accelerated aging. What we did is we looked, we discovered this solenoid valve and it appeared to be, have thermal discoloration I'll, call it on the thing, which was strange, because the environment that was shown in the picture or in the documentation showed it should be a certain level, the temperature should be at about 113 degrees. It looked like it had been exposed to temperatures higher than that.

What we found was that it was actually at a different elevation in the containment, and it was actually exposed to temperatures in the range of 150 to 170 degrees and it had caused the discoloration. And, what that did was decreased the thermal aging life of the piece of equipment. It was intended to be 40 year life component, and this prematurely aged it, I would say thermally. It's still functioning, but we figure we've used up its thermal aging life. We're replacing that, and changing the pm frequency or the EQ frequency for changeout of that piece of equipment.

We did do an ~~extended~~ extent of condition review on that also to see if we had properly identified those components that have a thermal aging aspect to their qualification life.

Future things we're doing in the world of environmental qualification. Revised the documents for installation of limitorque actuators, make sure we're getting qualified splices put in when we get the limitorque.

Provide drainage configurations for containment conduit. This is an issue that came out some years ago, actually in NRC information notice or some generic correspondence, on potential for accumulating condensation in unsealed conduits or conduits that don't have weep holes and the like.

Our containment ~~extended~~ extent of condition evaluations opened up all of these. We found no current evidence of any precipitation condensation in any of the conduits with the exception of one that we found, some rust around it; could be indicative of that, but we actually believe that was due to a cable pulled through there, is a high liquid content in the material that you put on the cable pulls.

But we are going to in the future go back and put these drainage configuration weep holes in there. We want to be able to take the time to, it can be a tricky thing to put weep holes into conduits that have live wire in them.

Found no evidence of a current problem. We'll fix that as we go forward, after we have proper time to adequately engineer and make sure we know exactly what we're doing before we go poking into live conduits.

We have some update on the maintenance matrix, EQ files. Revise EQ Program for guidance on recognizing components that need raceway drainage, and improve the problematic direction in that regard.

We found that we need to conduct some refresher training in the world of environmental qualification, what you have to do to make sure that maintenance and modification out in the plant can impact the qualification of environmental impact on your equipment. We provide that training.

I think what we're going to do is go steal that training from Perry, because I know we developed it over there in the years past. And we'll import that and put that into our continuing training programs.

Do you have a question, Jack?

MR. GROBE: How could you tell? Your comments on conduits drainage holes didn't make, I'm not sure I completely understand them.

MR. SCHRAUDER: Okay.

MR. GROBE: First off, the issue of, the one issue where you discovered corrosion. It

doesn't make sense to me that the pull lubricant would cause corrosion in that location and not elsewhere. I'm not sure I understand how a lubricant could cause corrosion.

MR. SCHRAUDER: The lubricant does have a high water content. It can cause it if you don't get it cleaned off properly. The ~~odd~~ old pull Condition Reports show you. I pulled the Condition Report and read it, that was the assessment of that, why that one had it and not others.

We only found this, this level of rust, I'll call it, on one. There was no indication of current water in that.

MR. GROBE: I'll talk to a couple of my folks. Doesn't make a lot of sense to me, but I'm not an expert in this area.

MR. SCHRAUDER: Okay. Me either.

MR. GROBE: The second question is, I'm not sure why this is a post restart issue. Do you have a design requirement to have these drainage holes in the conduits?

MR. SCHRAUDER: No, it's not a design requirement. It was information to say, hey, you ought to consider this, that you can get condensation in those things from moisture in the air, or humidity in the

air. We went and looked at all of them and found that we were not, you know, we weren't collecting water. The issue is, if you collect water in them, then you can have shorts.

MR. GROBE: Right.

MR. SCHRAUDER: There is no, we went in and opened an awful lot of them during this ~~extended~~ extent of condition review in containment and did not find any evidence of moisture intrusion into those. And that is the basis, it's not required for restart.

MR. GROBE: I understand. Thank you.

MR. SCHRAUDER: Then, the final topical issues is the Appendix R Safe Shutdown Analysis. We do have some actions there to complete. Framatone is doing a transient calculation upgrade for us. We want to get that completed prior to restart.

Complete flow model of component cooling water fire induced valve failure is a hot short issue, where the component cooling water could reach runout conditions. That analysis has actually been complete. We have not owner accepted it yet, but it was, contractor did the analysis for it, and preliminarily I would say, the analysis will support that you won't reach runout conditions on that issue.

Part of that is, the ~~extended~~ extent of condition goes back to that, the Framatone transient calculational analysis. They're going to be looking at other pumps in that process also, to make a pump, a high pressure injection pump, to make sure these issues can't cause those pumps to be Appendix R fire scenarios to reach the runout condition.

The next issue is a performance technical review of response to request for assistance. Two things to do on that. One is a restart required and one is a going forward issue. A request for assistance, you know, people will ask questions sometimes in the old process under what was called a request for assistance. And answers, technical responses were given to those that would have been more appropriately documented in calculation space.

So, first thing we've got to do is, we're going to go back and look at those RFAs, make sure they're technically correct, and then going forward we will convert them to formal calculations and put them in the calculation base, as opposed to a response to request for information.

Another action to support restart is, we're going to do a triennial audit, QA is going to do that. Prior to restart, we'll get that. And I know that you folks are coming in and doing an assessment of fire protection also to see whether triennial inspection is required prior to restart.

MR. GROBE: When you say triennial audit, is that with the safe shutdown, post fire safe shutdown --

MR. MYERS: Right.

MR. GROBE: -- or is that classical fire protection?

MR. SCHRAUDER: Whenever they're looking at safe shutdown, they're also looking at classical fire protection --

MR. PEARCE: The whole thing.

MR. SCHRAUDER: -- features in that.

MR. GROBE: Okay.

MR. SCHRAUDER: I talked about for future improvements, I talked about the, formalizing the calculations and requests for assistance. And we have an ongoing safe shutdown procedure upgrade project. And I believe that that is on the wrong slide, because I think we were also completing that prior to restart.

So, in conclusion, we looked collectively at the five areas. We've identified areas in virtually each of those that need correction prior to restart, and identified some additional enhancements that we want to make.

We didn't find any of the issues or any of these areas to be fundamentally unsound. The programs as set up

are fundamentally sound. We believe that the actions we've identified in those areas, we take those actions, that those topical areas will support the safe operation of the plant. And again, we'll be forwarding those to Marty for his review.

MR. GROBE: Okay.

MR. MYERS: Next area is Containment Health.

MR. SCHRAUDER: Next area is Containment Health and Lynn Harder will perform that for us.

MR. HARDER: Thank you, Bob.

My Name is Lynn Harder. I'm the Containment Health Inspection Project Manager. Since I'm a new face to the panel, I thought I would give you a little background on myself.

Personal note, I was born and raised, and lived in this area pretty much my whole life. Married my high school sweetheart, dream of my life. Two kids. Dream of a marriage, and two grandchildren. Dreams for everything. So, life is good in that perspective.

Professional note, I have an Associate Degree in Nuclear Power Technology. I have a Bachelor in Management Organizational Development. I've been involved in nuclear power, been a nuclear power professional for over 26 years;

the last 22 years at Davis-Besse.

While at Davis-Besse, I worked 15, 16 years in Health Physics, Radiation Protection in almost all aspects to include Radiation Superintendent. Five years in Security as a Fitness Duty Program Manager, Access Authorization Supervisor, Security Operations Supervisor.

And, last year, early in the spring, I moved to Human Performance, Human Performance Advocate and Performance Improvement Group. And, took Project Manager role over to Containment coating activities in Containment in June. Spent about the last eight months in Containment, looking at changes in the ~~extended~~ extent of condition in transformations that we take a lot of pride in. We're going to talk about today, Containment Health.

Last three or four weeks, got involved with Containment Health Inspection, so that's what I would like to talk about. Focus a little bit on the background of our Containment Health Program and what we're doing to go forward.

Next slide, please.

Really the purpose of our Containment Health Program is to ensure that our equipment is maintained to support safe, reliable plant operation.

If we go back and look in the spring of last year, we knew we didn't like the extent of the conditions of

things in containment as well as the rigor of our Boric Acid Corrosion Control Program.

We brought some specialists in, rewrote our procedures, improved our Boric Acid Control Procedure, and brought over 40 inspectors in, in August and walked containment down top to bottom by area in accordance with these procedures, looking for the ~~extended~~ extent of conditions in containment to do what we call as founds.

And those inspectors were diversified in electrical, structural, and mechanical areas. And were specifically looking at over five hundred inspection components and two hundred for Alloy 600.

And next slide, please.

They resulted in taking pictures and documenting more than 950 Condition Reports, which identified the ~~extended~~ extent of condition of what again we call the as-found condition. Those Condition Reports are given to an independent team of evaluators who looked at the extent and performed cause analysis on 950 Condition Reports and came up with over 6,400 corrective actions that would ensure the appropriate remediation for rework, replace, clean or refurbish done where necessary.

The last bullet there identifies those totals of corrective actions, involved more than twelve thousand assets, which is a part, pump, valve, component, conduit,

et cetera.

Next slide, please.

The problem side of it is, if you're looking at the transformation over the last six months really in some of the work activities, that these would be pictures of as-left conditions of the containment air coolers were completely refurbished, core flood tanks.

Next slide.

The plenum sensing line and the whole plenum itself was replaced with a stainless steel plenum. All the service water pipe was blasted and recoated with the piping supports. There is a picture of the containment air cooler plenum, and more of the service water pipes, and even conduits.

The big project there is the containment dome project was over 40,000 square foot of coatings being removed from the containment dome and repainted.

That shows a good picture of some of the supports and service water pipes that were recoated, and the bottom right pictures show a thermography shot of the hydrolasing we were doing internal to the pipe, even doing pipe internal cleaning to remove some of the scale.

Next slide.

So, where we got involved here, kind of at the end is, after the big projects were pretty much completing with

the as-found conditions, there is still about a thousand corrective actions out there, smaller activities, mostly related to cleaning and clean up, which we refer to as our final inspection and close-out areas. And even these as-left conditions need to be identified as we go through and close out the remaining corrective actions prior to restart.

So, we've developed teams, multidiscipline teams of painters, laborers, deconers, and each team is led by a Containment Health Inspector. They're in the field together. So the team can take care of business, so to speak, on the spot; make remediations as necessary, as directed by the corrective action.

So, then the final as-left inspection is documented in the inspection report. That final photograph that's taken of that asset is compared to the as-left by an independent verifier, so the Corrective Action Program then results in having the as-found versus the as-left condition of before and after pictures, and documentation associated with both, to reside all the evidence of the Boric Acid Corrosion Control Program.

So, this method provided for us a systematic method to document all of our findings and going forwards, and in essence, what we conclude will provide us a baseline for Boric Acid Corrosion Control Program before restart.

The last bullet discusses our Restart Test Plan. As the Containment Health closes out all the boric acid corrosion inspection, we will still perform four more independent tests on the Reactor Coolant System boundaries to ensure we have an intact and tight RCS.

Any questions?

MR. GROBE: Nope.

MR. HARDER: No questions, I would like to turn it over to Clark Price.

MR. MYERS: I have one. How many CAs did you say were still there, condition reports?

MR. HARDER: Containment Health Inspection Team is working off about a thousand corrective actions.

MR. MYERS: Which are minor in nature in general.

MR. HARDER: Minor in nature, but still has to be closed out before we can restart, that's correct.

MR. MYERS: The point is, the hard stuff in Containment, we have, before we close up the minor stuff, we had to get the hard stuff out of the way.

MR. HARDER: Correct.

MR. MYERS: So, a lot of this stuff is fairly easily closeable; is that correct?

MR. HARDER: That's correct.

MR. MYERS: Okay.

MR. PASSEHL: Sorry. I have a question. On page 56, what is the, looks like a large thermal gray there, that section of pipe. What are we looking at there?

MR. HARDER: That's service water pipe. We are hydrolasing the service water pipe. That depicted where our laser was at, so we knew the effect of where we were moving within the pipe as it was being cleaned.

MR. PASSEHL: I see. Thank you.

MR. SCHRAUDER: Before Clark gets started, I have to make a correction to a statement I made. The EQ Program, we did have more than one junction box that rust was identified. It was attributed to the cable pull slime.

MR. GROBE: Okay. Thanks.

MR. DEAN: That was his second lifeline.

MR. GROBE: No, actually it was his third. He's way over.

MR. SCHRAUDER: I didn't ask for that, I was just kidding. But it may get me in trouble.

(laughter)

MR. MYERS: Let's move on to Clark Price.

MR. PRICE: Okay. My name is Clark Price, and I'm the Owner of the Restart Action Process at Davis-Besse.

I would like to talk today about -- go on to the next slide -- two items; our 350 checklist item status and then our overall restart action progress, which I'll talk about in a little bit of detail.

Go on to the next slide.

This particular slide is the first set of three slides. And what it's looking at is our 350 progress, as we track it on site.

As we talked about in the past, our Restart Action Process is really in two major categories; a discovery phase and then an implementation phase. This chart here is showing the progress that we're making in those two phases.

This first chart identifies the checklist items number one and two, which primarily address the reactor head corrosion event and also the ~~extended~~ extent of condition in containment related to the boric acid.

And, as you can see in this area, we have one particular item in discovery that we're still working on,

that's the Collective Significance Review. That is being performed right now and there will be a management review of that next week and that should complete it.

On the righthand side in implementation area, we have some, a number of items that are still in progress. I failed to mention our green -- if the bar is green, we're complete with that activity. If it's blue, it's in progress. If it's gray, it's just not applicable.

But in that area, in the checklist item two category under the reactor vessel head and containment vessel, we are basically waiting plant conditions in order to finish out the required tests there with the full pressure test on the Reactor Coolant System and also the containment IRT.

We're also, as Lynn just talked about in the one area in Containment Health, which is the line called 2C, we're making good progress there. That's closing out. Hopefully, we'll be done with that area soon.

Containment emergency sump is another project that we're contending with and we'll have an inspection coming up on that, that we discussed earlier.

Then we have our boric acid systems outside of containment, which Lynn is also responsible for and he'll be focusing attention on those areas when we're doing the containment IRT. He'll move his teams outside to work on those. So, we'll make better progress once the, in that

area once they are IRT starts.

On the next slide is our program area, or Safety Significant Programs. We talked about those earlier. Dave talked about those in the earlier discussions.

We have one area that is still in discovery, and Bill Pearce talked about the Quality Audits Program Review that's currently going on and should complete this week.

We have a number of items that are completed in our programs area, and also some that are still in progress. And, we're pushing to get these completed this week and next, so that they're ready for inspection.

The one that is, currently the newest checklist item, which is the last item on the chart there, which is Completeness and Accuracy of Required Records and Submittals to NRC; we're just in the process of getting the implementation plan put together for that, make sure we have the full scope of that identified and covered.

If there is no questions, I'll move on to the last slide.

MR. GROBE: Clark, just an observation on that last slide. I believe that's, as far as the discovery and completion of the discovery phase, that's quite an improvement, having essentially by the end of this week possibly all of those done. Is that correct?

MR. PRICE: That is correct.

MR. GROBE: Good. There was a number of questions regarding John ~~Jacobsen's~~ Jacobson's programs inspection where things weren't quite complete when we expected them to be, so that's all ready for inspection, that's good.

MR. PRICE: Yes, this is one area we're pushing real hard on and making sure we've got all the implementation planned action items completed and there are just a couple close-out items on a couple of the reports to complete and we'll be ready.

Okay, the last sheet here is the last four remaining 350 checklist items. The first one is the our Management/Human Performance Improvement Plan. We're continuing our activities there. Discussed that earlier, and we still have some items to complete to be able to finish up that inspection on that particular item.

In the, the one item that's in discovery is the item that Bob Schrauder just spoke to in the Design Issues Resolution area and we're making good progress there and should be closing that out from a discovery perspective within the next week.

We do have some other areas; the Test Program Development Implementation, that sits at 60 percent complete. That's primarily due to plant conditions. The plan and procedures are essentially ready. Now we're

waiting on plant conditions for the Integrated Leak Rate Test, which will be the first use of that test program, and then the full temperature and pressure test.

And, as you can see there too, we have identified our Restart Readiness Reviews, which are a critical process in our assurance that we're both from an operational perspective and our system readiness perspective that we're ready for restart. We've discussed those readiness review meetings and that's what's identified there.

Yes?

MR. DEAN: Clark, before you move on. Going back to the first item, 1 A. We do have a technical root cause in hand, but I note there is still some ongoing work looking at the liner that, testing along with that report.

MR. PRICE: Can you address that, or Jim?

MR. POWERS: I think there is continued work in terms of the data that was taken at the laboratory in Virginia on the as-found condition of the cladding liner; is that what you're referring to, Bill?

MR. DEAN: Correct.

MR. POWERS: So, that needs to be rolled up and reported out, and as well, we're going forward with extracting some additional samples from the

old head per your request, and that needs to continue as well. So, there is ongoing work.

MR. DEAN: Do you have a timeline for the analysis of the line?

MR. POWERS: No, I don't have that today. We'll have to get that information to you.

MR. DEAN: Thanks, Jim.

MR. PRICE: Okay, if that's all the questions, I'll move on to the next session, which is looking at our overall restart progress.

Each month, we display a set of charts that are actually on the audience's right over there. We use those to look at our major building block areas and major contributors to a lot of the work that came out of the discovery phase of our Restart Action Process.

I'm not going to go back and address each one of those curves today, but I do have a chart in here that will address them in kind of a higher level look. But what I also want to do is put this all in perspective.

When we look at the charts, they look rather ominous because of the scale we put them on, but when we look at what we have really completed to-date, this is the total Restart Condition Report that we have set our required for restart. And we have over 5,400 Condition Reports that we placed through the review of the Restart Station Review

Board, as requiring evaluation prior to restart.

As you can see there, we've got about actually around 89 percent of those Condition Reports have been evaluated, and Corrective Actions delivered out of those, with the remaining amount down there around 600 that are still to be completed.

So, it kind of puts it all a little in better perspective. We completed a tremendous amount of work already in this area that came out of our discovery phase. It's not only on the Building Blocks that these come, but normal day-to-day operations and the generation of Condition Reports, all those Condition Reports are reviewed by the Restart Station Review Board for potential restart requirements.

The other thing I would like to mention -- well, I'll wait until a later graph here.

The next graph is the Restart Corrective Actions now that have come out of those Condition Reports. As you can see here, we have over, to-date over 5,700 Condition Reports or Corrective Actions that have been identified out of those 5,400 Condition Reports.

Now, we talked months ago, we have around 3 to 4 on average Corrective Actions coming out of each Condition Report. And right around 30 percent of those Corrective Actions, when you look at it in total, are being classified

as restart by the board. So, that's why it almost ends up, looks like a one per one relationship with the Corrective Actions and the Condition Reports.

The Restart Station Review Board continues to meet. As we're now pushing to correct Condition Report Evaluations rather hard, the population of Corrective Actions coming into the board review, are streaming in quite rapidly, so until the board reviews them and classifies them, they don't get into this graph.

So, right now, I would expect that this graph will top out a little over 6,000 Corrective Actions when we, when we're done. But again, here, what this is showing, we have around almost 60 percent of the Corrective Actions that we've identified as required for restart completed to-date.

The last chart, what this is showing is another chart, simple chart that we put together, as we are looking at how we're progressing again. These are the major Building Blocks and the same ones that the charts are in the back.

A simple way to look at how we're progressing in our work-off rates. Essentially what the color coding means is, red means we're basically declining in our work-off rate; a green indicator says we're improving it, and white says basically from the prior week we remained about the

same.

Back during the week of the 16th of February, I believe it was, actually it was 23rd of February, earlier that week, we started a process on-site where we have morning meetings, 8:00 every morning, that are focused at Condition Report and Corrective Action progress. And we are reviewing those on a three-day look ahead basis, ensuring that we have everything in place in order to complete the Condition Report evaluations and close out the Corrective Actions.

And you can see that that focus attention now has turned a corner on our Condition Reports. We were having positive performance, as you can see from the charts in the back, however it wasn't at a rate that was satisfactory to support the restart scheduling that we wanted to get to. So, this focus effort here has definitely made some improvements in the work-off rates.

In addition, we have 2:00 meetings every day that are focused with the sections that are looking at the Corrective Actions and Condition Reports to ensure that each manager has a full grasp on the conditions that he's responsible for, what their status is. And also for the senior management team, because it's meeting with the senior management team to ensure we don't have any real hidden items out there.

That review has essentially been completed for all the sections. Now it's going to start a systematic review of those in the same 2:00 meeting; what we're going to be looking at are from a persistence perspective now versus the ownership of those Condition Reports and Corrective Actions from a department perspective.

So, that's to ensure that as we work those down, that we know the issues that we have out there. As I talked about before, we have around 600 Condition Reports out there that are still, still open. And out of those Condition Reports, at the rate we're working those off right now, that should take about two and a half weeks, two and a half to three weeks. We should have those Condition Report Evaluations completed.

Every day we still have incoming, but the incoming rate has significantly dropped. So, it would look like in about two and a half weeks, we should have our Condition Report backlog down. We know we've got some hard ones in there that we're working on that we'll manage those, but right now we want to get the major ones, the masses down, so we can really manage the real issues now that are out there.

And the same way goes with the Corrective Actions that were on the prior chart. We still have in the area of, I don't have my glasses on, I think around 320, 400

Corrective Actions. Like I said, that's going to grow a little bit. But the same thing, we're focusing on getting those numbers down, so the real hard ones we have identified what they are and we're pushing those into the schedule, the outer schedule, so that they're scheduled out and then worked on.

MR. MYERS: How many are late now?

MR. PRICE: How many are late now? We did what we were supposed to do, none of them are late now.

MR. MYERS: That's a good answer.

MR. PRICE: Part of our process in the 8:00 meeting is, we had a number of Condition Reports that went late, Corrective Actions. And through this process, we've gone through a -- management reviewed and agreed upon extension to those, placed those out in time in order to support the schedule. And so, that's been completed as part of this activity.

I think one last thing to say. One of the things we talked about here, we have to ensure that the quality of the product, quality of these Condition Report evaluations and Corrective Actions are maintained; that the documentation behind those is there. We continuously focus

on that. We've talked about that today. We know we have a major inspection coming in with a lot of focus in that area. So, we're working hard to get the numbers down, but we're also working hard to maintain the quality that we need to in all these Corrective Actions and Condition Reports.

MR. MYERS: Jack, I would like to move on to Greg Dunn. If we're going to skip anything this time, I think the program would be the one.

MR. GROBE: I appreciate that, thank you.

MR. MYERS: Okay.

MR. DUNN: Good afternoon. I'm Greg Dunn. I'm the Manager of the Outage Management Work Control. I recently joined the Davis-Besse team and my current capacity is Restart Director on day shift. That function is responsible for facilitating the physical implementation of field work and activities for the actual implementation of the corrective measures.

My desired outcome in this short discussion is to communicate our upcoming work activities that are necessary to support that testing and restart phase of our Return to Service Plan.

Just last evening -- next slide, please. Just last evening, as Lew mentioned earlier, we set our new reactor

head in place on the vessel flange. And our current work in progress includes lowering down the control rod lead screws and run in of the reactor head studs. And then, this evening, we plan to conduct a seating pass of those studs, and then transition into the tensioning, which will move us into Mode 5 Operating Condition of the facility.

That will establish the need to establish the technical specification of requirements for Mode 5, and will fully restore the reactor pressure vessel intact for the Davis-Besse station.

Placement of the reactor head on the vessel establishes also plant conditions necessary to support going to deep drain conditions. Deep drain is defined any time we go less than the flange level of the reactor vessel, and that's water level less than 80 inches.

That will allow the removal of the steam generator nozzle dams. Nozzle dams were put in place as a barrier between the reactor vessel and the steam generators and to allow for layup conditions of those steam generators during our extended shutdown conditions.

It is now time with the restoration of the reactor pressure vessel system to remove that isolation and restore normal Reactor Coolant System boundary conditions.

Also, during that drain period we'll be replacing all four reactor coolant pump seals. We elected to replace

those seals based upon industry operating experience, industry experience with an extended shutdown condition, potential for chemical attack on the surfaces of those seals; and as a result, utilize that experience and the need for replacement of all four of those seals also in preparation for restart.

Completion of all these activities will place the physical reactor system ready for fill to normal water level, and will establish Reactor Coolant System ready for return to service.

Fill of the Reactor Coolant System also supports the next testing activity, which is the Integrated Leak Rate Test. The water level and restoration Reactor Coolant System is necessary for proper monitoring from the control room during the conduct of the Integrated Leak Rate Test as we close up the containment structure and access to containment is limited during the conduct of that test.

The Integrated Leak Rate Test will verify or validate the leak tightness of the containment structure after we opened that up for access of our new head, and it will utilize as multiple industrial air compressors essentially and will pressurize the containment to approximately 40 pounds of pressure. And, it will be our first major milestone of the plant rate retest activities in preparation for restart.

In parallel with these activities, we have much remaining work in the field. As we know, we talked about much of that today in the Corrective Actions. Two of the important items in there inside containment are the completion of our new emergency sump, and specifically, that's the completion of the lower strainer assemblies installation, which is in progress.

That was prohibited earlier as we had the incore, we had the incores removed from the reactor vessel in support of fuel reload and that radiologically prohibited access to the under vessel area. Those incores are reinserted with the completion of the fuel reload, and allowed access in the new lower strainer assemblies installations in progress.

And, as we talked of the containment air cooler, we have lessons learned implementation necessary for restoring the service water supply in return to those containment air coolers.

And, Jack, as we talked about earlier the implementation of the field implementation lessons learned, as well as the modifications on how the design itself is installed.

All that should culminate with what we have called our restart readiness meetings. Define a little bit about what that is, it's a Collective Management Team Review of

the completion of implementation of Corrective Actions, that Clark talked about. Also our process in program improvements, our field work execution, as well as our performance matrix that we talked about earlier that's intended to monitor our progress on Safety Culture improvement and all of this is with the purpose to validate our preparation for plant restart.

That's the whole function of our restart readiness meetings proceeding forward. Upon successful completion of those readiness review meetings, and as Lew mentioned, it took us six days for Mode 6. I would anticipate some long hard days for Mode 4 as well.

This will be followed by pressurization of the Reactor Coolant System to normal operating pressure for seven days, which will be the demonstration of what I would term the fruits of our labor in establishing Reactor Coolant System integrity and supporting return to service.

Those are some major activities that we have upcoming in the near term to support the restart phase of our Return to Service Plan.

MR. GROBE: Lew.

MR. MYERS: Okay. In summary, our people are making good progress. We're working long hours. We're pushing toward closure of Corrective Actions, CRs, identifying -- in the CR area we're trying to find the

correct answer, corrective action area, we're trying to implement them, implement the needed actions.

If you'll look at our work-off rates, every week over there in each one of those categories, they're improving. The last two or three weeks have been the best weeks ever. So, we think we have a good opportunity to move forward to return the plant to service.

We continue to improve the material condition. I think we demonstrated that today. Many of the plant systems and components, a lot of hard work there ahead of us. There is a bunch of AOVs that we've got to go fix.

Price and work are going to come out of the electrical reviews and things we have to do, but there is a lot of work ahead of us. We're making a lot of progress in improving the material today.

We continue to make progress of the management area also. A few months ago, we couldn't even discuss what the Management Observation Program was telling us. Today, we have a good idea there, as we demonstrated.

Also the Safety Culture is an important part of our plant, our plant startup. We're doing our next assessment this week in Safety Culture. We're looking forward to the Sonja Haber review.

Additionally, from a plant standpoint, the decision-making Nuclear Operator Procedure, I really do

believe that carries us a long way, that consistent approach to addressing questions.

And then, finally, we're looking forward to our next meeting to see where we're at then. Hopefully, we'll be through the Integrated Leak Rate Test and looking forward to Mode 4.

With that, I thank you very much.

MR. GROBE: Thank you. Why don't we -- it's ten after 5, why don't we just go right into public questions and comments.

(Off the record.)

MR. GROBE: I appreciate you folks sticking with us through this meeting. These are long meetings. They're very productive for us. Some of the discussion I sure could be dry for you, but I do appreciate you all staying around.

What I would like to do is begin with questions from local officials or representatives; local officials, if they were here, if they're here; and then take any questions from local members of the public, and then move to other folks.

So, are there any local officials or representatives here that have a question or comment?

Okay. How about local members of the public? You guys going to be easy on me tonight?

Amy shook her head no.

Okay, anybody else?

MS. RYDER: Amy Ryder. My name is Amy Ryder, and I represent Ohio Citizen Action.

I have a few questions today. My first question is in reference to the Management Observation Program that was discussed this afternoon. It seems that when it comes to Safety Culture at Davis-Besse, a lot of the problems keep bringing back to the decisions that are being made by management, not necessarily the work force. And so, I wanted to get your thoughts on what you would think about a program, an observation program that would actually observe management decisions as opposed to decisions or behavior of the work force.

MR. GROBE: That's an excellent question. I know one component of Doctor Haber's work was observations of all sorts of different activities, including meetings where managers were making decisions. But that's really not a question for me. Where did Lew go?

I think that was a question for you, Lew. Let me repeat the question, just in case you didn't hear it. Amy's question was, whether or not the Management Observation Program should not just be limited to observing workers by supervisors, managers, directors and whatnot, but maybe there should be some components of the Management

Observation Program, observing the managers doing their work in decision-making.

MR. MYERS: We actually do that. If you want to look at our Corrective Action Program. You know, we make decisions, if we find out like design mod made a poor decision on approach, we write a CR and capture those things in training and look for, like we just talked about awhile ago, at risk mods. Maybe right now we're not getting enough operation involved and stuff like that, so we really do that, Jack.

MR. SCHRAUDER: The observations that we talked about of infrequently performed tests and evolutions, prejob briefings, those are management decision-making activities. And we do observe those, enter those into the data base. We also do observations of things like the Senior Management Team Meetings where decisions are made. So, all of those activities are in fact incorporated into the program.

MS. RYDER: My question is actually specifically geared at one particular decision, which was the decision to fire Andrew Zamiska. Did somebody observe that decision and what was the key facts in that?

MR. GROBE: I don't think it's appropriate to discuss personnel actions in public.

That's not appropriate.

MS. RYDER: Well, it's safety culture. This was an individual who was raising safety concerns. He's claiming that he was fired for safety concerns. It absolutely has to do with safety culture.

MR. GROBE: I understand.

MR. MYERS: I would suggest you let that play out in court.

MR. GROBE: Yes, and that's actually, Andrew has pursued his avenues for adjudicating that issue and that's through the Department of Labor.

MS. RYDER: I understand.

MR. GROBE: And that's the way it will proceed.

MS. RYDER: It, all right, it's still related to safety culture.

MR. GROBE: Absolutely, I understand what you're saying.

MS. RYDER: My second question is not actually a question, more of a statement. This is in regards to whether or not, what was going to happen with the draft report, the bearer report that she's doing, and when she drafts her report I understand it's going to be given to FirstEnergy and to the NRC; is that correct?

MR. GROBE: Um-hmm. There is

a meeting next Thursday, when Doctor Haber will present her preliminary results to FirstEnergy, and we'll be observing that meeting.

MS. RYDER: Okay, one of the issues that you raised was this issue of credibility on behalf of both FirstEnergy and the NRC. And, I think it is important that members of the public actually are able to compare what the draft report said, in addition to what the final report said.

Last, let's see, in January, there was a report issued, it was commissioned by the State of New York, James Lee Witt, former Director of FEMA, was asked to look at the evacuation plan for Indian Point and Millstone. He actually posted his draft report on the Internet and allowed people to respond to that. And once the final draft is issued, you know, people will be able to compare.

So, I would like to make the suggestion that when that report is issued, that it's posted on line, either on FirstEnergy's Website or on the NRC's.

My final question, this was an issue that was discussed a little bit today and also last month. This is this issue about these, the thousands of tasks, whatever the number is, that has to be completed before restart, if that should ever happen, as well as the number of tasks that are being deferred until after restart.

I want to know whether or not the NRC has evaluated the criteria used by FirstEnergy to decide what gets done before restart and what gets done after restart?

MR. GROBE: Yes. That's actually contained in Clark Price's, the Owner for that program, is contained in a Building Block called the Restart Action Plan Building Block; and it includes criteria that are fairly obvious that a piece of equipment is not working properly, so it's then required by technical specifications, so that clearly would be a restart issue, specific issues to address over 50 checks list items.

And then there is more judgmental areas where an issue might affect reliability on equipment, but not directly affect safety. So, there is a variety of criteria in that test plan. And that's something that we review from a program perspective, we look at the criteria to make sure we're comfortable. On a regular basis, the resident specialist staff in particular, sample those types of issues to make sure that, two things; that the initial classifications are correct, and if an item is reclassified, that it is done correctly.

MS. RYDER: Okay, is there a specific inspection report that documents the scope and results of those?

MR. GROBE: I don't know. If

you could give Jan Strasma a call and maybe he can help you.

MS. RYDER: Okay. Thank you.

MR. GROBE: Thank you.

I wanted to make a, a comment regarding your earlier observation, Amy. I feel also strongly that it's important that the draft report be available. That's the way our internal assessments work in the NRC. But when my kids were in grade school and high school, I also let them open their report card, even though it was addressed to me. I let them open it first, and tell me about it. And now they're in college, I have to ask them if I can see their grades.

I think it's appropriate for FirstEnergy to have an opportunity to hear the results and then make any clarifications before the final report is issued, but I likewise think it's important, if there is any change between the draft report and the final report, that it be understood. So, I appreciate those comments.

Yes, sir.

MR. WITT: Jere Witt. County Administrator for Ottawa County and a member of the Restart Overview Panel. I would like to make one point for the benefit of the public; and that is in the question of management observation, I believe there are three areas

that I've observed, that management is out getting their observations done, and one of those would be the new structure with FENOC that provides a much better organization structure to oversee the decision made by management.

The second one is, that the Restart Overview Panel certainly reviews and comments and makes recommendations under decisions of that Restart Overview Panel. And I believe that the company Nuclear Review Board serves in that function in many regards.

So, I believe there is really three areas that the management team is being observed in. Thank you.

MR. GROBE: Thanks Jere.

And, in fact, there are others also; some aspects of quality assurance of the management decision-making and an independent assessment, as well as being a student of our operations, there is regular assessments at every nuclear plant in the United States.

Criteria they use are industry best practices, are not NRC requirements; and they look for any areas in management and organizational effectiveness that provide independent assessment also. But it was a very interesting question, within the context of the Management Observation Program. Thank you.

Any other questions or comments?

Okay, very good.

We have another meeting this evening at 7:00. If you all haven't had enough, want to come back, that would be great.

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 21st day of March, 2003.

Marie B. Fresch, RMR

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