BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN RE: THE MATTER)
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OF)
)
DAVIS-BESSE)

REPORT OF PROCEEDINGS
December 23, 2002
9:00 A.M.

REPORT OF PROCEEDINGS had and testimony taken the hearing of the above-entitled matter, held before Mr. Ted Quay, at the Nuclear Regulatory Commission, 801 Warrenville Road, Lisle, Illinois.

PRESENT ON BEHALF OF N.R.C.:

MR. JACK GROBE, Hearing Officer;

MR. MARTIN J. FARBER;

MR. MEL HOLMBERG; and

MR. ROY CANIANO.

PRESENT ON BEHALF OF DAVIS-BESSE:

MR. LEW ~~MYER~~ MYERS;

MR. JIM POWERS;

MR. ROBERT SCHRAUDER;

MR. GARY LEIDICH;
MR. MIKE RODER;
MR. JOHN GRABNAR;
MR. KENDALL BYRD;
MR. BOB COWARD;
MR. ALEX ZARECHMAK;
MR. STEVE FRANTZ;
MR. PAT MC CLUSKEY; and
MR. KEVIN SPENCER.

ALSO PRESENT:

MR. DAVID PASSEHL;
MR. TOM HENRY;
MR. JOE PETRICH;
MR. BRIAN RENWICK;
MR. CHECK ~~ZOIO~~ ZOIA;
MR. TIM STEADHAM;
MR. GEOFFREY WRIGHT;
MS. DANEIRA MELENDEZ;
MR. ROLAND LICKUS;
MR. TODD SCHNEIDER;
MR. TOM BILIK; and
MR. SHAWN PERGANDE.

MS. HOUSEMAN: Good morning and welcome to the Nuclear Regulatory Commission conference call. Participants will be able to listen in on the question and answer portion of the conference. Your host for today is Cheryl Houseman. You may begin when ready.

MR. GROBE: Thank you very much. My name is Jack Grobe. I'd like to welcome First Energy and N.R.C. participants and the public from various locations to this meeting this morning. I'm the chairman of the N.R.C. oversight for the Davis-Besse facility. Over the past several months, First Energy has been reviewing three systems to evaluate the design and operating condition of those systems.

In addition, the N.R.C. has performed a safety system design and performance capability inspection to independently evaluate three systems, one already reviewed by First Energy, an assessment of the adequacy of the First Energy reviews. The reviews of each of those systems by both the N.R.C. and First Energy

revealed substantive design questions regarding the operation of those systems.

We appreciate First Energy providing the N.R.C. with your resolution of system health assurance plan design issues documents allowing the N.R.C. staff to better prepare for this matter. The purpose of today's meeting is to discuss First Energy's plan to resolve the design questions and to assure that through the efficiency it's well understood.

This meeting between N.R.C. and First Energy is open to public observation here in the N.R.C.'s Region III office in Lisle, Illinois, and in the N.R.C. headquarters offices in Rockville, Maryland, through video conferencing and through a teleconference bridge line where members of the public can listen in on the bridge.

After the N.R.C.'s discussions today with First Energy are completed, there will be opportunities for members of the public here and through the telephone conference bridge to ask questions of the N.R.C. or make comments. We are

also having this meeting transcribed today to maintain a record of the meeting. The transcripts will be available on the N.R.C.'s web page several weeks after today's meeting. Copies of the First Energy hand-out are available in the back of this conference room and N.R.C. headquarters and on the N.R.C.'s web site. You may also see copies of the N.R.C.'s December public monthly newsletter. Also in our conference rooms are N.R.C. meeting feedback forms that you can fill out and provide feedback on format, content or any other aspect of these meetings so that we can improve the quality of our public meetings.

At this time I'd like to introduce the rest of the N.R.C. staff that is here today and also in headquarters, and then have Lew introduce your staff here at the table.

MR. FARBER: My name is Martin Farber, division of reactive safety, Region III.

MR. HOLMBERG: My name is Mel Holmberg.

MR. GROBE: And I'm glad -- you didn't have your microphone on, that reminded me to make sure

that everybody has these microphones close to them and turned on. There is a little green LED that would indicate the microphone is on. Most of them should be on.

Also here for the N.R.C. in the audience, please go ahead.

MR. ~~ZOIO~~ ZOIA: Chuck ~~ZOIO~~ ZOIA, DRS.

MR. STEADHAM: Tim Steadham, DRS.

MR. PASSEHL: I'm David Passehl, DRS.

MR. LICKUS: Roland Lickus, state and government affairs.

TOM BILIK: Tom Bilik, DRS.

MS. MELENDEZ: Daniera Melendez.

MR. WRIGHT: Geoff Wright, reactor projects.

MR. GROBE: Okay. Could the N.R.C. headquarters please introduce themselves.

MR. HOPKINS: Yes, John Hopkins, project manager for NRRI. I'm expecting Bill Dean to join us though he's not here right now.

MR. GROBE: Very good, thank you. Also behind us who I neglected to introduce is Roy Caniano, Deputy Director of Reactor Safety. And

our stenographer is Ellen Piccony, welcome.

Lew, at this time would you like to introduce yourself.

MR. ~~MYER~~ MYERS: Thank you, Jack, we're glad to be here today. At the table we have Ken Byrd, he's with our nuclear engineer group. John Grabner is our manager of design engineering; Mike Roder, my operations manager, I'm glad to have him with us. I'm Lew ~~MYER~~ MYERS, chief operating officer of First Energy. To my right is Gary Leidich, executive VP of First Energy. Next to him is Bob Schrauder, our director of support normally, but he's the project engineer on this issue and helped us work through this. And Jim Powers is a director of engineering next to him. We have several people along the back row. Why don't you stand up back here. Kevin Spencer, Steve Frantz, Pat McCluskey, Alex Zarechmak and Bob Coward.

MR. GROBE: Okay, very good. I think that completes our introductions. One person I did not hear introduce themselves was ~~Victoria~~ Viktoria ~~Midling~~ Mitlyng. ~~Victoria~~ Viktoria is our public affairs officer here in

Region III, and she is always available to interface with the public.

At this time, Lew, I'd like to turn the meeting over to you for your presentation.

MR. ~~MYER~~ MYERS: Gary is going to start out.

MR. LEIDICH: Refer to the slides on Page 4, and just from a corporate perspective, set the appropriate tone for the meeting, as well as this effort going forward. The company, First Energy, set the standard of returning Davis-Besse back to service in a safe and reliable manner and that includes system health assurance, which is what we are here to talk about today. And, again, our overall focus is to do the job right the first time to regain the confidence of all our customers, and we are certainly committed to meet that challenge. So really I'm here today to offer support from a corporate perspective and recognize that we are here to do this job appropriately, and certainly welcome your input on our plan for system health assurance and the design issues that have been identified.

So with that I'm going to turn to it over to our team, starting with Lew who will go through the desired outcomes, and we will go from there.

MR. ~~MYER~~ MYERS: We are here today to provide you an update on the Davis-Besse action plan to resolve design questions identified during the system health assurance plan reviews. We told you that we were evaluating issues from our system readiness reviews and create the scope as necessary through these five latent issues reviews and a total of three system reviews. We are here to obtain your feedback on our plan going forward today.

The system health -- our objective, the objective to the system health building block, if you will, was to provide system assurance to First Energy, the regulators and the general public that the systems at Davis-Besse would perform these safety and accident mitigation functions. That was the original objective of the building block. Since that time that we started the six building blocks, the seventh one will be the restart action

plan. We in the system health really thought there would be three systems, we picked five latent issue systems to look at, and we picked the systems like service water and component cooling water because of recent experience. And we thought that would provide us significant insight.

We found questions concerning design calculations and our ability to go back and look at those calculations, the rigors of the calculations, and we found some questions in those areas. Most of those were primarily questions from the prior to 1990 time frame. There weren't recent issues. We found that the calcs sometimes were different, but we have been able to find the calcs and they were very much in line with the 54(f) letter that we provided to the regulators some time ago.

Today we found nothing in these calculations that we were not able to find or were not bounded easily. And to date we found nothing that would indicate that our systems at our Davis-Besse plant were not either able to perform their design functions or operable to this date for

those questions we looked at in the five systems.

So once again, we always told you that we would take a broad-based look. Our plan looks at systems with questions. We are going to go back and look at systems which have a greater than one percent core damage risk frequency. What that does is give us 99 percent confidence we won't find anything later on in latent issues reviews that are significant.

Our plan has three paths. The first path is an operability review. We are taking each and every CR and we are talking about that today, and performing what we call operability review on the CRs we have generated as part of the latent issues. And our supervisor will either declare the system operable or inoperable, based on their reviews of the information.

We will then validate risk significance of the safety functions. And then finally we are looking at the issues from a programmatic standpoint. We always told you we'd take the CRs that we wrote during latent issues and

put them together and look at cross-cutting issues on the other systems.

These three paths, we feel that if we take ten additional systems and provide reasonable assurance of the conditions of the Davis-Besse plant and assure that it's safe and reliable, if we find additional issues, we will take additional corrective actions before restart. But our intention is to -- we believe that we will find that our reviews were bound, the systems, and we told you that we will continue to move forward with latent issue reviews after our restart of our plan. We think that that will provide us and the public good, reasonable assurance.

With that I'd like to turn it over to Jim Powers.

MR. POWERS: Thank you, Lew. What I'd like to do this morning is first give a little historical perspective on the maintenance of the licensing basis at Davis-Besse over the years, and then proceed to talk a little bit about our system health building block and activities we have

undertaken as part of the current recovery of the plant.

Behind me on the easel and in your hand-outs there is a design basis assessment timeline that we prepared, and it shows along the top of the timeline the plant operations since the mid 1980s time frame up until today. And along the bottom it shows the number of assessments that have been performed both by the Davis-Besse staff, as well as the N.R.C. staff over the years.

We started in the 1985 time frame because this is the time frame when the plant went through a recovery effort from the offspeed water event that occurred in that time frame. And we proceeded from there because we wanted to see from the long-range historical look on what type of activities had transpired since that time because we know that a lot of attention was focused on the plant in the mid '80s, both from the owner perspective as well as the regulator perspective.

In fact, a course of action was prepared in that time frame that encompassed many

activities, a lot of them were related to engineering. What I'd like to focus on is the bottom of the chart and the activities that transpired over the years and the number of sets that were performed. We list them on the slides -- on Slide No. 11 that is shown here. Our independent safety engineering group performed vertical slices of systems, and that starts in 1989, we show a station and instrument air system vertical slice assessment; 1991, emergency diesel generators; 1992, steam generators; 1993, service water system. And this is particularly important because service water system is one of the ones we are looking at in detail today. In 1994 instrument and controls, and 1995, offspeed water system.

And as you go across the bottom of the timeline you can see that the surveillance and assessment of the design basis has been ongoing and continuous. Then we look at N.R.C. reviews that were performed, and these are typically detailed inspections of systems and their functional capability, and also design basis supporting them.

In 1992, electrical distribution system functional inspection, EDSFI was performed. In 1993 a service water inspection that was referred to, this was a very detailed and hard hitting assessment of service water capability and appraisal performance, and in the 1997 high-pressure injection and low-pressure injection systems, and what was referred to as an architect/engineer inspection. This inspection consisted of teams of engineers from architect/engineer corporations that were led by the N.R.C. inspector looking in detail at these systems over a number of weeks to go into the design basis specifically to see how the licensees were maintaining the design basis over the years.

And then in 2000 safety system design performance capability inspection was performed at the plant. And so these activities were ongoing over time, and I think if you look at the chart you will see that it's a continuum of assessments and inspection.

And the chart is available at the front here for those of you who would like to come

take a look at it, and there is also hand-outs that detail it.

The results of those assessments, importantly, consistently showed that the systems were operable and capable of performing safety functions. Any time that we have an assessment or an inspection, we typically develop questions, engineers come to the site, they are independent, they haven't participated in the engineer activities of the site, and they ask questions. We wrote those down in our corrective action program, and then we evaluate them and answer them. But we found over the past the systems had been determined to be operable and functional.

We did also identify some weaknesses in calculations as a part of those inspection assessments, and, in fact, had activities ongoing at the site to improve our calculations and the quality and continuous improvements in those areas over the years. Another thing to point out is as the assessment and inspection activities have gone on over the years at the plant, both the inspectors

and the engineers learn new things, new perspectives on the systems, and we continue to improve our technology and our methodologies improve and the questions get tougher, and part of that contributes to some of the questions we have today.

When we look at a plant that's been operating for 25 years and we apply today's understandings, today's technology and methodologies to the original -- in some cases the original calculations for the plant, there are questions and areas for improvement that are identified, and that is consistent with Davis-Besse, as well as other plants in the industry.

MR. ~~MYER~~ MYERS: When we went back and looked at all questions on the calc and compared what we were seeing at our plant and throughout the industry, we were very consistent with our operational plants.

MR. POWERS: That's right. I would say that is correct, Lew. When we have an inspection, one

of our internal inspections done and calculations on design basis information, the type of questions we see today are typical of what's been -- we have seen at other plants and at our plants in the industry. You typically have a number of questions that need to be answered, usually takes some time to work through the analysis, and in some cases calculations need to be revised to answer the questions, and that's what we are doing right now, and it's consistent with what occurred at other plants.

The resulting remedial actions from many of these inspection assessments were a review of our updated safety analysis report that was done in 1996 and design basis validation program, which was performed in 1997 to 1999. The updated safety analysis report is really a compendium of all the license bases for the plant and reflect the important design basis that is related to safety function of our systems. And so it's a very extended review that is done when you look at the use.

The design basis validation program looked at three systems which comprise some of the most important functions in the plant from a safety perspective, and we looked at all the calculations in support of those functions in the 1997 to 1999 time frame. These activities were part of a response to a request for information that was issued pursuant to 10 CFR ~~1054.F~~ 50.54F by the N.R.C. that all utilities in the time frame in the mid '90s were requested to prepare an assessment and response on the maintenance of their design basis of plants and how it was reflected in the procedures that tested and surveilled the plant. And we have performed that assessment, along with all of the other licensees in the country, and these two activities, the review of the USAR and our design basis validation program were two of the activities that we performed in support of that. And there were commitments from the design basis validation program to work through, corrective actions that we developed, and that improving calculations, weaknesses in calculations,

identified issues, and we were in the process of working through those improvement programs.

MR. GROBE: Are you going to get into more detail later, or is Bob, on the scope of those prior activities and what contributions they provide to you on comfort level and the extent of conditions bounded?

MR. POWERS: Sure, I can comment on that. Well, particularly in the case of the design basis validation, we were using portions of the design base validation project to provide assurance on extended condition, and with respect to that project did assess areas that have -- where questions currently have been raised, then we will be able to use it and take credit for it, for extended condition assessments. If it did not accept a particular question that's been raised, we will not be able to use it, but Bob will get into some more detail on the safety function validation program that we have prepared, and then we will walk through some detail on that.

MR. ~~MYER~~ MYERS: Is it fair to say if you go back

and look at the 50.54 that was submitted and with the plan we laid out, that the type of questions that we found on the five latent issue reviews and what N.R.C. found are similar?

MR. POWERS: Yes, the -- what Lew is referring to is our 54(f) letter response, we acknowledged at that time that there were weaknesses in calculations and prepared our design basis validation program, launched into that in '97 to improve of the calculations, but we also in that letter of response point out that there was several areas which we did not specifically assess in the response, because it was believed that the assessments and inspections that we had undergone relatively recently to that time frame substantially demonstrated that the programs were healthy.

Those were programs of HELB, environmental qualifications, seismic qualification, Appendix R and flooding, for example, and when we have gone through this most recent system health building block and done our

latent issues reviews and systems health maintenance reviews, we have developed some questions in those areas, started out as areas of corrective significance in our assessment of the questions that have been asked, and so it is consistent that we find some areas of question there, because we did not poke into those in a lot of detail as part of the 54(f) letter response.

So what we are seeing is fairly consistent to what was submitted in the 54(f) response.

MR. ~~MYER~~ MYERS: I guess what I'm trying to tell you is I think we did a pretty good job in the 50.54(f) letter. I'm not sure that we did as good a job of following through after we submitted the letter. But when I read that and I read the issues that I see coming out of our recent reviews, they're basically the same in my mind

MR. POWERS: That's right. One of the important aspects of the response to the 54(f) letter and also our design base validation program is that we had a number of calculations that needed

to be either revised or prepared, that we found areas that needed continued improvement, and there were 250 calculations that fell under this category that were ongoing, to have those calculations finished up as part of our corrective action.

That project was not expedited as aggressively as it appropriately should have been. We determined that when we came on site this year, and reviewed our current numbers in this area. This was back in the April time frame, and we authorized the resources to complete that project by the end of this year, and Sergeant & Lundy has been helping us with that process in issuing over 250 calculations. So that is an area where we could have done better from a schedule perspective as a project that didn't get completed as quickly as we would have desired, but it is being expedited now.

MR. HOLMBERG: Mel Holmberg, Region III. You mentioned the other issues that were not specifically looked at very in-depth in the 50.54, I think HELB, EQ, seismic qualification, fire

protection. What was your basis for whatever conclusions you had in those areas?

MR. POWERS: In the letter of response what we -- the basis for our conclusion was that assessments and inspections had been performed near term to the 54(f) letter response. Those are areas that were relatively active at that time, had been surveilled, and we felt that that was a satisfactory assessment at that time.

MR. HOLMBERG: So what types -- can you give me examples of what type of things you say you surveilled, or --

MR. POWERS: Inspection, for example N.R.C. inspection in the EQ area for self-assessment by our quality organization in that area.

MR. HOLMBERG: Okay.

MR. POWERS: There had been documented audits and inspection assessments of those programs that we felt substantially characterized their status at that time.

MR. HOLMBERG: Thanks.

MR. ~~MYER~~ MYERS: EQ, if you go back and look on the

timeline we gave you, it shows us inspections and areas where we all looked at the EQ, so if you go back and say was that program healthy, we would say yes, based on the results of that. So we tried to provide a lot of that history here in that timeline.

MR. GROBE: I have got a number questions regarding the historical review, but, Jim, I think I'd like you to continue your presentation and we will hold them for the end of your section.

MR. POWERS: Okay. So that's a look back on how the design basis has been maintained and surveilled at Davis-Besse over the years.

Now, moving into today's time frame, the system health assurance plan that Lew described in 2002 we began the system health assurance plan I referred to as a building block or restart of the plant. And there was three reviews actually that were prepared as part of this building block.

The first was an operational readiness review, and this was a review of the system engineer chaired by the plant manager of

issues that related to their systems that they had been carrying over the years that they wanted to get done, and giving them an opportunity to voice their concerns to the plant manager.

And there were a number of projects that emerged from that of things that were important to get done in the plant, material condition issues for their systems, and we approved a good deal of work to proceed as a result of those reviews. And I think it also gave the -- from the human, you know, perspective, it gave the responsible system engineers an opportunity to sit down with the plant manager and have a direct voice in the plant management and their desires to improve the health of their systems.

The next was a system health readiness review level. We went into this looking at our maintenance rules, risk significant systems. 31 of those -- of the 36 systems were included at this level of reviewing. We went and looked at modifications back to the 1990 time frame, because this is the year in which the modification for the

service structure inspection port openings was initially submitted and subsequently deferred from that time, and so we wanted to take a look and see if there was any other modifications, either open or closed, that needed to be done or appropriately done, and gave the engineer an opportunity to look at that.

We also looked at work orders and corrective actions since the 1995 time frame. That 1995 time frame was selected because that was subsequent to a management shift from the Davis-Besse site over to the Perry site, and we wanted to take a look to see if there was any deviation from the programs, from effectiveness from 1995 going forward in those areas.

And we also looked at the testing programs for these systems to be sure that the maintenance rules for significant functions were tested appropriately. So they were fairly extensive reviews, each one is in a three-inch binder of working material, and in some cases two binders worth of materials. So it's by no means a

shallow review.

And lastly, our latent issues reviews. And for those of you who have not participated in the dialogue up to now, the latent issues is a vertical slice process that we initiated at the Beaver Valley plant and was seen as very beneficial there in terms of digging out issues that may be latent, buried in a plant system, either in the hardware or in the software, the paperwork for the system.

A team goes through and looks for issues that may have been residing below the surface and brings those out so they can be resolved. It's a very effective process, and we have improved on it actually at Davis-Besse, a little more detail on operational readiness reviews.

These were completed, they were done very early on, in fact in the May time frame, identified whether the systems have any known significant deficiencies and corrective actions to bring those out, bring them forward and deal with

them, selected systems relative to the maintenance rule performance criteria material, condition and operator. So this was a fairly broad selection process that went into these systems. Any one of these areas where there was known to be problems, the systems were brought up and brought forward for a committee review. The committee was chaired by the plant manager. And there was also substantial maintenance and operations support for it.

In fact, Mike Roder, our operations manager sat in on the planning of these meetings, and there was a number of issues that came up in the area of, for example, operator burdens or material conditions of the systems that were addressed. And Mike is here if -- do you have anything to say on that?

MR. RODER: Yeah, thanks, Jim. There was an -- now this early on in the time frame that we sat in on these meetings, and it was good ownership by the system engineers, a lot of activities that were added to the schedule to resolve. I brought a couple of examples we worked and several leads on

transformers and corrected some deficiencies there. Breakers in the switch yard were overhauled. Some of the air compressors, power supplies, I think we changed out 14 enunciator power supplies, all strengthening the operation of the plant. Several work arounds and several operator burden activities were also included, remodified the fuel handling bridge, components to strengthen the operation of the plant, so there was a lot of good ownership, good dialogue from the system engineers and operations plant manager to strengthen our position and increase the reliability and health of the various systems.

Another thing, Jim, it wasn't all the systems, there was a couple of cross-cutting issues as we went there. We noticed there was issues with power supplies, we discussed power supplies in that context of air operated valves, motor operated valves, and corrosion was another system, if you will, that was discussed, and instrument root valve, we noticed there was an issue with root valves. There was some vertical

slices through the system, if you will.

MR. POWERS: Thanks.

MR. RODER: So there were a number of projects that we -- high pressure injection were refurbished.

MR. POWERS: There were some major items that the engineers had sought to get done.

Next, on Slide 16, the system health readiness reviews. We list out the review scheme that was performed, the test results of functionality, the support functionality modifications since the 1990s, corrective actions, work orders since the middle of the 1990s, and then system walkdowns is one aspect of it that I didn't mention. And that is, we got out on each one of these 31 systems and walked them down to the multidiscipline team, consisting of maintenance, operations, system engineering and design engineering and management.

MR. LEIDICH: I participated in those as well, and I can assure you these were a high level of detail in the field, and we were going as far as

identifying rust in electrical cabinets and a variety of those kinds of things, so suffice it to say we got a very comprehensive review of the systems condition from a plant perspective, so the threshold for identification of problems, I think, took a different tone at Davis-Besse. As a result, we have identified a lot of condition reports on these systems at both thresholds, which represents a very substantial amount of work that we have been tangling with in this outage, but I think it's another indicator of our philosophy going forward here.

MR. POWERS: I agree. I believe there was a significant change in the plant that was achieved. You were asking the engineers and the maintenance staff and operations to work together and walk by equipment in the plant that they have been walking by every day for years and critically look at it and ask them is it safe and is it acceptable, and it's a 25-year-old plant, so you will find some corrosion of supports, for example, and I'm talking about minor surface corrosion, rust if you will.

You were going to find small questions of material condition or cleanliness, housekeeping that perhaps had been passed over before, but now we're critically asking questions, and much of that was entered into our corrective action process, and particularly getting off the beaten path and look around behind the equipment, behind cabinets, inside cabinets and poke around. And it was very beneficial in terms of changing culture and standards.

MR. ~~MYER~~ MYERS: Let me take this a second. You know, if you are going to look, you know, I think what we have concluded so far, we have looked at our systems every way throughout history, through -- that is what our timeline talks about, and if you look at our 50.54(f) letter response, I think that was done quite well.

The reason I spent some time on that a while ago is I don't think our response of that was as good as it should have been. I want to make that clear.

You're going to look at overall

material position of our Davis-Besse plant from an operations standpoint and maintenance rule standpoint, stuff like that, go back and read the report, there was a 25 percent decrease in the last cycle in the number of A-1 systems from a maintenance rule standpoint, which once again indicates that -- and we have said that before -- the plant was in fairly good material condition when we brought down -- we know we -- when we walk around the plant, you know, the plant material condition looks pretty good, and additionally we brought in some -- several outside teams of people, executives from our plants, our ROP cabinet members that we have in our restart oversight panel, and we have had them out in the plant, and I know you have been out there, and actually the material condition of the plant appears to be quite good.

That is my overall assessment of the plant, and my experience is that if you look at the physical, material condition of the plant, the material condition of it is quite good in our plant, and that is the feedback we have received

from everything we have looked at, and that's what I said going into the building block plans, and that is what we still believe to be true. There are these design type questions that have to do with calcs, mostly latency issues, and I think that is the meat of what we're here for. But I think just to summarize, we did go over all material condition of the plant, we addressed that quite good.

MR. POWERS: And so the goal for the system health assurance plan was to provide confidence that the systems can perform their function. And on Slide 17 we talk about the latent issue review in a bit more detail. We selected five systems to look at in great detail to assess down through the design basis of the system, the design calculation, what the status of the systems were. That included the reactor coolant system, service water system and off-speed water system, component cooling water and the emergency diesel generators. And those were selected for a variety of reasons, some due to volume of involvement with our reactor degradation

issue, others were due to issues from our quality assurance assessments of the systems, and others were selected because of their contributions to safety function at the plant. And we thought there was a core group of systems that would really tell us a good picture on what the status was of the deep system health.

We verified design bases as part of these reviews, going back and looking that the calculations were in place to support the safety functions and the testing program of the safety programs. We assessed in all 31 different system attributes, so we asked a lot of questions going through this in terms of given calculations, quality of the calculations, electrical calculations, mechanical safety analysis, environmental qualifications, there were a lot of checks that were made. And we also reviewed various data sources.

There were teams working on these, I'd say on average probably eight individuals, engineers, experienced engineers, I might add that

have worked at other plants who have gone through this level of detail system review and spent several months going through the review process and really digging through all the information available, and then performing comprehensive walkdowns of these systems as well in the field, and both were material condition and configuration perspective.

In addition to latent issues, we also prepared self-assessments of calculations and high pressure injection system and the 4160 vault distribution system. And this was looking at the calculations. In particular we felt that one of the areas that we had developed of corrective significance was in the calculations as we went through latent issues reviews, and so we prepared an assessment of the high pressure injection and 4160 systems. The N.R.C. also came and inspected I would add the service water system in detail and also high pressure injection on 4160 volt systems, and so that their findings were added to our discovery findings as well, and used to help set

direction in terms of what issues were of collective significance to us.

On Slide 18, the major accomplishment that we made at the site, we completed discovery in this area for system health assurance plan, and to us that was quite important. We started off on this track back in the early summer time frame, building our plant, doing our training, developing procedures and mobilizing industry expertise, and I feel we have some of the best in the industry in discovery type of activities help us and helping our engineers go through it. It was a very good learning process for our engineers, as well as helping us understand the status of systems in the plant.

We issued reports for both the latent issue and system health readiness reviews, and those were all issued to Mr. ~~MYER~~ MYERS. They are in his office taking up a lot of space on his conference table now as he calls in individual engineers and walks them through their report to gain a clearer understanding of what they did and

what their feelings are about their system, and also their feelings about activities that need to be done to support restart of the plant and then other activities that are in the category of improvement that can be made subsequent to restart.

They issued condition reports for all of the questions that were identified, and there was a large number of condition reports, and an important point that I'd like to make on the number of condition reports issued, when we commissioned the review teams to go off and do the system health reviews and the latent issues reviews, we brought in a number of contractor resources who were highly experienced at doing system reviews, but we told them we didn't want them to spend a lot of time searching for information and trying to answer questions, but rather we wanted to move expeditiously through discovery and sort of write their questions down on a condition report and move on, and we would research and answer that question subsequent to the identification. And they did that.

And what we are finding as we go through the evaluation and the research stage now on our condition reports is that in many cases there is an answer to the question, for example, a calculation is missing for an important parameter on a system. Given some time an engineer that is more familiar with the records retrieval process is able to find those calculations, and so there is a significant population of the condition reports which are being answered and being closed out and being determined to be not necessarily a significant issue.

We encouraged a questioning attitude going through the process, and we generated over 1,200 CRs, and that included both design calculation type questions, as well as operation questions, meaning material condition, hardware questions, procedure questions for operation of the equipment.

Our collective significance reviews which we committed to and always planned to do at the end of discovery identified some cross-cutting

issues, and we listed those out in our plan to go forward, and Bob Schrauder will talk to those a bit, and I mentioned those earlier. They are the HELB, environmental qualifications and seismic qualification, floods, Appendix R fire protection. The questions in those areas we felt merited some further review from a significance perspective.

The overall discrepancy ratio related to latent issue reviews was determined to be low. That is, for all the attributes that we checked as we went through this collecting calculations, drawings, manuals, procedures and just looking for consistency and looking for any errors that could be found, the number of errors that we found versus the number of checks made was low. And that is an arrangement of about three percent. So we are talking about a -- you know, the vast majority of things that were checked going through all documentation at the plants passed acceptably that level of scrutiny.

MR. ~~MYER~~ MYERS: How does that three percent rate, how does that compare to the industry when we do

this kind of cross-checking?

MR. POWERS: I would say when you get into this level of detail and the complexities of the business we are in, the engineering, this level of discrepancy not be expected. Every time we do that assessment, whether it's our own licensee, quality assurance or engineer assurance, personnel do assessments, questions are raised. Every time the N.R.C. comes in on an inspection, questions are raised. That's how we, each of us do our job, to raise those issues. And to have questions and discrepancies come up in the three percent range, I would say is probably consistent with what we would see on-line. Let me ask M.P.R., I think M.P.R. & Associates assisted us in assessment of some of these, and I would like Alex to perhaps describe his experience in some other plants that have gone through this type of review.

MR. ZARECHMAK: My name is Alex Zarechmak, M.P.R. & Associates. Thank you, Jim. We have been asked to participate from the beginning on this latent issue review process and advise First Energy

in how to structure and how to conduct it, and on the back end to assess some of the results, not unlike the experience at at least five other plants that have gone through similar kinds of system reviews.

In each case we tried to track not only the issues that we identified but to put in perspective the issues that we looked at to get a ratio of problems versus checks, and then frankly the three percent is probably in the lower range of the reviews that have been done in other plants. Clearly not something that you can scientifically prove and hang your hat on, but clearly not atypical of other places.

If could I comment, I guess the other thing that perhaps is a little bit different here, I'd like to point out is we literally -- First Energy literally put together an army of folks for these five systems, probably more intrusive and heavier hitting than some of the other places.

Each of the five systems, if I

recall right, had at least 10, and probably 12, and sometimes 15 people doing the reviews. Typically other places it's been fewer than that, so if you look at the number of plan hours that have gone into these inspections, compare that to the industry experience in other systems, it's pretty overwhelming. So in that sense as we look at how successful or with how much difficulty we have had to close out the questions that have been raised, it's probably not too surprising. You have this army of folks generating the questions, and frankly you don't have enough people on the other side answering the questions quickly enough or effectively enough.

MR. POWERS: Thank you, Alex.

Our preliminary evaluation and other questions indicates that there is relatively few that have potential safety consequences, given 1,200 -- over 1,200 condition reports issued. We have gone through, looked at potential safety consequence assessment, and M.P.R. Associates is assisting us with that and has done that at several

other sites, and what we are finding is that that large number of questions boils down to in the range of approximately 20, 24 questions. Bob is telling me 26 question areas that we need to do further detailed review on in terms of having potential safety consequences. So the number of potentially significant issues is -- again is relatively small, but those are the issues that we are focusing on and turning our detailed attention and evaluation analysis approaches on to assure that we answer those questions satisfactorily.

Now, we are currently performing operability determinations in areas to determine the actual impact of those questions, and that is an ongoing process. As Alex pointed out, we really unleashed an army of engineers and technicians on our systems to ask questions, and these engineers had come from actively doing that at other plants, and for those of you who are engineers, and for that matter most of you who have any sort of a job know that each time you do something, you learn and you move on to your next task and bring that

knowledge with you. So the cumulative knowledge in the industry in today's terms was brought to bear at Davis-Besse, and that did result in a lot of questions, and it's taking the technical staff at the station some time to go through those questions.

But we have developed a resolution plan, and we provided an advance copy to the staff here in the region last week for review, and Bob's going to walk through that and we will talk about that plan and some of the findings we have had and some of the suggestions we have had in disposition issues and some of the activities that are continuing to go on.

In summary from my section of the presentation, what I'd like to point out is that the findings that we have at the plant are consistent with the past historical findings that have been generated through system reviews over the years. The plant has not sat idle.

The plant has its design basis that is in command of a design base and responsible for

it, and it's been aggressively inspected and surveilled both by N.R.C. and the licensee over the years, and so the questions that are resulting are consistent with questions for our plant in the industry, will be consistent for operating plants in the industry right now, and we are going through our operability determinations process, and we assess these questions and we are working through them one by one to make sure we answer them thoroughly and completely, and the answers will be subject and -- available and subject to inspection.

And with that I'd like to turn it over to Bob Schrauder, whose taken on the project management role for resolution of the design questions.

MR. FARBER: Could you go back to the 1,200 CRs, just run through the process by which those were evaluated and tell me whether all 1,200 now have been evaluated, what is the status of that whole program? You have 26 open questions. Is that 26 potentially significant issues out of 1,200, or what is the percentage?

MR. POWERS: That is 26 potentially significant issues out of 1,200 is the way that I would characterize that, Marty. The process is that the condition reports are written which identified a question, the preparer will write it up. Then a supervisor takes a look at it and annotates it in his block to indicate his knowledge perhaps of the relative significance of the issue. There may be some background from the plant, knowledge that contributes to the identification of the issue and provides some clarity to it. So you have those initial preparation stages, and they issue it.

Going to the control room from there, if it affects equipment in the plant in any way, the control room makes an initial determination of operability, and the equipment is either operable or it's not. And based on that question, in some cases it's not clear. For example, there is a question on a calculation for a heat exchanger for a room cooler let's say, and the question needs to be answered. Right now it's just

a question, and so the operator will often times take what is called a mode change restraint against the condition report. He marks it right on the condition report that the plant cannot proceed through a given mode where that equipment must be operable, and the operator, the licensed operator requires that that question be answered to his satisfaction before it goes through the mode change.

And so the mode changes are listed and they are controlled, and the plant cannot be taken through a mode change until all of those condition reports tagged against it have been answered. So once the licensed operators have made that determination, then the condition report, the question if you will is out there to be answered. We have got these large numbers, over 1,200 that have been answered, and we have been assisted by contract organizations, Enercom being one of the primary ones we are utilizing to go through research work with our people, licensee people at the site, get that site-specific knowledge, go

through the records, history, answer the questions. That is an ongoing process.

And we are dealing with operability determination of each one of these issues as we go through that process, and we are observing it by mode change restraint, so each time we have a mode change in our schedule ahead of us, we are working off those CRs to make sure that we are prepared to make that mode change.

Now, the 26 issues out of the 1,200 are issues that in the assessment that was performed of all those CRs could potentially effect the -- have an affect on what we call the Chapter 15 analysis, which is -- Chapter 15 is a safety analysis chapter of our updated safety analysis report, and so we have gone through the screening process, we have determined that 26 out of over 1,200 questions could potentially affect that, and now we are in the process of bearing down on those issues to assess them and answer them, and I think Ken Byrd can provide us some detail on the type of issues that have arisen and a couple of cases where

we have had completion of those issues.

Ken, would you like to speak to them?

MR. BYRD: Of the 26 issues, some of the more significant ones included a question which was raised about our emergency core cooling system, heated exchangers, in particular the question was raised whether or not the heat transfer coefficient was not conservative enough. There was an initial question it could be off by 60 percent. Obviously this was a significant concern. We have had a review done by a third party, and based on that review, it appears that of the activities, the transfer coefficient was doing closer to our value, and we were able to resolve the issue after further review.

Another significant concern was in our ultimate heat sensor. There was the question about our -- the returns if we have a seismic event, if we had a failure of our normal return, all the service water was routed back to our deicing return, would we overheat the service water

system. At the time this question was raised, we didn't have an answer for it.

We have done a lot of further digging and determined that actually this was addressed, we had calculations and it had been addressed in our original safety analysis report, and apparently somehow inadvertently dropped from that section of the safety analysis report, but the calculations actually were in place. It was one of the things we had to dig around for a while to find information.

Another example which is not necessarily a calculational issue was a question about the current -- we have gone to three-way communications, as have a number of other plants. There was a question of how that would affect the timing of a number of our calculations, in particular the high energy line break calculations, and it was all of those. We have been working with operations, in fact we have gone and observed crews in the simulator to determine if the assumptions we made were credible. It appears that they are. We

will take some additional actions going forward to ensure that first of all we have identified all functions.

We have some more procedure guidance on that, and then in my area we are going to try to eliminate some of those if possible, so if we can do away with some of the assumptions, operator actions.

Another one of the other questions was actually service water flooding issue involved, this was actually not a design basis issue, it was of some significance because it was an issue where we would have failure, it would result in a loss of all our service water and also cause us to lose the ability to align our back-up service water pump, which is a safety-related pump.

After investigation of this question, which had been raised by one of the issue teams, we determined this was an issue of misreading of PNID and that the pipe didn't go there in fact, so that issue was resolved.

We had a calculational issue that

again that was one that came out of the latent issue review that had been previously identified in our design basis validation, and we have resolved that issue, and it was -- this appears to be documentation, although there was revision of calculation that was required.

Those are the kinds of issues. A couple of other good examples of ~~RECS~~ RCS activity, there was a question raised about the basis for our ~~RECS~~ RCS activity. There was a case of confusing presentation in the -- in our safety analysis, the historical numbers were confusing. We have gone back through the calculations. It's adequate, but we are going to have to revise some of the way the information was presented in our safety analysis report.

I think those are typical of some of the ones we have worked. There are 26 issues, we have not worked through all of them yet, some of them are still in the resolution process, some of the resolutions are not completed yet, but that is kind of the examples of what we are finding.

MR. SCHRAUDER: Let me take a crack at answering your question, because I'm not sure that we have yet.

MR. FARBER: You have generated a couple of additional questions, let's put it that way.

MR. SCHRAUDER: 1,200 CRs identifying -- as you know, the station review board looks, we categorize some of those as obviously not being required to be completed prior to restart, so some of them come out of that process. The others -- and the boiling down to 26 issues, if you will, says that we just take that issue -- the answer is no, they have not all been evaluated yet, some have and some haven't.

MR. FARBER: So --

MR. SCHRAUDER: If you take the issue as written, and accept for the time being for our assessment process that it's a fact, and then if you say that it's fact, then we went through the process of determining what is the generic issue and what is the potential safety significance and lump them together and come up with 26 potentially

safety-significant issues that need to be addressed if they, in fact, turn out to be true.

So that they are not all answered yet, they are not all evaluated yet. We are continuing in the process, but again if taken as true, they would boil down to 26 right now potentially safety-significant issues.

And then there is also the programmatic or topical issues that Jim talked about that are not included in the 26, the line break, seismic, Appendix R, flooding and equipment qualification.

MR. FARBER: So does that mean there exists a potential that further engineering evaluation of this additional population could reveal other potentially significant issues because it sounds like you have gotten to this point as a result of just your initial screenings subsequent to SRP and that the detailed technical evaluation --

MR. SCHRAUDER: No, out of that population you won't -- I don't believe you will find additional issues because again, like I said, the

issue is accepted as it's written. Now, as you do an extended condition, we are going to talk about that later. And as you look at other systems, you could have more issues that identify themselves, but I don't think we are going to find any additional potentially safety significant issues out of the 1,200 CRs that we are talking about here.

MR. FARBER: Okay.

MR. HOLMBERG: This topical ~~band~~ group we keep hearing about, and my understanding that is the flooding, EQ, do you have a number that you put on that in terms of CRs that are in the topical vein?

MR. SCHRAUDER: I don't have the number off the top of my head.

MR. HOLMBERG: Is it comparable with the other conditions or more or less?

MR. POWERS: Well --

MR. SCHRAUDER: Substantially less.

MR. HOLMBERG: In fact, let me ask -- I believe that the -- that group included all condition reports as great as 1,200 that were

generated, and in the system areas there was, I think, somewhat less than that in these topical areas. I think there is typically I want to say in the range of 30 or so.

MR. POWERS: That's right, so there was enough hits in those areas as far as CRs from a significance standpoint that we thought it merited further review.

MR. HOLMBERG: But -- okay. I understand if you have a population of -- we will take it as 30 or whatever, the real number is -- have these issues gone through some kind of thought process taken as they're fact, there was a significance to them, has that been done?

MR. SCHRAUDER: Not in exactly that same way. The safety significance evaluation that MPV was working on did not include those five topics. Those five topics are being evaluated now on the potential impact of those.

MR. HOLMBERG: The reason I bring it up is that another plant that I was involved with was in an extended shutdown, they had some ~~health~~ HELB issues

that turned out to be some more risk-significant issues, and that's why we list those. I want to make sure I understand. If we haven't done that, do you intend to do that process?

MR. SCHRAUDER: We intend to do this, all of those issues will be addressed prior to restart and their extent of condition

MR. HOLMBERG: Thank you.

MR. GROBE: Bill and John, in that course do you have any questions?

MR. DEAN: I don't have any questions, nothing at this time.

MR. GROBE: Okay. Jim, let me just ask a couple of questions. You have given a historical description of design reviews over the years, and I'm having a little bit of difficulty putting all of this in context, and I have a couple of questions just to make sure I understand.

It sounds like you have done a number of vertical slice reviews, it looks like six of them over the late '80s and early '90s, and then did a rather comprehensive design basis validation

program in the '97 and '99 time frame. Several of the systems that you have reviewed in your latent issues review in 2002 you had prior vertical slice reviews which were fairly comprehensive design reviews and were also covered under the design basis validation program. The findings that you have had from these latent issues review, why are you finding these today and not identified during one of these prior either vertical slice reviews, for example, service water was one of your latent issues you did in 1993, a vertical slice on service water, and then you reviewed all the systems again in the '97 and '99 time frame. Why do you have those, the 26 potential safety significant design concerns today, and were these issues previously identified and not resolved?

MR. POWERS: I think there is two reasons for the first part. Any time you bring a different individual into play in terms of coming in and asking questions, that individual, engineer, technician will bring his or her own unique experiences and background to the job to ask

questions. They have gone through and seen problems in their careers and they bring that unique perspective to asking questions, so any time you bring in a new person, a new team, this is the important reason for independent verifications in the industry, you are going to get different questions.

So that is one reason why we see additional questions. Every time we inspect a system we will see questions. The other thing is that with time the industry improves and the questions also change and improve as we discover issues with the plants, both your organization as well as our own. The Institute of Nuclear Power Operations will issue an operations bulletin, and we learn, and communications, it's the same thing with the engineers and technicians who inspect or assess, they also learn. And so methodologies change, technology changes and the questions change. So from year to year we will seek new questions being asked, but in general the questions that are being asked is -- are consistent with

those that have been asked over time, and subsequent to which the systems were determined to be operable and functional, and that's why we feel we are dealing in the same set of cards, if you will, as we go through the issues that have been raised now.

And some issues have been known to exist before. There is quite a large number that are new, but there have been some that were raised in the past and either have been satisfactorily disposed of in the past and are being raised again or were not satisfactorily disposed of, and in the cases I alluded to earlier on the design base validation, we knew there were a number of issues and calculation updates we needed to follow through on, which we have not done aggressively, and so we know there are some areas where questions were known and need to be followed up on more aggressively.

MR. GROBE: I'd like to focus on the 26 potential safety concerns. Had any of those been previously identified and not adequately resolved?

Ken, let me ask you that question.

MR. BYRD: Two of the issues were directly identified in the design basis validation program. One of those was a water temperature, minimum temperature, the other one was the flooding one I had mentioned before, the flooding calculations issue.

MR. GROBE: And those were CRs that were issued in the '97 to '99 time frame on those two?

MR. BYRD: Actually, in the '97 to '99 time frame they had been evaluated, and then there had been a request for assistance initiated concerning the flooding issue which had now been completed. The temperature issue had been evaluated as not being a concern, which was probably an incorrect evaluation, although we have subsequently agreed on the calculations, and there is a concern that there was no subsequent change of the '97 time frame, should have gone back and redone the calculation.

MR. GROBE: And so 24 of the issues had not been previously identified?

MR. BYRD: Not directly. In other words, the

two I mentioned were ones that were directly identified.

MR. GROBE: Jim, I understand your comments with respect to the vertical slice reviews, those are normally more of a sampling type review, but the design basis validation program, and in a sampling review oftentimes the individuals bring specific questions to look at, but in the design basis validation program, that should have been a comprehensive look at all critical design parameters, isn't that what it was?

MR. POWERS: The intent was to look at the -- for the maintenance rule, risk significant rule analysis in support of their functions, and yes, it was intended to be a comprehensive assessment.

MR. FARBER: Jim, let's go back to the program itself because Lew made the comment that the 1997 response was -- you know, back to the N.R.C. was well written, but that the actual execution didn't measure up to the level of response. Could you be a little more detailed about how that came about, you know, why didn't the

execution match the quality of the response?

MR. POWERS: Yeah, I will give you my perspective on that. And if we look at the timeline over here you can see we kicked off the design base validation right subsequent to our 50.54(f) letter response, this time frame. And you can see that the -- that that program proceeded on through 2000, working up responses. There was follow-up responses to 50.54(f) process, and as Ken had indicated there was a collection of issues that were out of that review that were considered to be requests for assistance level actions that need to be taken through, improved calculations prepared, calculations that were missing.

It was felt that it was work in the configuration management design control area that needed to get done, but it could get done on a project standing aside from the corrective action program, if you will, as a project. Now, projects need to be funded, and this project did not get done as, you know, getting resources applied to it as aggressively as it should have, and you can see

in the 2001 time frame there was a hiatus from completing some of those calculations, and these resulted in the 250 calculations I mentioned earlier. And so what we found was earlier this year when we looked at status on those that we had to get those done promptly, so that's what we have been doing this year.

MR. ~~MYER~~ MYERS: We bounded that in April.

MR. POWERS: That is correct.

MR. ~~MYER~~ MYERS: Since we found out about it, we went after it, we just have not been as responsive as we should have.

MR. FARBER: Wasn't there some delay in getting the reviews underway?

MR. POWERS: Initial review?

MR. FARBER: Yeah.

MR. POWERS: Not that I'm aware of, not that I'm aware of.

MR. FARBER: The reason I bring that up, it was my understanding that initially the system reviews of the maintenance rule risk significant systems were going to be done by in-house

engineers, but there was not enough folks to get it done, so ultimately it was contracted out and some of those were -- at least it wasn't issued until 2000.

MR. POWERS: Yeah, that could be right, that is probably right from a resource applied to it perspective. And the answer is yes, you know, we could have done better, we should have done better, and I think part of the lessons learned from this whole episode at the plant is focus appropriate attention on activities like this, this sort of design base maintenance and responsiveness questions, so yeah, we could have done better in those areas.

MR. GROBE: The design base validation program, the 36 system maintenance rule, significant systems so far in the latent issues reviews, which I think are aware of the majority of these 26 significant questions; is that correct?

MR. POWERS: (Indicating.)

MR. GROBE: You looked at five systems. You have indicated that the design base validation

program, and these are design reviews you did, consistently showed that the systems were operable and capable of performing their safety function. Now, you have looked at five systems and identified 26 areas where you can't answer that question yet.

What does that tell you regarding the quality and scope of the prior design reviews?

MR. POWERS: We feel in the case of the design base validation that it covered a lot of ground. We did a lot of checking of the calculations. We prepared revisions or new calculations.

In a number of cases and, you know, also a number of discrepancies that we have disposed of. However, there were areas that we feel that it did not answer questions. There has been specific questions raised as part of our latent issues reviews and the inspection activities that the design base validation program did not ask that question.

So in those cases, we were not using it to take credit for its completeness in those

particular areas, and we will be evaluating that. Bob will talk to that in his description of the plan that we have put forth on resolving these design questions, and then again I would say, you know, a couple of the design base validation with systems assessments and inspections, and in some cases those inspections being very deep slice, vertical slice reviews, multiple, week-long reviews, such as architect engineer inspections, and come back and we will ask other questions that require substantial engineering time to evaluate is something that does happen as you change reviewers, as you change technologies and evaluators, I would expect that there will always be questions raised. So do I condemn the activities that have been done in the past? No, not at all. I think they were done with the intent to do a comprehensive and technical quality job.

We, a licensee sought out resources, appropriate resources to do that, and in the case of design base validation, we utilized a major architect/engineer in the industry who had done

similar type of calculation programs at our plants, and I think those were good efforts that were performed. I think there is areas where they need to be improved though, Jack.

MR. ~~MYER~~ MYERS: Let me answer that, too. We have some industry experience from our contractors that worked at a lot of plants, some very few plants. When Davis-Besse was designed, we all had slide rules, you know, and we have come a ways since then. I have worked at some of those plants too. But some of the modern plants that I have looked at have very detailed, very detailed I'd say design bases. I have confidence if you went out and did a latent issue review and brought in engineers from five or six companies and turned them loose and go ask questions, they'd give you a three percent error rate consistently, and if you do it again, they will give you another three percent error rate. If you do it again in five years, it will be three percent.

They will ask you five or six questions, and every one of these design engineer

reviews I have ever been through, you are going to have to scratch your head and try to answer, you know, that you just don't know the answer to, but you have to go out and do an engineering calc or some reviews to try to answer those questions.

And you heard us go through some of the 26 questions already. You know, I think it's fair to say that we know the answer to a bunch of the 26 questions already, and we are finding the calcs, you know, and we are able to -- we can do other engineering reviews. Davis-Besse is a fairly old plant, like many others, but even though the new plants that are plants that have been recently redesigned with new design basis documents that I have worked at, when you go back and do the latent issue reviews, you will get a three percent error rate or three percent questions, and there will be a couple of them that will just make you scratch your head.

So I think that the key is that we haven't found anything yet that's caused us to go out and say we are going to have to redesign a

system or something like that.

MR. GROBE: I think by and large we agree with you, that certainly every time you send a capable, inquisitive group of design engineers into a system, you are going to find good questions. And I think this discussion, Jim, that you have provided is a good foundation for ongoing dialogue on the condition, and maybe it's time to move into that. The issue that I struggle with is making a judgment on the adequacy of extended condition without knowing the answer to those 26 questions. Why is it that we don't have those answers yet? We have been talking about this for a month or two.

MR. POWERS: It's based on the large number of questions, you know. As Alex indicated, we did have a number of competent question askers working at the plant for several months and generated in fairly short order, and by that I mean over several months, a large number of condition reports, not all of which are in this population of the 1,200 we are talking about today, or there are many other questions that are being asked.

There is also a high level of activity at the plant in terms of improvements, modifications to the plant to improve it. Design engineers and system engineers are engaged in many of those activities. The system engineers were engaged in -- focused on getting their reports done for the latent issues report and system health review, and those reports were issued out on the -- geez, I want to say on Thanksgiving week or the week after Thanksgiving we got those completed. So relatively recently they have been able to put their pen down and turn their attention to the condition reports.

Now, Ken Byrd's area is one of the major ones that is dealing with questions, and he's got the task of sorting those questions out, getting them in a logical sequence, because not all independent questions, if you ask a question on the alternate heat ~~sinc~~ sink, the lake temperature, that temperature can affect the heat exchangers that are cooled by service water within the plant, and the question on heat exchangers in the plant, and you

have got two different questions that relate to each other, so Ken has carefully tried to lay out the logic on how he worked through the process of anticipating the questions logically, and it takes time, Jack. They are complex, technical issues that merit some introspection and evaluation, and that's taken us some time.

MR. ~~MYER~~ MYERS: Of the 26 issues right now we have most of those bounded, don't we?

MR. POWERS: I would -- we have answered -- of the 26, we have answered about eight of them. Ken, why don't you give us a picture on that.

MR. BYRD: Of the 26 issues, right now I would say that approximately a third of them we have an answer for. We may not have it all the way run through and documented. Probably another third we are still looking at, and then probably other third we know where we're going to go, and that would be probably a rough estimation as to where we are right now.

MR. GROBE: When are we going to start answers on those 26 issues?

MR. POWERS: We are targeting the end of January to have the bulk of our condition reports worked through, and that is ongoing as to the process that Bob will describe. Ken's being engaged now, he's got projects going on each of those questions, and activities, and we are still -- we are still engaging more technical resources, bringing in some of the original designers of the plant, for example, to help us through this process, and we are trying to -- we are trying to balance having the appropriate level of resources at the site to manage effectively and make sure we get a good quality of work versus the timeliness of supporting the -- answering these type of questions and proceeding with our activities for restart of the plant.

So that as you know, we did have a reduction in the contractor population around the Thanksgiving time frame for precisely those reasons. We were finishing up discovery, and we felt that we needed to get to a contractor level that we could effectively manage and assure that we

were controlling, and production at the appropriate quality of work, and those are some of the issues that Ken worked through as he answers these questions.

MR. ~~MYER~~ MYERS: We believe the end of January, right, we will have all those bounded up?

MR. BYRD: That's what we're aiming for, the end of January.

MR. ~~MYER~~ MYERS: Was that your question?

MR. GROBE: It was. And like I said, I don't understand how we can fully put a full context on what you have done to date and what needs to be done going forward without those answers. Three percent failure rate is very low. If all three percent was operability questions, that is very significant. If none of them result in operability questions, then that is also very significant, and so it's -- as far as these decisions, these cross-cutting areas that you have identified, and environmental qualifications, these are areas that you shouldn't be identifying today in 2002 as cross-cutting concerns in your design engineering

programs.

However, if none of them have resulted in operability questions, then that's pretty good. If at least some of them have, then that's a horse of a different color, as they say in the Wizard of Oz. So I think we need these answers to be able to make any judgments on questions before us.

Why don't I ask for any more questions on Jim's presentation, and then we will give our transcriber's fingers a rest for a few minutes.

Bill Dean, anything at headquarters?

MR. DEAN: Nothing here, Jack.

MR. GROBE: Why don't we take -- it's 10:32, why don't we take a break until 10:40.

Thank you.

(Whereupon, a recess was had, after which the conference resumed as follows:)

MR. GROBE: We just finished the historical

dialogue from Jim Powers, and I think Bob Schrauder is going to describe the resolution process.

MR. SCHRAUDER: Okay. Thank you, Jack. Now we have identified questions, reiterated questions. We don't know yet whether they are actually issues. They are potentially safety-significant questions that have been raised. Now you have got to figure out, what does that mean to all the rest of the systems that have resolved that determine your condition and how do you determine whether, in fact, it is safety significant, and that's what the plan that I'm going to describe goes through.

It's a comprehensive plan that is intended to provide assurance that these potentially safety-significant issues are identified and resolved. We can verify the technical specifications, operability is met, safety systems, structures and components will, in fact, perform their safety functions. And then just as importantly, what is the extent of the conditions of these issues or questions that we had identified. I will tell you that we have looked at

-- some of what we have looked at, some of the issues that we have brought up, the majority of the design-related condition reports, and that I want to keep reiterating, that is fundamentally what we are talking about is the design-related condition reports.

92 percent of them that have been identified for restart are not potentially safety significant. We looked at nearly 600 CRs that were flagged for restart, these design-related condition reports, 40 of those condition reports fell into the category of potentially safety significant or having potentially significant impact on the Chapter 15 analysis, and those 40 individual CRs then when you compile them together constitute the 26 potential issues that we talked about.

Then there is another approximately 36, I believe, condition reports that we say have a potential -- if correct as written, they have minor impact on the Chapter 15 analysis. By and large, the calculations related questions are the ones that dominated the potentially safety significant

questions that were raised.

So Lew had talked about the three parallel paths that were taken. The primary path, if you will, is each individual CR has a -- what we described as taken through the control room for an operability determination. And if there were operability issues taken to an extended condition, so you look at each condition report individually. Then we go out and do a validation of the risk significant safety functions, and also resolution of our topical issues. So what we have is a CR process for the individuals. We did this potential safety significant impact or potential impact on the Chapter 15 analysis, and then we did a collective significance review as another activity here.

The diagram that is shown on 22, and, Jack, this has been just subtlety altered. You had a preliminary one, and there is really not many changes to it, but I will describe those as we walk through it. These are the three flow paths that we will talk through. And those of you that

have the handouts, I might suggest that you keep this one in front of you as we go through these, and the individual paths are reproduced on the slide as we get to them.

On Page 23 you see the three paths. Path A is the resolution of each individual condition report and determine extent of condition. Flow Path B provides evaluations or additional assurance of significant safety function capabilities. And Flow Path C resolves those topical issues that we talked about earlier.

Let's talk about the -- Path A is on Slide 24. The condition report comes in initially and goes to the control room.

You can see that it can be answered one of two ways, it's either -- one of three ways. It's operable, it's not operable or we don't know, we need to do further evaluation.

If it's not operable, it's -- as you recall, it went over to the restart station review board, and that was one of the changes that I made is that block coming out of the shift managers went

over -- I initially said it would be restart, but there is another screening -- it would be post-restart. There is another screening that needed to go through, and that is restart station review board. And even though it may be operable, there were a lot of those that we said needed to be evaluated prior to restart anyway.

If it's not operable or required further evaluation, it's going into the detailed evaluation triangle there. If we, in fact, find that the condition is not valid, it moves back around to the control room where the shift manager can agree or disagree with that and make his final determinations on operability.

If it's a valid condition -- I'm going to have to pull this out too because I can't read the screen. If it's a valid condition, the detailed evaluation can result in several things. Either the system function is not operable, it's operable but degraded or it's not operable, but it is within the design basis. Those are the three paths that we show there. And if you say it's

operable but degraded, you may come up with compensatory actions required under a generic 91-18 evaluation. You would then obviously send those compensatory back down to control room to get their concurrence.

If it's not operable you have to take remedial action, obviously, to restore operability, discuss that issue with the shift manager and also there needs to be a root cause analysis and preventive actions to prevent recurrence.

You see that we have identified that as not necessarily a restart required activity in that many of the issues that we have coming out of here, we believe are going to be the same type of root cause issues that we found in our root cause reactor vessel head. We can take the remedial action and restart the system to operable without having the root cause of how did you get there and what preventive actions are you going to take to make sure you don't get there in the future, but we do need to go through that process.

The other block down the path is it's not operable but it's within the design basis. That is, the design calculations may support the condition, but it didn't meet the literal compliance with the tech specs, that maybe there is a specific value that the tech spec would call out that you have to meet, and that in fact would render the system inoperable if it didn't meet those surveillance requirements, for instance. In that case we may, if the design basis supports the new value, you may need to come in with a licensing action to change the specs back to a more correct value.

Now, the two paths of not operable or not operable for either reason comes down and it splits there and goes two paths, obviously goes back up to the control room to let them know the condition of their systems, and then it also goes to the extent of conditional path, and that is the path that says we've got to determine your extended condition, and that extended condition report, we say if it's in this safety function validation

project, which we are going to talk about a little bit further, if it's in the scope of that or if it's within the scope of what was looked at in the design basis validation project on the system health reviews, or it's one of these topical issues that we have talked about in Path C, then the extended condition we believe is bounded.

If it's not covered, if those activities that have taken place or are ongoing, then we need to determine the extent of condition and how you might go about determining the extent of the condition if it's not covered there. And that is Flow Path A.

MR. ~~MYER~~ MYERS: That gets into that question you asked earlier about could you identify the topical areas. The answer is yes, you do.

MR. SCHRAUDER: Then we look at what I will call Flow Path B, and that is the safety consequence of potential issues that you look at, as we discussed.

MR. GROBE: Before you go on, I'm a little concerned. Maybe it's just a choice of words, the

big diamond at the right-hand corner, is your decision for extended condition within the scope of one of these several programs, then the extended condition is bounded. What you mean I think if I understand correctly is that the extent of condition should be bound once you complete these?

MR. SCHRAUDER: That is correct.

MR. GROBE: Okay. Got it.

MR. SCHRAUDER: Those, in fact, would constitute the extended condition by going through the significance determinations and the like.

MR. GROBE: Okay.

MR. SCHRAUDER: So Flow Path B, we know that we have a lot of the CR questions that were raised and have potential safety consequence, so we are working with M.P.R. on what is really a two-phased program. Let me talk about Flow Path B and C together for just a minute. In those two paths, we are looking at the collective significance and the potential safety significance for these issues. And they both identified one common theme, and that is a lot of the issues, or a vast majority of the

issues are related to those calculation issues that we have talked about.

And then the collective significance review also identified the topical issues which we referred to, and those being the high energy line break, EQ, seismic qualification, Appendix R and flooding issues. But two of those paths show the calculational issues or concerns that need to be addressed, and so Phase 2 of that evaluation process is to do the safety function validation project.

So Phase 1 said each of the CRs is reviewed to see if it has a potential impact on the safety analysis to determine that if properly screened, horizontal reviews are likely to discover the similar nonconforming conditions and systems not covered by the latent issue reviews or the assessments that were done for the N.R.C. inspections, and then, three, to identify what those further actions are that are necessary to determine whether, in fact, they are safety significant. So Phase 1 had three objectives that

we were trying to meet. In Phase 2, completes the actions necessary to determine the actual safety significance and perform extended condition review on other systems.

The -- that piece of the program, the safety function validation project, which is what I'm referring to as Phase 2, it will perform evaluations of findings that contribute more than one percent of the core damage frequency, and for our plant those functions that contribute more than one percent of the core damage frequency are comprised of 15 systems, and they relate to, as you see down further, the 99 percent, practically 99 percent of the core damage frequency and the large early release frequency.

Five of the fifteen systems have already gone through the latent issue review. Two of the systems that still need some further looking at but have gone through the self-assessment in this population also. So if you look at the next page, it lists the 15 plant systems that will be subjected to the safety function validation

project.

Do you have a question, Jack?

MR. GROBE: Go ahead

MR. HOLMBERG: Well, the question I have is on Path C. You get into resolving of topical issues, you have got a line on the far right that talks about EQ -- HELB and EQ, and I'm trying to understand what types of examples of things would fall into that? Like for instance, in my mind I'm picturing a component, for instance, that let's suppose it's either related to the cooling system on safe shutdown of the plant, component needed for one of those functions, and it's vulnerable to hydrogen line break, for the sake of argument, if that component, for instance, has not been evaluated before and you are trying to pick out whether you were required to evaluate or not, I mean it's true maybe that if it cannot function, you would have an impact, but it may be a licensing question, i.e. was I originally designed or required to have health protection in all areas or not? Is this the path that it would be on on the

right side there if you had that kind of question?

MR. SCHRAUDER: That would be in Path Charlie, that is correct

MR. HOLMBERG: So even though you have a vulnerability protection, if it's a licensing issue, it would be on the very far right and would not necessarily fall into a bin that would be a restart type CR?

MR. SCHRAUDER: No, no, no. Just because it's in the topical issues, in the licensing issues, does not mean that it wouldn't be resolved prior to restart.

MR. HOLMBERG: Okay.

MR. SCHRAUDER: So those programs, again HELB, EQ, all of those programs will have assessments done programatically on those issues and determinations made of what conditions need to be resolved prior to restart and which ones don't have to be resolved prior to restart?

MR. HOLMBERG: And just refresh my memory. If it's a licensing issue or question, what would be your threshold for throwing it in one bin or the

other?

MR. SCHRAUDER: The threshold would be it was required to be evaluated, environmental qualification, and if it hasn't been, it will be required to be looked at prior to restart.

MR. HOLMBERG: Thank you.

MR. GROBE: If I understand the logic that you selected 15 systems, if you review these 15 systems, I think, if I understand correctly, you will have evaluated 99 percent of -- you will have evaluated the functions, that if they are adequate, will contribute 99 percent of the core damage frequency reduction in the event of an accident, but isn't that evaluation of core damage frequency in large early release frequency contingent upon all other systems and functions performing adequately, that there were no other design issues?

For example, one of the systems not on your list is the reactor protection system, and one of your cross-cutting concerns is environmental qualification. If you have an environmental qualification concern with some of the components

that contribute to the reactor protection system and the reactor doesn't shut down, doesn't that affect your core damage frequency calculations and the importance of these 15 systems?

MR. SCHRAUDER: First of all, I'm going to let Ken -- Ken is our expert in the PSA world, but the issue of if it's an environmental qualification issue that impacts RPS, it's expected to catch it in Path C and have that resolved prior to restart.

MR. GROBE: Okay. Maybe I didn't understand Path C. Are you going to review all safety significant systems, meaning all systems that contribute to the accidents in some successor for these five cross-cutting issues --

MR. SCHRAUDER: The --

MR. GROBE: -- or are you just going to review these 15 systems in the five cross-cutting areas?

MR. SCHRAUDER: The topical issues will be resolved and looked at for their extent of condition individually, independently of the extended condition for calculation issues.

MR. GROBE: Why don't we let you go on then and get you -- why don't -- I think we have gotten onto Path C so why don't we do that so we can fully understand this.

MR. SCHRAUDER: So Page 28 identifies those 15 plant systems that will be included in the safety function validation program. And then on Page 29, we talk about the methodology that we will employ, review associated calculations and/or tests and confirm that they do, in fact, support the function.

If it's necessary, we prepare evaluations to support operability determinations for condition reports, and these things will provide additional assurance that we need the system structures to perform their safety functions.

We will prepare a summary report for all of the 15 systems to reach a conclusion of the ability of the plant to perform its risk-significant functions. We will correct any operability issues obviously required to restart,

if necessary determine whether to expand the scope. You see as we go through this process of the extent of condition, if the extent of condition in going through these other 15 systems identifies another potential operability issue, then that kicks it back into Path A that goes through, and if its in fact determined to be an operability issue and it's not operable, that obviously results in a significant condition which a further extent of condition may be warranted. So of course if we find additional operabilities in the review, that it's likely to expand the extent of condition that you would need to do.

And then on Page 31 we talk about Path C, collective significance review identified, as we said, calculational issues, topical issues that we have discussed several times, and then a few other issues that -- things like material issues I will call them, valve leakage, some incomplete tread engagement procedure, some system distribution, those are the types of things that we are talking about under other issues.

Now, these -- each of these topical issues, as I said, it has some developing of a resolution plan on its own. I think Ken can speak specifically and tell us how he is going back looking at the high energy line break, as an example, and the flooding issues.

MR. BYRD: The line break we looked at, collected all condition reports together, and all the issues and what we found is the questions we have had regarding high energy line break, there is two major categories, one is postulation and the other is issues involving the ~~turbinability~~ turbine building, which is issues coming from information in 2002. There's been some other things, those are the large two areas.

I think we have a really what to my mind is a very comprehensive plan with high energy line break. What we are doing is we are resolving these issues on postulation, and what we found is we are a pretty standard review plant and there was some confusion trying to apply some of the postulation, we are going back determining what

exactly our design basis is for this, and we are going to update our design criteria manual and that particular section of the safety analysis report to make sure this is clear.

We are also going to go back and review all of our analyses to determine if we have any new breaks we need to analyze as a result of that. My understanding in talking to our people is it doesn't look like we are going to have significant changes to the breaks, we are postulating right now, but we want to clean this up.

If we have any new breaks, we will analyze those and make a determination. The other our big issue this -- the second big issue, the information in the 2002 ~~turbinability~~ turbine building, HELB, we had been working on this prior to the shutdown and all the flood questions have slowed down our resolution of this because we have got a whole lot of new issues, and we wanted to make sure we understand all the new questions that were coming at us.

And the issues -- one of them was

the operator actions that I mentioned before. That was a question that related to our ~~turbinability~~ turbine building to -- we wanted to sort some of those things out, so we slowed down the process of getting the final calc out on that.

However, we have achieved analysis -- we are completing analyzing the ~~turbinability~~ turbine building and associated rooms, including our component cooling water room, and auxiliary fuel pump rooms using the most current codes, and at this point that should be -- actually, the calculation was complete, and nothing we have seen is really changing the results significantly, but we will have the final -- after we have completed it there may be some changes. We should be seeing that back within a few weeks, our final calculations.

On the EQ part, there may be some EQ issues, the off-speed pump rooms we have been expecting and making plans for. The other part of our HELB analysis, auxiliary HELB analysis, we have two major sides, the turbine side the other auxiliary building side.

There have not been a significant number of questions relating that, however, in the effort to make sure we are really looking at this thoroughly, we are going to go back and look at analysis prior to restart.

Our concern is potentially there may be some assumptions or it could be that we did find one condition report concerning barriers that were not really qualified to HELB credits analysis, so we do have a project going that will actually go back and take that analysis, which was done in old code, we are going to upgrade it, will rewalk it down and look at our analysis, and that will be done before restart.

If we find any problems, we will stick that post-restart. We plan to go back and evaluate all of the breaks. If we do that, essentially this will go through all of our HELB analysis, this plan we have prior to restart, so any issues should come out of all of this, and we are going to be left with a pretty up-to-date HELB analysis for all parts of the plant.

The flooding was another issue that I was involved in quite a bit. We had substantially fewer condition reports overall on the flooding issue, and they have tended to run over a variety of different issues, some are procedural, some are involving testing of check valves and things of that nature. The one issue we have not found as many is calculational issues on the flooding side.

We did have the one calculation which I found on design validation basis, which is turning out to be a non-issue. The one issue that was particularly concerning to us is we did have a concern over non-seismic piping on our cooling water makeup pump which could affect all of the service water pump room that was evaluated to have been functional, but that was a significant concern from an actual physical perspective on a situation like that.

As a consequence, we are going to be looking pretty extensively to see if there is other conditions like that. In order to do that, what we

have essentially done is look at identifying other places where there could be similar flooding concerns, and that is component cooling water pump room, specifically the emergency core cooling system pump rooms, which are other potential areas we could have flooding concerns, and in those rooms we are going to review all the piping analysis to determine if there is any other piping that should have been seismic. If we had a flood concern, that is -- I think that would be a fairly thorough way to resolve the extended condition on that issue.

MR. HOLMBERG: Quick question for you. These re-analyses, will this require some kind of review by the N.R.C.?

MR. BYRD: Nothing should require review by the N.R.C.

MR. GROBE: I guess the complete answer to that question is you don't know yet, as you go through the analyses you could identify something that would require review?

MR. BYRD: That is correct. Actually what I meant is we are using a different code and that

sort of thing, but everything we are doing, none of that would require necessarily a resubmittal. We could run into a problem that requires review, that's true, but at this point I don't believe we have any issues like that.

MR. GROBE: Okay.

MR. SCHRAUDER: On each of the topical areas, there will be a plan for resolution and determination of the extended condition. If in fact, the questions that were raised turn out to be real issues, I can tell you that environmental qualifications, some of the feedback I have already gotten from the guys is some more of this "didn't look far enough" or "didn't understand the current licensing basis of our plant," so we expect that many of those issues will not be valid issues, and those that are will have to be determined for extent of condition, and obviously environmental qualification issues in one sense they are going to trail the high energy line break, so if there is a high energy line break in an area that has to be repostulated, it may change your environmental

qualifications parameters in that area also, or it would.

MR. GROBE: There is one of your topical areas that I don't have a good understanding of the types of issues you have identified, and that is the Appendix R safe shutdown, post-fire safe shutdown situation.

What are the kinds of issues that you have identified in this area, and what is your re-evaluation scope?

MR. SCHRAUDER: I don't have the details on the fire protection yet, Jack. As you probably know, I just got into this this week, I'm trying to sort through all of these issues. I don't have a good handle on what is identified in Appendix R yet. I did talk with the system engineer on that last week, he does not believe that he's going to have significant issues that were identified here that are going to turn out to be real issues, so he's not overly concerned with them. I haven't dug into the specific details of that to confirm his sense yet.

MR. GROBE: It may be beneficial over the next month to have more detailed discussion on working level of each of those topical areas to make sure we understand what the specific issues are, what the extent of your re-evaluation is going to be, and that will help us determine what level of inspection we may want to apply in each of those areas.

MR. SCHRAUDER: Right.

The next page is already asked and answered, when do we expect to have determination of operability, determination of safety function validation project completed. We expect to have that completed by the end of January. If other issues fall out of that, then to we will have to reassess, you know, further extent, but this activity that we are looking at now, current determinations of operability of questions already raised and safety function validation project, we expect to have done by the end of January

MR. FARBER: Bob, what resemblance will the reviews conducted under the safety function

validation project bear to the latent issues reviews on the five systems, if any?

MR. SCHRAUDER: They will look at the depth of -- again, it is aimed at the calculational issues, so it will look to that level of depth in the calculational -- MPR you have a -- would you like to ask Alex what is --

MR. FARBER: The key is latent issues review evaluated some 31 attributes in detail and now what I'm hearing is the safety function validation project will evaluate some additional 10 systems, but only in the calculational area. I'm not sure if that is -- if my understanding is correct or not.

MR. ZERECHMAK: That is the correct essence of the review. The purpose coming out of it is not to redo the latent issue review for a number of different systems, but is to take advantage of the lessons that we have learned both from the LIR and the safety consequence review, which both pointed to calculations being a key issue for those issues that affect safety functions. And so we are

sitting back and saying, okay, if my goal ultimately is for it to be sure that my plant can satisfy safety functions, what do I have to do?

And the answer for these additional systems is identify what the safety functions are and confirm that I can meet those mitigation functions, either by calculations or by test, and if I can -- if I can find a calc and demonstrate either by calc or testing that I can meet those safety functions, then I have done two things, provide assurance that I can meet safety functions, which is probably the most important thing, and in addition, what I have done is an extended condition for the calculations as they support or do not support the safety functions.

MR. SCHRAUDER: Part of the Phase 1 also -- Alex, correct me if I am wrong on this -- we went through and we looked at all of these issues that were identified, or questions that were identified that did have potential safety significance, and asked the question of whether this detailed look from a calculational perspective would have

uncovered those issues, and in most of those cases, the answer was yes.

Things that weren't were things like what Ken had asked or said before, that an operator had questioned whether given a current philosophy in three-way communications and some other things, do we have sufficient time to take the operator actions in the time that we are specified. I recall that that is one of the examples, but nearly all of these things, or very many of them would, in fact, have been identified in the calculational review that we intend to do on the additional systems.

That was part of the process for Phase 1, to determine whether this process was likely to uncover the remaining issues.

MR. GROBE: Mel, Marty, any other questions?

(No response.)

MR. GROBE: Bill and John in headquarters, do you have any questions?

MR. HOPKINS: Is there a plan to update the 50.54(f) response to us?

MR. POWERS: We will evaluate that, John, and determine, based on collectively what we find. To the extent that we need to do that and if we do, we will.

MR. ~~MYER~~ MYERS: I'd like to add that, you know, as we come out of this program we are in, I think we have already made a commitment that we still see the significance of those type of reviews. We need to go back and do them. We didn't do as good a job as we should have. We are going to do some now, and we are going to commit to do some additional latent issues reviews going forward now with all 31 attributes, you know, so I think we have already committed to do that, and we need to go back, and based on the letter we sent back to you, the 50.54(f) letter, we could do a second letter, but I don't know that we need do that. I think we have already made that commitment. If we do, we will.

MR. FARBER: I guess the thing that I'm trying to make sure that I appreciate is that you have a good, sound technical basis for only looking at these calculational issues for these ten systems

and not looking at other inspection attributes.

Now, I understand that you did a system -- health system readiness review that covered a number of attributes, but there are attributes that the system health readiness review did not cover, and calculations was but one of them. So I'm trying to understand why you feel that you have a solid technical basis for not looking at some of those attributes that weren't covered under that and why you are limiting it just to the calculations.

MR. POWERS: Our collective significance review focused on latent issues, Marty, looked at all the routes from 31 topical areas and went through that process and determined where we needed to focus on, one is calculation quality, and then the five topical areas we discussed before, environmental qualification, high energy line break, etc., those five areas we felt were the ones we needed to focus on pre-restart to nail down status there and provide its position.

There were other areas from

collective significance that we intend to pursue following the restart, and that is things like the maintenance and quality of our system design description manuals. There were some -- there is further issues that we need to do that is going to take us through those other systems, so it's not as if -- it's not as if we are not going to do that further work on those system health review level systems. For example, environmental qualification, high energy line break, they will go to the extent necessary, where the CRs have been held, they will determine what extent of condition they need to be taken through those systems, and areas of collective significance similarly will not just be focusing on five latent issues system, they will have plans that extend them to the other population of systems. So in that sense we think the latent issues review served its purpose. We found areas of weakness, we have characterized whether they are pre-restart or post-restart that need to ensue, and we will be laying forth plans to carry those forward as much as can be limited to five latent

issue systems.

MR. FARBER: Thank you.

MR. ~~MYER~~ MYERS: Did that answer the question?

MR. FARBER: (Indicating.)

MR. GROBE: Let me make sure I understand the scope of the safety function validation project. For those systems that have already been through a latent issues review or self-assessments prior to N.R.C. inspection, I think that is a total of seven systems. Are those systems going to receive additional review under the safety function validation project?

MR. SCHRAUDER: The five systems that were looked at under latent issue reviews will not. The two systems that were done as self-assessments will be looked at to the extent that they were not looked at for this aspect when self-assessment was done.

MR. GROBE: Okay. Any other questions from headquarters?

MR. HOPKINS: No, we don't have any other questions.

MR. GROBE: Okay.

MR. ~~MYER~~ MYERS: You know, one of the things we came in with a latent issue review is -- you know, that is not easy for us to pull up our information, we are still finding it. And you know one of the things we installed over at our other plants is a system called Atlas, and our engineers use it, we got good feedback.

That was one of the issues that we are talking about here, and I believe that we will do that as we do the latent issue reviews after restart. It took us several years to get all of our information in Atlas in the other plant, but it's our intention to use Atlas in all three of our plants, and we have that in our program, so that is something we would do after restart.

But anyway, in closing let me say this: None of our system reviews that we did, and as part of the system building block reviews today have resulted in any systems not supporting functionality or operability. There's been some tough questions there, but we think we have most of

those questions, at least 66 percent of the 26 areas are bounded now. So why should we go further? Why should we go further? Well, the reason we should go further is because we told you we would. We didn't do as good a job responding as quickly as we should to the 50.54(f) letter, and we told you as part of the system health building block that we would identify issues, categorize those issues and increase the scope as necessary. That's what we are doing.

Prior to restart we will resolve the topical areas, we will validate the most risk-significant function capability, we will address the operability issues to the extent of condition.

Completion of these items will ensure -- I believe will meet the objectives of ensuring that we are reliable and safe. If we find issues that are significant concerns, then additional actions will be required. We don't believe with the information we have today that that will be the case, but if we do, we will

increase the scope.

Thank you.

MR. GROBE: Okay. Bill, did you have any final comments or questions that you wanted to make?

MR. DEAN: Just that we will wait and see what results out of this, and I think this is a good opportunity for the licensee to demonstrate, you know, some of those things that we have talked about relative to safety focus and showing the persistence to continue to look at these issues and continue the communication. This is a good opportunity for the licensee to do that for us.

MR. ~~MYER~~ MYERS: Can I comment on that? You know, the easy thing is if we can take these 26 issues and bound them would be to come back to the regulator and say that -- and say we did what you told us to, increase the scope as we did. I think that says something, and it says that we are interested in validating that we have a safe plant, and that is an additional scope for us, but we are going to do that.

MR. GROBE: Okay. Well, I certainly appreciate this, it's been very informative. I think we still have some questions outstanding, so that the dialogue needs to continue.

I particularly appreciate you coming in on December 23rd. I know that this has an impact on everybody, it's a busy time of the year, and I appreciate you coming in on this date.

I believe that based on the conversations we have had amongst the panel members that should you not identify in these 26 current issues or any additional issues as you go through your system function validation project for the additional ten systems, if you identify no safety function problems, then I think we would be comfortable that this is a robust review that will support your conclusion that the plan provides reasonable assurance that Davis-Besse is ready to support safe and reliable plant operation.

If, in fact, you identify that plans as they are currently -- as they currently exist in the plant would not support safety function, then I

think we need to step back and ask ourselves that question a little bit more thoroughly and look at other systems that you are not evaluating and possibly look at what you are planning after restart to support our thinking on whether or not we can comfortably agree with your conclusion.

So I think that the question is open. It's absolutely critical that we have the answer to the 26 issues, and also that you proceed with these cross-cutting areas, the topical issues as you call them and that we understand the safety impact of those. And whether you identify any further operational issues, operability issues as part of your validation project. So I think the dialogue needs to continue.

Who is the principle point of contact that we should use for the topical issues, is that you, Bob?

MR. ~~MYER~~ MYERS: Bob.

MR. GROBE: And we will be getting a hold of you and making sure that we understand who are the leads in each of these areas that we can get more

information from and understand exactly what the issues are and what you are doing with those design areas. And we are also going to be looking at the safety function validation project in detail to make sure we understand that.

So I think this has been a highly successful meeting. We understand the landscape. I don't believe we are able to agree with your conclusion today, but we understand what we need to do to go forward.

So with that I'd like to complete -- unless you have any other comments, I'd like to complete the business portion of this meeting and go to the public question and comments section of the meeting.

The way we'd like to address this section of the meeting is to first ask if there is any members of the public here in the Region III office that have any questions or comments for the N.R.C. staff and then move to any folks that were in the headquarters offices and then move to folks that are on the phone.

So why don't we start here in Region III, is there anybody here that has a question or a comment that they want to make, please step up to the microphone.

(No response.)

MR. GROBE: We've got a happy, satisfied bunch here, okay, good.

Bill, do you have any folks there at headquarters that have any questions or comments that they'd like to make?

MR. DEAN: We have one individual here, and they declined our offer to make a comment or ask a question.

MR. GROBE: Okay. At this time I'd like to ask the operator on the phone whether or not she has any folks on the phone that have questions or comments?

MS. HOUSEMAN: If you would like to make a comment, please press Star 1 on your touch-tone phone.

(No response.)

MS. HOUSEMAN: Once again, to ask a question,

please press Star 1.

(No response.)

MS. HOUSEMAN: I'm showing no questions at this time.

MR. GROBE: Well, that's a first.

Without any questions from members of the public, I believe we are ready to adjourn the meeting. Thank you very much.

MR. ~~MYER~~ MYERS: Thank you.

(Which were all the proceedings had and testimony taken in the above-entitled matter at the time and place aforesaid.)

STATE OF ILLINOIS)
) SS.
COUNTY OF KANE)

I, ELLEN E. PICCONY, a Notary Public duly qualified and commissioned for the State of Illinois, County of Kane, do hereby certify that subject to the usual terms and conditions of County Court Reporters, Inc., reported in shorthand the proceedings had and testimony taken at the meeting in the above-entitled cause, and that the foregoing transcript is a true, correct and complete report of the entire testimony so taken at the time and place hereinabove set forth.

_____
Notary Public

My Commission Expires
October 15, 2003.