control, checks for hazards, and as identified foreign material exclusion.

MR. MENDIOLA: Can I ask a question about your observations? You said 460 management observation in the month of January. How many managers are involved, or better yet, how often does a specific manager make an observation?

MR. FAST: Tony, let me try to answer your question. The total population of folks that are involved in the observation program is somewhere around 125; includes from our First Line Supervisor to our Chief Operating Officer. So, if you kind of figure out, you say 125, that would represent about three per. We have some specific targets on how many people, but as well, as far as managers, we're actually scheduled approximately once per month. So, that's a scheduled observation. Our expectation is that we exceed the minimum.

So, I think the numbers are pretty defensive. They will illuminate at least the fact that you schedule each person for one, you might end up with 125. We end up with 468, pretty much demonstrates that we're exceeding the minimum expectations.

MR. MENDIOLA: That's almost three or four a month, I would say.

MR. FAST: That's correct.

MR. MENDIOLA: You say most of the observations are in the plant. Are you doing any observations, if you will, of meetings or, you know, engineers get together and discuss system characteristic?

MR. FAST: Yes, we do.

MR. MENDIOLA: Basically the soft stuff.

MR. FAST: Absolutely. When we developed this program, I worked with a team of folks from FirstEnergy Nuclear Operating Company. This is a common process we use at all our stations. We didn't want to put this, didn't want to put any over burdensome contraints on it, so we actually provide some examples. In a meeting, are personally done observations of operations turnover, maybe in observations, but I've also done observations of where I'm not directly involved with a meeting; sit back, walk it, watch the interaction, see what the communications are, and we have some specific attributes to that.

So, the answer is, yes we do.

MR. MENDIOLA: Okay, thank you.

MR. SCHRAUDER: I can tell you when NPR was doing the Safety Function Validation Project for us, I spent two days, two different Fridays, where I went down to Virginia and did some observations of their

process as they were going through it also.

MR. MYERS: Same thing closer.

MR. FAST: We would maybe provide an observation of a vendor out in the field or at their factory or their support headquarters.

Any other questions? With that, I'll turn it over to Jim Powers.

MR. POWERS: Okay, what I would like to talk about today is looking forward in Restart Readiness, the committee meeting that Randy described in the past slide was talking about Mode 6 readiness for reloading fuel into the reactor.

The next mode that we'll come upon as a milestone is Mode 5. We'll replace the replacement head that we have in containment on the reactor vessel with fuel in it. So, we will again assure that we're ready for that mode 5, and be prepared for that.

Then following that, we're going to do a containment integrated leak rate test. This is a test that's done periodically at nuclear plants, typically every ten years, where the containment building is pressurized up to the post accident pressure in containment, and leak tested to verify that it meets regulation and requirement per leak tight integrity.

We last did this test in 2000, and the results of that test were very good. We were very leak tight, two and a half percent of the allowed exceptions criteria. So, the engineers are quite proud of the containment systems performance. And we've got the same group preparing the test again.

Because it's such a large building, we pressurize it with seven large compressors, and that takes about ten hours to pressurize the building. We pressurize it a bit higher than 38 pounds to provide a demonstration that there is additional margin in the capability of containment. And, so we pressurize it up. We have a stabilization period that we hold pressure about 6 to 10 hours, let conditions stabilize in there.

Then, we do a drop test is what we refer to it; watching pressure instrumentation is very accurate, and temperature instrumentation is laid out throughout the containment to see any changes that would indicate that the pressure is dropping and that any leakage exists.

Following that first phase of the test, the second phase is to introduce a known leak out of the containment with a flow meter, so we know precisely how much air is coming out. Then, we watch our instruments to see if they would detect that, how accurately they detect that. And that validates phase one of the test, showing that the

instruments do pick up and read any small leaks.

We're looking at this test schedule now to be tested and complete in the early part of March, and it's a major milestone for us. It will demonstrate the robust containment. And the real intent of this is to demonstrate that the access openings that we created in the containment to bring in our replacement reactor head, which we have closed up and we did testing, for example, on the containment metallic vessel itself. We did radiography x-rays of all the welds to verify they met all acceptance criteria, which they did. This will be a substantial test of robustness of the containment for completion of that project.

MR. HOPKINS: I have a question, Jim. One of those lines up there says, local leak grade test to repair containment. Why do you have the word local there?

MR. POWERS: At the time we did that repair itself, we were looking at locally, the actual weld on the vessel to assure that it itself had high integrity. But, one of the questions is when you do such a large construction project on a structure like this, is to demonstrate overall structural integrity. That's one of the reasons why we're undertaking this integrated test.

When you do containment testing, you can do

integrated type tests, which is the whole building; or you can do local tests, which is individual valves or in this case welds, to demonstrate each one, one by one, that it has leak tight integrity. So, there is a couple different ways it's done.

Typically, every ten years you do an integrated test of the whole building, but each refueling outage, you'll do local leak rate tests of individual valves. Particularly if you do maintenance on a valve, you need to demonstrate as a post maintenance test that its leak tight integrity has been maintained.

MR. HOPKINS: So, in reality, the word local is an error though on the slide.

MR. SCHRAUDER: No, it's not an error, Jon, we've done both. When we completed that repair, we did a local test of that repair. We will now do an integrated test of the entire containment. We'll do both.

MR. HOPKINS: Okay. That's what I didn't understand.

MR. POWERS: Any other questions? Okay, if not, I will turn it over to Mr. Schrauder, and he'll talk about --

MS. LIPA: Well, actually, I was going to interrupt and suggest a 10 minute break at

this point. Okay? So, it's 2:19 by my clock, so 2:29.
(Off the record.)
MS. LIPA: Let's go ahead and get started. I'm sure Tony will join us shortly.
Go ahead, Bob.
MR. SCHRAUDER: Thank you, Christine.
As Lew said, for the last several months, I've been working with Jim, looking at some of the engineering issues that we're trying to resolve. In particular, over the last couple of months, I've been involved in the Safety Function Validation Project and that's the project I'm going to spend most of my time discussing the status of the results of that today.
Before I get to that, I want to very briefly build the background up to that and why we have the Safety Function Validation Project. So, by way of background, the System Health Assurance Plan is what this falls under and that plan consisted of the Readiness Operational Reviews that were done early in the outage; then the System Health Readiness Reviews, which were part of the Building Block; and then the Latent Issues Reviews.
We did a couple of other reviews that we looked at in this. We had done a couple of self-assessments on a couple of other systems; the High Pressure Injection System

and the 4160 Volt Electric Alternating Current System. And then we also looked at the results of the NRC inspections on several of the systems that we had also looked at.

As we went through that, all of the issues, potential issues that were documented, that came out of that were documented in our Corrective Action Program.

This next slide is kind of a mini version of an issue that we introduced I believe at the last meeting; then we had a more detailed discussion in Lisle regarding our path for resolution of the issues that Condition Reports that came up.

We described a three-path process, where Path A is, is our Corrective Action Program. And each individual CR that's written is evaluated through Path A, where we determine its impact on operability, where the RSRV identifies whether it's a restart issue or can be resolved post restart, look at whether we need to do an extent of condition for those. So, those are kind of the individual issue resolutions.

Then over on the far right you see Path C, which the topical issues, some of the, what the collective reviews looked at is there were certain issues that came up that we lumped together in topical issues. Those were the High Energy Line Break, Environmental Qualification, Seismic Qualification of Equipment, Plugging, Appendix R Issues.

And, I'll talk very briefly about how we're resolving those at the end of this.

Then Path B is where I want to spend most of my time is the Safety Function Validation Project. We've completed that project now, and we want to discuss the results of that.

Next slide shows how we got to the Safety Function Validation Project. As we worked through the System Health Readiness Reviews, Latent Issues Reviews, obviously, we generated quite a few condition reports out of that.

So, we did a Safety Consequence Review. Actually, we had NPR associates do that for us. They looked at the body of Condition Reports that had been identified by our Restart Station Review Board as required for restart. Looked at those, binned them together, tried to draw some conclusions from that, and recommend a plan for looking at the extent of condition from those.

You can see, we looked at about 600 Condition Reports in that process. Eight percent of them or about 51 Condition Reports identified a, it did have potential impact on the plant design basis. And again, this is on, I'm going to say, five systems in detail, and two systems that were not as detailed evaluated.

So, we had about 28 individual issues, when you bin them together. And again, had the potential for impact on

plant design bases. And, a lot of those potential issues did relate to our calculations supporting the design basis.

So what-- the project that we came up with or the extent of condition process, we named the Safety Function Validation Project.

MR. GROBE: Bob, before you get into that project, could you status us with where you are with resolving those 28 issues?

MR. SCHRAUDER: Those 28 issues are encompassed in the Safety Function Validation Project. I don't have the exact where each one is resolved, but they are working through those in the Corrective Action Program. And, I can status you the next time exactly where each of those are.

Some of them I know have been fundamentally resolved, and some of those are the issues I'll talk about in the results of the Safety Function Validation Project.

MR. GROBE: Actually, Lew, you and I had talked about possibly having another separate meeting just focusing on design engineering.

MR. MYERS: That's right.

MR. GROBE: I think that would be a good idea. I'm not sure when would be the best time for that, but maybe sometime over the next 4 to 6

weeks would be appropriate to have that second type of meeting.

MR. SCHRAUDER: That would work out well. I'll be going into detail in all those issues and where we are in resolving them.

MR. GROBE: Okay, thank you.

MR. SCHRAUDER: Again, NPR worked with us, and we developed the Safety Function Validation Project, whose purpose was to provide assurance given what we seen in the safety functions that provide a significant contribution to the core damage frequency as determined by our plant safety analysis, probabilistic safety analysis could be performed.

We looked at all those safety functions that contribute greater than one percent of the core damage frequency. Said another way, all those functions added up to covering 99 percent of the core damage frequency. And approximately 99 percent of what's known as the large early release also.

Those safety functions identified were comprised within 15 Safety Related Systems. Five of those, we had already evaluated in great detail in the Latent Issue Reviews. Two of them; the High Pressure Injection, and the 4160 Volt AC System, we had done a partial assessment of, but not as deep as the Latent Issues Reviews.

So, we took those two systems we'd done partially and added 8 additional systems we were going to look at in the Safety Function Validation Project for a total of, all total that would be 15 of our safety systems that again cover 99 percent of the core damage frequency for the plant.

The methodology that was used by NPR was to first find the safety functions and what attributes would be validated. So, the group went off, identified what the safety functions were, what attributes there were. They identified the available calculations and testing that demonstrate the system's capability to perform those functions, and then reviewed the calculations and testing to validate, to attempt to validate whether or not in fact that safety function or attribute could be fulfilled.

It was a two-step process that NPR employed; that is, they first had their groups go off the, the individual groups go off and identify the safety functions, the boundary of the system that they were going to look at. That then came into the board, and the board looked, an Oversight Panel, looked at and reviewed the level, the depth that they were going into and confirmed that, yes, that would capture all the safety functions that we intend to look at.

Then, the review teams went off, did their reviews,

did their looks at safety functions, calculations, testing that had been performed, all the design basis information that they could get. They then brought that back to the board, and then the board probed them, dug at the issues, did their review to make sure that they had done a comprehensive review of the safety functions that they were attempting to validate.

In line with that process, or as part of that process, there were oversight provided by FirstEnergy. I spent a couple of days down there, sat through several of the board presentations at the beginning -- well, actually toward the middle of the project and then at the end of the project.

Steve had his Quality Assurance Oversight people were down there for much of the time. Marty Farber from the NRC observed a large part of that. We also had at least one member of our Engineering Assessment Board present at nearly all of the Oversight Panel Reviews of those. So, we got a lot of review while that was in process.

I would tell you that I believe that it was a very thorough and comprehensive review. I think they did a good job. I think Marty and the inspector that he brought down with him felt like it was a pretty high quality review that was done.

So, that's all well and good. What's the results of it? Four of those systems -- I'm sorry. The additional thing that NPR was doing for us in that review was for functions that could not be fully validated, they did perform some of the preliminary technical evaluation to see the impact of that; to determine the effect on systems capability, and they helped us in operability determinations if required, if the systems were found to be degraded.

Then, of course, all the nonconformances that were identified during the course of that project were also entered into the Corrective Action Program, and they would then go back over to Path A and come down through the Corrective Action Program.

MR. GROBE: Bob, let me make sure I understand that. Oftentimes in engineering reviews, you come up with a lot of questions. And, it's a period of time until those questions are revolved to the point where you can conclude they're actually nonconforming conditions.

Do you still have a batch of questions that are still being evaluated, or have all of the issues been evaluated and dispositioned as either nonconforming conditions or adequately resolved?

MR. SCHRAUDER: All of the

evaluations have not been completed yet, Jack, out of the Safety Function Validation Project. In some cases, they were not able to, with the information they had available to them, validate for instance a safety function. That then comes back to us and we have to do further analysis, in some cases, and further research.

So, not all of those Condition Reports that came out of this are complete yet; and we have not yet completed the effort of attempting to validate those systems which NPR was not able to validate their safety function.

MR. GROBE: Okay. So, all of the questions have been turned into Condition Reports and you're continuing the evaluation under the Condition Reporting Process?

MR. SCHRAUDER: That's correct.

MR. GROBE: Thank you.

MR. MENDIOLA: I'm not sure I understand. This is a one-time project? In other words, you know, now that you finished it, now that you looked at these 15 systems, and you've come up with either being fully validated or those that need additional analysis; that's it, basically, everything gets handed over to the Corrective Action Program?

MR. SCHRAUDER: I'm not sure

I understand your question, but basically the answer is yes. It's a one-time project that covered 99 percent of the core damage frequency, but those issues that were identified need to be resolved and they are categorized as either needing to be resolved prior to restart, or whether they can be resolved post restart. Because every discrepancy that they found, we identified and put into the Corrective Action Program.

The ongoing process is, as we've talked about in the past for assuring continued system health and maintaining design basis, are the latent issue reviews, which we will incorporate into our ongoing processes.

MR. MENDIOLA: So, that, if you will, is the long term result of this project, is to institutionalize that kind of material into a constant everyday process that you have at the site?

MR. SCHRAUDER: Yes.

MR. MENDIOLA: So, it would show itself in a latent issue?

MR. SCHRAUDER: The Latent Issue Review Program will be the institutionalization of systematic reviews of systems to assure ourselves that we maintain them in full stead.

MR. MENDIOLA: Okay, thank you.

MR. SCHRAUDER: Okay, the results of the project. Four of the systems that were looked at, NPR was able to fully validate their safety functions; that's the High Pressure Injection System, the Main Steam System -- Steam Generators and the Safety Features Actuation System.

You see there are additional systems that we still require, as Jack asked about before, additional analysis to confirm or identify that the safety system could not be, the safety function could not be validated. Those systems are listed there.

We have a fairly high competence level that when we're through with all the analysis, that we will be able to demonstrate that each of these systems was capable of performing its safety function. We have just not yet completed all those reviews, and some cases may have to do some recalculation, some reanalysis to show that.

Do you have a question, Jack?

MR. GROBE: I wanted to make sure I understood the totality of the results. These results on this slide, called Project Results; those are the results of the Validation Project. You had seven additional systems that you looked at under Latent Issue Review and Self-Assessments. How many of the systems from those additional seven fell into the fully validated

category and are requiring additional analysis category?

MR. SCHRAUDER: I would tell you from the Latent Issue Reviews, that none of those systems were fully validated when they went through their Latent Issue Reviews, and they would fall into the same category of some of those. Again, they were questions that were asked that the individuals could not either find the documentation, or in some cases there was conflicting information. I will tell you, none of the Latent Issue Reviews would result in what we would say their safety function was validated.

Many of those issues we have resolved along the way; have not yet reached the point where we have declared any one of those systems completely validated yet.

MR. GROBE: And the two systems that you did Self-Assessments on, those also were not fully validated?

MR. SCHRAUDER: Right. The ones that we did Self-Assessments on are included in the Safety Function Validation Project.

MR. GROBE: I see. So, the total then is 13 systems.

MR. SCHRAUDER: The total is 15 systems; 5 Latent Issues, 2 Self-Assessments that were redone in the Safety Function Validation Project, and then

8 additional systems. So, the total amount of systems we looked at in this level of detail was 15.

MR. GROBE: I think I understand. Thank you.

MR. SCHRAUDER: So, each of those additional analysis required, again are entered into the Corrective Action Program. And in many cases or several of the cases, for instance, Low Pressure Injection System, there is one function of that system that yet has to be validated. Then, we're working through those issues.

Any other questions on the Safety Function Validation Project?

MR. PASSEHL: So, I guess on your slide 22, you don't have all 15 systems listed on here; you have 8. And there is an extra 7?

MR. SCHRAUDER: Actually, all of them that were comprised within the Safety Function Validation Project are here. Where it's the Electrical Distribution Systems, that includes 125 Volt/250 Volt DC System, the 4160 Volt AC System and 480 Volt AC System.

One of the good things, I would say, that came out of it or one of the encouraging things, is we looked at the electrical distribution systems, we were not able to fully validate that, but all but one I believe of the issues that

came out of the Safety Function Validation Project had been previously identified in the System Health Readiness Reviews that we had done.

The process that NPR did, they didn't look at what had already been identified for those systems. They merely identified the safety function they were trying to validate, find what documentation they could have, created their questions or their issues, and then they looked to see if that issue was already addressed in the Corrective Action System.

And, for the Electrical Distribution System, like I said, with the exception of the battery issue that was raised, all of those conditions had been identified under the System Health Readiness Reviews, even though those reviews were not really targeted at a detailed analysis of the calculations and the design basis information for those systems.

So, I think it just, in my mind it adds some credibility, I would say, to the System Health Readiness Reviews. And, that was a comment that NPR made to us also.

MS. LIPA: The question I have -- excuse me, Jack. Maybe you're going to get to it later. At what point will you be at or where are you in the process of determining if any of these are passed

operability, past reportability, LER-type issues?

MR. SCHRAUDER: All of those issues still have to be evaluated and it will depend, obviously, that's what the evaluation is doing. Can we determine or demonstrate operability from a going forward prospective, and also we will have to look back and determine its past operability if, the function is in fact found to be not able to be validated.

That's all part of the normal condition reporting process. And we're working through those Condition Reports.

MS. LIPA: So, you haven't even gotten to the point where you've determined that it would be reportable to start the 60 day clock from any of these issues?

MR. SCHRAUDER: That's correct. The other thing that we did find -- sorry, Jack -- in this process, both in the Safety Function Validation Project and the, what I'll get to in just a minute, as we're looking at the topical issues; we did confirm what we suspected; that is, we have a lot of help in looking at these reviews and going through documentation for the plant calculation, with a lot of people that are not familiar with our design or licensing basis; they're not familiar with the calculational structures and where to find information.

And they, as we told them, don't spend a whole lot of time. If you can't find the information, generate the CR, get it into the system, and we'll turn people loose on going down it.

We did in fact, have in fact found numerous examples of where the information was in fact contained in calculations if you knew your way around it, could find it. You know, there are certain aspects of those Condition Reports that are attributed directly to what we are licensed to and what our design basis is. So, a lot of the issues are not issues. They're simply questions that were raised and are easily answered once you get the calculations out and can demonstrate it.

I have a percentage for you on that, but there are a lot of them in there that-- and that was done by intent. We wanted them to get the reviews done. If they had questions, don't stop the review, get them into the process, and we'll get to those as we can.

MR. GROBE: Just a comment, Bob, so that you and your licensing folks can anticipate our needs. Recognizing the number of design questions you're still in the process of resolving. We discussed this, this morning, and internally in a panel meeting; determined that it might be appropriate now to start weekly calls with your Regulatory Affairs Group to track the

resolution of these questions. I anticipate that there is a possibility there may be some licensing questions that come up in the course of resolution of these issues. And, early dialogue will help us be prepared to understand those issues, and help you understand our perspectives on them.

So, I've asked Tony and Jon to set up with your staff, your licensing staff, some weekly dialogues to go through the status of these issues and identify the ones that have the greatest risk of needing licensing work, so that we can be prepared to do that.

MR. SCHRAUDER: I think that's a good idea, Jack. I can tell you that there is one that came out of the Safety Function Validation Project that I know of, and that's on the differential pressure trip set point that the steam feedwater control system, where the tech spec value is nonconservative relative to the design basis calculations. In that case, we will have the procedure for that, looks like it was also nonconservative relative to the calculational base behind it.

What we have to do now is look at where do we actually have the trip set point set. And, also make sure that the procedure now aligns with the design basis, and then we'll have you come in with a license amendment request, to change the tech spec, because the tech spec

value is a nonconservative tech spec and follow NRC guidelines on how you handle those issues also.

There are some licensing issues that will come out of it.

MR. MENDIOLA: Bob, I'm going to ask the stupid question here. You started out on slide 20 with 15 safety systems. Okay. Slide 22 only has 8 listed. I can only assume from your response earlier that all the Electrical Distribution System systems, if you will, the 15, are listed at the bottom there. They're all compressed into one bullet?

MR. SCHRAUDER: Let me go through the 15 systems for you clearly.

MR. MENDIOLA: Basically, the very simple question is, where is the other 7?

MR. SCHRAUDER: Let me go walk through it for you. There were 15 total systems. Five of them were completed under the Latent Issue Review. They were not looked at in the Safety Function Validation Project. Okay. That leaves 10 systems.

If you look at the slide you're looking at, there are eight bullets there. The last bullet, the Electrical Distribution System is actually three systems; 125 Volt DC-- 125/250 Volt DC, the 4160 Volt AC, and 480 Volt AC.

So, that should be ten systems there and the five

from the Latent Issues Review.

MR. MENDIOLA: Okay. Thank you.

From the systems requiring additional analysis, was there any, for lack of better terminology, red flags or anything to cause, anything that we should, if you will, start focusing on?

MR. SCHRAUDER: The one that I don't have a very clear path to how it's going to be resolved yet I'll talk about; and that's the Low Pressure Injection System of the Decay Heat System. The safety function there that we're trying to validate yet or need to relook at is the, we have two methods of Boron precipitation control post LOCA.

Our secondary method for Boron precipitation control post LOCA is through the decay heat drop line, where you have one low pressure injection system taking suction from that for the purposes of precipitation control; you have the other LPI system injecting into the vessel.

Early tests for the plant identified that the net, to satisfy the net positive suction head requirements for that pump for Boron precipitation control required eleven inch height in the drop leg.

This review identified that the calculational basis identified that if you're injecting an LPI pump, were

running at runout, it could only supply seven inches of head in that drop line.

So, the analysis that we're going through right now is there is some questions on the validity of the test, because it was not really run, Boron precipitation control wasn't considered at the time the plant was licensed. It was a later addition. So, the test that was done was really not for the purposes of establishing precipitation control. So, once they got to a certain level, eleven inches, ran it there for a certain time; they said, okay, end the test, we'll draw a curve from that.

During the course of that test and looking at the data now, and the reason they stopped at eleven inches, was testers believed that they heard cavitation in the pump at that level. Going back and looking at the test data now, what's believed is what they were hearing was air entrapped in the system from the previous test; and that they're looking at pressure gauges and discharge pressure from the pump, you know, being able to show the pump couldn't have been cavitating with the kind of pressure indications that you had there.

And so, Framatone was working with us in resolving this. When I say I don't have a clear path to solution on this, we're either going to have to demonstrate analytically with the data we have available that the

required height is much less than eleven inches and you could have met that safety function; or we're going to have to take, we're going to have to test that under, in a mockup facility and reestablish what the actual height is.

So, that's one of them I would say, yeah, we don't have a clear answer on that one yet, but I believe there is two paths to pursue on that one.

MR. MENDIOLA: Okay, thank you. I'm just curious on the timetable for when this information might be more readily available to us? Will be a while off?

MR. SCHRAUDER: Which information, Tony?

MR. MENDIOLA: Well, things like you just brought up; your response and your reaction to how you're going to conclude that analysis, and conclude this issue?

MR. SCHRAUDER: It will be available to you as soon as we know which way we're going with it. Some of these issues just are being evaluated.

MR. MENDIOLA: Okay, I understand.

MR. SCHRAUDER: Okay, emergency core cooling system, HVAC system, that's another one that relates back to the ultimate heat sink temperature. That's

really an environmental qualification issue, where the room was originally, max temperatures was expected to be 125 degrees in that.

When you include two issues in there; the high pressure injection pump running in the room was not considered as a heat addition to the room, and it needed to be; also, when you looked at the impact of raising the temperature to 90 degrees, and the potential for separation from the lake, if you will, and the heatup of the forebay, the bottom line conclusion was that the actual maximum temperature in that room would rise above 125, and would peak somewhere around 133 degrees.

So, we had to go relook at all the equipment in the room and see, will it withstand 133 degrees. We have looked at that, and we have one relay that was qualified for 125. We don't have, I don't believe we have right now sufficient information to say it works at 133. So, we still have some more analysis to do with; if there is other facilities that have tested it higher, we'll probably take that relay out and qualify it to a higher temperature to verify that it would have functioned at 140 degrees. And we may have to go out and buy a replacement relay for that.

That's the type of issues that we're dealing with, on those unvalidated systems yet.

MR. MENDIOLA: Okay, thank you.
MR. PASSEHL: I would have an additional question. You mentioned on slide 18, your Safety Function Validation Project, you stated that you're completed with that. Yet on slide 22, you got all these systems requiring additional analysis. What did you mean by completed with that?
MR. SCHRAUDER: The Safety Function Validation Project was a defined scope of work that NPR did for us. They performed that issue for us. They have turned over the results of that and said, here are the things that we could not validate. So we then put them into the Corrective Action Program where we will have to resolve those, but the project itself is completed.
MR. PASSEHL: I understand. And, then your five systems you did on the Latent Issue Reviews; Reactor Coolant System, Aux. Feedwater --
MR. SCHRAUDER: Service Water.
MR. PASSEHL: Are those fully validated?
MR. SCHRAUDER: No, that's the question Jack asked before. None of those systems were fully validated in the Latent Issue Reviews either. So, the same process is ongoing for them; further analysis, further research.

MR. PASSEHL: Okay, thank you.

MR. SCHRAUDER: Okay. The other thing, Path C was the Topical Issues. And the Topical Issue Reviews are not done yet, not completed yet. Those, again, I have identified before is Seismic Qualification, High Energy Line Break, Environmental Qualification, Appendix R Safe Shutdown Analysis and the Station Flooding.

Described briefly here, the process we're going through to review those. We're doing Collective Significance Reviews on those topical areas. We're looking, we're using a Nuclear Operating Business Procedure that, it's a relatively new procedure that we've developed, across FENOC. It's specifically aimed at Collective Significance Reviews. It provides us with a consistent process and consistent format for the analysis of those systems.

We'll use the Condition Report Data Base to pull all the issues that have been identified relative to those. We would bin those Condition Reports, much like we did in the Safety Function Validation Project, into specific topical areas within that topic. And then, we'll look at those to see whether they have implication, problematic implications to those topical areas, and we'll also conduct an extended condition evaluation for the area where that's warranted.

Then, we'll determine, schedule again the Corrective Actions that come out of that, go into the system to determine whether they need to be done prior to or post restart and we'll schedule those Corrective Actions.

Then, when the report is written, it will go through our Engineering Assessment Board to review the results of that process also.

Those things, I'm going to say they're probably 75 to 80 percent complete right now, some in a more of a state of completion than others. I expect that they will be, the reviewers should be completed with their work this week and then they will be scheduled for AP Review within the next week or so.

MR. GROBE: Bob, are the reviews completed sufficiently that you can give us some insight on how many of the areas warranted further extended condition review?

MR. SCHRAUDER: I can speak to one, Jack, that I've looked at pretty much. That's the Seismic Category.

Seismic Category had identified several things. Two over one criteria. Much of that was a, restraints of some temporary equipment. We also looked at the impact of the Boron deposits that were in the containment. Did they impact the seismic capability of the systems they were on?

We found that they did not.

We had one issue that came out of this, was a relatively old issue though. Early in the plant's life, we got some of these relays, HFA relays that were identified under GE SIL. I can't recall what SIL stands for. Notification to industry from a vendor.

MR. POWERS: Service Information Letter.

MR. SCHRAUDER: Service Information Letter. Thanks, Jim.

We had bought these relays by way of a third party. We didn't get them directly from GE. We were not on their vendor list for them. So, we did not get the information in when they put it out, that these relays needed to have certain adjustments or checks to see if they needed adjustments periodically.

I think we had about five of those. We identified a few of those and we did do an extended condition to find out how many of these HFA relays do we have. We'll go out and perform the set point checks on that.

And then we did confirm that we plugged that gap in the process, a third party vendor, we would get information on their products. And this was, was found to be isolated in this case, with GE. I think we had gone through Westinghouse that that had been corrected in the past.

Another one we did find that we had to do an extended condition on the seismic was, our process a couple of years ago has had some discrepancies in the seismic and safety classification, where you might in the safety, safety/nonsafety boundary at say an open root valve, downstream up there, you might have a transmitter or something that needed to be qualified for seismic purposes.

Either was not reflected properly on the PNID's, or the data base that we use to track that; had it confusing to modification, if you're putting it in.

We went back and did an extended condition on that, to see. We looked back to the point that that confusion was introduced into the system and looked back at all the mods done since that time. And I believe that resulted in identification of five transmitters that needed to be looked at. Two of those were original purchases, and they were, did have the proper qualification to them. We had to replace three transmitters. That's an example of an extended condition that came out.

One final one was a, I don't know if you recall this or not, but there was an issue again on the seismic classification in the service water pump bay, if you will. And the cooling tower makeup line went through there. And, it was supposed to be seismic. And it was not seismic. It

was not installed seismically.

So, we had to do an analysis to show. We used a methodology to determine the line would have withstood the frequency, the resonance frequency for the earthquake. We used that method to show it would have withstood the earthquake effects, but we are also going back and making that seismic now.

That resulted in an extended condition, so we had to go out and look at other systems where there were multiple trains or multiple systems in a single area that could be impacted by that event. And, by that situation, we found four or five other areas that we had to go look at. All of those turned out to be acceptable.

That's the kinds of things we're finding in the extended conditions that we're doing as a result of.

MR. GROBE: Okay, thank you.

MR. SCHRAUDER: That concludes my discussion, unless there's -- well, there is a summary slide here that says, as I said before, we did show good correlation with the System Health Readiness Reviews. We do have more analytical work ahead of us to be able to fully validate some of the safety functions. We have yet, we have not identified any major modifications necessary as a result of the Safety Function Validation; or so far, the

Topical Area Reviews.

And we did confirm, I think what we had already said, that there was some rigor in the calculations, clerical calculations that was lacking.

MR. GROBE: Thank you.

MR. SCHRAUDER: With that, I turn it over to --

MR. MYERS: Me.

MR. SCHRAUDER: Lew Myers.

MR. MYERS: Thank you.

I have to sort of shift gears now, talk about providing you some information in a few areas first, give you a snapshot of the January the 30th meeting that we had with the Nuclear Regulatory Commission in Chicago to discuss Safety Culture and Safety Conscious Work Environment.

Second, to status our Restart Readiness Review Meeting that we had, where we looked at -- once again, I want to make this clear, we only looked at fuel, because Restart Readiness Review Meeting was not prepared, designed to look at restart. We do various Restart Readiness Review Meetings as we change operating modes of the plant, so I'll provide you some observations of the one we did for fuel load.

And, finally, I'll provide you status of how we

addressed the safety, Safety Culture readiness for fuel load. That will be the first time we've done that.

First, I would like to give you a little background. The Root Cause Report for the Reactor Vessel Head was presented last August. In that report, there were basically five overall conclusions that we had.

First, we found that there was a production focus established by management combined with taking minimum actions to meet regulatory requirements and in some cases we did meet the minimum action, and that resulted in acceptance of degraded conditions. Item number one.

Second, we found that Davis-Besse had been operating a long time as basically an isolated plant. As you remember, FirstEnergy is a fairly new company. And then we took over the Beaver Valley Station. So, if you look at our Davis-Besse station, all our performance indicators were running along pretty well. So, from a FirstEnergy standpoint, it was still being operated sort of as a stand-alone plant.

Third, a large number of Condition Reports were identified by our employees. There was like over twenty Condition Reports written, but they weren't properly classified or evaluated. If they had been, we wouldn't be sitting here today. So, the employees were writing and identifying problems.

Fourth, our Quality Organization reported to the site staff for many years, and as a result their effectiveness was limited. In fact, they became part of the same culture, if you will. And when you read back on the reports, some of the conclusions that they drew based on the findings, it's hard to correlate those conclusions as being accurate.

Fifth, Operations was not actively involved in the role of improving the plant conditions. Somewhere along the line, over a long length of time, sort of have a different role with Randy and I, than others have seen traditionally in other nuclear stations.

With that, those are the areas that our Root Cause sort of focused on, and I would like to provide you with now the next slide. The definitions of what we've given our employees, as Safety Culture and Safety Conscious Work Environment.

We divide those things into two areas, and basically, two different definitions. Let me tell you why. From a Safety Culture standpoint, we define that as the "assembly of characteristics and attitudes", so both characteristics and attitudes, "in the organization", which is organization, you're looking at the organization; "and individuals", so, what they see from, "which establishes an overriding priority towards nuclear safety activities and

ensures that issues received the attention warranted by their significance."

Write a CR, properly classified. If you're out doing a job in the field, you get the right management oversight. That's what we're talking about here.

From a Safety Conscious Work Environment standpoint, it's "That part of a Safety Culture", if you will, "addressing employee willingness to raise issues and management's response to these issues." So, they have an environment that encourages them to identify problems.

Next slide.

At that meeting, we provided the NRC a management model. Once again, I want to stress this. This is a management model. It's not an employee model. And this, it's not designed to establish the perfect employee.

It can and should be used to help management and ensure that the correct standards are present in the organization, and that our standards are properly being understood by our employees, and then be implemented into the field. Are we sending the right message to our employees? That's the real question.

There are three commitment areas that we discussed with the NRC at that meeting, and 14 individual commitments that we also discussed that we monitor effectiveness in. Now, let me go through those.

First is the policy level commitment. That policy level commitment has to do with the message that we send from our corporate organization. Are our policies correct from a safety standpoint? The management value structure that we have. Do we understand our value and vision and are they being properly implemented in the field. The resources that we provide; the same thing from time, money to people.

And then, finally, the oversight that we provide, from not only a quality oversight point-- standpoint, but from a self-assessment standpoint. Those are the type of things we're talking about there.

Then you move on into the management commitment area, if you will. The commitments under there are emphasis on safety. Do we send the right messages daily, when we find issues? That we understand the responsibilities of the managers and the organizations and are we cohesive as a team. And that was an area that we really want to start focusing on. I would tell you that we were sort of in isolationism in our group.

Then finally, accountability of responsibility. Do we understand who is responsible? That accountability is clear. Qualifications in training is more than just maintenance or operator training; it's leadership training, it's management training, and supervisor skills training

also. Then, high organizational commitment to safety. Are we really committed to it? Do we send those messages?

And then, finally under the individual area, you can focus on the nuclear professionalism. You know, what do people, what do they understand technically when they're in the field. I mean, do you understand what you're dealing with and do you have the right sensitivity to those issues?

Open communications. That's the vertical communications within our organization. And then rigorous work control. That's more than just going out working a work package. Are the engineering documents that we prepare quality documents? And one that I know is close to our heart right now are the RWP's that we prepared, radiologic standpoint, thorough and accurate. So, it's across the board from a work control standpoint.

Questioning attitudes and overall drive for excellence, and maintain our plant, and improving safety margins from cycle to cycle, both from a personnel standpoint, but also from a material standpoint.

With that being said, let me go through some of the actions we're taking very quickly. These are just, you know, just a snapshot of the actions that we shared with you all guys in the January 30th meeting.

First from a policy standpoint, we started taking many of our actions back in the May time frame in 2002,

after we finished our Technical Review. The first action we took was create a management structure for oversight, and took the action to sponsor the Management/Human Performance Report that we shared with you in August.

And then, after that, our FirstEnergy Board of Directors issued a resolution on nuclear safety. That's what we think should be the genesis of the standing in our company. From that point on, Bob Saunders provided two new policies; one on Safety Culture and one on Safety Conscious Work Environment.

We've now met with all of our employees and trained all employees at FirstEnergy Nuclear Operating Company on those policies. We strengthened our Incentive Program, which we talked about with the root cause to focus on safety.

We've established and implemented an executive level organization, if you will. We now have the Quality Assurance Manager, the Executive VP of Engineering and Chief Operating Officer position at our corporation -- at our corporate offices. And if you go look at this alone, it would have prevented some of the isolationism and assured standardization of our processes, and it would have probably improved the quality, the quality of the oversight documents that we looked at and may have resulted in us not being here today.

We strengthened our Employee Concerns Program. We work hard to make sure that's an anonymous program and people feel free to come forward with that, into that program and address issues. And, we're seeing good improvement there.

From a management standpoint, you know, I talked at that meeting about our management team. Today up here, you know, I think it's our senior team. We're technically involved with things going on at the plant. Before we came here today, we took time looking at the videotape of our reactor vessel, so we could understand the cleanliness requirement, you know.

We talked somewhat about that, but the management team we have in place at our station has over 460 years of nuclear experience. Most of them are SRO, most of them are degreed individuals with advanced degrees. And what's more important than that, they're proven leaders in industry. A lot of us have worked other places, worked at our other plants and we're a pretty well known commodity. So, we really believe that we really strengthen the leadership team for the plant.

Additionally from a, a standpoint of what failed; Tony, you asked a question awhile ago about the Corrective Action Program. If we're going to restart our plant, we have to make sure that our Corrective Action Program is

working properly. I mean, it is the backbone of how we identify problems, where we put things. Once we stick them in there, they can't get lost. They might not get worked on, but they can't get lost.

So, it's imperative that we properly classify and then evaluate issues. And, what we've done to strengthen that is our Corrective Action Review Board. Now it's chaired by Randy Fast. On there we also have engineering managers and the Operations Manager. So, we really, really escalate the duties and responsibilities of that board, their performance indicators, and tried to strengthen the Corrective Action Program.

Additionally now, once we solve our problem that our employees had given us, we send each and every employee back an email telling them how we solved their problem. So, we think we're improving that program a lot.

We improved our leadership conferences. You know, one of the things we now have, we evaluate each and every one of our managers, supervisor yearly; and we're in the process of doing that right now. We've added two new conferences that focus on safety. So, that's new for us.

We've strengthened our problem solving and decision-making nuclear operating procedure. As I think Christine knows, we have a procedure that we used at Perry for decision-making; stop, analyze the problem, get the

right people involved, use the right techniques.

You know, we did not have that at the Davis-Besse Plant, so we've turned that into a nuclear operating procedure that's now used every day at all of our plants, called morning phone call. We have a morning phone call 7:30, just about every day you can hear somebody talking about an action plan they developed for one of the nuclear operating decision-making models. So, we think that's really strengthened the way we -- when we find problems, that we deal with them.

Then, Engineering Assessment Board is now in place at this station to look at the engineering products. And probably if they looked at some of the engineering products that were sent out in the past, we wouldn't be here today. So, we think we're seeing good improvement there.

Now let's move on to the individual. We've talked about the Reactor Vessel Head Group Training that we've done, if you will, where we sit down each and every group individually, and went through, in depth training on this event and how your particular group was involved with this event; how we should have found it earlier. Then we went through the group standards and we tested each and every person on site. So, that's complete.

The Town Hall Meetings are basically weekly. We may miss a week every now and then, but usually weekly. Randy

says we have a hundred people. Jim says we have 40. So, we typically have somewhere between 100, 140 people.

I don't know how I came up with that math, but sometimes they're very large groups and sometimes there are groups where I've attended meetings of about 40 people.

If you go look, I talked about our 4-C's Meetings. I try to have one of those meetings basically weekly with our employees. I've now met with over 500 of our employees. And, you know, it's really interesting. I think it's time for maybe one of you all to come in and sit in on one of those meetings. Our employees are brutally honest. That's one thing I'll say about them. I think those meetings are good.

The one thing that I see coming out of that, is a willingness of the employees. When we do these meetings, we have, we have the team meet together to identify their concerns and their compliments and everything. So, I want to know who wrote the question out. Then, when I come into the meeting and go over all those things, I prepare and try to be able to give them good responsive answers.

And what I'm finding now more and more at those meetings, as I bring up the questions, the employees will say, well, this was my question, which shows me it's the environment I'm looking for. So, I think those meetings have been very valuable.

There is something that I believe, they tell me in the years that they've been at Davis-Besse, they've never had an opportunity to sit down with a VP and be able to talk with him. I don't quite understand that, but that's something we should keep a permanent part of our system in the future; and we intend to.

Finally, we created -- we had operability training, as you know. And our Root Cause Report, our Operations Group was lax on, prove to me this is operable; come to me, engineering, show me why it's operable. And, we were doing some things by telephone that we shouldn't have. So, we reevaluated the operability process, provided training to all of our engineers, all of our operators. I think you'll find that very challenging, operability issues now.

And then finally, we went back and we requalified each and every one of our root cause evaluators. Those are just some of the actions we have taken. There may be more.

The next area, I want to talk about is --

MR. GROBE: Before you go on, I have a question on slide 30. I wanted to hear this slide 31 material before I asked it.

In the 3 areas; policy, management and individual, you have four to five assessment attributes, I guess.

MR. MYERS: Right.

MR. GROBE: In each of those assessment attributes, there is a number of data sources that goes into your assessment in that area. Have you developed that sufficiently that it's on paper, it's something that's ready for us?

MR. MYERS: We used it, Jack.

MR. GROBE: Pardon me?

MR. MYERS: We used it during the Restart Assessment. Now that we've used it, we're going back and modifying it some, but it's actually been used. I'm going to talk about that, as a matter of fact.

MR. GROBE: Okay, good.

MR. MYERS: In our Restart Readiness Review, let me tell you, the purpose of that meeting is not to justify why we should load fuel, the purpose of that meeting is to determine why we should load fuel. You know, do we have a consensus around the table that loading fuel, we're ready to load fuel. And, we'll do that for Mode 4 and other times.

As Randy said, the meetings, this meeting went on for five and a half days over a several week period. If nothing else, it was a good team building session. Start off not doing as well as I would have expected on presenting their areas, but ended up I thought fairly well.

What we do there is we bring each and every group in our station in, and the groups come in and explain why their organization is ready to load fuel. Do you have the -- and we have a list of questions that we go through; 3 or 4 page list that they need to be able to answer.

Do you have the people in place that you need? From a health physics standpoint, do we have all the areas locked that we need to go lock up now to load fuel? Do we have the organization in place? What is different now than it was before, you know? So, they need to be able to answer those questions.

We also have a group of questions they have to ask about Safety Culture in those areas. So, each and every group, we grade those groups on their Safety Culture, their readiness to move forward. And they would go through this question list on a group basis.

Additionally, we look and make sure that we feel the whole plant staff, at the end of the meeting, we sit around the table and go through those questions again. That's where we sit down and grade each of the areas as a total.

For example, suppose we have a manning problem in one group, which we did. But as a site, do we think we have a manning problem, we're working excessive hours or something. So, we analyze that and then grade that particular area based on what all we've heard.

The other thing we do is we look at several key programs. For now, we've looked at the groups; what are the key programs? Some of the programs we went through are Corrective Action Program, what's it tell us; the Management Observation Program, the Radiological Control Program, the Reactor Coolant System Leakage Program and the Employee Concerns Program, which is, what does the Employee Concerns Program tell us now? Are our people willing to bring issues forward?

Also, from an engineering standpoint, let's talk about the systems we need for, for fuel load. We actually bring the System Engineers in and go through the systems and let them convince us that their system is ready to support fuel load. And out of that we found a lot of interesting things. Also, at the end of the meeting then, we're ready to grade the overall assessment of Safety Culture, if you will.

Now, as we do that, what we've done, is the way we've done that at this meeting, we took each individual group and we graded either green, white, yellow or red. You can read the definitions, I won't read each one.

To be green, all major areas are acceptable with a few minor deviations. From a white standpoint, all the major areas are acceptable with a few indicators requiring management attention. Then, you get down in the red area,

and you would say it's just not acceptable. We have to take immediate management attention. So, that's sort of the grading process we went through.

Next slide.

Once again, what I tried to do here is to indicate that we just don't take one, one issue like, all the groups, do they feel like they have the right man. What we try to do is take our performance indicators, went and looked at our backlogs, we looked at our risk indicators, our management observation programs. What are they telling us?

For instance, we went through our management observations. We could tell that we had a high number of management observations requiring coaching, more than we typically see at our other plant.

We looked at how we've demonstrated our performance during recent plant critical evolutions. For example, one of the things we looked at in this issue was when we filled the reactor cavity for the first time. Then, feedback from our Independent Safety Culture Review Process, which is -- and Quality Assessments; they also provide us some input. And, then Doctor Haber will look at that process too. How do we need to use that process to help strengthen the one we have in place.

Now, let me go through what we found. You go look