

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 ~~turbineability~~ 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 ~~turbine~~ 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 ~~turbine~~ 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.)

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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