

1           BEFORE THE UNITED STATES  
2           NUCLEAR REGULATORY COMMISSION

3   IN RE: THE MATTER           )  
4           OF                    )  
5   DAVIS-BESSE                )

6                   REPORT OF PROCEEDINGS  
7                   December 23, 2002  
8                   9:00 A.M.

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

13

14   PRESENT ON BEHALF OF N.R.C.:

15       MR. JACK GROBE, Hearing Officer;  
16       MR. MARTIN J. FARBER;  
17       MR. MEL HOLMBERG; and  
18       MR. ROY CANIANO.

19   PRESENT ON BEHALF OF DAVIS-BESSE:

20       MR. LEW ~~MYER~~ MYERS;  
21       MR. JIM POWERS;  
22       MR. ROBERT SCHRAUDER;

          COUNTY COURT REPORTERS, INC.  
600 S. County Farm Rd., Wheaton, IL  
          630-653-1622

1 MR. GARY LEIDICH;  
2 MR. MIKE RODER;  
3 MR. JOHN GRABNAR;  
4 MR. KENDALL BYRD;  
5 MR. BOB COWARD;  
6 MR. ALEX ZARECHMAK;  
7 MR. STEVE FRANTZ;  
8 MR. PAT MC CLUSKEY; and  
9 MR. KEVIN SPENCER.

10 ALSO PRESENT:

11 MR. DAVID PASSEHL;  
12 MR. TOM HENRY;  
13 MR. JOE PETRICH;  
14 MR. BRIAN RENWICK;  
15 MR. CHECK ~~ZOH~~ ZOIA;  
16 MR. TIM STEADHAM;  
17 MR. GEOFFREY WRIGHT;  
18 MS. DANEIRA MELENDEZ;  
19 MR. ROLAND LICKUS;  
20 MR. TODD SCHNEIDER;  
21 MR. TOM BILIK; and  
22 MR. SHAWN PERGANDE.

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

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

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

1 revealed substantive design questions regarding the  
2 operation of those systems.

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

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

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

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

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

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

20     MR. HOLMBERG: My name is Mel Holmberg.

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

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

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

7 MR. ~~ZOH~~ ZOIA: Chuck ~~ZOH~~ ZOIA, DRS.

8 MR. STEADHAM: Tim Steadham, DRS.

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

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

12 TOM BILIK: Tom Bilik, DRS.

13 MS. MELENDEZ: Daniera Melendez.

14 MR. WRIGHT: Geoff Wright, reactor projects.

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

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

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

1 our stenographer is Ellen Piccony, welcome.

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

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

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

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

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

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

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



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

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

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

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

7         We found questions concerning design  
8 calculations and our ability to go back and look at  
9 those calculations, the rigors of the calculations,  
10 and we found some questions in those areas. Most  
11 of those were primarily questions from the prior to  
12 1990 time frame. There weren't recent issues. We  
13 found that the calcs sometimes were different, but  
14 we have been able to find the calcs and they were  
15 very much in line with the 54(f) letter that we  
16 provided to the regulators some time ago.

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

1 those questions we looked at in the five systems.

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

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

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

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

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

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

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

1 undertaken as part of the current recovery of the  
2 plant.

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

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

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

1 activities, a lot of them were related to  
2 engineering. What I'd like to focus on is the  
3 bottom of the chart and the activities that  
4 transpired over the years and the number of sets  
5 that were performed. We list them on the slides --  
6 on Slide No. 11 that is shown here. Our  
7 independent safety engineering group performed  
8 vertical slices of systems, and that starts in  
9 1989, we show a station and instrument air system  
10 vertical slice assessment; 1991, emergency diesel  
11 generators; 1992, steam generators; 1993, service  
12 water system. And this is particularly important  
13 because service water system is one of the ones we  
14 are looking at in detail today. In 1994 instrument  
15 and controls, and 1995, offspeed water system.  
16 And as you go across the bottom of  
17 the timeline you can see that the surveillance and  
18 assessment of the design basis has been ongoing and  
19 continuous. Then we look at N.R.C. reviews that  
20 were performed, and these are typically detailed  
21 inspections of systems and their functional  
22 capability, and also design basis supporting them.

1 In 1992, electrical distribution system functional  
2 inspection, EDSFI was performed. In 1993 a service  
3 water inspection that was referred to, this was a  
4 very detailed and hard hitting assessment of  
5 service water capability and appraisal performance,  
6 and in the 1997 high-pressure injection and  
7 low-pressure injection systems, and what was  
8 referred to as an architect/engineer inspection.

9 This inspection consisted of teams of engineers  
10 from architect/engineer corporations that were led  
11 by the N.R.C. inspector looking in detail at these  
12 systems over a number of weeks to go into the  
13 design basis specifically to see how the licensees  
14 were maintaining the design basis over the years.

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

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

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

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

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



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

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

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

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

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

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

1           The design basis validation program  
2 looked at three systems which comprise some of the  
3 most important functions in the plant from a safety  
4 perspective, and we looked at all the calculations  
5 in support of those functions in the 1997 to 1999  
6 time frame. These activities were part of a  
7 response to a request for information that was  
8 issued pursuant to 10 CFR ~~105.4.F~~ 50.54F by the N.R.C.  
9 that all utilities in the time frame in the mid '90s  
10 were requested to prepare an assessment and  
11 response on the maintenance of their design basis  
12 of plants and how it was reflected in the  
13 procedures that tested and surveilled the plant.  
14 And we have performed that assessment, along with  
15 all of the other licensees in the country, and  
16 these two activities, the review of the USAR and  
17 our design basis validation program were two of the  
18 activities that we performed in support of that.  
19 And there were commitments from the design basis  
20 validation program to work through, corrective  
21 actions that we developed, and that improving  
22 calculations, weaknesses in calculations,

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

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

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

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

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

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

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

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

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

12     MR. MYER MYERS: I guess what I'm trying to tell  
13 you is I think we did a pretty good job in the  
14 50.54(f) letter. I'm not sure that we did as good  
15 a job of following through after we submitted the  
16 letter. But when I read that and I read the issues  
17 that I see coming out of our recent reviews,  
18 they're basically the same in my mind

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

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

6           That project was not expedited as  
7 aggressively as it appropriately should have been.  
8 We determined that when we came on site this year,  
9 and reviewed our current numbers in this area.  
10 This was back in the April time frame, and we  
11 authorized the resources to complete that project  
12 by the end of this year, and Sergeant & Lundy has  
13 been helping us with that process in issuing over  
14 250 calculations. So that is an area where we  
15 could have done better from a schedule perspective  
16 as a project that didn't get completed as quickly  
17 as we would have desired, but it is being expedited  
18 now.

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

1 protection. What was your basis for whatever

2 conclusions you had in those areas?

3 MR. POWERS: In the letter of response what

4 we -- the basis for our conclusion was that

5 assessments and inspections had been performed near

6 term to the 54(f) letter response. Those are areas

7 that were relatively active at that time, had been

8 surveilled, and we felt that that was a

9 satisfactory assessment at that time.

10 MR. HOLMBERG: So what types -- can you give

11 me examples of what type of things you say you

12 surveilled, or --

13 MR. POWERS: Inspection, for example N.R.C.

14 inspection in the EQ area for self-assessment by

15 our quality organization in that area.

16 MR. HOLMBERG: Okay.

17 MR. POWERS: There had been documented audits

18 and inspection assessments of those programs that

19 we felt substantially characterized their status at

20 that time.

21 MR. HOLMBERG: Thanks.

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



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

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

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

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

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

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

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

16           The next was a system health  
17 readiness review level. We went into this looking  
18 at our maintenance rules, risk significant systems.  
19 31 of those -- of the 36 systems were included at  
20 this level of reviewing. We went and looked at  
21 modifications back to the 1990 time frame, because  
22 this is the year in which the modification for the

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

8           We also looked at work orders and  
9 corrective actions since the 1995 time frame. That  
10 1995 time frame was selected because that was  
11 subsequent to a management shift from the  
12 Davis-Besse site over to the Perry site, and we  
13 wanted to take a look to see if there was any  
14 deviation from the programs, from effectiveness  
15 from 1995 going forward in those areas.

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

1 shallow review.

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

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

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

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

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

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

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

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

1 slices through the system, if you will.

2 MR. POWERS: Thanks.

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

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

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

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

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

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



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

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

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

22 You're going to look at overall

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

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

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

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

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

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

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

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

9           In addition to latent issues, we  
10 also prepared self-assessments of calculations and  
11 high pressure injection system and the 4160 vault  
12 distribution system. And this was looking at the  
13 calculations. In particular we felt that one of  
14 the areas that we had developed of corrective  
15 significance was in the calculations as we went  
16 through latent issues reviews, and so we prepared  
17 an assessment of the high pressure injection and  
18 4160 systems. The N.R.C. also came and inspected I  
19 would add the service water system in detail and  
20 also high pressure injection on 4160 volt systems,  
21 and so that their findings were added to our  
22 discovery findings as well, and used to help set

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

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

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

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

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

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

13           We encouraged a questioning attitude  
14 going through the process, and we generated over  
15 1,200 CRs, and that included both design  
16 calculation type questions, as well as operation  
17 questions, meaning material condition, hardware  
18 questions, procedure questions for operation of the  
19 equipment.

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



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

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

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

1 this kind of cross-checking?

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

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

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

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

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

22           Each of the five systems, if I

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

15 MR. POWERS: Thank you, Alex.

16 Our preliminary evaluation and other  
17 questions indicates that there is relatively few  
18 that have potential safety consequences, given  
19 1,200 -- over 1,200 condition reports issued. We  
20 have gone through, looked at potential safety  
21 consequence assessment, and M.P.R. Associates is  
22 assisting us with that and has done that at several

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

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

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

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

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

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

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

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

16       MR. FARBER: Could you go back to the 1,200  
17 CRs, just run through the process by which those  
18 were evaluated and tell me whether all 1,200 now  
19 have been evaluated, what is the status of that  
20 whole program? You have 26 open questions. Is  
21 that 26 potentially significant issues out of  
22 1,200, or what is the percentage?

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

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



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

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

1 through the records, history, answer the questions.

2 That is an ongoing process.

3 And we are dealing with operability

4 determination of each one of these issues as we go

5 through that process, and we are observing it by

6 mode change restraint, so each time we have a mode

7 change in our schedule ahead of us, we are working

8 off those CRs to make sure that we are prepared to

9 make that mode change.

10 Now, the 26 issues out of the 1,200

11 are issues that in the assessment that was

12 performed of all those CRs could potentially effect

13 the -- have an affect on what we call the Chapter

14 15 analysis, which is -- Chapter 15 is a safety

15 analysis chapter of our updated safety analysis

16 report, and so we have gone through the screening

17 process, we have determined that 26 out of over

18 1,200 questions could potentially affect that, and

19 now we are in the process of bearing down on those

20 issues to assess them and answer them, and I think

21 Ken Byrd can provide us some detail on the type of

22 issues that have arisen and a couple of cases where

1 we have had completion of those issues.

2 Ken, would you like to speak to  
3 them?

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

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

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

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

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

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

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

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

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

22           We had a calculational issue that

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

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

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

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

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

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

15 MR. FARBER: So --

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

1 safety-significant issues that need to be addressed

2 if they, in fact, turn out to be true.

3           So that they are not all answered

4 yet, they are not all evaluated yet. We are

5 continuing in the process, but again if taken as

6 true, they would boil down to 26 right now

7 potentially safety-significant issues.

8           And then there is also the

9 programmatic or topical issues that Jim talked

10 about that are not included in the 26, the line

11 break, seismic, Appendix R, flooding and equipment

12 qualification.

13   MR. FARBER: So does that mean there exists a

14 potential that further engineering evaluation of

15 this additional population could reveal other

16 potentially significant issues because it sounds

17 like you have gotten to this point as a result of

18 just your initial screenings subsequent to SRP and

19 that the detailed technical evaluation --

20   MR. SCHRAUDER: No, out of that population

21 you won't -- I don't believe you will find

22 additional issues because again, like I said, the



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

9 MR. FARBER: Okay.

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

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

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

18 MR. POWERS: Well --

19 MR. SCHRAUDER: Substantially less.

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

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

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

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

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

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

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

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

8 MR. HOLMBERG: Thank you.

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

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

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

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

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

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

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

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

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

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

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

1 Ken, let me ask you that question.

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

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

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

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

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

1 two I mentioned were ones that were directly  
2 identified.

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

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

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



1 execution match the quality of the response?

2 MR. POWERS: Yeah, I will give you my  
3 perspective on that. And if we look at the  
4 timeline over here you can see we kicked off the  
5 design base validation right subsequent to our  
6 50.54(f) letter response, this time frame. And you  
7 can see that the -- that that program proceeded on  
8 through 2000, working up responses. There was  
9 follow-up responses to 50.54(f) process, and as Ken  
10 had indicated there was a collection of issues that  
11 were out of that review that were considered to be  
12 requests for assistance level actions that need to  
13 be taken through, improved calculations prepared,  
14 calculations that were missing.

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

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

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

9 MR. POWERS: That is correct.

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

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

15 MR. POWERS: Initial review?

16 MR. FARBER: Yeah.

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

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

1 engineers, but there was not enough folks to get it  
2 done, so ultimately it was contracted out and some  
3 of those were -- at least it wasn't issued until  
4 2000.

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

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

20 MR. POWERS: (Indicating.)

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

1 program, and these are design reviews you did,  
2 consistently showed that the systems were operable  
3 and capable of performing their safety function.  
4 Now, you have looked at five systems and identified  
5 26 areas where you can't answer that question yet.

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

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

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

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

1 particular areas, and we will be evaluating that.  
2 Bob will talk to that in his description of the  
3 plan that we have put forth on resolving these  
4 design questions, and then again I would say, you  
5 know, a couple of the design base validation with  
6 systems assessments and inspections, and in some  
7 cases those inspections being very deep slice,  
8 vertical slice reviews, multiple, week-long  
9 reviews, such as architect engineer inspections,  
10 and come back and we will ask other questions that  
11 require substantial engineering time to evaluate is  
12 something that does happen as you change reviewers,  
13 as you change technologies and evaluators, I would  
14 expect that there will always be questions raised.  
15 So do I condemn the activities that have been done  
16 in the past? No, not at all. I think they were  
17 done with the intent to do a comprehensive and  
18 technical quality job.  
19         We, a licensee sought out resources,  
20 appropriate resources to do that, and in the case  
21 of design base validation, we utilized a major  
22 architect/engineer in the industry who had done

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

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

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

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

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

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

1 system or something like that.

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 programs.

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

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

13           Bill Dean, anything at headquarters?

14   MR. DEAN: Nothing here, Jack.

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

17           Thank you.

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

22   MR. GROBE: We just finished the historical

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

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

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

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

7           92 percent of them that have been  
8 identified for restart are not potentially safety  
9 significant. We looked at nearly 600 CRs that were  
10 flagged for restart, these design-related condition  
11 reports, 40 of those condition reports fell into  
12 the category of potentially safety significant or  
13 having potentially significant impact on the  
14 Chapter 15 analysis, and those 40 individual CRs  
15 then when you compile them together constitute the  
16 26 potential issues that we talked about.

17           Then there is another approximately  
18 36, I believe, condition reports that we say have a  
19 potential -- if correct as written, they have minor  
20 impact on the Chapter 15 analysis. By and large,  
21 the calculations related questions are the ones  
22 that dominated the potentially safety significant

1 questions that were raised.

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7 MR. SCHRAUDER: That is correct.

8 MR. GROBE: Okay. Got it.

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

12 MR. GROBE: Okay.

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

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

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

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

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

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

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



1 project.

2 Do you have a question, Jack?

3 MR. GROBE: Go ahead

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

1 right side there if you had that kind of question?

2 MR. SCHRAUDER: That would be in Path

3 Charlie, that is correct

4 MR. HOLMBERG: So even though you have a

5 vulnerability protection, if it's a licensing

6 issue, it would be on the very far right and would

7 not necessarily fall into a bin that would be a

8 restart type CR?

9 MR. SCHRAUDER: No, no, no. Just because

10 it's in the topical issues, in the licensing

11 issues, does not mean that it wouldn't be resolved

12 prior to restart.

13 MR. HOLMBERG: Okay.

14 MR. SCHRAUDER: So those programs, again

15 HELB, EQ, all of those programs will have

16 assessments done programatically on those issues

17 and determinations made of what conditions need to

18 be resolved prior to restart and which ones don't

19 have to be resolved prior to restart?

20 MR. HOLMBERG: And just refresh my memory.

21 If it's a licensing issue or question, what would

22 be your threshold for throwing it in one bin or the

1 other?

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

6 MR. HOLMBERG: Thank you.

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

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

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

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

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

15 MR. SCHRAUDER: The --

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

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

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

5 MR. SCHRAUDER: So Page 28 identifies those  
6 15 plant systems that will be included in the  
7 safety function validation program. And then on  
8 Page 29, we talk about the methodology that we will  
9 employ, review associated calculations and/or tests  
10 and confirm that they do, in fact, support the  
11 function.

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

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

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

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

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

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

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

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

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

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

22         And the issues -- one of them was



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6 MR. GROBE: Okay.

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

1 qualifications parameters in that area also, or it  
2 would.

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

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

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

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

9 MR. SCHRAUDER: Right.

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

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

1 validation project bear to the latent issues

2 reviews on the five systems, if any?

3 MR. SCHRAUDER: They will look at the depth

4 of -- again, it is aimed at the calculational

5 issues, so it will look to that level of depth in

6 the calculational -- MPR you have a -- would you

7 like to ask Alex what is --

8 MR. FARBER: The key is latent issues review

9 evaluated some 31 attributes in detail and now what

10 I'm hearing is the safety function validation

11 project will evaluate some additional 10 systems,

12 but only in the calculational area. I'm not sure

13 if that is -- if my understanding is correct or

14 not.

15 MR. ZERECHMAK: That is the correct essence

16 of the review. The purpose coming out of it is not

17 to redo the latent issue review for a number of

18 different systems, but is to take advantage of the

19 lessons that we have learned both from the LIR and

20 the safety consequence review, which both pointed

21 to calculations being a key issue for those issues

22 that affect safety functions. And so we are



1 sitting back and saying, okay, if my goal  
2 ultimately is for it to be sure that my plant can  
3 satisfy safety functions, what do I have to do?  
4           And the answer for these additional  
5 systems is identify what the safety functions are  
6 and confirm that I can meet those mitigation  
7 functions, either by calculations or by test, and  
8 if I can -- if I can find a calc and demonstrate  
9 either by calc or testing that I can meet those  
10 safety functions, then I have done two things,  
11 provide assurance that I can meet safety functions,  
12 which is probably the most important thing, and in  
13 addition, what I have done is an extended condition  
14 for the calculations as they support or do not  
15 support the safety functions.

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

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

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

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

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

18           (No response.)

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

21   MR. HOPKINS: Is there a plan to update the  
22 50.54(f) response to us?

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

5 MR. ~~MYER~~ MYERS: I'd like to add that, you know, as  
6 we come out of this program we are in, I think we  
7 have already made a commitment that we still see  
8 the significance of those type of reviews. We need  
9 to go back and do them. We didn't do as good a job  
10 as we should have. We are going to do some now,  
11 and we are going to commit to do some additional  
12 latent issues reviews going forward now with all 31  
13 attributes, you know, so I think we have already  
14 committed to do that, and we need to go back, and  
15 based on the letter we sent back to you, the  
16 50.54(f) letter, we could do a second letter, but I  
17 don't know that we need do that. I think we have  
18 already made that commitment. If we do, we will.

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

1 and not looking at other inspection attributes.

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

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

22           There were other areas from

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

1 issue systems.

2 MR. FARBER: Thank you.

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

4 MR. FARBER: (Indicating.)

5 MR. GROBE: Let me make sure I understand the

6 scope of the safety function validation project.

7 For those systems that have already been through a

8 latent issues review or self-assessments prior to

9 N.R.C. inspection, I think that is a total of seven

10 systems. Are those systems going to receive

11 additional review under the safety function

12 validation project?

13 MR. SCHRAUDER: The five systems that were

14 looked at under latent issue reviews will not. The

15 two systems that were done as self-assessments will

16 be looked at to the extent that they were not

17 looked at for this aspect when self-assessment was

18 done.

19 MR. GROBE: Okay. Any other questions from

20 headquarters?

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

22 questions.

1 MR. GROBE: Okay.

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

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

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

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

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

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



1 increase the scope.

2 Thank you.

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

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

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

1 MR. GROBE: Okay. Well, I certainly  
2 appreciate this, it's been very informative. I  
3 think we still have some questions outstanding, so  
4 that the dialogue needs to continue.  
5 I particularly appreciate you coming  
6 in on December 23rd. I know that this has an  
7 impact on everybody, it's a busy time of the year,  
8 and I appreciate you coming in on this date.  
9 I believe that based on the  
10 conversations we have had amongst the panel members  
11 that should you not identify in these 26 current  
12 issues or any additional issues as you go through  
13 your system function validation project for the  
14 additional ten systems, if you identify no safety  
15 function problems, then I think we would be  
16 comfortable that this is a robust review that will  
17 support your conclusion that the plan provides  
18 reasonable assurance that Davis-Besse is ready to  
19 support safe and reliable plant operation.  
20 If, in fact, you identify that plans  
21 as they are currently -- as they currently exist in  
22 the plant would not support safety function, then I

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

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

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

19   MR. MYER MYERS: Bob.

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

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

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

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

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

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

5           (No response.)

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

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

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

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

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

21           (No response.)

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

1 please press Star 1.

2 (No response.)

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

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

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

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

10 (Which were all the  
11 proceedings had and  
12 testimony taken in the  
13 above-entitled matter at  
14 the time and place  
15 aforesaid.)

16

17

18

19

20

21

22

1     STATE OF ILLINOIS   )  
                                   ) SS.  
 2     COUNTY OF KANE    )

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

13

14

15

16

17                               \_\_\_\_\_  
                                   Notary Public

18     My Commission Expires

19     October 15, 2003.

20

21

22

COUNTY COURT REPORTERS, INC.  
 600 S. County Farm Rd., Wheaton, IL  
 630-653-1622