we still have to attach a couple of the lifting devices to replace the head onto the vessel. But that job is very nearly at successful completion now.

With regard to the head that we replaced, we have moved that out of the turbine train building into a temporary storage building, out on the dry cask fuel storage pad that we had poured and we'll retain it in that temporary storage building until after the, after this outage. And, then we intend to take some additional samples off of the head for ongoing research by the industry and the NRC.

Then, that's the status of the head.

Now, the issue that we addressed last week, I'll go over a little more, and that is with regard to the bottom head of the reactor vessel. As you recall, we had some material going down the side of the vessel, and had Boron accumulated on the bottom nozzle.

We were unable to positively exclude through chemical analysis that those Boron deposits on the bottom head were not coming from leakage from the incoming nozzles on the bottom.

As Lew alluded to before, we have gotten together with Framatone. They have made recommendations to us and we are proceeding with a plan on what we will do to assure ourselves that the bottom nozzles are not leaking on the

reactor vessel head.

I'll walk through a couple of those steps with you here. First of all, the first step here we have completed, we thoroughly cleaned the sides and the bottom head and have removed any indication of Boron that's down there now.

As we complete this outage, we'll restore the head on the vessel, then we'll bring the Reactor Coolant System up to normal operating pressure and temperature. We'll hold then that temperature and pressure for 3 to 7 days. We haven't zeroed in on the exact amount of time, but approximately a week we'll have the plant up at normal operating pressure and temperature.

We'll then bring the temperature and pressure back down. We'll remove the insulation off of the vessel again. And we will perform a bare metal inspection, this time prior to restart, so we will have a very good picture before and after.

The next slide we show why we think that will be effective. And then, as we complete this outage, bring our unit back on line, we have talked about before, we do intend to do a mid cycle outage. We will take the insulation off the bottom head again. We will reperform a bare head inspection at that time.

Then, we're also continuing our investigation of our

on-line leak detection system we will install on the bottom head. And, we're continuing to look at that. If we can get it in during this outage, we will put it in, in this outage. It is more likely that it will be in the mid cycle outage before we are able to get all the hardware and complete installation of that. But our intent is to put an on-line monitoring system on the vessel, probably will be on the bottom vessel as well as the head.

The next --

MR. GROBE: Bob, before you go on, could you explain a little more detail why you need to put fuel in the reactor to do this test, and then secondly, how you raise your Reactor Coolant System to normal operating temperature and pressure?

MR. SCHRAUDER: Sure. We looked at our ability to bring the system up to its normal operating temperature and pressure without fuel as is done, it's a hot functioning test before you go in operation, the equipment used to do that.

The issue there is you have to get proper differential pressure through the vessel so that your reactor coolant pumps don't exceed, and rerun it in that condition. So, you have to put in some, something that will simulate the core, basically to give you the proper differential pressure across what is normally the core.

The way that you heat up the vessel in this condition is not with nuclear heat, but actually with heat coming off of the reactor coolant pumps themselves. And so, and that's what we usually heat this up to. Even though fuel will be in the vessel, it's not nuclear heat, we will be using generator pressure from the reactor coolant pumps themselves.

We were unable to get plates, and the equipment that's necessary to create the differential pressure. They just don't exist anymore in the industry. And so, we're not able to get that equipment. So, we're going to need to put the fuel back in the vessel in order to get the proper differential pressure across the vessel.

MR. MYERS: Also, the seal, Bob, the way our incore seal, seal moves in and out. There is a seal at the end of the incore, with them installed, the seal is made up. And so, if you have the incore installed, try running the pumps, that wouldn't be good. And if you pull them out, you can't get a seal. So you couldn't get the pressure. So, you have to have the incore installed to get your fuel to do that. That's what we need also.

MR. COLLINS: Excuse me.

MR. MYERS: Those are the conditions that's driving that.

MR. COLLINS: I had a question of clarification for you. I understand you'll be performing nuclear tests before the NOP/NOT Operation?

MR. SCHRAUDER: Integrated leak test on containment?

MR. COLLINS: Correct.

MR. SCHRAUDER: Yes, sir.

MR. COLLINS: That's to ensure your interior area is intact?

MR. SCHRAUDER: Yes, sir. Containment integrated test will be done prior to, before the normal operating temperature.

MR. COLLINS: And I think, as far as a leading technology, we would be very interested in your online integrated attempt, realizing it's not required by the license. One of the lessons learned through reading the NRC Lessons Learned Report from Davis-Besse is to challenge yourself to go back and look at the existing leak rate requirements specs, when you go through the specifications, or one gallon un-identified, and the other criteria.

So, we're looking for enhanced ways consistent with some of the technology that's overseas, as you say, to supplement those systems.

MR. SCHRAUDER: We do believe

the technology is available for this leak detection system. It's a question of whether we can, the amount of time it will take to get the equipment here, and to complete the design modifications to install it on the vessel during this outage. And as you said, this modern system is used overseas in several reactors.

MR. COLLINS: In conjunction with that, of course, that would require a response procedure by operators and perhaps even modification of the simulator has been ~~wanted~~ warranted to deal with the conditions and the expectations of the operators in response to this.

MR. SCHRAUDER: Right.

MR. GROBE: Just one more thing, Bob. This is the issue Sam is addressing on the need to address. This is an interesting enough issue, but once you finalize your design and have a good grasp on it, may want a meeting with us, just to go through the system, how it's going to work. As Sam indicated, how the operators, what kind of operators you're going to have to respond to it. Similar to what you're doing in sump modification.

So, we need modification. I think it would be beneficial if you can, then chat with us prior to that.

MR. SCHRAUDER: Right, we were planning on that.

MR. MYERS: We're pretty excited about this new technology, about the Flus Monitor.

MR. GROBE: Okay, go ahead.

MR. SCHRAUDER: This graph, the next slide shows a graph of the type of accumulation of Boron you might expect to see for the various leak rates. This was developed for us by Framatone. The original graph of the whole series of how long you held the reactor at normal operating temperature and pressure.

I chose 7 days as the example here, but you can see that you would actually begin seeing some Boron deposits for as little as a millionth of a gallon per minute leakage was deposited on the nozzles. And then as you go into more leakage down to ten millionths of a gallon, for example, you see you're up over the inches, in cubic inches of Boron you would be able to detect on the bottom nozzle.

So, we believe if there is leakage on the bottom nozzle, we will be able to have the system up and pressured for a week.

MR. GROBE: So, this is one graph, 7 days.

MR. SCHRAUDER: There are a series of graphs for 3, 7, 10 and 30 days, but it looked like 7 days was fairly reasonable amount of time that you would

expect to see any leakage that might be there.

I would also like to add that Framatone is continuing to do some laboratory modeling of different leak sizes held at different pressures to verify. This is analytical curve right now they're creating --

MR. GROBE: I don't want to speak for Bill Bateman, but if I was Bill Bateman, I would ask that exact question. What kind of crack tightness are you talking about, what size of crack, two thousand, maybe 2,250 pounds per square inch. That would be great information on what leak rate if you would encounter.

MR. SCHRAUDER: Then in the event you do find leakage, we have a fix that is designed and in fact has been used in the industry, not on the bottom nozzle, but on the pressurizer, for instance, this type of repair has been made.

And, the first, the first thing here is the, you see on the initial nozzle, the first thing you do is come in and you'll pull the incore of the tube out of the nozzle; plug the nozzle from the top of the vessel. You can see on there on the top edge of the, still not right, top edge of the, what represents the vessel is the weld, and that is the current pressure boundary for these nozzles.

What we'll do is we'll cut that nozzle after, cut the nozzle, you'll see in the middle picture, goes up about

an inch up into the metal itself on the reactor vessel. Then there is a head welded onto the bottom vessel, a weld put on down there.

Then you take a new nozzle and insert it into the opening and then the new pressure boundary weld is a weld that's put on between the nozzle knob and the head that was welded on the bottom of the vessel. So, you remove the pressure valve inside the reactor vessel to the outside of the reactor vessel.

The advantage that this fix has for us is, in that nozzle, the replacement nozzle that goes up in there, is not attached to the remaining piece of the old nozzle. So that if you weld this thing on the top and the bottom, one might say you could just do a weld on the bottom of the thing. That's preemptive, move the pressure valve down to there. The problem with that is, now you've anchored that nozzle on the inside and the outside, and you can induce thermal stresses into that. As the tube has to expand when you bring the vessel up to its temperature and pressure, this allows for thermal expansion in the nozzle itself.

MR. HOPKINS: Let me understand, Bob. So, the leak barrier still will be the top weld then essentially, you're saying?

MR. SCHRAUDER: The pressure nozzle there will be welded at the bottom.

MR. HOPKINS: It will welded.
MR. SCHRAUDER: Yes. That will be where your pressure weld is.
MR. HOPKINS: Okay. So, by cutting, you're no longer tying the top and bottom.
MR. SCHRAUDER: That's correct.
MR. GROBE: I'm not sure how accurate this drawing is, but it appears that the new penetration inserting from the bottom is butted up against the one that you're cutting off. Is that going to be a gap there or --
MR. SCHRAUDER: It's essentially, it won't be flush up against it, but pretty close.
MR. GROBE: It will be a gap, okay.
MS. LIPA: And Bob, this is, as I understand what we were talking about, in more detail on the November 26th meeting?
MR. SCHRAUDER: That's correct.
MS. LIPA: Tentatively set up for 26th.
MR. MYERS: This is on the schedule though, what is it, three days, Bob?

MR. SCHRAUDER: Maybe seven days.

MR. MYERS: And it's been done on the pressurized vessel before, so it's kind of unique.

The interesting thing is, the bottom of our vessel is the, the pole, where the pole goes into the lowest temperature, we really don't believe there is a high probability there is leakage there. We just can't substantiate there is not leakage there; that we can substantiate we found that Boron there.

So, we've cleaned it up and now we can substantiate it. We'll find the leak. And we have the repair at hand. This is the repair suggested for us.

MR. GROBE: Sam has one more question, which I think I answered correctly. You're expecting this is going to be a ~~cold prepare~~ code repair not requiring NRC approval; is that correct?

MR. SCHRAUDER: That's what we believe at this time. We're going to look through this and make sure whether we need any approval or not. We don't believe we do.

MR. GROBE: I'm sure we'll talk about that a little more on the 26th, but I appreciate your point, Lew, is you don't expect the penetrations to be

leaking, you're just going to be ready with the design to install a repair, if in fact there is one.

MR. MYERS: When we took the chemical sample, we didn't, we couldn't validate from the chemical samples that, exactly where the Boron came from, and we couldn't trace it back either, due to insulation. So, the conservative thing to do is do a good inspection to see if there is leak damage. We don't expect it, we can do a little work and if we find it, we repair and fix it right then. That's our plan.

MR. MENDIOLA: Going back to slide 19, your graph slide, what are the two vertical lines there; that one and the one to the right? Those two.

MR. SCHRAUDER: Those are miscellaneous vertical lines. They have no meaning at all.

MR. MENDIOLA: Okay.

MR. POWERS: I think what those are is, the initial dialogue we had Framatone on those, that's the flus monitoring range, ranges of effectiveness for flus monitoring for tracing cracks.

MR. MYERS: That's exactly what those are.

MR. SCHRAUDER: They were notes on this. I cleaned them off, or pulled them off.

MS. LIPA: Any other questions for Bob?

MR. THOMAS: One other thing, Bob. If the flus monitoring system doesn't get installed on the vessel prior to the NOP/NOT check, are there any other temporary monitoring systems that you'll put between the insulation and the bottom vessel and monitor for leak during the ~~cold~~ hold period?

MR. SCHRAUDER: Not that we're aware of at this time. We're looking for potential for cameras and the like, but it is not looking very promising right now.

MR. GROBE: Fairly high temperature environment.

MR. MYERS: We're looking into having cameras --

MR. GROBE: Talk to the coal miner.

MR. SCHRAUDER: We are continuing to look for some cameras that will work. We're investigating that.

MS. LIPA: Any other questions for Bob, because this would be a good time for a break. So, we'll start back in ten minutes at 3:40.

(Off the record.)

MS. LIPA: Are you ready, Jim? Go ahead.

MR. GROBE: Jim, before you start, just quickly. Apparently, some of us are speaking too softly and if there is any inability to hear, please speak up. Mr. Stucker does an outstanding job, and for some reason some of us have our head turned or something like that, and it's not, our discussion is not discernible. Please let us know. Thank you.

MR. POWERS: Okay. My portion of the discussion today is focusing on System Health Assurance piece of the Building Blocks. And my desired outcome today is to provide a status of the Latent Issues Review and our plan to perform a Collective Significance Review of the results we've obtained.

The Collective Significance Assessment consists of rounding up all the findings that we found from different individual valuations and we use to determine areas that require improvement.

You recall at the last meeting I brought along a pretty substantially thick report that we prepared on Service Water System whereby our engineers went through the system in a lot of detail checking a lot of attributes and developing a substantial report out on it, also finding some discrepancies.

We did similarly report efforts for five systems in total, plus we've been doing what we call System Health Readiness Review Reports on 31 systems, which are important to the safety of the plant.

So, we take all those results from those reports and the findings from the reports and we roll them together with self-assessment activities that we've undertaken, particularly in the calculation quality area. We also rolled together with inspection results that Marty Farber described earlier in the presentation. And, we took all that information and put it together and see what it's telling us in terms of areas that require improvement.

From the Latent Issues Review, which we did on five systems, as you see here, we checked 31 topical areas. And by a topical area, what I mean is calculations, drawings, what we call system design descriptions, quality of the use. There is a number of engineering documents that provide the basis for a system and its design basis.

And a process of going through that matrix of doing those checks of all the individual attributes that support system quality. We did over 14,000 individual checks. So, there is a lot of things we went into checking and looking for any sort of discrepancies.

Going through it, we found 777 discrepancies, which is about a 5 percent hit rate. And of those our station

Restart Review Board classified 447, as being required to be resolved prior to restart. That was about three percent.

So, we checked a lot of activities and we found about a two percent error rate, if you will, in discrepancies.

Now, we added to those findings the results of the System Health Readiness Reviews, Self Assessments and Inspection Results and what we found then -- next slide.

The topical areas out of those 31 that really call for more attention and improvements are areas of calculation and analysis, electrical calculations, instrumentation and control calculations; and that typically is set point for instruments in the plant mechanical and structural calculations.

And also system descriptions, and in this area, there may be discrepancies between references and various numbers and different references that make up our system description manuals. And as a result of those, configuration management shows up as an area that needs to be improved as well. We refer to configuration management as an overreaching program for all the documentation of the plant to be sure that it's managed in a way so it is all consistent.

So, we consistently groom configuration management

systems with your Corrective Action Program. And these are areas that thinned out, a significant requiring further work. All the issues that we found during our Corrective Action Program and all the issues are going to be addressed per the Corrective Action Program. These issues will require some additional attention.

On the next slide then. We also went through a Collective Significance Assessment of what we call common attributes. These are engineering programs, technical programs. And you can see the list of them, high energy line break. That's for breaks of steam lines, for example, high pressure and temperature lines that affect the equipment. We design for that.

Environmental Qualification. We design the equipment so it withstand access conditions.

Appendix R is our fire protection program.

Seismic qualification of equipment.

Temperature effects upon system operability, and this was several issues, but in particular one of the license men requested that I mentioned at the last meeting, that was related to the lake temperature increases and changing our intake water temperature, to coincide with anticipated lake temperature increases, and carrying out the analysis rigorously into the heat exchangers in the systems in the plant.

And the Natural Phenomenon, which can be flooding of the lake, if you get a high enough level to flood into some of the sumps and sump pumps.

So, these are areas that we're going to be looking at in some more detail, and what's been referred to as expansion plans. We're going forth and taking these results that are of a collective significance and looking into the balance of our, making control safety significant systems to assure that they are safe and ready to support restart and continue live operation.

The plans are putting together for that now, take into consideration the collective significance, and it lays out our roadmap, if you will, for what we're going to do looking into other systems to be sure that the issues are appropriately addressed in our other systems.

So, in summary, we're in that evaluation phase now. Other collective significance, this is a valuable process to us.

The latent issues process, I think you heard Lew talk about that many times in the meeting. It originated out of the Beaver Valley Plant and we brought it to Davis-Besse also. I think we've improved on it substantially, and we plan to utilize it going forward in all of our FENOC facilities on a regular basis during operation of units.

So, with that, I'm go to turn it over to John Grabnar. John is our Design Basis Manager, and he's going to talk about our plans going forward and addressing some of the issues we found, collective significance.

MR. COLLINS: Jim, if I may, I have a question and you may refer this to John if it's more appropriate.

The findings that you have depicted on slide 23, have those areas been flagged such that if those calcs or portions of those calcs were to be used in the immediate future given the activity at the plant, if that would be known to the engineers?

MR. POWERS: All the discrepancies are flagged within the corrective action process, and one of the more significant activities we've undertaken at the plant in the past several weeks is to go through the process of laying out the communications channels that need to occur, for example, people that are working in calculation topical areas versus system engineers that are working to get their systems ready for restart, and looking at the list of issues that need to be corrected and have those communication channels set up, so people know who is working on what issue.

So there is a major set of activities occurring, if you will, and we've gotten all the engineers involved

together to talk about that. And it's an area we need to communicate as we go through this aggressively, because there are a lot of activities going on parallel.

MS. LIPA: Sam brings up a good point. I hadn't really thought about this before either. If you have a calculation that you find a problem with, you write a condition report on that, and then somebody tries to solve that problem. Is that calc then quarantined so it's not used somewhere else?

MR. POWERS: Well, the condition report is written against the calculation. And going through the, what we call our press database that lists all the conditions reports and what they're written against, the activities go on, the engineers need to be familiar with, Chris, and know what's in there in terms of issues that have been written against calculations.

MR. GRABNER: That's one of the issues, Christine, that we are aware of and we are concerned about. We're working on doing that to make sure as part of our review process, first of all, the engineers in the different disciplines are aware of the calculations that have been in question. And we have lists of various, various sorts of condition reports versus calculations, and open items that still remain open from a program that I'll talk about in a few minutes.

So, we're putting those altogether to make sure that as the owners accept for review upon the modification work, we take into account that A, there are calculations out there that have been that may need to be revised, and could be that we have some other calculations that we're working on. And we will have to, we're going to make sure we're using it in some of the design work going forward.

MR. POWERS: Typically, what happens is the supervisor involved in the areas, for example, the analysis group or the service water system that I've talked about issues, lake temperature and service water, they are aware of the ramification of the systems going into the plant. So, the contracted work that's proceeding under their direction, they have that direct communication and are working at laying out the sequencing of, you know, what's important and the steps which need to occur if the calc has to get revised, when to support the ultimate logic train through the plant. So, it's an ongoing process with the supervisors.

MS. LIPA: Seems like you can probably have a similar thing with drawings or procedures, where you find a problem while you're solving the problem, that a drawing or that procedure is sitting there where somebody could use it.

MR. MENDIOLA: To your knowledge,

is there any licensing actions in-house occurring in the NRC review or any recent NRC amendments that we have approved that are affected by any of these discrepancies, that we should be aware of?

MR. POWERS: Nothing comes to mind. Two active license amendments or requests that we have had relate to the code applications that, Tony, there's no application on those. And I don't believe that we have any other, currently any other submittals in place.

The one we would need that does come to mind, that we need to look into, is the calc on power free modification that we had in pressure resistance. And I think there is one request for additional information on that, that remains to be answered, and that's an area we do need to check and be sure that application is still examined.

MR. MYERS: Can we go back --

MR. MENDIOLA: The reason I asked -- sorry, Lew. The reason I asked, had to do with, you said more than a few times, the temperature of the heat sensor and things like that, I was wondering if any recent amendments that we allow, or approved, if you will, had, were affected by any of this?

MR. POWERS: The one that comes

to mind that actually involves most of the, many of the issues centering around the service water system is the application made for the lake temperature increase, and the difficulties; part of the difficulties we're experiencing is in the dialogue with the staff on reaching approval, was taking a design basis consideration that the plant could be cut off from the lake, the canal could be cut off from the lake by an earthquake, for example, and needs to be able to cool the water recirculating now.

And when that's a consideration for design, temperature goes up, and that affects our margins of the plant. And so, although that one was approved, it's something we're looking at a little more closely to see, you know, the basis of approval, if we could work to do more technical work and have further dialogue with staff on that, that's the basis for that improvement.

MR. MYERS: What we do, we're taking action to go back, go back a year or two, and look at previous approvals we had and bounce it off of this stuff. We can do that pretty easy. So, we're taking action to do that. As we sit here, we don't know.

MR. HOPKINS: Just to expand that a little bit, you mention here instrumentation control calcs. And again, I'm wondering now about set point values and allowables in technical specifications, are those

detected, you know, that we're not aware of?

MR. POWERS: That needs to be checked, Jon. That's part of the assessment that we're doing in that area is take a look at those critical calculations and certainly those values or set point values of that population.

MR. HOPKINS: Okay. So, that's part of your evaluation phase now?

MR. POWERS: That's correct.

MR. MENDIOLA: I assume you're talking specifics rather than the methodology. When you said, set point methodology is still sound, your calculations on this are still sound in the way that you calculate your allowables and methodologies; and it's just basically on a specific case where they may be a set point that needs to be recalculated?

MR. POWERS: What we want to be sure is when a set point has been calculated, that all the associated tolerances and inaccuracies and instrument loop are included in that appropriately. And so the issues that have occurred that have been found in the set point calc area, we'll be looking at, you know, I say bundling all those issues together, looking at them collectively, and looking at each specific issue.

If there is any issues that occur that, that merit

looking broadly across the board at, for example, aspects on set point, for example, that's what we'll be doing, to make sure that the methodology is sound across the board in this area.

MR. MENDIOLA: Thank you.

MR. GRABNER: Okay. Good afternoon everyone. Again, I'm John Grabner, Manager of Design Engineering at Davis-Besse. I wanted to share with you this afternoon a process that we're undertaking to resolve the design-related issues that we've uncovered between our Latent Issues Reviews, the Safety Systems Design Performance Capabilities Inspections, as well as some of our own self-assessments; and talk about not only resolving those, the five systems that we've done latent reviews for, but also for across the other population of important systems of the plant.

First of all, as a result of the number of issues that we've identified, I've issued a functionality review to be performed that will focus on what's the ultimate effect in total of the questions that have been asked on the ability of the five latent issues systems to actually perform their important function. That assessment is currently in progress and we expect that to be done by the end of the month.

Secondly, being new to the plant, I had, I didn't

have a good picture of all the design basis activity that have been performed here in the past, so we had a timeline commission, which is down here on the wall to the left. If I could have Chuck here point out as I call some things out. Just point out some big picture items in red.

The red bars on top indicate periods of plant operation. The blue bars below them indicate periods of plant shutdown. This timeline starts in 1985, and runs to the present.

The green bars in the middle, that first green bar indicates the Davis-Besse course of action, which is the plan we undertook beginning in '95.

The second long green bar is our Design Basis Validation Project. Now, Design Basis Validation was a project we committed to as part of our response to the letter from the NRC, the industry received regarding design basis information, commonly referred to as the 10-CFR-5054 letter.

And in there we took a look at our system description manual, as well as our design criteria manual, which are two documents that we prepared as part of that course of action back in the 80's, and those comprised a design basis of the plant.

So, we looked across 29 of our most important systems with this Design Basis Validation Program, and we

have a course on every one of those 29 important systems to take a look at all the important features of each system and look for where calculations or analysis supports that that function can be performed.

Now, our preliminary review to-date shows these are very good documents. They're high quality. They do have limitations. And I'll talk about in the next slide how they correlate with the questions we've had so far. But they provide for us a very valuable resource. And, had we followed through completely with all the issues that were asked back in the late 90's, we would have a lot more issues today that we can talk about.

MR. GROBE: John, before you go on, you indicated a third bullet down under Design Basis Validation, that it validated Systems Descriptions and Design Criteria Manual. Were there any deficiencies identified during that process?

MR. GRABNER: Yes, there were. We referred to, there is a data base of open items. Originally there were about a thousand, roughly a thousand open items. Now we have 275 or so of those still open today. And the, in fact the third green bar over there, which started around March or April time frame this year, indicates the renewed focus we took on closing out those 275 actions. We've applied a lot of resources to doing

that, and suspect those will be closed out by the end of this year.

So, yes, there were a lot of issues. A lot of them were issued, not all of them were answered correctly or completely, however; so, and we're finishing that up now.

So, from our Latent Issues Reviews, I talk about latent issues. I'll add into here other, of course, activities that we perform on our five most important systems. We do have a number of design basis questions that have been raised.

Looking through these, and again, this is all somewhat preliminary in nature. A lot of these issues have been previously identified in this Design Basis Validation. A number of them are merely questions and really aren't issues. I couldn't find this calculation, we find actually we do have it. Other cases we thought we didn't do testing and we find a test report.

However, there are a number of potentially important issues that were not previously identified that were identified either by Latent Issue Reviews or one of the other reviews that were conducted. So, what we're working with, of course, is what's the difference between those two.

So, many of the areas that weren't previously identified by the way are in topical areas that Jim had

talked about earlier; flooding, environmental qualification, energy line break design, those were topical areas that were not looked at in detail during Design Basis Validation, because specific credit was taken to previous inspection and assessment activities, which by the way are allocated on the bottom half of the timeline, which shows the assessment and inspection activity both internal and external that's gone on through the timeline.

So, that brings us to our resolution approach. And, if we start here, first of all I will point out that this is all conducted within our Corrective Action Program. We have condition reports for every one of these issues that's been identified, in many cases multiple condition reports.

So, the first task that we're currently undertaking as we speak is consolidating, eliminating the redundant condition reports, so we're not answering the same question twice; consolidating similar calculations or similar condition reports, so when we do things such as revise a calculation, we have all the issues combined together so we can do it once.

So, we take those condition reports and we ask ourselves, first of all, is there a potential impact on safety function or operability. Either one of those, a yes to either one of those questions is going to require that we resolve the issue and run the ground prior to deciding

how to act.

So, once we now group to the balance of the number of conditions or issues that are potentially safety significant, we look at how many of those have been previously identified under the Design Basis Validation Program. And, what that does for us is provides us a more efficient way of looking at the extended condition, because we've already looked at 29 systems under Design Basis Validation; and we verify the issues, these open items, on each of those 29 systems, we can revalidate the answer, make sure we answer completely and correctly, if it's already been answered. We follow through to make sure it gets answered and is still open.

Then, there is going to be a number of issues that will fall out as a no to that question to say, it's important to safety or operability, it was not identified by Design Basis Validation. For those, we have to do an extended condition in our Corrective Action Program, and apply those to all the important systems of the plant to make sure it's not a generic issue.

That's essentially our methodology we're going to be using here to try to make sure that the issues that we know of are solved, and that the issues that we know that have application to the other systems are also applied appropriately.

So, this is an approach that we've developed. We believe it's based on sound engineering principles. We have our new engineering principles expectations manual, which I believe you're all familiar with. We talked about that in the past.

We're applying that new level of rigor and concern to the open items, not simply accepting the answer that was provided maybe five years ago. And we'll take a look at every one of those again, it's important prior to restart, and make sure we've answered it right.

MS. LIPA: So, John, are you talking about the 275 open items?

MR. GRABNER: I'm talking about the 275, plus even we're going to look at the ones already closed, because there are some of those that we found, in fact a couple that were identified by Marty's group, where we didn't bottom line if we would have answered the question using today's standards more completely, we would have found the issue and addressed the problem then.

MS. LIPA: And have those open items been put to Corrective Action Program?

MR. GRABNER: The 275 open items have been rolled into the Corrective Action Program, so they are tracked in the Corrective Action Program.

MS. LIPA: Thank you.

MR. COLLINS: John, I have a few questions if I could, right before summary. If you want to cover them during the wrap up, please defer me to that.

Who owns the design basis of the plant? Is it system engineers, is it design engineers?

MR. GRABNER: Design engineers.

MR. COLLINS: Design engineers. And you have a design engineer for each system or how do you specify that?

MR. GRABNER: We have, that's one thing we're looking on. That's one of the deficiencies actually we're tracing. We don't have design engineers assigned specifically to systems. That's one of the items we're looking at in terms of realigning.

So, we do get that assignment, so we can feel more ownership directly. We're really broken down discipline-wise, and it's not clear always system by system where that applies.

MR. COLLINS: Okay. So, that's a go forward approach you need to establish?

MR. GRABNER: That's correct.

MR. COLLINS: How is the system now used? Do you have a readily available automated means for engineers to access the design basis of the plant and to search for the latest calcs? Do you intend to have

one, or how are you going to transform this information when you have confidence in it, do you have a process that can be applied?

MR. MYERS: Let Jim answer that question. Do you have an answer?

MR. POWERS: I'll jump in on that. At the Perry Plant, we used an electronic design basis information system called Atlas, that we worked with General Electric to extract much of their design basis information out of San Jose, and get it electronically assessible to the engineers. We even scanned in some of the old memos from the original system designers out there. It's electronically available on desktops.

Sort the information by accident and, you know, design parameters and functions for the systems, anyway you want to slice it and dice it. It helps the 5059 writers do their jobs and the reviewers and the modification preparers. And so, we had success with it there, and we're going to bring it to both this plant and our Beaver Valley Plant. That's ongoing now. That's one of the improvements that we'd like to kick that into gear and get that up, because we do want to capture this information to be sure.

What we're concerned about is the demographics of the plant through the technical staff, and there is going to be turnover occurring over probably the next five to

seven years, retirement starts. Bringing in younger staff now, entry level staff. We need to turn over that knowledge. And we see the tools to capture this thing are critical to us to continue improving that.

MR. COLLINS: Thank you.

MR. MYERS: We said something yesterday about having the right tools. It's painful going back here and looking for the information, we're still looking for information through the records and everything. And it's there a lot of times, but with the technology we have, it should be a lot easier to attain. And we put that in place.

We really designed the system at our Perry Plant when I was there. And our engineers raved about it all the time, our system and design, but we didn't bring it over here. We're going to do that.

MR. COLLINS: A comment would be that this multiple purpose, reestablishing and confirming the design basis of the plant, of course, one is the existing safety basis of the plant in a confirmatory way, is always important. The other is ensuring that in a go-forward sense rather than a legacy sense that that information is available to be applied. And I think that's where you're going perhaps with your future initiatives.

I'm curious about the 97-5054F there. You indicated

there are some legacies having to do with quality to those findings. Are you in to broaden the scope of your response to 97-5054F letter? Are there any lessons learned that you found of your sampling that are causing you to question the implementation of the actions from that 5054?

MR. POWERS: No, we haven't really looked at that yet, specifically. The areas that John described, there is a follow through on the action items, Design Basis Validation that was done. We know we need to follow through on that.

There was also the four topical areas that we talked about, that were excluded because recent external QA assessment, self-assessment and inspection activities. It was felt at that time those programs were in good standing.

Now what we're finding as we go through this, we're taking some discrepancies that have been identified and we're in the process of looking at that to see what's the significance of them, what's the validity of them, and then we'll go through the process of looking at the 5054F and see if there is any lessons learned to report.

MR. COLLINS: Thank you.

MR. MENDIOLA: I have a process question. Your two decision blocks here, Resolution Approach. Who does those, who makes those decisions and

what process are you using or is there any special process they use to make those decisions?

MR. GRABNER: That would be, that's, when we set up to do that, we set up system teams that consist of system engineer, a design engineer who is assigned, as well as technically some contract help to both the teams. They are doing this resolution process on a system by system basis. They will hone the resolution of all those open items and will ensure they're done to their satisfaction.

They will be the ones also who will be doing the screening and they will be documenting the results of that as part of the Corrective Action Program as every one of these issues again is in the Corrective Action Program. So, there should be trail, an explanation of that decision and have that documented in the Corrective Action Program.

MR. MYERS: Our program all along has been set up so we're using our CR process, now we roadmap this. We have our CR going through a screen committee that Mr. Schrauder chairs, and they classify them as restart and nonrestart in that committee.

MR. MENDIOLA: So, then I would understand that when the decision, for example, that first decision is made, whether it affects safety or functional operability, the answer is no, so then the CR is resolved

and it shows up in front of this committee to, if you will, quality check the decision. And subsequently, the same thing would occur on the second decision block depending on its outcome.

MR. GRABNER: That's correct. It may not, well, I have to take it back. First of all, this population of CRs have already been identified by the Restart Station Review Board as being restart related. We'll take those. The ones we feel do not have to be resolved prior to restart, because it goes through one of those blocks, we'll have to take that back to that board with an explanation to present all of those items and explain the rationale for concluding these are not restart items.

MR. MENDIOLA: So, there is a little bit involved, obviously, there is a process and what you just discussed there, some standardization in the approach, closing on each of these, if you will, the same as you go through the entire list of design related CRs?

MR. GRABNER: That's correct.

MR. HOPKINS: I have a specific question. Are you reviewing the control room envelope? Is that possibly expanded largely inappropriately or not, or that part of your design basis review?

MR. POWERS: We are not looking

at the size of the control room envelope. I don't know whether we're looking at that from a technical perspective in terms of any size of it; however, we are looking at the control room habitability and leakage testing.

MR. JOHNSON: All right.

MR. GRABNER: I don't recall any issues we have identified specifically raise questions regarding the envelope itself.

MR. HOPKINS: But you're looking at the building?

MR. POWERS: Yes.

MR. MYERS: Are you ready for summary?

MR. GRABNER: In summary, we believe we have developed a process that will let us efficiently and effectively go through, screen the issues we have, resolve them down, the issues, and resolve those with the highest priority of those which have a potential to affect function. And, again, the teams of people that will be performing this work are the system engineers, design engineers, and complimented by contractor staff.

MR. MYERS: I would like to take a couple moments to talk about our Management issues, and Human Performance Action Plan that we have.

Next slide.

As you remember our issues, we broke all the issues down, took several reports, and we broke everything down there in the areas of Nuclear Safety Culture, Standards and Decision-Making, Oversight and Assessment, Programs/Corrective Action and Management/Personal Development.

We're not, I'm not going to talk much about the programs today. I think that Steve did a good job of oversight. I'm going to give you some of the actions taken in some of the other areas.

Some significant improvement initiatives we've completed so far is we completed a training program for Safety Conscious Work Environment at our plant. We went through 210 of the 250 site supervisors, from contractors and our supervisors. So, we've done that.

That training program is about four hours long. A major commitment of time. It's designed to ensure that our supervisors are very proactive with our personnel when they address concerns. So, that is our desire. Our supervisors to go from reactive to proactive when it comes to personnel concerns.

Additionally, we've completed 98 RHR assessments of our FENOC personnel. What is that? Well, that's an industrial psychologist, that we said, some of our other means, we're going to go baseline our staff. We've

completed that.

What we committed to, what it means, is we would look at behaviors and do an assessment of each individual that's a supervisor in Operations, Engineering, Work Management, Chemistry/Radiation Protection, Quality Assessment. I'm here to tell you, we've gone above that.

We've interviewed all of our managers. We've done our directors and our FENOC executives. And we're now moving to the directors at our other plants.

Next slide.

MR. GROBE: Lew, before you go on, could you give me a sense of what attributes, performance attributes you examined in these assessments?

MR. MYERS: Certainly. You know, we looked at each of our people, and you know, we went back and used our Leadership in Action guidelines that we assess people by. Everything is broken down into safety, teamwork, accountability and ownership, which is sort of the FENOC values. Then we have criteria on each one of the values we're looking for to make sure that people understand our standards just as well.

You know, we have some issues there that we got to go deal with. Probably the whole population, ten areas of issues that we want to go deal with. But, there was some good things that really came out of that review, and the

people that are at our plant are there because they want to be there because it's a good place to work in the area, and they feel like it's a good asset to the area, and good place to work. They're pretty vocal about that.

We learned a lot from that review, and we've already had a round table review with our senior management team, myself.

How long was it, Randy; five, six hours? Went over each individual, and action plans going forward.

From a Safety Conscious Work Environment, we've brought Randy in. He's developed a plan already. That plan has been communicated and distributed to all of our employees. We completed the case study training of 864 employees. And, one of the things that we really stressed is, we sit down as senior management team and developed a set of standards that we want our employees to hold us to, and we shared those with each and every employee; and I'll talk some about the results in a moment.

We revised our Leadership in Action Training already too, based on reviews we've done of this issue. And we've already went out and trained, using new Leadership in Action models, 17 new supervisor personnel.

And additionally, our Chief Operating -- Chief Executive Officer of our company, Pete Burg. He's been to our plant four times since May. But, last Tuesday, he came

down and spent all day at the plant and met with two different sessions; one at 7:00 at night, one in the afternoon, with our employees, an All-Hands Meeting. Really talking about doing the job right, safety the first time, and setting the standards that he expects at our nuclear plant. And, for him to come down four times and spend the entire day like he did last week is pretty exceptional.

Our four C's meetings. I really enjoyed those meetings.

MR. GROBE: Just a question on that last slide, Lew.

MR. MYERS: Yes?

MR. GROBE: The Safety Conscious Work Environment area. Without going into detail or specifics on any issues that are brought up through either our Allegation Program or your Safety Conscious Work Environment Program, do you have any insights gained from the types of issues and the number of issues that are being brought to our attention as compared to the number and types of issues that are being brought to your attention through your, I can't remember what you call it; common goal?

MR. MYERS: You know, many times I would give you, there was some questions about, you

know, the confidentiality of our program, and the willingness of people to use that. What we've done is we brought Randy in. Randy established his plan already.

And one of the things, another thing we've done is put independent investigators in there, so we're not going back to the line organization doing investigations. And what we're trying to do there is really show our employees this is a very confidential program. And go from a situation where it's a reactive program, Randy is trying to set a program where we're actually meeting, all the meetings have been more proactive, to go out and look for concerns now. And I think we're going to find that very successful.

Randy, you're out there now. Do you have any comments there?

MR. HUEY: I would just reinforce.

MR. MYERS: You can go up to the speaker there.

MS. FRESCH: Would you state your name?

MR. HUEY: I'm Randy Huey. I would just reinforce what Lew said, that we are discouraged by the fact that the amount of use, traffic we have with the existing offensive program does not, is not ahead of

what we're seeing coming in from the NRC. So, combine that with the survey that we did, showed a less than acceptable confidence on the part of the employees at the plant in the existing program.

We are in the process of putting in place this month an expanded employee concerns process that will have essentially two major elements that we think will improve that, the circumstances of the employees' lack of confidence.

One, is that it will be more independent, instead of being more or less a brokerage for employee concerns where an employee comes to the ombudsman, and then that concern is just directly turned over to the responsible supervisor.

We'll be doing more independent investigations because we will have an in-house, either in-house independent investigator or we will have the resource of an outside investigator to investigate more cases. We've only opened ten cases this year. I expect to see that turn around with our, with our new ECP.

And, the second feature of it will be to meet with employee groups when we get this thing, get procedures in place.

In addition to publicizing it in the various communications journals, like a newsletter, we're going to

go out and meet with, across the board with, at the plant, with groups of employees to explain and get a little bit of dialogue on it, on what the capabilities of this program are going to be and encourage people to use it.

And, I think that my experience has been that most employee concerns involve failures and breakdowns in communications. So, we're going to have emphasis on not only the ECP personnel, talking to the employees, but getting their supervisors to be demonstrating on a continuing basis that employees' concerns are a top priority and they will not be discouraged.

MR. GROBE: Thank you.

MR. MYERS: Go ahead.

MR. GROBE: Just a question, Randy, now that you're standing in front of the microphone; two questions. When do you anticipate having this new more robust program in place?

MR. HUEY: Procedure is being worked on today. I expect to have procedures in place by the end of December, and have, start these meetings that I mentioned by the end of the year.

MR. GROBE: I would suggest that you think about not waiting until you have the new procedure in place to start making a one-to-one interface; one-on-one interface.

MR. HUEY: Well, in that regard, I'm attending some of these Four C Meetings, and based on your comment, maybe I'll start attending more too. Lew has deferred to me to talk with the employees about, during those meet meetings about what this new process is going to do, and I've had some feedback following those meetings by employees saying that what they hear is good, and they'll be interested in seeing how it's implemented.

MR. MYERS: We're not sitting back. I mean, we're actually getting out and we're acting on it.

MR. COLLINS: Thank you, Lew.

Randy, one question if I may, first grievance. Will this program be subject to independent auditing by QA or some oversight towards its effectiveness? Have you gotten that far yet in its implementation and how you would define success for its effectiveness?

MR. LOEHLEIN: We haven't discussed whether QA would provide that or someone else would. I don't know if Bill knows the answer to that, Pearce?

MR. PEARCE: I'm sure that we will provide some oversight of the program once we get the program established, but as of yet, we haven't got the program in place, so then we can look at how we're going

to provide oversight, but I'm sure the answer is going to be positive to your question, we will provide some level of oversight.

MR. COLLINS: So, you would, I guess in a more general way, my question would be appropriate to say, that you would provide all of the normal processes and checks and balances for an onsight or Licensee program, including performance measures and success material and oversight?

MR. PEARCE: That is correct.

MR. COLLINS: Training, those types of things?

MR. PEARCE: That is correct.

MR. COLLINS: Thank you.

MR. GROBE: Randy, don't go away yet. I think -- I appreciate your emphasis that the first line of resolution of employee concerns is the relationship between employee and their supervisor, and the next line is going to the managers, next line would be going to you, and then if they're still not satisfied or at any time they can certainly come to us.

The thing that concerns me and has a sense of, causes me to have a sense of urgency in this issue, is I believe that we're at a rate of about 3 to 1 allegations coming to the NRC as what are coming to you, and that

should be substantially in the other direction.

So, I think you need to take some pretty prompt action to regain the confidence of your staff, that in those several opportunities they have to resolve concerns within house, certainly they always have the opportunity to come to us.

MR. HUEY: I agree.

MR. MYERS: Okay. One of the things we've been doing, each one of the Four C's Meeting, I've now met with 280 of our employees. Randy sat in these meetings. And they're two, two and a half hours each, so they're pretty timely. Very valuable information comes out of the meetings.

What we've done consistently is we have stressed the atmosphere that we want a Safety Conscious Work Environment at each meeting. There's 280 employees at that plant that I've personally assured them that that's the atmosphere we want. We want them to bring up issues. And, it's okay to come to me, to Randy or whoever, but if they have an issue, we at least want to handle it in a professional matter. And, we've done that at each and every meeting.

And the other thing I think we demonstrated is the action we take at each meeting, I think actions at each meeting, we publicize the actions that we've taken in the newsletter. So, I think the employees are receiving

positive feedback. And in fact, Pete Burg was here last week. They commented to him, they find these meetings very valuable.

Next area is Town Hall Meetings. There has been 18 Town Hall Meetings with our employees to-date. We find those positive also.

Do you have any comments, Randy?

MR. FAST: It's more like the fireside chat, an opportunity to get with our folks, give them opportunity to bring up things going on at the station. Typically get questions about rumors that come up. Try to create an atmosphere where people can come in, feel like they're being informed, but as well bring up issues. We get a wide array of questions from our folks, and we're most able to resolve those on the spot.

We try to build confidence, just another medium to communicate confidence with our employees that we can connect with them and provide them timely updates on things that are going on in the station.

MR. STEVENS: We also videotape them and use the videotape for those on the back shift that are not able to attend Town Meetings, so they can hear and recognize what's being discussed.

MR. COLLINS: Lew, having heard where you are, if this is an appropriate time, maybe I can

ask a question about an ongoing program.

MR. MYERS: Okay.

MR. COLLINS: If we were to take a step back and look at the purpose of Safety Conscious Work Environment and the promotion of appropriate safety culture, including a program that captures concerns, and what might cause those types of concerns; clearly, the status of the plant as it exists today with a lot of work, a number of contractors, some highly unusual work, and schedule being important, has all the trappings, if you will, of probably worse case environment, and perhaps more appropriately a significant challenge for Safety Conscious Work Environment Program.

Given that your program is admittedly being started up, being established, what do you have in place today; what confidence do you have today that you're not missing opportunities for these types of challenges? Once the plant progresses and restart decision is appropriately made by FirstEnergy, and the NRC takes it into consideration, that embarkment will be a little perhaps benign than what it takes to get there.

MR. MYERS: Well, the strategy that I have, and we have, is become proactive through this environment on looking for issues. I can tell you that in each one of the Four C's Meetings I have, we