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Assessment Subcommittee

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

DECEMBER 4, 2001

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## 1 NUCLEAR REGULATORY COMMISSION

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## 3 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

4 (ACRS)

## 5 RELIABILITY AND PROBABILISTIC RISK ASSESSMENT

## 6 SUBCOMMITTEE MEETING

7 + + + + +

8 TUESDAY,

9 DECEMBER 4, 2001

10 + + + + +

11 ROCKVILLE, MARYLAND

12 + + + + +

13 The Reliability and Probabilistic Risk  
14 Assessment Subcommittee met at the Nuclear Regulatory  
15 Commission, Two White Flint North, Auditorium, 11545  
16 Rockville Pike at 1:00 p.m., George E. Apostolakis,  
17 Chairman, presiding.

18 COMMITTEE MEMBERS PRESENT:

19 GEORGE E. APOSTOLAKIS, Chairman

20 THOMAS S. KRESS, Member

21 STEPHEN L. ROSEN, Member

22 E. PETER FORD, Member

23 MARIO V. BONACA, Member

24 WILLIAM J. SHACK, Member

25

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1        STAFF PRESENT:  
2        MICHAEL T. MARKLEY

3  
4        ALSO PRESENT:  
5        CYNTHIA CARPENTER

6        TIM REED  
7        EILEEN MCKENNA  
8        STEVE WEST

9        DAVID DIEC  
10       ANDRIEN HEYMER  
11       GLENN KELLY

12       MARK RUBIN  
13       MIKE CHEOK  
14       THOMAS SCARBOROUGH

15       TONY PIETRANGELO  
16       JOHN FAIRWEATHER

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## P-R-O-C-E-E-D-I-N-G-S

(1:01 p.m.)

CHAIRMAN APOSTOLAKIS: The meeting will now come to order. This is a meeting of the Advisory Committee on Reactor Safeguard Subcommittee on Reliability and Probabilistic Risk Assessment. I am George Apostolakis, Chairman of the Subcommittee.

Subcommittee members in attendance are Mario Bonaca, Peter Ford, Thomas Kress, Stephen Rosen and William Shack.

The purpose of this meeting is to discuss proposed revisions to the special treatment requirements of 10 CFR, Part 50, Option 2.

The subcommittee will gather information, analyze the relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the full committee.

Michael T. Markley is the cognizant ACRS staff engineer for this meeting.

The rules for participation in today's meeting have been announced as part of the notice of this meeting published in the Federal Register on November 21, 2001.

A transcript of the meeting is being kept and will be made available as stated in the Federal

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1 Register notice.

2 It is requested the speakers first  
3 identify themselves and speak with sufficient clarity  
4 and volume so that they can be readily heard.

5 We have received no written comments or  
6 requests for time to make oral statements from members  
7 of the public regarding today's meeting.

8 The ACRS last issued their report  
9 concerning the proposed 10 CRF 50.69 and associated  
10 Appendix D, dated October 12, 1999.

11 The staff is no longer pursuing Appendix  
12 D and is considering guidance provided in NEI 004,  
13 Option 2 implementation guideline.

14 The ACRS has reviewed the licensed  
15 amendment request from South Texas Project concerning  
16 special treatment requirements and issued a report  
17 dated July 23, 2001.

18 Today the subcommittee will also consider  
19 pilot activities at the Quad Cities and Wolf Creek  
20 nuclear power plants.

21 We now proceed with the meeting and I call  
22 upon Ms. Cynthia Carpenter, from the Office of Nuclear  
23 Reactor Regulation to begin.

24 MS. CARPENTER: Thank you. My name is  
25 Cindy Carpenter and I'm the branch chief for the Risk

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1 Informed Initiatives, Environmental Decommissioning  
2 Rulemaking Branch, and I have oversight responsibility  
3 for the Option 2 and Option 3 rulemakings.

4 I want to thank you for this opportunity  
5 to brief you on Option 2.

6 And what you have in front of you is -- we  
7 issued, in accordance with an SRM in August, draft  
8 rule language for public comment.

9 So it is on the website and it is  
10 available in Adams for the public to review. And I  
11 think the public comment period ends December 31st, if  
12 I'm not mistaken.

13 And we look forward to hearing any  
14 insights that you might have as we go forward to  
15 prepare the proposed rules.

16 I need to leave at 2 o'clock for a PRA  
17 Steering Committee meeting and Steve West will be  
18 taking my place as the management representative while  
19 I'm gone.

20 CHAIRMAN APOSTOLAKIS: Why didn't you tell  
21 them to come here? This will be PRA.

22 MS. CARPENTER: They will be. For some  
23 reason it was set up in conflict with this meeting. So  
24 I'm going to go to that meeting and then come on back.

25 So you have Tim Reed and Eileen McKenna,

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1 who are the lead on the rulemakings for Option 2, and  
2 Glenn Kelly, who is in the risk assessment branch.  
3 Thank you.

4 CHAIRMAN APOSTOLAKIS: Are you requesting  
5 a letter?

6 MS. CARPENTER: No, not at this time.  
7 Because this is just draft rule language. We'll be  
8 back for a letter.

9 MR. REED: I'll address that in the very  
10 first slide. I'm Tim Reed from the Division Regulatory  
11 Programs. And I'll be leading through the presentation  
12 today and I have technical support throughout the  
13 room. So if you have questions, we'll direct them to  
14 the appropriate person.

15 And I've got Eileen McKenna from DRIP also  
16 with me, and Glen Kelly, from DSSA, who's basically  
17 acting for Mike Cheek until Mike returns, hopefully.

18 So we have Mike Cheek also here today,  
19 who's the author of a lot of Appendix D.

20 CHAIRMAN APOSTOLAKIS: Mike Cheek is late.

21 MR. REED: He's late. Why don't we get  
22 rolling here. The first slide here is just to go  
23 through what we hope to achieve today, or the  
24 objective of this briefing, is to provide a status of  
25 where we are today on Option 2, what the ongoing tasks

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1 are, how we're doing on those.

2 Most of the folks on the focus on the  
3 briefing will be on the draft rule language, which has  
4 already been mentioned. It's out on the website. I  
5 think last week it went out there. So we'll focus  
6 mostly on that.

7 And if there are major issues with the  
8 direction we're heading in, we'd like to hear that.  
9 We're not asking for a detailed letter or anything  
10 like that.

11 CHAIRMAN APOSTOLAKIS: So we will not  
12 discuss NEI-000 --

13 MR. REED: We're going to discuss the  
14 status where we stand on the pilot activities, as well  
15 as the status on NEI 004. So both those will be also  
16 discussed.

17 CHAIRMAN APOSTOLAKIS: So we're going to  
18 get into technical discussions there.

19 MR. REED: Well --

20 CHAIRMAN APOSTOLAKIS: Why are you guys  
21 laughing? The subcommittees meetings are the place to  
22 do these things; right?

23 MR. REED: Why don't we start -- just to  
24 get everybody on the same page then. We'll go back  
25 through a little bit of background real quickly,

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1 because we haven't been here for a while.

2 As you recall, SECY-99-256 was the paper  
3 that put out the proposed or the rulemaking plan for  
4 Option 2 and also attached advance notice proposed  
5 rulemaking. That went out in October of '99 and then  
6 we actually published the NPR in I think it was March  
7 of 2000.

8 We got several -- I think a hundred to 200  
9 comments or thereabouts on the NPR and then in SECY-  
10 00-194, which was published in September of 2000, we  
11 provided our preliminary views on the NPR comments, as  
12 well as discussing our further thoughts on the  
13 regulatory approach.

14 Since that time, really, actually, in the  
15 last year, as some of the committee members are very  
16 well familiar with, most of the technical effort here  
17 has been focused on the South Texas exemption request  
18 and the staff's approval of that.

19 It was approved for concept for Option  
20 2's. I think you're well aware.

21 In the last couple of years, we've also  
22 had at least three workshops. We've briefed the  
23 Commission twice, September, 2000 after we published  
24 SECY-00-194 as well as in conjunction with STP when  
25 the exemption was issued.

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1 CHAIRMAN APOSTOLAKIS: Was the Office of  
2 Research involved in the public workshop? Do they ever  
3 come?

4 MR. REED: Oh, I believe the Office of  
5 Research was at, I think -- I'm not going to say every  
6 workshop. I know they were at some of them. The last  
7 one -- was the Office of Research at the last one?

8 CHAIRMAN APOSTOLAKIS: So this is an NRR  
9 effort exclusively?

10 MS. CARPENTER: The Office of Research --  
11 this is Cindy Carpenter, again. The Office of Research  
12 participates on the Risk Informed Licensing Panel.  
13 Even the draft rule language, many of the things we do  
14 in Option 2 we take through the RILP.

15 And the Office of Research participates  
16 through a division director on the RILP. So they are  
17 participating.

18 CHAIRMAN APOSTOLAKIS: But are there any -  
19 - is there any work that the Office of Research is  
20 doing to support you in this effort?

21 MR. REED: Yes. Yes. They're reviewing  
22 NEI-00-02, which is the peer review guidance for its  
23 application to Option 2. So they're supporting Option  
24 2 in that respect. In the PRA quality issue they're  
25 supporting us.

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1 CHAIRMAN APOSTOLAKIS: Are they reviewing  
2 NEI-000-04?

3 MR. REED: NER is the lead review on NEI-  
4 000-04 -- 00-04. And we have a RILP 50 Option 2 core  
5 team, which research is also a member of that too.  
6 They participate on that as well as on the RILP. So  
7 they're involved.

8 To refresh your memories then, the concept  
9 --

10 CHAIRMAN APOSTOLAKIS: If you can do that,  
11 we'll love you.

12 MR. REED: The basic four box diagram --

13 CHAIRMAN APOSTOLAKIS: Freudian slip.

14 MR. REED: Just the first of many, I'm  
15 sure.

16 I'm showing what I like to call the two  
17 different worlds here. The old deterministic world in  
18 the columns when we divided the world into safety-  
19 related --

20 CHAIRMAN APOSTOLAKIS: Can you use the  
21 world traditional, rather than deterministic? There  
22 is nothing deterministic about it, in the sense the  
23 physicists use the word. It's not deterministic. It's  
24 a traditional way of doing business.

25 MR. REED: That's true. It is traditional.

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1 Absolutely. It's the way we've been doing it for 30  
2 plus years. And now with the risk informed and  
3 pressure taken in Option 2, of course, we're dividing  
4 the world into safety significant and low significant  
5 through using a risk-informed characterization  
6 process, which we'll talk about here.

7 For RISC-1, the RISC-1 box, of course,  
8 that's safety related. The SSC's that are, in fact,  
9 determined to be safety significant through the risk-  
10 informed characterization process.

11 RISC-2 are non-safety related SSC's that  
12 are safety significant through the risk informed  
13 categorization process.

14 RISC-3 are safety related, low safety  
15 significant, and RISC-4 are non-safety related, low  
16 safety significant.

17 As you'll see, a little bit different  
18 there -- basically, RISC-1 and RISC-2, current  
19 requirements continue to apply to these.

20 And in addition to that, you've got to  
21 basically make sure that your categorization process  
22 is valid and remains valid, and then we'll go into the  
23 details here in a second when we get into the actual  
24 rule requirements.

25 The focus on Box 3 has to be maintain

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1 design basis functions. As you're aware, for Option 2  
2 we're not giving up the design basis. We're trying to  
3 maintain the design basis functions.

4 What we're only risk informing, if you  
5 will, is the assurance that's associated with  
6 maintaining those design basis functions. So that's  
7 where the focus is on Option 2.

8 CHAIRMAN APOSTOLAKIS: Let's go back to 2.  
9 RISC-2.

10 MR. REED: Sure.

11 CHAIRMAN APOSTOLAKIS: These are safety  
12 significant, but have been declared from day one as  
13 non-safety related. So the special treatment  
14 requirements don't apply to them.

15 MR. REED: There can be some SSC's that  
16 have been called important to safety.

17 CHAIRMAN APOSTOLAKIS: Some part.

18 MR. REED: Yes, there are some.

19 CHAIRMAN APOSTOLAKIS: But by and large,  
20 they didn't apply to them. Have we had any incidents  
21 where what -- SSC's have turned out to be RISC-2 --  
22 were involved, that something went wrong, or some  
23 observation that they played a role in some way in a  
24 safety-related incident?

25 MR. REED: Mike Cheek.

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1 MR. CHEOK: The thing that comes to mind,  
2 George, is the main feed water system for PWR's, and  
3 in some cases the service water system in PCNB's. So  
4 those are safety significant as far as the PRA's  
5 concerned, that it's not safety related.

6 CHAIRMAN APOSTOLAKIS: I understand the  
7 categorization. But were they involved in any real  
8 situation where the fact that they had not been  
9 classified as safety significant -- safety related  
10 played a role? The bottom line is do the special  
11 treatment requirements do anything for us?

12 MEMBER BONACA: I think pressurized PORV's  
13 were not --

14 CHAIRMAN APOSTOLAKIS: And?

15 MEMBER BONACA: And we had TMI.

16 CHAIRMAN APOSTOLAKIS: And if the special  
17 treatment requirements had been imposed on them, we  
18 would not have had the TMI?

19 MEMBER BONACA: No. No. But I'm saying  
20 that that's the component that was not safety related  
21 because it was not credited for an accident analysis.

22 CHAIRMAN APOSTOLAKIS: But the heart of my  
23 question is if I look at the significant experience.  
24 I mean, the numbers vary, but I think most people  
25 would agree we have about 2,500 years of -- reactor

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1 years of experience.

2 And we're making a big deal about relaxing  
3 these requirements for RISC-3. Is it a fair question  
4 to ask how effective these requirements have been, or  
5 are we making a big deal out of nothing?

6 I'm not saying to eliminate them, but I  
7 think that's a very interesting perspective. I mean,  
8 you've been operating for so many years with a number  
9 of SSC's being declared as non-safety related, and yet  
10 you haven't really had any serious problems.

11 MEMBER SHACK: Yes, but the circumstances  
12 in which you're asking them to perform is something  
13 that you don't --

14 CHAIRMAN APOSTOLAKIS: Are you using the  
15 microphone? And identify yourself with sufficient  
16 clarity and volume.

17 MEMBER SHACK: The experience isn't  
18 relevant. I mean, the number of incidents in which  
19 these things are tested under the conditions that  
20 you're really interested in in an accident are  
21 fortunately --

22 CHAIRMAN APOSTOLAKIS: Very few.

23 MEMBER SHACK: -- are rather limited.

24 MEMBER ROSEN: And, George, your  
25 experiment is purely an academic one anyway, because

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1 the utilities know which components are important,  
2 whether or not they're safety related and take good  
3 care of the ones that are, whether they're in the  
4 balance of the plan or not. So it's not a pure  
5 experiment.

6 CHAIRMAN APOSTOLAKIS: So you're saying  
7 that they were doing things even though they were not  
8 required.

9 MEMBER ROSEN: Correct. I might also add,  
10 we don't get a whole lot of design basis events,  
11 fortunately. So we don't even challenge the safety  
12 related SSC's throughout the years very often. It's  
13 been very, very few times it's ever been challenged,  
14 which is good.

15 CHAIRMAN APOSTOLAKIS: But it's still --  
16 I think there is a message there somewhere that maybe  
17 the debate that we have seen on RISC-3 requirements  
18 maybe is not justified, completely justified.

19 MEMBER ROSEN: I think there's some data in  
20 the South Texas filing that indicates that there's  
21 very limited difference between the performance of  
22 those components of the same kind that are treated  
23 with the full panoply of safety-related and special  
24 treatment requirements and those that are not. There's  
25 very little difference in their performance.

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1 CHAIRMAN APOSTOLAKIS: And others have  
2 said the same thing.

3 MEMBER SHACK: Under the conditions in  
4 which they've been asked to perform. Under normal  
5 operating conditions that's, I think, unquestionably  
6 true.

7 MEMBER KRESS: I agree with Bill. The real  
8 experiment has never really been done.

9 MEMBER BONACA: Absolutely. If you have a  
10 component that has to work in a steam environment in  
11 high temperature, you never have that. You'll never  
12 know if it will work.

13 CHAIRMAN APOSTOLAKIS: Did we have that  
14 for TMI?

15 MEMBER KRESS: We had some, but that's not  
16 very good.

17 MEMBER BONACA: Environmental  
18 qualification of equipment or seismic event, for  
19 example. How do you know? The most you can do is to  
20 do the best you can to make sure it will work if you  
21 get a seismic event. So you don't have experience to  
22 support one conclusion or the other.

23 MEMBER KRESS: You could do some things  
24 with seismic. You can stick them on Shaker Tables.  
25 It's some of the other things you can't do much with.

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1 But I don't think the experiment has ever been done.

2 MEMBER SHACK: Well, I think it's  
3 certainly clear that if you change the design  
4 requirements, it would have a big impact on whether --  
5 now, whether all the other special treatment -- you  
6 know, how much that adds is probably the more  
7 questionable statement. But I think --

8 CHAIRMAN APOSTOLAKIS: Well, that's what  
9 I had in mind.

10 MEMBER KRESS: Yes.

11 CHAIRMAN APOSTOLAKIS: Okay. So I got my  
12 answer, which also tells me that the argument we've  
13 heard in the past from other people that this industry  
14 is not as mature, because we have a lot of reactor of  
15 experience so we don't need any more research, so  
16 that's not a valid argument. Right? That's what you  
17 guys just told me.

18 That this experience was not long enough  
19 to really see some of these bad environments. Anyway,  
20 let's go on.

21 MEMBER BONACA: Before you change this,  
22 I'm going to go make to this question, so I might as  
23 well raise it now.

24 In dividing this region in four, you know,  
25 you used a criteria of CDF and LERF, you're using. And

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1 I've asked this question before in different ways.

2 But the FSAR really was based on a  
3 frequency consequence. I mean, it really wanted PRA  
4 based.

5 So in defining safety-related components  
6 that contributed to, for example, not exceeding Part  
7 100 limits or things of that kind.

8 Now when you go to this approach in which  
9 you're still using only CDF and LERF, by definition  
10 you're saying that components that prevent Part 100  
11 limits, exceedants or whatever, in the low  
12 consequence, high frequency portion of those curves  
13 are, by definition, low safety significant.

14 MR. KELLY: This is Glen Kelly. They will  
15 be in RISC-3, not RISC-4.

16 MEMBER BONACA: RISC-3.

17 MR. KELLY: And so they'll still have to  
18 have their design functions maintained.

19 MEMBER BONACA: Well, I'm trying to  
20 understand -- it seems to me you're driving so much in  
21 this application, in maintaining design function,  
22 because you consider them important.

23 And it seems to me that the only tie to  
24 that statement is, in fact, this no consequence, high  
25 frequency portion of the curve that you're abandoning

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1 there.

2 Why didn't you take an approach where you  
3 would consider including the separation of those  
4 boxes, some consideration of a frequency consequence  
5 curve, rather than just simply CDF and LERF, which  
6 implies that the only risky thing that can happen to  
7 the plant is a core damage.

8 See, because it brings to definition  
9 throughout the NEI report of the fact that anything  
10 that causes a core damage is not safety significant.

11 MR. REED: Unless it's important for  
12 defense.

13 MEMBER KRESS: I think what Mario's saying  
14 is if you had done it that way, it might have turned  
15 out that a lot of those items in Box 3 would haven  
16 been in Box 2 or Box 1, rather.

17 MR. KELLY: No, they'd be in Box 4.

18 MEMBER KRESS: Well, a lot of them would  
19 been in Box 1.

20 MR. KELLY: Well, if we were saying that  
21 they were -- the but reality is -- and for the PRA  
22 space, they don't count. They don't matter much,  
23 because --

24 MEMBER KRESS: Only because you're looking  
25 at LERF and CDA. If you were looking at something

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1 else, then they might move up to Box 1. That's what  
2 I think Mario is saying.

3 MEMBER BONACA: We have -- for new plants  
4 presenting us a curve in which they're considering  
5 also no consequence, high frequency limits. Why should  
6 they consider those, when here you're presenting us  
7 something that says only core damage is important?

8 MR. REED: We'll get into the  
9 categorization process and Mike can do a lot better  
10 job than I can. That's why this is a blended  
11 approach.

12 It's not just core damage frequency and  
13 LERF. It's a RISC -- what I'd like to call a REG Guide  
14 1.174 type of approach where we're considering defense  
15 margin of safety, qualitative pieces of information,  
16 in addition to any kind of quantitative pieces of  
17 information you have from the PRA, like CDF and LERF.

18 MEMBER BONACA: The reason why it is an  
19 issue, is that it's very hard for you to define some  
20 of the requirements you are imposing in the back of  
21 these documents here -- under functionality plus, when  
22 you have already a component as low safety  
23 significant, it doesn't account for nothing.

24 MR. KELLY: And part of this is we can go  
25 back to the Commission's policy statement on the use

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1 of PRA.

2 It was that PRA should be used to the  
3 greatest extent possible in regulatory framework, and  
4 at the same time that the PRA would work in  
5 conjunction with the deterministic process.

6 The Commission did not expect us to go to  
7 a risk-based approach, but to a risk-informed one  
8 where we use a combination of both deterministic and  
9 probabilistic insights.

10 So I think one may sit down and ask, you  
11 know, do we have the right combination of requirements  
12 for RISC-3? It may be that we can argue about whether  
13 we have too much or too little, or whatever.

14 But, basically, I think that our idea of  
15 maintaining the functionality of the equipment is in  
16 keeping with the Commission's policy of -- policy  
17 statement, unless it wants to indicate that it really  
18 wants us to change, like we do under Option 3; change  
19 the design itself, the design basis.

20 MEMBER ROSEN: A couple of points I'd like  
21 to make. One of them, Mario, is that most of the  
22 components in the plant are not in the model. Most of  
23 the safety-related components.

24 MEMBER BONACA: True. True.

25 MEMBER ROSEN: So you don't get a value

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1 for CDF or LERF.

2 MEMBER BONACA: True.

3 MEMBER ROSEN: It's basically a  
4 deterministic process, a traditional process, which is  
5 informed by the PRA when the PRA results are  
6 available.

7 What you're basically running is a  
8 careful, expert elicitation process that's almost  
9 fundamentally 95 percent deterministic. That's the  
10 first point.

11 And so I think that goes a lot to your  
12 question of well what about all this other stuff at  
13 the high frequency, low consequence end. That's what  
14 the expert panel is looking at. It's looking at all  
15 the things.

16 Feed and bleed, transients, loss of off-  
17 site power, events that can happen but have low  
18 consequence that happen once every ten years, let's  
19 say, but have low consequence.

20 The other point I'd like to make is about  
21 -- and maybe it's partly a question.

22 MEMBER KRESS: Or if they come up with a  
23 component -- it was important for one of those. And I  
24 know what they're measure of importance is. Would it  
25 be -- the expert panel, would they say oh, this is

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1 important to keep the dose within a certain limit or  
2 to keep --

3 MEMBER ROSEN: It might be functionally  
4 important for operational purposes, in order to bring  
5 the plant from operating condition to hot shutdown.

6 MEMBER KRESS: Okay.

7 MEMBER ROSEN: It might be important  
8 because operators need it to access --

9 MEMBER KRESS: If I decided it was  
10 important, then would they put it in the -- in Box 1  
11 then?

12 MEMBER ROSEN: Yes, probably.

13 MEMBER BONACA: They could.

14 MEMBER ROSEN: If it was already safety  
15 related, they'd put it in Box 1. If it wasn't safety  
16 related, but there was some strong view on the expert  
17 panel that it was important that it go to box 2.

18 MEMBER KRESS: It's the same as putting it  
19 in --

20 MEMBER ROSEN: Well, mostly, it's in --  
21 box 1 is for safety-related things that were -- the  
22 original equipment manufacturer provided a safety  
23 related -- some of these things you can't put in box  
24 1 because there were provided by a non-Appendix B  
25 supplier to begin, so you don't have all the data and

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1 the certifications that -- certificates of conformance  
2 and all of that rest that you would need to put into  
3 box 1.

4 But you can very much treat it, in terms  
5 of inspection, maintenance and test and Box 1  
6 component.

7 Let me ask about, or make a point about  
8 this. Is that throughout the whole -- my whole  
9 troubled career of involvement with this topic, I felt  
10 that there was another definition needed, rather than  
11 just low-safety significant.

12 And at South Texas, in fact, we did  
13 include not risk significant, as I guess it came to be  
14 understood between the staff of South Texas and the  
15 staff of the NRC that that was not risk significant,  
16 was subsumed inside of low safety significant.

17 But, clearly, there were a lot of things  
18 that we simply had no nexus, none whatsoever, between  
19 the risk to the core and or the plant.

20 And this component was purely a  
21 convenience for maintenance, or a way to drain the  
22 system when you were shut down.

23 I mean, there's lots and lots of things  
24 that one of my staff used to call ornaments. The  
25 operators maybe didn't think so, but from a safety-

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1 related point of view, he called them ornaments. But  
2 they weren't called --

3 MEMBER BONACA: But could it be --

4 MEMBER ROSEN: So why didn't we have -- so  
5 the question is why not have a non-risk --

6 MEMBER BONACA: But could it be that you  
7 already had a system that included a lot of components  
8 which really should not have been there to start with.

9 I mean, you mentioned once that at South  
10 Texas you really went overboard in including either  
11 safety-related -- all I'm trying to say is there are  
12 plants out there that may not have gone overboard in  
13 including components into the safety class, and  
14 therefore --

15 MEMBER ROSEN: That's correct. There are  
16 a lot of reasons people put stuff in safety related  
17 during design and construction that really didn't need  
18 to be in there.

19 MEMBER BONACA: So you really probably had  
20 a large number of those components which are non-  
21 safety important. And I think other plants, most  
22 likely, are not in that condition, but it's just an  
23 observation.

24 MEMBER SHACK: I think --

25 MEMBER ROSEN: I'd like to come back to a

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1 fundamental objection to Mario and Tom's point of  
2 view. I mean, if it's low consequence, it's low  
3 consequence. And it belongs in Box 3.

4 MEMBER KRESS: It depends on what you've -  
5 -

6 MEMBER ROSEN: Even if it's high frequency  
7 level.

8 MEMBER KRESS: No, no, no. We're talking  
9 about safety, not consequence. And you have to  
10 determine what your definition of safety is.

11 MEMBER ROSEN: You're almost treating a  
12 regulatory limit in the same way you're treating CDF.

13 MEMBER KRESS: That's correct. I am.  
14 That's what I want to do.

15 MEMBER ROSEN: Oh, okay. I guess we have  
16 a fundamental disagreement.

17 MEMBER BONACA: But these are -- there are  
18 releases out there, for example, or those issues.  
19 They're that important to the people around the plant.

20 They may not be important to you -- have  
21 knowledge that says that a few millirems maybe are not  
22 doing anything to your health, but some people would  
23 like to know what your definition of safety  
24 significant is.

25 CHAIRMAN APOSTOLAKIS: I think this issue

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1 should be addressed a bit more explicitly in the  
2 deliberations of the integrated decision making panel.

3 And if you go to NEI-00-04, pages 58 and  
4 59, this is where there is some guidance as to what  
5 the IDP should be doing, and the question to you,  
6 Mario, is if you read those four bullets on page 59,  
7 do you think that it covers your concern?

8 No defense in depth has been raised again  
9 as the savior here. It seems to be defense in depth  
10 is a concept that is relevant.

11 I have the point here that I want to  
12 protect some release or something and the hazard is on  
13 the other side, how much defense and depth do I have  
14 in between. Okay?

15 So I can talk about defense in depth with  
16 respect to releases and defense in depth with respect  
17 to core damage, right?

18 If you read this document, and you haven't  
19 heard this discussion over the last five minutes, it  
20 seems to be defense in depth is really with respect to  
21 core damage. So it doesn't really cover Mario's  
22 concern.

23 But the only question is whether these  
24 four bullets -- for example, the panel is supposed to  
25 look at this categorization and determine whether

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1 failure of the SSC will significantly increase the  
2 frequency of an initiating event, including those  
3 initiating events originally screened out of the PRA  
4 based on anticipated low frequency.

5 So now you're focusing only on initiating  
6 events, which is really very different from looking at  
7 the core damage frequency.

8 MEMBER BONACA: That's right.

9 CHAIRMAN APOSTOLAKIS: And then later on  
10 it says the SSC is necessary for safety-significant  
11 operator actions created in the PRA.

12 MEMBER BONACA: Oh, there are elements  
13 there.

14 CHAIRMAN APOSTOLAKIS: So there are  
15 elements that address concern, but if they expanded  
16 this and made it with more rigorous explicit language,  
17 perhaps it would address your concerns.

18 MEMBER BONACA: Exactly.

19 MEMBER KRESS: George, let me articulate  
20 just a little more about what my concern is, and it's  
21 a lot like Mario's.

22 If I had the regulatory curve on frequency  
23 versus consequences, which we've talked about in the  
24 past, it would cover all ranges of frequencies and  
25 consequences.

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1           And I maintain that implicit in the  
2 regulations is such a curve. They deal with all of  
3 these things in some way.

4           And if I wanted to define that curve as  
5 what I meant by safety, the whole curve, then I could  
6 ask my PRA to give me importance measures related to  
7 that whole curve.

8           And I might get a few or several things  
9 that didn't show up here on CDF and LERF.

10           Not only that, I would have guidance I  
11 would give this panel that's different than asking  
12 those particular questions. I would ask -- except  
13 maybe the initiating event might be one of them.

14           But there would be guidance that would  
15 relate to that sort of thing, and that's what I see as  
16 kind -- that's what I see as missing in this.

17           MEMBER BONACA: And once you would have  
18 done that, I would take all the RISC-3 components,  
19 which are not required for any of the curve, and  
20 simply say I don't need to have any burden any more or  
21 demonstration.

22           MEMBER KRESS: I would push it over --

23           CHAIRMAN APOSTOLAKIS: I am not going to  
24 argue against what you said. Bill and Tom were here  
25 when I was trying to convince this committee that the

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1 FC curves was a good way to do.

2 MEMBER KRESS: You convinced me.

3 CHAIRMAN APOSTOLAKIS: The committee was  
4 not convinced. Now in all fairness to the staff, they  
5 have to go with what rules and regulations have been  
6 approved --

7 MEMBER KRESS: Oh, they have to go with  
8 the rules --

9 CHAIRMAN APOSTOLAKIS: -- and 1174 is in  
10 the books. There is nothing in the books that says  
11 with FC curves.

12 MEMBER KRESS: There's nothing in 1.174  
13 that says it should be applied for this special  
14 treatment requirements.

15 MEMBER BONACA: But it's a general  
16 guideline for risk informing the regulations.

17 MEMBER KRESS: It changes.

18 MEMBER BONACA: So what can be done now --  
19 I mean 1174 will be revised at some point.

20 MEMBER KRESS: Who made it a general  
21 guideline for risk informing the regulations? It was  
22 never meant for that?

23 MEMBER BONACA: For changes?

24 MEMBER KRESS: Its purposes were minor  
25 changes to the licensing basis where you keep the rest

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1 of the regulations in tact.

2 MEMBER BONACA: That's correct.

3 CHAIRMAN APOSTOLAKIS: Minor? I don't know  
4 about minor.

5 MEMBER KRESS: Minor, because they have --

6 CHAIRMAN APOSTOLAKIS: It doesn't say  
7 minor anywhere.

8 MEMBER KRESS: Minor, because they have a  
9 small impact on the CDF.

10 CHAIRMAN APOSTOLAKIS: Ah.

11 MEMBER KRESS: So it was never intended to  
12 be a guidelines for risk informing the regulations. It  
13 was made into that by somebody deciding that would be  
14 an interesting way to go.

15 CHAIRMAN APOSTOLAKIS: But there is no  
16 mention of low consequence, high frequency regions and  
17 so on. There is nothing there that talks about that,  
18 but just because general --

19 MEMBER KRESS: Well, it says you will  
20 maintain the rest of the regulations.

21 MEMBER BONACA: In a practical sense, they  
22 would have had now a foot to stand in imposing the  
23 additional requirements, or whatever remains in Box 3  
24 and eliminating any requirements on what moves now to  
25 Box 4.

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1           Because you have a demonstration that you  
2 absolutely have met your definition of safety. If you  
3 don't need it for that, everything goes into 4.

4           CHAIRMAN APOSTOLAKIS: It seems to me --

5           MEMBER BONACA: Right now you have a  
6 hodgepodge of both in 3 and you're still trying to  
7 impose the requirements, which are going to be almost  
8 as demanding as Appendix B. That's the point I wanted  
9 to make.

10          CHAIRMAN APOSTOLAKIS: Would it be -- I  
11 mean, in order not to revolutionize everything here,  
12 would it be a good idea to say that in the guidance to  
13 the -- what is it? IDP. Integrated Decisionmaking --

14          MEMBER KRESS: That's where I would put  
15 it, because I don't think that PRA properly deals with  
16 this.

17          CHAIRMAN APOSTOLAKIS: Because that way  
18 you don't attack 1174.

19          MEMBER BONACA: I can live with that.

20          MEMBER KRESS: I don't want to attack  
21 1174.

22          CHAIRMAN APOSTOLAKIS: And when 1174 comes  
23 up for revision --

24          MEMBER KRESS: We can talk about that.

25          CHAIRMAN APOSTOLAKIS: -- for license

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1 renewal, then we'll --

2 MR. KELLY: Can I make sure I understand  
3 what Dr. Kress is saying here, just to make sure it's  
4 clear from my limited understanding of things?

5 Let's take an example of the standby gas  
6 treatment system, which is safety related, but is not  
7 -- would be a category 3 component because it really  
8 has no impact on core damage frequency or large early  
9 release. And, as a matter of fact, doesn't have any  
10 affect on late containment failures either.

11 However, from the way we calculate our  
12 design basis locus, it's important for maintaining the  
13 nearby offsite consequences to within part 100.

14 So in my understanding, that from your  
15 standpoint you would say if we really believe that  
16 that's what the standby gas treatment would  
17 effectively do, that it should become a RISC-1 -- that  
18 your proposal would be that it should be a RISC-1 --

19 MEMBER KRESS: That's the general idea.  
20 I'm not sure about that specific one, but that's the  
21 general idea.

22 MR. REED: Let me see if I understand  
23 this. If it's a frequent -- like loss of main feed  
24 water, a more frequent event.

25 MEMBER KRESS: Yes.

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1 MR. REED: But very low consequences, and  
2 there's SSC's in the plant that are basically there  
3 just to mitigate that, let's say. Box 1,  
4 unfortunately -- will come out -- will be important no  
5 matter what.

6 But that's -- if it didn't, let's just  
7 assume for the example, this is the only reason it was  
8 there for that high frequency, low consequence event,  
9 that you say that this would be somehow a measure of  
10 frequency times consequences, that you want to  
11 basically keep this curve, that even for this very  
12 high frequency, low consequence event, it if comes up,  
13 through some measure you'd use -- I guess, out of the  
14 PRA, or however else you want to do it. You may not  
15 need it.

16 But this would be a piece of information  
17 you'd be able to hand to the IDP and say yes, this is  
18 how you can make the determination on this.

19 CHAIRMAN APOSTOLAKIS: Well, not only  
20 that, but you will also have a problem now of by how  
21 much would you change the curve, or pieces of the  
22 curve, and still find it acceptable.

23 MEMBER KRESS: Yes, there's a problem.

24 CHAIRMAN APOSTOLAKIS: So you don't have  
25 a Delta CDF and Delta LERF.

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1           MEMBER ROSEN: This whole discussion to me  
2 is deja vu all over again. We spent most of the time -  
3 -

4           CHAIRMAN APOSTOLAKIS: For us too.

5           MEMBER ROSEN: -- at South Texas arguing  
6 about the things that didn't matter. The low  
7 consequence events. That's what you want to talk most  
8 about. The ones that are high frequency, low  
9 consequence.

10           And I keep getting turned off by that  
11 discussion. I'm much more interested in the high --  
12 the low frequency, high consequence events.

13           CHAIRMAN APOSTOLAKIS: Well, I'm not so  
14 sure that's right, Steve, because this point of view  
15 assumes that the consequences are only what we mean by  
16 consequences here. And sometimes they're not.

17           Now, in another context, there was a minor  
18 release of tritium from Brookhaven, and they almost  
19 shut down the lab. The consequences --

20           MEMBER BONACA: Absolutely.

21           CHAIRMAN APOSTOLAKIS: The real  
22 consequences were nothing. So, you know, I mean, the  
23 Commissioner really wants to build public confidence  
24 and all that. So having a low consequence event with  
25 very high frequency, may not be wise.

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1 MEMBER BONACA: I mean, the Commission is  
2 concerned about --

3 MEMBER KRESS: The question is what should  
4 it be in the purview of NRC and what should not? What  
5 should be left to the licensee, and that's sort of  
6 more of a policy issue than anything.

7 CHAIRMAN APOSTOLAKIS: In terms of real  
8 risk I think Steve is right.

9 MEMBER KRESS: Steve is probably right.

10 MEMBER BONACA: There was a speech by Dr.  
11 Meserve this summer speaking about we have to focus  
12 still on certain issues of lesser consequences, okay,  
13 that, in fact, for the public are significant. And  
14 that's an important issue.

15 CHAIRMAN APOSTOLAKIS: That is a perennial  
16 problem there, Mario. I mean, I won't argue now  
17 against what I just said.

18 The perennial problem is this is a  
19 technical agency. It's supposed to use the best  
20 science and engineering.

21 Should it run its business according to  
22 people's perceptions, or according to technical  
23 evidence and analysis? I don't know. I don't think  
24 anybody knows.

25 The truth of the matter is perceptions are

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1 important to some degree.

2 MEMBER BONACA: I agree with that. Just  
3 let me say one thing. One last thing and I will just  
4 keep quiet on this.

5 If you consider that, for example, at  
6 South Texas there were probably 40,000 components on  
7 the Box 3.

8 MEMBER KRESS: That's a lot.

9 MEMBER BONACA: And I would say that maybe  
10 of those if you applied this frequency consequence  
11 curve, maybe 3,000 would end up being in Box 2 and  
12 37,000 would be Box 4.

13 I would have a very strong base to stand  
14 in saying for this 37,000 I want no requirements.  
15 Absolutely commercial grade. Not this debate or  
16 anything. I have a base to stand on it, because there  
17 is no connection to any curve.

18 And for the others, I'll have a commitment  
19 for the 40,000. Right now, they have 40,000 in the box  
20 and they are going to have this fight on what kind of  
21 commitment they're going to impose on these  
22 components.

23 They want functionality. They want some  
24 basis to demonstrate that and it is very hard to do,  
25 unless you go to Appendix B

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1           So it's going to be this pulling and  
2 pulling because it's a very hazy -- there is no clear  
3 foot to stand on.

4           CHAIRMAN APOSTOLAKIS: Let me ask one last  
5 question on the subject.

6           MEMBER ROSEN: I never got an answer to  
7 the first question.

8           CHAIRMAN APOSTOLAKIS: Which was?

9           MEMBER ROSEN: Which was where are not  
10 risk significant components?

11          MR. CHEOK: ARN --

12          CHAIRMAN APOSTOLAKIS: Maybe it's a  
13 related question, what I was about to say.

14          MR. CHEOK: In Box 3 right now. At the  
15 beginning of this project, we had discussed a four box  
16 diagram and six box diagram. I think we have decided  
17 that the four box diagram was simpler.

18                 I mean, if you wanted to have a six box  
19 diagram, if you had no requirements for box six or box  
20 five, as you called it, NRS components, you have to  
21 remember, we are still in Option 2 space. We cannot  
22 remove requirements in this rulemaking process.

23                 In Option 3 space, we can say special  
24 treatment requirements do not apply. In this space, we  
25 still are constrained by the functionality

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1 requirements.

2 CHAIRMAN APOSTOLAKIS: Let me ask Mario  
3 one last question, or maybe he can make a statement.

4 You referred to -- I mean, if you want to  
5 use the FC curves, you said that some of them would go  
6 to Box 2.

7 Is it obvious that the same boxes would  
8 apply? These boxes are CDF and LERF-based.

9 MEMBER BONACA: Yes, right.

10 CHAIRMAN APOSTOLAKIS: You might have  
11 different boxes, which is something like --

12 MEMBER BONACA: I agree. You may have  
13 another box there that is low safety significance, but  
14 then you have -- you want to relegate to almost an  
15 Appendix B program, and that's a residual box.

16 CHAIRMAN APOSTOLAKIS: So the number of  
17 boxes is not obviously the same.

18 MEMBER BONACA: No, it's not obvious. And  
19 then the bulk of that stuff within that -- in RISC-4.  
20 That's the advantage of it.

21 And there will be no contention, because  
22 it's obvious it doesn't meet -- it doesn't impact CDF,  
23 it doesn't impact LERF, it doesn't impact Part 100 and  
24 so why should you ever keep it there.

25 CHAIRMAN APOSTOLAKIS: Again, could they

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1 address the fundamental concern you have in the  
2 guidance to the IDP on Page 58, 59 by giving --

3 MEMBER BONACA: Yes, I think so.

4 CHAIRMAN APOSTOLAKIS: -- more explicit  
5 guidance?

6 MEMBER BONACA: Yes.

7 CHAIRMAN APOSTOLAKIS: Because I would  
8 hate to say go back and use FC curves instead of --

9 MEMBER KRESS: I think they have to,  
10 George, because --

11 MEMBER BONACA: Absolutely.

12 MEMBER KRESS: Most of those 40,000 things  
13 aren't treated in the PRA anyway.

14 CHAIRMAN APOSTOLAKIS: I don't have any  
15 problem with that, any problem with that. Because  
16 that's an improvement.

17 MEMBER SHACK: That's still fundamentally  
18 asking them to change the basis on which they're doing  
19 the classification.

20 CHAIRMAN APOSTOLAKIS: No, because these  
21 bullets are changing -- not the categorization. I  
22 mean, the bullets --

23 MEMBER SHACK: No, but the rules that you  
24 used to put the guys into the bins changed.

25 CHAIRMAN APOSTOLAKIS: But then you're

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1 looking at the frequency of initiating events. So you  
2 are really forgetting about the box, and you're saying  
3 now I have this component. They told me it belongs  
4 into this category. Now I ask these questions of  
5 myself.

6 MEMBER SHACK: And I changed the  
7 classification process.

8 MEMBER BONACA: No, no, no.

9 CHAIRMAN APOSTOLAKIS: No, that's why it's  
10 integrated.

11 MEMBER BONACA: It is the treatment of  
12 RISC-3 components. That's part of --

13 CHAIRMAN APOSTOLAKIS: They've already  
14 accepted this.

15 MEMBER BONACA: Once you get to the RISC-3  
16 components, you look at its curves and you separate  
17 them in having some residual function -- safety  
18 function and the bulk not having any.

19 And those for those having a residual  
20 safety function, you apply some requirements you are  
21 proposing here. You have a foot to stand.

22 MEMBER ROSEN: It seems to me, the height  
23 of myopia or colorblindness, or something, to have a  
24 four box deal that shows non-risk significant  
25 components, when the plant is full of them. If you're

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1 not careful, you're going to stumble on them.

2 There are thousands and thousands of them,  
3 and they're no place on this document.

4 CHAIRMAN APOSTOLAKIS: Some of them are  
5 safety related now?

6 MEMBER ROSEN: Oh, yes.

7 MEMBER BONACA: But you're only starting -  
8 -

9 MS. MCKENNA: I guess I don't understand  
10 your question. Are you saying because we call the  
11 bottom row low significant that that masks, if you  
12 will, the fact that some of those lows are really  
13 no's?

14 MEMBER ROSEN: Most of those lows are  
15 really no's.

16 MEMBER KRESS: You could call them low or  
17 non-risk.

18 MS. MCKENNA: Yes. The terminology -- you  
19 notice, we didn't say high and low. And for some of  
20 these reasons is that you kind of get into judgements  
21 about what some of these things mean.

22 And, yes, I think I agree that within the  
23 bin that says low, there is obviously a range. And  
24 some at the bottom, maybe a lot at the bottom --

25 MEMBER KRESS: Zero is pretty low.

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1 MS. MCKENNA: Yes. And that's -- I think  
2 that's what you're fundamentally getting to and that  
3 within those, obviously, some of those are going to be  
4 in Box 3 if they started out being safety-related. And  
5 a whole lot of them are going to be over in 4.

6 CHAIRMAN APOSTOLAKIS: Okay. I think it's  
7 time now to move on. We all made our points.

8 MEMBER KRESS: I think we dealt with that.

9 MR. REED: Okay. Going to the next slide,  
10 then we'll get into the actual draft rule  
11 requirements. The first slide here -- we've already  
12 been through the definition, so I don't need to talk  
13 about that.

14 But the definitions are in paragraph A of  
15 the draft rule. Paragraph B of the draft rule is  
16 really just saying that this -- you can adopt this  
17 option for, basically, any reactor power -- power  
18 reactor licensee, basically, whether it's a current  
19 licenses, a Part 52 or Part 54. That's what that's  
20 saying.

21 And now we get to the meat, really, of the  
22 draft rule, which is really in paragraph C and D. C,  
23 the categorization requirements, and D is the  
24 treatment requirements.

25 Start here on the categorization

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1 requirements. A big change since the last time we were  
2 here. You're now going to be required to categorize  
3 you SSC functions the rest of the season to the four  
4 risk categories, using an NRC-approved categorization  
5 process.

6 You don't see Appendix T now in the draft  
7 rule, or connected to the draft rule. It's been  
8 removed.

9 CHAIRMAN APOSTOLAKIS: This puzzles me a  
10 little bit, because ultimately they will have to show  
11 that the Delta DCF and Delta LERF are acceptable,  
12 right? So why do you care what categorization process  
13 they use? Why is that of interest?

14 MR. CHEOK: You are right, George.  
15 Ultimately, we do have to rely on the change in risk  
16 as our ultimate criteria.

17 But I believe that if they use the  
18 importance measures, it's something that the plant's  
19 already familiar with, something they have already  
20 used in applications like the maintenance rule.

21 It also, basically, points out the risk  
22 outlines that they may not want to change -- I  
23 understand that there are importance measures -- is an  
24 extreme measure.

25 But it does also point out the outlines,

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1 the SSC's that you may not want to change the  
2 treatment requirements to if a change would create too  
3 much a disturbance to the risk profile.

4 But you're right. Ultimately, it will  
5 depend on change in risk.

6 CHAIRMAN APOSTOLAKIS: I mean, if the  
7 component of an SSC turns out to be really important,  
8 I mean, you're going to see it in your Delta CDF  
9 population, aren't you?

10 MR. CHEOK: That's correct. You are.

11 CHAIRMAN APOSTOLAKIS: So the thing that  
12 you save that way is the agony of defending the  
13 categorization process.

14 MR. CHEOK: We merely say that you use the  
15 importance analyses to identify the candidates that  
16 you could consider to put into --

17 CHAIRMAN APOSTOLAKIS: You're saying much  
18 more. You're telling them how to do it.

19 MEMBER SHACK: No. I think you're saying,  
20 George -- it's a defense in depth argument. There's a  
21 certain amount of uncertainty in how you calculate  
22 that change in CDF when you change the requirements.

23 And so this sort of tells you that you've  
24 gone through this in a way that's ultimately sensible  
25 even if you don't believe the absolute, the final

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1 number, that you've given this a lot of considerations  
2 that are important in a number of senses.

3 CHAIRMAN APOSTOLAKIS: But you can still  
4 have the integrated decision making panel doing these  
5 things with guidance and without being so specific  
6 regarding the categorization.

7 Because what really matters at the end is  
8 the panelists view and -- it's an NRC-approved  
9 categorization process.

10 MR. KELLY: Dr. Apostolakis, can you  
11 explain, perhaps, what part of the rule in paragraph  
12 C that you feel would be inappropriate as guidance?

13 CHAIRMAN APOSTOLAKIS: Where is paragraph  
14 C?

15 MR. KELLY: I mean, because that's what  
16 lays out at the high level --

17 CHAIRMAN APOSTOLAKIS: But isn't NEI-0004  
18 going to be --

19 MR. REED: I think the reality is that if  
20 we reach agreement with NEI on 0004 that, in fact,  
21 they would come in and say our categorization process  
22 is as per 0004 and we'd say great. That solves that  
23 piece of the problem.

24 And then we'd them well, how good's your  
25 PRA? And that's the next piece -- that's the next

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1 question.

2 So this is just, basically, putting the  
3 high level requirements in place that we need to have.  
4 But with the new approach, basically, paragraph C  
5 isn't getting into a lot of these details anymore.

6 CHAIRMAN APOSTOLAKIS: No, it does not.

7 MR. REED: You don't see the Appendix D  
8 type detail anymore.

9 CHAIRMAN APOSTOLAKIS: That's right.  
10 There's not.

11 MR. REED: So I think it's actually doing  
12 what you just -- what you're suggesting. Maybe not as  
13 far as you're suggesting.

14 MS. MCKENNA: I think we were trying to  
15 cut between just send in approved categorization  
16 process, period. And then you figure out as you go.

17 The details of Appendix T, what we were  
18 trying to do was give kind of what we saw as the basic  
19 elements that we would expect to see and that they  
20 would then be supplemented and the guidance would  
21 explain more how they would go about these things.

22 But for a matter of having the regulations  
23 give some idea of what we're going to find acceptable,  
24 is a process that has these kinds of characteristics.

25 MR. REED: That's really all this is

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1 saying. One, you're going to use an approved  
2 characterization process. Two, it's going to --

3 CHAIRMAN APOSTOLAKIS: Do you see the rule  
4 being approved without the NEI document being approved  
5 at the same time?

6 MR. REED: I think it's entirely possible  
7 that we could have the rule out there and still not  
8 have the guidance firmed up completely yet.

9 But I think we're going to have to be  
10 pretty close and pretty comfortable that we can get  
11 there.

12 MEMBER BONACA: In the package I received,  
13 in fact, in many places you say that the NEI document  
14 is not acceptable. Not sufficient.

15 MS. MCKENNA: I think this came up  
16 earlier. I mean, you have take a look a little bit at  
17 the timeframe too.

18 The latest draft of the guidance is June,  
19 and we had been going back and forth on reviewing the  
20 guidance, and then we had to stop trying to match  
21 things up.

22 We ended up -- we had two moving targets,  
23 and we needed to settle one before we can reconcile  
24 them, so we kind of focused our energies on trying to  
25 come to agreement on what the rule and the process

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1 would require.

2 And then our next turn is it will come up  
3 later, so then go back and say, okay; what respects  
4 does the guidance need to be supplemented or need to  
5 be changed in order to meet those things together?

6 So, yes, there are areas right now where  
7 we would not find 04 acceptable.

8 CHAIRMAN APOSTOLAKIS: So, Mario, coming  
9 back to your earlier comment. Maybe if we add some  
10 language to paragraph C-4, Page 2 of attachment 1, I  
11 guess. Up front. The very front. Not NEI. The rule  
12 itself.

13 MEMBER BONACA: Okay.

14 CHAIRMAN APOSTOLAKIS: Where they list 1,  
15 2, 3, 4, 5 things that the panel --

16 MEMBER BONACA: That's page -- what page  
17 is it?

18 CHAIRMAN APOSTOLAKIS: Two.

19 MR. REED: Top of the page. Bullet 4 and  
20 then the sub-bullets.

21 CHAIRMAN APOSTOLAKIS: Maybe there they  
22 can put some language that is generally enough to give  
23 some idea of what you want to worry about.

24 MEMBER BONACA: I don't know what it means  
25 in this context. It's so open.

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1 CHAIRMAN APOSTOLAKIS: Actually, I was  
2 proposing that before because I think that would  
3 simplify so much. Everything else that comes after  
4 that.

5 You would have a foot to stand in not  
6 imposing these additional requirements in the back, or  
7 anything that is not required for that curve.

8 MR. REED: I think, the problem associated  
9 with using that curve by itself is that that would  
10 potentially be a risk-based approach and the  
11 Commission has to date indicated that it's willing to  
12 go that way, that it prefers a risk-informed, with a  
13 combination of deterministic and probabilistic  
14 insights.

15 And that -- inclusion of that would be a  
16 significant shift from what the Commission's approved.

17 CHAIRMAN APOSTOLAKIS: But you can make it  
18 part of roman IV, results and insights from the PRA,  
19 including those from importance measures, including  
20 those from something else.

21 MR. REED: I think it's just a different  
22 way of looking at it --

23 MEMBER BONACA: Just once you have the Box  
24 3, you have to deal with it. Right now, the way you're  
25 dealing with Box 3 is to impose those components a

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1 diluted Appendix B required and not so diluted either.

2 In some cases, it's pretty hard --  
3 Appendix B. So you're back to square one. You're  
4 really imposing unnecessary burden on the majority of  
5 those components because of a small minority that you  
6 want to preserve. That's exactly what you do.

7 MR. KELLY: Well, again it comes back to  
8 the question of in Option 2 are we going to maintain  
9 design functionality of safety-related equipment.

10 If the answer is not necessarily, then  
11 it's really in Option 3 space, because we're changing  
12 the design basis at that point.

13 It was our intention under Option 2 is to  
14 maintain that design basis. It has been proposed to  
15 us to do that, but we've -- so far, we've attempted to  
16 keep the two separate and to deal with them each in  
17 its own area.

18 MEMBER BONACA: You may want to think  
19 about it. I mean, I'm saying that rather than shut it  
20 out, I mean, I'm sure you're going to have a lot of  
21 difficulty in --

22 MR. REED: That's one way to do it, either  
23 in a categorization area. Another way to do it is in  
24 the RISC-3 treatment area. And when we say pertinent,  
25 what do we mean? Can we apply that, and in sort of a

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1       grated fashion.

2                   And for things that have absolutely no  
3       nexus at all with safety, what does that mean word?

4                   MEMBER BONACA: In my judgement, you will  
5       probably take ten percent of the equipment to RISC-3,  
6       and force maybe Appendix B requirement on that.

7                   But the rest, it will be free of this  
8       imposition that's -- it's a huge burden.

9                   MR. REED: It's certainly a concept that  
10      we've discussed before.

11                   MEMBER BONACA: And you almost have no  
12      basis for justifying this right now, because you're  
13      saying at RISC-3 it's all low safety significant, and  
14      I agree with that. But anyway --

15                   MR. REED: Getting back to this, this is  
16      basically following through the rule language that you  
17      have in front of you.

18                   What's in Paragraph C, first to be used in  
19      approved categorization process. Secondly, to use a  
20      plant specific PRA that's got internal events at full  
21      power at a minimum in your PRA.

22                   We don't require you to have the external  
23      events and shut down PRA's, but you have to consider  
24      the SSC's performance and those modes.

25                   And so you basically use whatever you

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1 have. And for the most part you're using -- I'll call  
2 them -- I don't think they're really -- deterministic  
3 type models. I think Mike knows the names of them.  
4 Five -- or whatever the different names of these  
5 models are that are used.

6 But you use all that information you have  
7 available to you, and that's what this is really  
8 saying. So you give the expert panel, basically, all  
9 the information you can give you them on the  
10 significance of the SSC.

11 MEMBER BONACA: Why wouldn't you require  
12 external initiating events?

13 MR. REED: Excuse me?

14 MEMBER BONACA: Why wouldn't you require  
15 external events? I mean, just -- most PRA's have  
16 treatment of those.

17 MR. REED: Why don't we have -- we're  
18 requiring the PRA to have external events?

19 MR. KELLY: Well, we've indicated --  
20 again, this is a voluntary rule. And we had previously  
21 indicated when we did the IPEEE's that it was  
22 acceptable for plants to use for a margins approach  
23 for seismic, fire and other areas, where they were  
24 looking to identify vulnerabilities.

25 Currently, we're considering that at least

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1 for Option 2 here that it was acceptable to just look  
2 at -- to take the insights that you got out of those  
3 types of non-PRA analyses.

4 However, we also are indicating that if  
5 you do have a PRA that includes external events, that  
6 we would expect that when you're categorizing the  
7 equipment, you would take into account directly the  
8 information from your PRA. And that's what you should  
9 be presenting to the IDP.

10 MR. CHEOK: We also expect that if you do  
11 use the PRA, you can be less conservative. And that if  
12 you use a non-PRA margins type approach that you would  
13 categorize small SSC's as being important.

14 MEMBER SHACK: Of course, your language in  
15 the bullet on the view graph is really wrong, because  
16 it's not either as part of the PRA or as part of the -  
17 - the PRA is only part of the IDP anyway.

18 CHAIRMAN APOSTOLAKIS: Where is this?

19 MEMBER SHACK: The last line there is not  
20 right. It's either as through a PRA or margins  
21 analysis, but they're both input to the IDP.

22 MS. McKENNA: It's probably one is the  
23 more quantitative aspect, and the other is the more  
24 qualitative.

25 MR. REED: You may have that wrong in the

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1 rules then too, also.

2 MR. KELLY: I don't think it's wrong in  
3 the rules.

4 MR. REED: You got it right in the rule?  
5 Okay.

6 MS. MCKENNA: I think it's okay.

7 MR. REED: That's just my --

8 MR. KELLY: When it translating into view  
9 graph language --

10 CHAIRMAN APOSTOLAKIS: Now, the first  
11 bullet I'm trying to understand. An NRC-approved  
12 categorization process.

13 So if say somebody wants to come in with  
14 the top event prevention methodology. Would this tell  
15 them that first they have to submit that methodology  
16 for approval, and then come for a 50.69 application,  
17 or they can do it at the same time?

18 MR. REED: They would do it at the same  
19 time.

20 MS. MCKENNA: I think the point is that in  
21 either event, they have to get an approval, whether  
22 it's a top event or they were coming in with a process  
23 that looks like this.

24 MR. REED: Paragraph E talks about the  
25 submittal requirements, and that's basically what

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1 you're getting to now. What will they have to submit  
2 in order to implement Option -- 50.69.

3 And one of the things they'll have to  
4 submit is the description of the categorization  
5 process and how it meets paragraph C.

6 In this case -- and the PRA. And how  
7 good's the PRA, these two items being the key pieces.

8 In this case, top event prevention, they'd  
9 have to describe, I think to some extent, what are  
10 they doing for top event prevention.

11 MEMBER KRESS: With respect to the second  
12 sub-bullet, relative importance, is your requirement  
13 going to -- with respect to that going to include some  
14 guidance as to how to determine the cut off line to  
15 put in there? Is there any guidance to be given on  
16 that?

17 CHAIRMAN APOSTOLAKIS: You mean the  
18 important --

19 MEMBER KRESS: Where do you draw the line?

20 MR. REED: Yes, it's in the guidance --  
21 NEI-00-04 right now.

22 CHAIRMAN APOSTOLAKIS: In the reg guide.

23 MEMBER KRESS: And it just uses the same  
24 value for all plants?

25 CHAIRMAN APOSTOLAKIS: Yes.

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1 MR. REED: Yes.

2 CHAIRMAN APOSTOLAKIS:

3 MEMBER KRESS: Are you going to endorse  
4 that?

5 CHAIRMAN APOSTOLAKIS: My point is that  
6 you look at these things, you're about to ask  
7 questions, and then you say why should I ask a  
8 question? At the end, they calculate Delta DCF and  
9 Delta LERF and so it doesn't matter. Nothing matters.  
10 Nothing.

11 MEMBER ROSEN: That's not true, but we  
12 don't calculate it for most of the components. Very  
13 few of them are modeled. Only maybe ten percent of  
14 the safety --

15 CHAIRMAN APOSTOLAKIS: But he's talking  
16 about those.

17 MR. REED: Even though they're important  
18 measures, I think -- and Mike, correct me if I'm  
19 wrong, it's really just like an initial screen. They  
20 just basically put things, in my mind, in little  
21 piles.

22 And at the end you say, well, are my piles  
23 too big? Because you're basically seeing a CDF and  
24 LERF and if it's not okay, then you've got to back and  
25 move things from one pile to the other, until you get

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1 --

2 So the bottom line is, absolutely. CDF and  
3 LERF. That's true. You do that through the sensitivity  
4 studies.

5 MR. KELLY: You've got three parts to the  
6 IDP process. The first is your PRA analysis where you  
7 come through and you use your importance measures  
8 through your initial screening to tell you what you  
9 think about the components, plus some deterministic  
10 evaluations of looking at the functions themselves and  
11 whether or not they're important.

12 Then once you've got your initial  
13 screening of the components, then you plug that into  
14 your PRA, taking a look at some value that you assume  
15 that if you're reducing your treatment on certain  
16 equipment, what's going to -- how that's going to  
17 affect the reliability of that equipment.

18 MEMBER KRESS: That doesn't show up in the  
19 rule.

20 MR. KELLY: Pardon?

21 MEMBER KRESS: That doesn't show up in the  
22 rule. That's in the NEI document, that part?

23 MR. KELLY: It shows up in the rule and it  
24 tells you you have to do sensitivity studies. It  
25 doesn't -- I mean, that's what we're looking for.

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1 We're looking for them to look at the impact --  
2 calculating the impact of changing the treatment.

3 Now if that passes the guideline there,  
4 then they now present that information to the panel,  
5 where the panel would then take into account  
6 additional things like defense in depth, margins,  
7 other types of issues about -- for determining whether  
8 or the equipment -- whether they're in the right  
9 boxes.

10 MEMBER KRESS: Does that sensitivity  
11 guidance spell out that they need to change this  
12 sensitivity -- change the value of each of these  
13 things at the same time?

14 MR. KELLY: Yes, it does.

15 MEMBER SHACK: By a factor of two to five.

16 MEMBER KRESS: Oh, it's two to five. And  
17 where did the two to five come from?

18 CHAIRMAN APOSTOLAKIS: We'll come to that.

19 MR. KELLY: That was the recommended  
20 number in the reg guide. That's correct.

21 MEMBER SHACK: Just coming back, that  
22 language in the view graph is in the rules. So take  
23 that as a criticism of the language in the rule.

24 MS. MCKENNA: Sorry. Which thing being in  
25 the rule?

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1 MEMBER SHACK: The part of the PRA or part  
2 of the IDP.

3 MS. MCKENNA: Oh, that you're commenting -  
4 - yes.

5 MR. REED: What I generally did was  
6 actually took the words right out of the rule and then  
7 --

8 CHAIRMAN APOSTOLAKIS: Why should the  
9 categorization process be NRC approved and not the  
10 plant specific PRA? Shouldn't that be NRC approved as  
11 well and is that a more serious matter than the  
12 categorization?

13 MR. REED: Mike?

14 MR. KELLY: Just as the NRC is going to be  
15 looking at the categorization process, currently, the  
16 NRC is looking at how we're going to judge adequacy of  
17 PRA's.

18 We have not, as an agency, come to a final  
19 determination of that. We're looking at that and --

20 CHAIRMAN APOSTOLAKIS: Well, the rule may  
21 say --

22 MR. KELLY: Well, the rule is a draft  
23 language. And it -- depending on where we end up with  
24 that, about the quality of the PRA, we'll -- that may  
25 need the change over time as we get down to the end of

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1 the rules and we see what actually --

2 MEMBER KRESS: Could you put in weasel  
3 word in that second bullet like, use an acceptable --  
4 specific PRA --

5 CHAIRMAN APOSTOLAKIS: That's what I'm  
6 saying. Acceptable; without specifying what that is.

7 MEMBER KRESS: And you're going to worry  
8 about that later?

9 CHAIRMAN APOSTOLAKIS: I don't see why the  
10 process --

11 MEMBER SHACK: Well, that's part of the  
12 acceptable categorization process, I assume.

13 CHAIRMAN APOSTOLAKIS: No, it's not.

14 MEMBER SHACK: It's that the PRA --

15 CHAIRMAN APOSTOLAKIS: No. The  
16 categorization process refers to importance measures.

17 MS. MCKENNA: Well, no. I think the  
18 categorization process refers to all of this.

19 MR. KELLY: Yes. The way we have it  
20 defined is that the categorization process includes  
21 them having a plant-specific PRA --

22 CHAIRMAN APOSTOLAKIS: Well, make it clear  
23 then. Because that's not what I read.

24 MR. REED: Certainly, one of the most, if  
25 not the most important piece of the categorization

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1 process is the quality of the PRA.

2 So it's a valid issue, but we haven't, as  
3 Glenn said, really come down to exactly what the  
4 details -- what we really need to see, what pieces of  
5 the PRA do we really need to see.

6 Right now we're going down a path that's  
7 basically industry -- in fact, I think by the end of  
8 this year we'll have peer reviewed all of the PRA's  
9 out there. I think just about all of them by the end  
10 of the year. So they'll have that out there.

11 And we have some problems with that peer  
12 review, as we look at it today, in trying to determine  
13 what was actually done and what the criterion mean.  
14 That's a side issue right now.

15 So we have to determine what it is we need  
16 to see from these people to get enough confidence in  
17 the PRA and we haven't determined that yet.

18 But I think we're going to have to look at  
19 something, for sure. And you see that language in the  
20 middle section. How much it is, how much detail we  
21 have to go in. That remains to be seen yet.

22 CHAIRMAN APOSTOLAKIS: It seems to me that  
23 it's a very simple thing to put the word "acceptable"  
24 there or make it clear somewhere that NRC approved  
25 includes everything.

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1 MS. MCKENNA: But if we put the word  
2 acceptable in there, then we have to have some means  
3 of what is it that we would consider to be acceptable,  
4 and then we're back to the standards issues that we  
5 haven't closed on.

6 CHAIRMAN APOSTOLAKIS: Yes. Which you are  
7 in the process of evaluating.

8 MS. MCKENNA: Yes, but we're a little bit  
9 out of phase trying to put that word into the rule  
10 when we haven't reached an agreement in some other  
11 space about -- so we try to do it more within the  
12 context of the overall categorization being approved,  
13 and the NRC is going to have to make the judgement  
14 with respect to the quality of the PRA and how it's  
15 used in this application, and whether that's good  
16 enough to support what they're -- how they're planning  
17 to use it.

18 CHAIRMAN APOSTOLAKIS: They're putting a  
19 hell of a lot of a burden on the reviewer.

20 MEMBER ROSEN: The fact of the matter is  
21 that South Texas PRA was approved; the only one that  
22 ever was. I mean, it went through many, many years  
23 and reviews, detailed by the staff and the staff's  
24 contractors.

25 MR. KELLY: Well, the staff has reviewed

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1 a number of PRA's in significant detail. Indian Point,  
2 Millstone, Cheyenne.

3 CHAIRMAN APOSTOLAKIS: And all the signs  
4 are that industry peer review process is pretty good,  
5 including our own Mr. Markley here. He attended one of  
6 those, right? You were favorably impressed.

7 So I'm not saying that it's impossible.  
8 But I don't see -- well, anyway, the precise language  
9 of the rule.

10 MEMBER ROSEN: Aren't we dealing with two  
11 different things here; for existing plants and for  
12 plants that are in the license renewal process  
13 requiring that PRA's be approved by the NRA. You'd  
14 have to think about -- for considerations. For the  
15 new plants, for Part 52 plants, I'm not so sure. Do  
16 you see a distinction?

17 MR. KELLY: Well, this is a voluntary  
18 rule. And from that standpoint, utility may choose to  
19 continue with their -- treating their equipment  
20 exactly the way they do today.

21 They're not required to change this to --  
22 they're not required to follow this procedure and  
23 submit a PRA.

24 We're just saying that if you're going to  
25 be using this process, that you'd have to have a good

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1 quality PRA.

2 MEMBER ROSEN: Good, but not approved. It  
3 has to be done in accordance --

4 MR. KELLY: We are still working out what  
5 constitutes an approved PRA and how we're doing that  
6 and I'm not --

7 MR. RUBIN: This is Mark Rubin from the  
8 staff. I think, yes, Mr. Rosen's exactly's correct.  
9 A good quality -- clearly, that's our objective. We  
10 probably are not on a pathway of formal approval of  
11 PRA's.

12 I think it was maybe an interesting  
13 concept back 15, 20 years ago when the methodology was  
14 less mature.

15 But I think that peer review process, the  
16 standards activities, I think, hopefully, those are  
17 going to give us the confidence the qualities are  
18 acceptable.

19 CHAIRMAN APOSTOLAKIS: Tim, this is the  
20 only set that you're presenting?

21 MR. REED: I have some backups, but --

22 CHAIRMAN APOSTOLAKIS: And the NEI  
23 document is presented in half an hour by Mr. Heymer.  
24 That's a half an hour, right?

25 MR. HEYMER: Fine.

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1 CHAIRMAN APOSTOLAKIS: No, it's not fine,  
2 because my question's going to be much longer than  
3 half an hour. So I wonder when we will discuss this?

4 MR. REED: Discuss --

5 CHAIRMAN APOSTOLAKIS: I'm going to get  
6 into technical details.

7 MR. REED: I have status slide --

8 CHAIRMAN APOSTOLAKIS: And I don't see us  
9 getting there. So I'm a little concerned. So when are  
10 we going to do this? Now? Do you want me to raise  
11 the questions now?

12 MR. REED: I have a slide on the NEI-00-04  
13 guidance. We can hold it till then and go into your  
14 technical. Do you want to do that?

15 CHAIRMAN APOSTOLAKIS: Sure. As long as we  
16 have an opportunity. Because this is a subcommittee  
17 meeting, and I have a lot of questions.

18 MR. REED: Sure. Why don't we just do the  
19 slides on NEI -- your questions on NEI-00-04 on that  
20 slide, which is coming up here towards the end.

21 CHAIRMAN APOSTOLAKIS: So you're done now  
22 with the categorization. Now you're going to IDP?

23 MR. REED: Yes.

24 MEMBER KRESS: Can I ask one more question  
25 on the categorization.

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1 MEMBER KRESS: In your guidance and in the  
2 rule, is there any consideration given to the fact  
3 that some sites have multiple plants?

4 MR. REED: No.

5 MEMBER KRESS: Is that discussed at all?

6 MR. RUBIN: Mark Rubin again. No, no  
7 specific recognition of that, that decisions be  
8 consistent with the approach we've been taking up to  
9 this point that we've discussed with the committee as  
10 plant specific, CDF frequency per unit, per reactor  
11 year.

12 MEMBER KRESS: Well, CDF, of course, is  
13 all right. My problem is with LERF. That it seems to  
14 me like your importance measure on LERF, that's where  
15 you draw the line for acceptable ought to be divided  
16 by the number of plants on the site.

17 That's just a comment and it's something  
18 you need to think about. This process ought to have  
19 some consideration of the number of plants on a given  
20 site.

21 MEMBER ROSEN: Does that go, Tom, all the  
22 way to a pebble bed site with ten --

23 CHAIRMAN APOSTOLAKIS: That's where it  
24 started.

25 MEMBER KRESS: That's where it started.

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1 CHAIRMAN APOSTOLAKIS: That's where it  
2 started with the ten units.

3 MEMBER KRESS: That's where it started.

4 CHAIRMAN APOSTOLAKIS: I see here that on  
5 slide 9 you're entering the draft treatment  
6 requirements, right?

7 MS. MCKENNA: Yes.

8 CHAIRMAN APOSTOLAKIS: So maybe before you  
9 go there we'll take a break.

10 MR. REED: Okay.

11 CHAIRMAN APOSTOLAKIS: So you finish 7 and  
12 8.

13 MR. REED: Okay. Then continuing through  
14 to paragraph C on slide 7, we get to the fact that  
15 we're going to require that you have an IDP,  
16 integrated decision process, system making process,  
17 with the expert panel. They'll have to make a  
18 determination.

19 In my mind, this whole thing centers  
20 around having an expert panel and in all the  
21 requirements here to give this expert panel enough  
22 information to make the categorization call, if you  
23 will.

24 So you have to have an IDP and then this  
25 also states that what -- the information that you must

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1 provide to the IDP or what they must consider; the PRA  
2 results and insights, obviously, the quantitative  
3 information coming out of the PRA, but also this  
4 function and other information you have as a non-  
5 quantitative models or determinist approaches.

6 Defense and depth must be considered and  
7 safety margins must be considered. So once again, it's  
8 a blended IE reg guide 1.174 type of approach that  
9 we've already talked about today.

10 If something's low, if it's low, then it  
11 must be justified in terms of these above items, in  
12 terms of defense in depth safety margin. Again, an  
13 item we've already discussed pretty heavily today.

14 And ultimately, as George has already  
15 mentioned, the bottom line here is that the potential  
16 increase in CDF and LERF has to be small. That's the  
17 real measure of whether this is acceptable or not.

18 CHAIRMAN APOSTOLAKIS: It's a necessary  
19 but not sufficient condition, right? Is that what it  
20 is?

21 MR. REED: Yes, that's right.

22 CHAIRMAN APOSTOLAKIS: Because for other  
23 reasons you might say, no, this component --

24 MR. REED: That's right. We're going to  
25 require you to have a means for monitoring the

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1 performance or condition of the SSC's that can affect  
2 the categorization process or results.

3 And if you do find that an SSC is  
4 degraded, then you'll have to take means to insure the  
5 continued validity of the categorization.

6 And there will be a provision, as you can  
7 see in paragraph C, for timely updates to the PRA and  
8 categorization process to make sure that reflects the  
9 actual plant conditions and the information that  
10 you've been collecting as far as performance.

11 So it's got to be maintained valid every time.

12 That's all I have on the categorization.  
13 That brings us to treatment.

14 CHAIRMAN APOSTOLAKIS: Maybe we'll take a  
15 break now.

16 MEMBER SHACK: Let me just come back to  
17 this monitoring the performance that can affect the  
18 categorization results.

19 I mean, I can understand that in terms of  
20 -- if we're talking about things that really change  
21 the PRA.

22 But does this come down to really a whole  
23 new collection of data on the reliability of  
24 components, which is another way to read this?

25 MEMBER ROSEN: Bill, it's not new data.

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1 The data we're now taking on the reliability of  
2 components is -- the question is whether or not you're  
3 going to update the PRA and include the new estimates  
4 of unreliability and unavailability.

5 MEMBER SHACK: Well, I guess that's the --  
6 I mean, are there any new requirements for monitoring  
7 the RISC-3 components above and beyond what you're  
8 talking about now?

9 MS. MCKENNA: Certainly not for 3.

10 MEMBER SHACK: Not for 3.

11 MR. REED: RISC-1 and 2 you could argue  
12 that we're telling you to monitor all failures, not  
13 just maintenance preventable failures. It's a little  
14 broader than the maintenance for monitoring, in that  
15 respect.

16 MEMBER SHACK: Right.

17 MR. REED: Although the fact is as a  
18 practicality to do the maintenance rule, you have to  
19 monitor all failures and then figure out which ones  
20 are maintenance preventable anyway.

21 So I don't see how you wouldn't have the  
22 information available to you.

23 MEMBER SHACK: Okay. So this one isn't  
24 monitoring to assure that you're providing the  
25 functionality of the RISC-3. That comes in the next --

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1 MS. MCKENNA: Right.

2 MR. REED: That's considered treatment  
3 RISC-3 treatment.

4 CHAIRMAN APOSTOLAKIS: Okay. We'll be back  
5 at 2:30.

6 (Whereupon, the meeting went off the  
7 record at 2:14 p.m. and went back on the  
8 record at 2:32 p.m.)

9 CHAIRMAN APOSTOLAKIS: Back to session.  
10 Let's go on. I'm just curious, when two members speak  
11 at the same time, what do you do over there?

12 THE RECORDER: We have problems.

13 MEMBER ROSEN: How about three members?

14 CHAIRMAN APOSTOLAKIS: Bigger problems.

15 MR. REED: Okay. Why don't we continue  
16 with the treatment portion of the draft rule. I have  
17 along now with me up here Tom Scarborough from the  
18 division of engineering to help out with questions in  
19 this area.

20 First, going to then 59.6 paragraph D,  
21 which is just the requirements -- now called  
22 requirements for structured systems, or what we've  
23 been calling treatment requirements, for RISC-1 and  
24 RISC-2 SSC's.

25 Basically, it's all the existing

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1 regulatory requirements will continue to apply. That  
2 means, special treatment requirements continue to  
3 apply, obviously for RISC-1.

4 And if there isn't any such requirements  
5 on the RISC-2 SSC's, those also continue to apply.

6 And we have a requirement that you need to  
7 insure that the categorization assumptions and the  
8 treatment applied to these SSC's are consistent.

9 Those are the two requirements that we  
10 have in this section for RISC-1 and RISC-2.

11 CHAIRMAN APOSTOLAKIS: Now, what does that  
12 mean?

13 MR. REED: Basically -- and correct me if  
14 I go wrong, anybody. But, basically, what that means  
15 is that the assumptions you're making for these SSC's  
16 in the categorization process that they are -- that  
17 the treatment that you're applying to them is  
18 sufficient to support the assumptions initially.

19 CHAIRMAN APOSTOLAKIS: Is there an  
20 example?

21 MR. REED: Like a validation, I think --  
22 in terms of -- it's really -- making valid assumptions  
23 for these.

24 MS. MCKENNA: An example that's come up  
25 before is, for instance, PORV's. If you're assuming in

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1 your PRA that you're going to take credit for a feed  
2 and bleed function, are the valves capable of passing  
3 water versus steam?

4 And I think it's those kinds of -- and the  
5 things that you do to it in your treatment, do they  
6 provide that -- what you're assuming that they can do  
7 for your PRA.

8 MEMBER KRESS: Does that include something  
9 like reliability that shows up in the PRA?

10 MS. MCKENNA: To some degree I think it  
11 would. Especially, if -- I think you'll get into it.  
12 Putting a lot of reliance on that particular function  
13 being provided by particular components, then are you  
14 doing the things to the component that will give it  
15 that reliability.

16 MEMBER KRESS: Be sure --

17 MS. MCKENNA: Yes.

18 MEMBER KRESS: -- that reliability.

19 MEMBER ROSEN: I think that phrase is so  
20 vague that you need to be careful in describing what  
21 you mean?

22 MS. MCKENNA: Yes, we've wrestled with  
23 different wording. I think one of the earlier drafts  
24 we talked about had wording like evaluate the  
25 treatment, and it was kind of like which one do you

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1 look at? Evaluate the treatment and then match with  
2 the categorization or do you see what's assumed and  
3 then look at the treatment?

4 So I think we're still wrestling with  
5 exactly the right way to word this. But that's the  
6 concept of what we're trying to get to.

7 MR. REED: I'm pretty certain that this  
8 piece of the draft rule language will change. I know  
9 we have stakeholder concerns and what that means to -  
10 - it's a little bit too vague, I think. But that's  
11 the idea; the concept.

12 Then for RISC-3 -- and, basically, what  
13 we're doing here, what the entire focus is here is to  
14 maintain the design basis functions.

15 As we put it down here apply the pertinent  
16 programmatic requirements to provide reasonable  
17 confidence in the capability of RISC-3 SSC's, perform  
18 the safety-related functions under the design basis  
19 conditions.

20 So what do we have? Well, first thing we  
21 do is, of course, remove the special treatment  
22 requirements. And if you look in D-3 that shows you  
23 the list of the ST, special treatment requirements  
24 that will be removed.

25 And in there, instead of those special

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1 treatment requirements, what we've placed on is a set  
2 of high-level, programmatic requirements that are  
3 described in paragraph -- in RISC-3.

4 And those processes are to control the  
5 design procurement, installation, maintenance  
6 inspection, tests, corrective action, oversight and  
7 configuration of the SSC.

8 So we've gone to -- this current version  
9 of the draft rule is not simply just stating that you  
10 need to maintain basic function, for example. It ends  
11 -- what we're doing is also the means, the programmatic  
12 piece.

13 And if you look in the draft rule, I don't  
14 have a slide that goes through all of this, but I do  
15 have the draft rule language. We can put that up, if  
16 you'd like.

17 We go -- in each of those two headings,  
18 then we describe one or two sentences what we want. So  
19 that's basically the focus of RISC-3.

20 And this is, I think, a major area of  
21 discussion that with stakeholders I think will  
22 continue, as I think you're well aware. It was a big  
23 area with South Texas and I'm sure it will continue to  
24 be an area here.

25 CHAIRMAN APOSTOLAKIS: So, again, the

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1 second bullet there, these are not special treatment  
2 requirements? What are they?

3 MR. SCARBOROUGH: They're replacement  
4 requirements.

5 CHAIRMAN APOSTOLAKIS: It says  
6 procurement.

7 MR. SCARBOROUGH: Right. They're  
8 replacements for the special treatments. They're  
9 replacement for Appendix B. They're replacements for  
10 the other requirements, for EQ, the specific sort of  
11 programmatic type requirements for EQ. That sort of  
12 thing.

13 It's a replacement -- these are  
14 replacement minimal, high-level objectives of  
15 treatment would be -- the alternative treatment that  
16 would be applied to this safety-related equipment.

17 CHAIRMAN APOSTOLAKIS: So let's take  
18 procurement. What was it before and what will it be  
19 now?

20 MR. SCARBOROUGH: Before you had to have  
21 a very detailed evaluation of anything obtained from  
22 a vendor. I mean, you had to insure very carefully  
23 through your own analysis and evaluation that that  
24 equipment would perform properly. It was the  
25 licensee's obligation to do that.

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1 Under the new approach, there's -- and  
2 this was sort of laid out in detail with the South  
3 Texas model.

4 But we -- and we haven't gotten down to  
5 the detail of doing it for this 50 Option 2 yet.

6 But in concept, there were like five  
7 different methods that you could use. One of them, for  
8 example, is vendor, where you could just rely on the  
9 vendor's documentation. That they would say it can  
10 function under this high temperature environment or  
11 high radiation environment.

12 You don't have to go back and do any shake  
13 table testing. You don't have to back and do an  
14 environmental test of it yourself.

15 There's a lot more reliance on the vendor  
16 without having to go out and audit in detail the  
17 vendor's own activities, which is what we do now, of  
18 what they're doing.

19 So there's a lot more flexibility in terms  
20 of how you purchase equipment. If a vendor comes in  
21 and says we did this, we prepared this so that this  
22 equipment can work under these conditions, you can  
23 rely on that vendor certification much more readily  
24 that you can now.

25 CHAIRMAN APOSTOLAKIS: So it's not really

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1 very clear, is it. I mean, it says suitable methods  
2 must be used to support the determination that  
3 procured SSC's will be capable of performing the  
4 safety-related function and so on. I guess you can  
5 interpret the word suitable in many ways.

6 MR. SCARBOROUGH: Right. Well, what we're  
7 going to do, is in the same considerations we're going  
8 to have a lot of discussion of sort of the concept  
9 that we used in South Texas.

10 And then in the regulatory guide that goes  
11 along with this, hopefully, we can endorse the NEI  
12 document.

13 But that also would lay out what would be  
14 approaches -- for example, vendor certification would  
15 be one method they could use.

16 So those would be laid out so they could  
17 understand that. So there's a lot that's going to go  
18 with this, just like in the current regulations,  
19 there's a lot of guidance that goes along with it.

20 We have to make sure we prepared detailed  
21 guidance for this -- for these requirements. And we'll  
22 be doing that as we sort of to prepare the process  
23 along.

24 CHAIRMAN APOSTOLAKIS: So this is not --  
25 we're not eliminating anything. This comes back to

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1 what Mike Choek said earlier, that under Option 2 you  
2 cannot eliminate -- I'm a little confused.

3 MR. KELLY: Under Option 2 you're not  
4 eliminating the design basis function capability.  
5 You're not changing the design basis, and it was part  
6 of the design basis, continues to be part of the  
7 design basis.

8 What we're saying here is that you may  
9 have less assurance that the equipment is actually  
10 capable of operating under design basic conditions.  
11 Then you would have under normal conditions, because  
12 they don't have to meet Appendix B and so forth.

13 MR. RUBIN: This is Mark Rubin. If I  
14 could just trip in. It would probably be slightly  
15 more accurate to say not changing the design basis  
16 itself, rather than the design basis of the equipment.

17 The inherent design basis of the plant,  
18 the equipment is selected to respond to meet the  
19 acceptance criteria. And the design basis elements are  
20 not being changed, except in the Option 3 approach.

21 Currently, licensees can redefine  
22 equipment as not being safety related because it's no  
23 longer required to meet the design basis, and they  
24 have that flexibility right now.

25 MS. MCKENNA: But I think the comment was,

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1 I think, perhaps, with respect to whether we were  
2 removing treatment requirements.

3 And I think what we're saying is we're  
4 removing some of the specific detailed and in some  
5 cases viewed as overly burdensome requirements of how  
6 you have to do these things and substitute for some of  
7 the categories some other -- what we hope is less  
8 burdensome, more flexible types of requirements.

9 But it's not strictly -- and I think it  
10 originally might have been viewed as it was strictly  
11 remove, no more requirements exist and we didn't quite  
12 get to that point. We still have something there  
13 because of this functionality issue that we have.

14 MEMBER SHACK: But wouldn't bullet A, the  
15 design control processes, basically, preserve the  
16 functionality and you can sort of quit at that point?

17 MR. SCARBOROUGH: Except over time with  
18 equipment, for example, motor operated valves, you may  
19 design it and put it in there, but unless you monitor  
20 it over time to insure that it's going to perform --

21 MEMBER SHACK: But you should be monitoring  
22 equipment as part of your ordinary operation of your  
23 plant.

24 MR. SCARBOROUGH: No, not if it's  
25 equipment that's in standby or safety related

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1 equipment that wasn't going to be operated except in  
2 response to an accident.

3 It may not see any type of function, and  
4 you may not know if it has that capability. It may be  
5 degraded.

6 MR. REED: I think what you're saying, Dr.  
7 Shack, is if you maintained the design capability,  
8 that would be sufficient.

9 And I'm thinking what you're hearing is it  
10 probably takes a little bit more than just the  
11 procurement spec, having the capability in there. And  
12 you're not explicitly changing the design. We need a  
13 little more than that. Is that fair?

14 MEMBER SHACK: Well, I guess, the design,  
15 it seems to me, buys me a lot in assuring the thing  
16 will work. The rest of the stuff is adding the  
17 Delta's of assurance at rapidly escalating cost.

18 And for something that's of low safety  
19 significance, if my basic requirement is to preserve  
20 the function, it seems to me that preserving the  
21 function is making sure it's suitably designed, the  
22 materials are suitable and procured.

23 MR. SCARBOROUGH: Yes. That's true. And  
24 that's the foundation. Unless you sort of have a good  
25 foundation, everything else you do is going to fall

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1       apart, unless you install it properly. You have to  
2       have some assurance that it's going to be installed  
3       properly.

4                If there is a failure, that you have  
5       corrective action that responds to that and deals with  
6       that. Those types of things.

7                That's what this was intended to do. Try  
8       to find a bare bones type of process where you would  
9       install it with some reasonable confidence of  
10      functionality and then you monitored it with  
11      reasonable confidence.

12               MEMBER SHACK: But, I mean, the plant puts  
13      in lots of equipment that it certainly expects to work  
14      without any special requirements.

15               MR. SCARBOROUGH:     There's a lot of  
16      equipment that they -- that specially that generates  
17      electricity that they spend a lot of time and  
18      resources on.

19               A lot of this equipment is equipment -- in  
20      this RISC-3, is equipment that's maybe standby  
21      equipment that may be like mainstream isolation  
22      valves, or feed water isolation valves, or diesel  
23      generator air start vales. Valves and components that  
24      may not see normal system operation that significant.

25               And so that's what this is trying to do.

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1 It's trying to give a sort of a safety net bare bones  
2 amount of treatment but still be able to yes, we have  
3 a reasonable confidence, less -- definitely less than  
4 Appendix B, because we're not going to be nearly as  
5 confident in the design, because we're going to rely  
6 a lot more on the vendor, without the checks that we  
7 do now.

8 So we won't have that confidence, but it  
9 will be sufficient, we think, for this lessor  
10 important equipment.

11 But it still has a safety function to  
12 perform that we want to make sure that there is an  
13 adequate level of confidence that it's capable.

14 MEMBER KRESS: And if you had gone all the  
15 way to RISC-4 category with those, you would still  
16 have some confidence that they would work.

17 MR. SCARBOROUGH: Well, RISC-4 is non-  
18 safety related.

19 MEMBER KRESS: Oh, I understand. I  
20 understand.

21 MR. SCARBOROUGH: And we don't deal with  
22 those at all. I mean, those are -- now there may be  
23 some equipment that's --

24 MEMBER KRESS: No, no. But in reality you  
25 have some confidence level that they would work if it

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1 has to.

2 Now the question that I have is how do you  
3 know where to draw that line on your confidence level  
4 that you are comfortable with?

5 You just decided that this was a level  
6 that's better than the confidence level that you had  
7 on the RISC-4 component?

8 MR. SCARBOROUGH: Well, because we don't  
9 have a confidence level for RISC-4. I mean, that's  
10 not equipment that NRC cares about, for the most part.

11 I mean, that's plant equipment and it  
12 doesn't have a safety function. So we don't monitor  
13 that equipment.

14 And that's one reason why we went out and  
15 did a look at commercial practices at different  
16 plants, to see how they dealt with that type of  
17 equipment and we found out that it was across the map.  
18 There were so many different levels of treatment  
19 applied to that type of equipment.

20 If it was equipment that was generating  
21 electricity, they were very careful about making sure  
22 it had a lot of treatment, a lot of design, a lot of  
23 qualifications and that it was monitored.

24 But if it's a equipment that's a valve or  
25 a piece of equipment that's only used for maintenance

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1 purposes or standby, they do very little with that  
2 piece of equipment, because they don't have the need  
3 to have confidence in it.

4 So that was what we felt we needed to have  
5 some minimal level of criteria to indicate that yes,  
6 these are sort of the areas that you need to address  
7 as part of treatment.

8 But there's a lot of flexibility in these  
9 areas. They're very general in terms of the  
10 flexibility that's allowed for licensee's to meet it.

11 MEMBER BONACA: First of all, every  
12 component in the plant, even though safety  
13 significant, goes through a process of procurement,  
14 installation, maintenance.

15 I mean, everything gets maintained. There  
16 are some procedures. You're not involved with it,  
17 because they're not safety related so, therefore, you  
18 have no business on those.

19 But the plant has its processes for  
20 everything that comes through. All you're doing for  
21 these components, you're imposing some level of  
22 requirement that is different than others.

23 For example, that you have a procurement.  
24 That they must be able to perform safety-related  
25 function and the design basis conditions throughout

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1 the service life. That's the only variation that you  
2 have --

3 MR. SCARBOROUGH: Right.

4 MEMBER BONACA: -- to impose a requirement  
5 there.

6 MR. SCARBOROUGH: Yes. It's just trying to  
7 provide a minimal level that we can with regulatory  
8 assurance -- have some regulatory assurance when we  
9 write -- just like we did with South Texas, we had a  
10 minimal level of regulatory assurance that we could  
11 write the safety evaluation.

12 The same thing here because, for example,  
13 installation, or procurement, when you have receipt  
14 inspection.

15 It could be equipment under this RISC-4 or  
16 this low level risk category that it might be. It can  
17 be kick and count type inspection.

18 I mean -- and that may not be sufficient  
19 to insure that you did receive the proper piece of  
20 equipment and it's the right one to go into that  
21 application.

22 So we feel there needs to be some minimal  
23 level so that we could in full confidence be able to  
24 say that yes, there is a minimal level of treatment  
25 that's going to be applied to this equipment because

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1 of the broad range of treatment that's out there  
2 that's available for licensees for a type of equipment  
3 that's not Appendix B.

4 MEMBER KRESS: You must have in the back  
5 of your mind then that the fact that these originally  
6 were categorized as safety relating, that that had  
7 some meaning to it, even though you went back now with  
8 another process and said it has no safety  
9 significance.

10 But the original process, the original  
11 categorization in your mind must have had some meaning  
12 to it.

13 And what you're trying to do is preserve  
14 that meaning to some extent?

15 MR. SCARBOROUGH: Well, we're trying to  
16 preserve that this equipment on an individual basis  
17 that falls down that has a safety function, when you  
18 risk rank them it falls down to this low importance on  
19 an individual basis.

20 But on a group basis, it can be very  
21 significant. We found out that some of the equipment  
22 that falls into this from the South Texas risk-  
23 informed --

24 MEMBER KRESS: That's the first I've heard  
25 that it has -- related to the fact that they have a

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1 group significance.

2 CHAIRMAN APOSTOLAKIS: But that's why you  
3 do the Delta CDF and the LERF. That's what takes care  
4 of the group. You change all of them.

5 MEMBER KRESS: If you do it right.

6 CHAIRMAN APOSTOLAKIS: Well, you do change  
7 all of them, right. South Texas multiplied everything  
8 by 10.

9 MR. SCARBOROUGH: But it doesn't deal with  
10 across systems.

11 CHAIRMAN APOSTOLAKIS: Why not?

12 MR. SCARBOROUGH: Because it doesn't.  
13 When we asked South Texas how they dealt with across  
14 systems, the only across system common cause it dealt  
15 with was the 41KV breakers. They did not --

16 CHAIRMAN APOSTOLAKIS: I thought they took  
17 all the failure rates.

18 MR. SCARBOROUGH: No, they did, but you  
19 still -- when you start combining a cut set, you start  
20 multiplying those across. There's no linkage in  
21 between the systems.

22 So when you start multiplying those  
23 failure rates together, you quickly become a very,  
24 very strong number. And that's the concern, that there  
25 is not a lot of treatment across the systems, because

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1 that's where the concern falls with this type of  
2 equipment.

3 When you deal with taking away all  
4 Appendix B requirements completely, and you have --  
5 you're left with no specific requirements for  
6 treatment, what does that do for treatment for all  
7 your motorized valves, for example, where you might go  
8 to stroke time testing, which was found to be  
9 inadequate for demonstrated design case capability.

10 And you can't fall down to a 80 or 90  
11 percent reliability for this equipment. It still has  
12 to be very high.

13 CHAIRMAN APOSTOLAKIS: So you're saying  
14 that the factor of ten was not sufficient?

15 MR. SCARBOROUGH: The issue would be does  
16 it deal with a cross -- the systems themselves.

17 CHAIRMAN APOSTOLAKIS: Why not?

18 MR. KELLY: It does in a point of view  
19 that when you increase -- if you were -- use the  
20 factor of ten to increase the unreliability of the  
21 equipment, that should increase the common cause  
22 failure rate by a factor of ten also.

23 CHAIRMAN APOSTOLAKIS: But I thought they  
24 did. That's what we were told.

25 MR. KELLY: Mike, you want to give him the

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1 details --

2 CHAIRMAN APOSTOLAKIS: That the common  
3 cause failure term is the random failure rate times  
4 some coupling number.

5 MR. KELLY: Right.

6 CHAIRMAN APOSTOLAKIS: So if you increase  
7 the random failure rate, it increases the common cause  
8 failure too.

9 MR. KELLY: That's correct. So it would  
10 have been factor of ten higher than it was before.

11 MR. SCARBOROUGH: Within the system.  
12 Within the system. It doesn't go across systems.

13 CHAIRMAN APOSTOLAKIS: Because there's no  
14 common cause failure term for across systems. That's  
15 correct.

16 MR. SCARBOROUGH: Right. And the  
17 guidance, NRC NUREG that talks about common cause  
18 across systems talks about you defend against that by  
19 defense and depth in treatment.

20 Because there isn't a good way -- it gets  
21 very, very complicated very quickly when you try to go  
22 across systems.

23 And that's one reason why we were  
24 interested in having some minimal level of treatment  
25 for this equipment --

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1 CHAIRMAN APOSTOLAKIS: What is this guide  
2 that you refer to?

3 MR. SCARBOROUGH: What's the NUREG number?  
4 NUREG/CR 5485, Guidelines on Modeling Common Cause  
5 Failures and Probabilistic Risk Assessment.

6 CHAIRMAN APOSTOLAKIS: Okay. I'd like to  
7 see it. I think I have it.

8 MR. MARKLEY: You said 5485?

9 MR. SCARBOROUGH: Yes, sir.

10 CHAIRMAN APOSTOLAKIS: But if that is  
11 important here, why isn't it important for a normal  
12 PRA to consider this coupling? I mean, somebody has  
13 decided that it's not --

14 MR. SCARBOROUGH: Well, this is the first  
15 time -- and I've seen -- because we've used PRA's  
16 quite often in risk ranking for model operator valves  
17 programs and things of that nature quite often.

18 This is the first time we've cut across  
19 the entire plant and reduced -- the initial proposal  
20 for us was to take the special treatment requirements  
21 and just eliminate them, and have no replacement  
22 whatsoever, and to let common commercial practices  
23 deal with it.

24 So this is such a broad, wide-ranging  
25 application of the PRA. This is really one of the

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1 first times we tried to do something like this.

2 CHAIRMAN APOSTOLAKIS: So it's the fact  
3 that a relaxation of these requirements affect of  
4 group of components is what bothers you and motivates  
5 you to do this.

6 MR. SCARBOROUGH: Right.

7 MR. REED: I think what Tom's saying is  
8 that by removal of the special treatment requirements,  
9 Appendix B and the whole list, that you're increasing  
10 the probability of all these things failing.

11 Not just increasing failures, but failing  
12 across systems in an event. Because you don't have  
13 all this treatment applied.

14 That treatment, in fact, is what's  
15 assuring that this common cause failure the way it's  
16 done today --

17 CHAIRMAN APOSTOLAKIS: Essentially, what  
18 you're saying is that there may be an additional term  
19 in the PRA that is not there now. Because otherwise,  
20 you know, multiplying by ten is good enough.

21 But you're saying there may be an  
22 additional common cause failure that we are not  
23 modeling right now which may become important during  
24 some accident condition because they relaxed the  
25 requirements across the systems.

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1 MR. SCARBOROUGH: Right.

2 CHAIRMAN APOSTOLAKIS: And I don't know  
3 why the PRA's when they do the severe accident  
4 analysis don't consider it. There must be a reason.

5 MEMBER BONACA: You're right, however. I  
6 don't understand that.

7 CHAIRMAN APOSTOLAKIS: Now, the report you  
8 refer to I think has one or two cases where they did  
9 look across systems.

10 MR. SCARBOROUGH: They do try and what  
11 they do is they show how rapidly that becomes very  
12 unyielding, even for the present day computers in  
13 terms of trying to model across systems that way.

14 And so because of that, I mean, we think  
15 it's handling adequately by having this sort of safety  
16 net of treatment.

17 It gives you a minimal level of confidence  
18 and there's a lot more flexibility that licensees can  
19 use in meeting them, but it doesn't try to do  
20 something with the PRA which would be very difficult.

21 MEMBER KRESS: Minimum cut sets go out of  
22 sight probably.

23 MR. SCARBOROUGH: They do. And that's  
24 what they were showing in this NUREG.

25 MEMBER KRESS: Yes, I can see.

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1 MR. KELLY: So I think the real question  
2 the people have to look at is the determination -- do  
3 we feel that a reduction in special treatment really  
4 is going to significantly increase that probability  
5 that you're going to get cross system common cause  
6 failures?

7 Is there a reason to believe that we're  
8 really going to get that linkage today, that by the  
9 things that we're talking about reducing, that it's  
10 going to get that?

11 CHAIRMAN APOSTOLAKIS: If that's  
12 important, than the current PRA's should have  
13 something.

14 MEMBER BONACA: Sure, it is.

15 MEMBER ROSEN: Well, this assumes that  
16 every one of those components was changed out and you  
17 applied this lesser treatment to all of them. But  
18 that's not the case.

19 CHAIRMAN APOSTOLAKIS: Maybe that's why  
20 it's not there.

21 MEMBER ROSEN: What in fact happens is  
22 occasionally a component fails and we go to the  
23 warehouse and replace it with something that was the  
24 same as was there to begin with.

25 But in the case where something fails and

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1 we don't have a replacement in the warehouse that was  
2 purchased many years ago to the same standards as the  
3 one that failed, we go out and buy a new one, and that  
4 one goes in the plant and it may have some slightly  
5 reduced special requirements.

6 So you have an isolated component out here  
7 that's like that and maybe one over there. But not  
8 wholesale.

9 So the assumption that they're all out  
10 there ready to fail in the event -- in this giant  
11 event where all the special treatment requirements  
12 come into play and they don't -- and the components  
13 don't work and the plant safety net collapses is a  
14 figment of the imagination. It can't happen, because  
15 the components are not changed out in a wholesale way.

16 MR. RUBIN: Additionally, the cross system  
17 sensitivity calculation will give you insights on what  
18 the impact will be, if it does cross throughout the  
19 plant.

20 And so that's a significant factor in  
21 assessing what the potential downside could be.

22 MEMBER ROSEN: These are all the low  
23 safety significant components we're talking about  
24 here. Again, an excessive concentration on that which  
25 has little importance. This whole debate for many

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1 years what characterized by these sort of discussions.

2 MEMBER BONACA: But, for example, I  
3 noticed there was an observation somewhere that for  
4 South Texas the -- and the -- for example, are low  
5 safety significance. Can you explain -- the reason why  
6 they are is because you have three trains.

7 MEMBER ROSEN: Three trains.

8 MEMBER BONACA: Right.

9 MEMBER ROSEN: Very low probability of off  
10 site -- loss of off site power.

11 MEMBER BONACA: That's right.

12 MEMBER ROSEN: And you have to figure all  
13 these things into consideration if you're doing a  
14 realistic analysis.

15 MEMBER BONACA: I understand that. But  
16 assuming that you have loss of off site power, you're  
17 going to have --

18 MEMBER ROSEN: Many very, very robust off  
19 site power network to the plant.

20 MEMBER KRESS: How would we know that the  
21 components that are in category 4 shouldn't be treated  
22 like category 3 because of this problem that we've  
23 sort of overlooked in all of our categorization  
24 process?

25 MR. SCARBOROUGH: Right. They have no

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1 safety -- they have no safety function. They're on  
2 that side of the line.

3 And so deterministically for years we've  
4 never relied on them. And then on top of that with  
5 the PRA, drops them down to low. So not only are they  
6 --

7 MEMBER KRESS: Yes, but the PRA drops them  
8 down to low because it didn't consider this problem.

9 CHAIRMAN APOSTOLAKIS: Right. If the  
10 baseline PRA doesn't have those terms, I think you're  
11 opening up a whole new --

12 MEMBER KRESS: Yes, you're opening up --  
13 you might want to move those things --

14 CHAIRMAN APOSTOLAKIS: My whole  
15 prioritization relaxes, right? Because I don't know  
16 how important these terms are.

17 MR. KELLY: There was -- one way to give  
18 you -- and these are numbers that were told to me and  
19 I don't have the details of it, and maybe Mike knows  
20 the details better.

21 But I was told that sensitivity studies  
22 were done looking at increasing the overall  
23 unreliability by a factor of ten for equipment that  
24 was ranked low safety significance, and that that  
25 increase was relatively small. It was less than a ten

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1 to the minus five type increase.

2           However, if all of the low safety  
3 significant equipment on reliability went to one, then  
4 it about doubled the core damage frequency.

5           MEMBER ROSEN: Everything fails?

6           MR. KELLY: If all of the --

7           MS. McKENNA: All three. All of the lows.

8           MR. KELLY: All of the lows failed, it  
9 about doubled the core damage frequency. More than  
10 doubled.

11          MEMBER ROSEN: Several magnitudes.

12          MEMBER KRESS: They weren't even there at  
13 all.

14          MR. KELLY: Well, let me ask Mike, because  
15 he has the exact numbers.

16          MEMBER ROSEN: A most absurd and ludicrous  
17 an assumption as anyone would possibly make.

18          MR. KELLY: I understand that, but it was  
19 just to look at -- that's why it's a sensitivity  
20 study. It looks at -- you know, what are the edges,  
21 the worst cases that you could get.

22          MEMBER ROSEN: No, I don't see that as a  
23 sensitivity study. I see it as an absurdity. A  
24 sensitivity study makes some sort of assumption that  
25 maybe the failure rate will double, or triple, or even

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1 go up by a factor of ten.

2 But to assume that everything fails with  
3 a probability of one is not sensible.

4 MR. KELLY: Well, if that number would  
5 turn out to be insignificant, then you really wouldn't  
6 have cared, and it wouldn't have made any difference  
7 at all. But it didn't turn out that that was the  
8 insight that you got.

9 MS. MCKENNA: Those would have been  
10 interesting.

11 MR. KELLY: Yes, it would have been very  
12 interesting, and then you really would have said --  
13 but I think the one thing it did say is that you -- at  
14 least you need to consider the thoughts about the  
15 possibility for common cause failures going across  
16 systems and it could make difference.

17 To what extent it does make some  
18 difference I don't think we have a good numerical  
19 handle on it.

20 CHAIRMAN APOSTOLAKIS: But I think we know  
21 that it's not a major driver, I don't think. I mean,  
22 geez, you're talking about a disaster here that many  
23 things fail.

24 MR. KELLY: Because even when we've looked  
25 at problems in maintenance, I don't think that we've

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1 seen failures that cascade across systems like that.

2 CHAIRMAN APOSTOLAKIS: And -- and for some  
3 important potential common cause failures, like  
4 earthquakes and so on, I mean this is done. They do  
5 consider the conditional failure probability, given  
6 the earthquake, and I think they go across systems.

7 So you're talking now about this other  
8 category of unidentified failure modes, which we  
9 commonly call common cause failures that may fail --  
10 a whole bunch of components and that's really hard to  
11 comprehend.

12 MEMBER ROSEN: It's a whole bunch of low  
13 safety significance components.

14 MEMBER KRESS: And I think there is a lot  
15 of truth to this statement that Steve made about  
16 you're not going to have a condition where all of  
17 these things are suddenly changed from their special  
18 treatment requirements to non-special.

19 And that's not considered really in the  
20 risk analysis at all. It's really the real condition.

21 MR. SCARBOROUGH: You would for  
22 monitoring. Because South Texas proposal -- because  
23 South Texas eliminated all code ISI, inservice testing  
24 and inservice inspection. That's all gone.

25 And so across the board, across all

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1 systems, you no longer are monitoring under the code  
2 anyway. But they have some requirements in the FSAR  
3 that they monitor in another way somehow, for example,  
4 all their motor operator valves.

5 But they could -- you could say, okay,  
6 we're not going to test these at all. We're never  
7 going to test them. Or we might even use stroke time  
8 testing, which has shown to be inadequate.

9 And so with that, those compliments will  
10 degrade and they will fail. I mean, those motor  
11 operator valves will not sit there and stay capable  
12 over long, long periods of time, unless you go in  
13 there and you adjust the torque switches and make sure  
14 that you're lubricating the stems and things of that  
15 nature which, when treatment's all gone, you're not  
16 going to be doing that.

17 MEMBER ROSEN: Let me see if I understand  
18 what you're saying. You said because we took away the  
19 ASME requirements, that we're not going to maintain  
20 the valves? That's your contention? See, that's  
21 false.

22 MR. SCARBOROUGH: I know you're not,  
23 because in the FSAR it's in there now. But in the  
24 original version, the plan was -- the proposal was  
25 that we're not going to deal with that.

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1           MEMBER ROSEN: I think you can go back to  
2 a lot of original pieces of paper and pick at them. I  
3 think that's irrelevant.

4           I think the point is where we ended up,  
5 not where we may have started or --

6           MR. SCARBOROUGH: And that's why there's  
7 a safety net there. I mean, there's a safety net and  
8 this sort of models what's in this -- it sort of  
9 models the South Texas --

10          MEMBER ROSEN: Well, those kinds of  
11 comments, that we're not going to maintain vales,  
12 we're not going to inspect them. I mean, South Texas  
13 is not going to maintain or not going to inspect them  
14 don't help, because they're not true.

15          And I think that when you look at the  
16 things that are left on RISC-3, the design control  
17 process -- I think Bill Shack made this point very  
18 well.

19          You pick things -- well, make good  
20 selections. And the next thing is procurement -- the  
21 procurement process. Make sure you got what you  
22 picked.

23          Then the next thing's an installment  
24 process. You make sure that you install those things  
25 well and test them to be sure that they're adequate.

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1           The next thing's the maintenance process.  
2           Having installed the correct thing well, you now make  
3           sure that over its lifetime it continues to work. And  
4           here it comes to the point that Mr. Scarborough made.

5           We're not going to abandon components.  
6           We're going to make sure they work. And then through  
7           a maintenance process and the next thing is inspection  
8           test and surveillance.

9           And ultimately, if all of that fails and  
10          we're wrong, that the things that we did -- all the  
11          five or six preceding steps don't, in fact, lead to  
12          good performance, the corrective action process, we'll  
13          find that out and we'll correct it.

14          CHAIRMAN APOSTOLAKIS: So, Steve, now, how  
15          is what you said different from what he's saying?

16          MR. SCARBOROUGH: We're saying the same  
17          thing. Our draft language is right out of the South  
18          Texas --

19          CHAIRMAN APOSTOLAKIS: The thing that --

20          MEMBER ROSEN: The idea that just because  
21          we relieve the ASME requirements, that we're not going  
22          to take good care of it is the point that I'm fussing  
23          about.

24          MEMBER KRESS: Can you say that across the  
25          board for all the plants out there?

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1 MEMBER ROSEN: Yes. Oh, for all the  
2 plants out there.

3 MEMBER KRESS: Yes.

4 MEMBER ROSEN: I don't know.

5 MEMBER KRESS: Well, you see you have to  
6 deal with every, not just South Texas.

7 CHAIRMAN APOSTOLAKIS: I'm reaching the  
8 conclusion here that -- maybe you guys can correct me  
9 -- that maybe what you propose in terms of treatment  
10 makes sense, but your argument that you may have  
11 common cause failure across systems probably is not  
12 the right argument.

13 MR. SCARBOROUGH: It's true though.

14 CHAIRMAN APOSTOLAKIS: I think what Mr.  
15 Rosen just said is -- no, I'm not sure it's true. And  
16 I take exception to the argument that we failed a  
17 bunch of components and boy, the core damage frequency  
18 was doubled. I think that's pretty good that it was  
19 only doubled.

20 MR. SCARBOROUGH: Well, I don't know if  
21 that's the right number.

22 CHAIRMAN APOSTOLAKIS: It's nothing.

23 MR. SCARBOROUGH: I think I'd double check  
24 that.

25 CHAIRMAN APOSTOLAKIS: Doubling it means

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1 nothing to me.

2 MR. SCARBOROUGH: I think I'd check that  
3 number.

4 CHAIRMAN APOSTOLAKIS: I'm not close to  
5 having an accident. If it's ten to the minus five --  
6 excuse me, that's pretty safe under such a dramatic  
7 assumption. So even if it's a factor of five, I don't  
8 care.

9 MEMBER KRESS: That's an argument in favor  
10 of --

11 CHAIRMAN APOSTOLAKIS: Yes, in favor of  
12 not doing anything. But I think in terms of good  
13 engineering practice, that you really -- as you went  
14 through the litany, you want to buy them, make sure  
15 that they're doing what they're supposed to do and  
16 then you don't abandon them. I think that's a  
17 powerful argument.

18 But to say this common cause failure thing  
19 -- because then you say well, gee, why don't you do it  
20 in the PRA's now, if that's such an important thing.

21 Even for the redundant elements within one  
22 system, I mean the beta factor is about one in ten,  
23 right? So one in ten failures is -- a failure of one  
24 component involves the other one.

25 So now if I go across systems, I can't

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1 imagine it remains one in ten. And then if I have ten  
2 of those, I can't believe that --

3 So I wouldn't advance this argument,  
4 although your conclusion is probably okay.

5 Now, I still don't see us going into the  
6 details of NEI. And that really bothers me, because  
7 I have a whole list of comments, and it will be too  
8 late if you guys come back six months from now and say  
9 we approved it.

10 So I don't know how you want to handle  
11 that.

12 MR. REED: Well, let's get onto it.

13 CHAIRMAN APOSTOLAKIS: Is anybody here who  
14 can --

15 MS. McKENNA: We have a representative  
16 from NEI here, which I believe wanted to speak.

17 CHAIRMAN APOSTOLAKIS: Can you go into the  
18 details of the technical analysis?

19 MR. REED: If you'd like, we can -- if you  
20 guys would like, we can jump to NEI-00-04.

21 CHAIRMAN APOSTOLAKIS: Well, this is  
22 important.

23 MEMBER ROSEN: How about doing it by  
24 exception? Does anyone have any comment on the rule?  
25 Yes, I do.

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1 MS. MCKENNA: Okay. That's --

2 CHAIRMAN APOSTOLAKIS: No, wait a minute.  
3 Mr. Heymer wanted to say something. I'm sorry.

4 MR. HEYMER: Up until now, it was our  
5 understanding that we were going to try and reach some  
6 agreement on the rule and then really focus back in on  
7 the guidance, and that's what I understood that we  
8 were trying to do, and what we came here today was to  
9 talk specifically about the proposals that the staff  
10 had put on the table, that come into some of the  
11 issues that have been discussed here.

12 I think the discussion on the guidance,  
13 once we got some better understanding on what the rule  
14 language might be are going to go on, and we can  
15 certainly have those discussions at a later date.

16 I mean, I think we've got some guidance  
17 out there at the moment. We've -- as regards  
18 categorization, the staff looked at it and felt that  
19 it was satisfactory to move forward and test it with  
20 the pilot applications.

21 We've looked at two pilot plans -- or  
22 three if you take South Texas. But we've got two  
23 pilot plans. We've got two more to do. Once we've done  
24 that we'll sit down amongst ourselves and see where do  
25 we need adjust.

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1           We'll have a meeting with the staff and  
2 incorporate lessons learned from that and then we're  
3 going to have to adjust the guidance in the document  
4 to make it consistent with whatever's in the rule and  
5 those discussions that took place in the rule, and the  
6 statements of consideration that are associated with  
7 that.

8           So that's where we are at the moment?  
9 That's not to say we're unwilling to get into the  
10 guidance document now, but I don't think it's -- we're  
11 at that point in the discussion process.

12           MR. WEST: This is Steve West. I agree  
13 with Adrien. I think we'll have other opportunities to  
14 talk about the guidance document.

15           It's kind of -- our energy is kind of  
16 focused right now on the rule itself. And we could  
17 work with Mike to set up another meeting, a  
18 subcommittee meeting where we could devote whatever  
19 time you'd like to the guidance document before we  
20 approve it.

21           CHAIRMAN APOSTOLAKIS: Now, what's the  
22 timetable here?

23           MR. WEST: I think we have plenty of time,  
24 actually. Months.

25           CHAIRMAN APOSTOLAKIS: I thought you guys

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1 wanted to approve something by April.

2 MR. WEST: Well, we're thinking now about  
3 maybe separating the guidance from the rule  
4 development, maybe like we did on 50.59.

5 CHAIRMAN APOSTOLAKIS: Put the word  
6 acceptable there.

7 MR. WEST: We're going to look at that.

8 CHAIRMAN APOSTOLAKIS: The classic --  
9 we'll consider it and think about it. Go ahead,  
10 Steve.

11 MR. WEST: But we do actually have a lot  
12 of time to get back with you on the guidance document,  
13 say February, March timeframe.

14 MEMBER ROSEN: I would like to make a  
15 specific comment about 50.69e, Roman 5.

16 CHAIRMAN APOSTOLAKIS: Which page is this?

17 MEMBER ROSEN: Page 5. 50.69, little e, 2,  
18 roman 5. It says -- it places a requirement for the  
19 licensees who wish to implement Section 50.69 shall  
20 submit a license amendment that contains a schedule  
21 for implementation of 50.69.

22 I think that's an unnecessary and, in  
23 fact, unwise requirement, because it will require  
24 licensees to set out a schedule in response to a  
25 regulation which might, in fact, force them to do work

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1 on a schedule which is not of the high quality that  
2 would ordinarily be needed under these circumstances  
3 for something as important as this.

4 My experience with this is that this  
5 turned out to be harder than ever we anticipated it to  
6 be and more intellectually challenging and we took our  
7 time and controlled the pace and quality of it.

8 So I would not ask for a schedule for  
9 implementation within the rule. If the staff has the  
10 need, and I think they probably do, to manage their  
11 resources, they could ask for the licensee to indicate  
12 in a cover letter in general what the schedule was.  
13 But certainly not in response to a requirement of the  
14 rule.

15 MS. MCKENNA: I think we indicated that  
16 part was more for information, rather than something  
17 that we felt needed to approved for purposes of our  
18 understanding kind of how the licensee was going to go  
19 about implementing it, but we can certainly take your  
20 comments back to the core team and think about whether  
21 it belongs in the rule or it could be covered in  
22 another manner.

23 MR. CHEOK: And I think the one intent of  
24 this requirement was that the I guess the licensees  
25 may not pick and choose -- sort of they can pick the

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1 systems where they think they have the most  
2 relaxations and leave the systems that may be  
3 important to -- 45 years down the road.

4 MEMBER ROSEN: Well, I don't think that --  
5 if that's a real concern, which I don't think it is,  
6 that you can handle it with a schedule anyway.

7 I mean, the worst that can happen is  
8 they'll leave the system under the current regulatory  
9 environment, which by a prima facie assumption is  
10 adequate.

11 MR. KELLY: In the current way, it's  
12 purpose is that the utility would have the opportunity  
13 to pick and choose what systems it wants to work on.

14 MEMBER ROSEN: Sure.

15 MR. REED: Why don't we just try to get  
16 through quickly the rest of the draft rule. The next  
17 two slides go the list of special treatment  
18 requirements that are lifted off of RISC-3 and RISC-4  
19 and there's some interesting points to be made here.

20 Most of these -- I think you've seen the  
21 list before. Of course, Part 21 is a key -- a very  
22 key regulation in lift off.

23 There's portions -- and this is something  
24 that's a little bit different than South Texas, but  
25 there's special treatment pieces in 10 CFR 50.44, I

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1 think the committee's well aware that's being  
2 addressed under Option 3, and that, in fact, may  
3 influence what's left in 50.44, which would then  
4 affect our references there, as pieces that move  
5 around.

6 But there is special treatment pieces in  
7 there and we'd have to lift off -- assuming that, in  
8 fact, that equipment's associated with our regulation  
9 it turns out to be RISC-3.

10 Of course, 50.49 in the draft that you  
11 have in front of you I think we have -- basically,  
12 have a type there. We don't actually say 50.49. We say  
13 equipment qualification. That's an oversight. It needs  
14 to say 10 CFR 50.49 in there, in addition to  
15 everything else.

16 But we also in there have a statement that  
17 you must continue to satisfy the conditions they  
18 listed in 50.49e 1 through 7.

19 And the intent there is to simply point  
20 out that the technical requirements in that regulation  
21 continue to apply. Pressure, temperature, humidity,  
22 submergence.

23 The lists in there are technical  
24 requirements that the staff believes need to be  
25 continued to -- the equipment needs to be capable to

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1 meet those, but you don't need to do that under 50.49  
2 qualification type program.

3 This is an important one, 50.55A. It's  
4 been listed all the way back from SECY-98-300 as a  
5 special training rule.

6 It's not on the list. And the reason it's  
7 not on the list is not because it's not being risk  
8 informed, it's because it's being risk informed under  
9 code cases.

10 And right now the ASME is developing a  
11 risk informed code case for repair and replacement,  
12 and that's the road that that's going down right now.

13 MEMBER SHACK: What does that mean,  
14 exactly?

15 MR. REED: They actually have -- and I may  
16 need a little help here. They actually have two risk-  
17 informed code cases for pressure boundary first of  
18 all.

19 PRA -- and you guys are much more  
20 experienced in PRA than I am, but PRA has a hard time  
21 when you fail pressure boundary. Because it fails  
22 things in the proximity, not functional path types  
23 things, so it's a little bit different approach.

24 And so the way this is going about is this  
25 has got a risk-informed categorization process for

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1 pressure boundary, and then it's got a -- once you  
2 determine the safety significance and everything,  
3 following through that risk-informed categorization  
4 process, it tells you what pieces of the ASME code  
5 that you can basically change out and do alternatives  
6 for repair and replacement.

7 So it's being developed with the code and  
8 the staff, of course, is working with the code to come  
9 with that code case.

10 Then the way that would work is then right  
11 now until that code case is either adopted in the reg  
12 guide, which adopts code cases, or it becomes part of  
13 the ASME code, and then we adopt it in 50.55a or we  
14 just take the code case and put it in 50.55a.

15 Until that time, the licensee would have  
16 the relief requests, even under Option 2. So that's  
17 what that means.

18 But there's still a path that the risk-  
19 informed ASME -- you still have the ISI code case, you  
20 still have the IST code case and now you'll have  
21 repair and replacement code cases. That's what that  
22 really means.

23 The rest of these -- 50.55e. That's really  
24 a Part 21 for construction plants. So that's basically  
25 the same idea as Part 21.

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1           The maintenance rule, basically, we're  
2           lifting off A1, A2 and A3 off RISC-3 and RISC-4 which  
3           basically, except for -- the only thing we're not  
4           lifting off is A4 and A4 is a risk configuration  
5           management. So that stays on.

6           50.72 and 73 are reporting requirements --

7           CHAIRMAN APOSTOLAKIS: Is that a special  
8           treatment requirement?

9           MR. REED: Excuse me.

10          MS. MCKENNA: No. It's really trying to  
11          carve out that that part of the rule isn't special  
12          treatment and we're keeping it -- these other parts --

13          MR. REED: Yes, it's risk management --

14          MS. MCKENNA: -- which is the monitoring.  
15          We did consider --

16          CHAIRMAN APOSTOLAKIS: Yes.

17          MS. MCKENNA: It's because the rules  
18          aren't labelled, as this one's treatment and this one  
19          isn't. We have to kind of go in and specify pieces, or  
20          the sections, or whatever.

21          MR. REED: All these are different.

22          CHAIRMAN APOSTOLAKIS: So you're not  
23          removing just special treatment requirements. Is that  
24          correct?

25          MR. REED: What we're trying to do is only

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1 remove special treatment requirements, but it isn't  
2 easy. Because every single rule is different. No two  
3 rules have the same scope. They never use the same  
4 language. They've been developed over so many years  
5 and nothing's consistent.

6 I wish they all just said safety related  
7 and non-safety related, but virtually none do. I think  
8 the only one that -- I think Appendix B is the only  
9 one that I can think of that did that.

10 50.72 and 73 are reporting, event  
11 reporting and LER's. That would be lifted off of RISC-  
12 3 and RISC-4, although I'm not sure exactly how that  
13 one would ever be utilized, because how many events  
14 just involved RISC-3.

15 But, nonetheless, it's hard to tell right  
16 now. And a couple in here are interesting. Appendix  
17 B, of course, that's the main one here. It's the  
18 biggest special training requirement I think there is  
19 really. That's, of course, coming off.

20 And Appendix J, containment testing  
21 requirements, type B and type C, testing requirements  
22 for both options A and B.

23 This is a little more than what I think  
24 South Texas got. I know there was some issues in South  
25 Texas. I'm not sure exactly how they came up, whether

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1 you got the type B. I know there was a little  
2 confusion there.

3 MS. MCKENNA: B, I think.

4 MR. REED: I forget which one --

5 CHAIRMAN APOSTOLAKIS: Which one is the  
6 integrated test?

7 MR. REED: That's A.

8 CHAIRMAN APOSTOLAKIS: A.

9 MR. REED: One of these is for contained  
10 isolation valves and another one's for penetrations.  
11 And I think type B's penetrations and type C's  
12 contained isolation valves.

13 CHAIRMAN APOSTOLAKIS: So you're keeping  
14 the integrated test.

15 MR. REED: Integrated stays. These will  
16 just be for --

17 CHAIRMAN APOSTOLAKIS: That can be removed  
18 using 11.74 in a different petition --

19 MS. MCKENNA: I think there is an  
20 initiative going to change the frequency --

21 CHAIRMAN APOSTOLAKIS: The frequency.

22 MR. REED: Exactly.

23 CHAIRMAN APOSTOLAKIS: But that's a  
24 separate --

25 MR. REED: Exactly. There's actually --

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1 if you see, there's specific criteria in the rule. It  
2 tells you, basically, for very small penetration and  
3 small containment isolation valves, connections that  
4 you'll see in the rule, if you look.

5 Part 100 is not on the list. I will point  
6 this one out. And the justification here is that,  
7 basically, Part 100, as it stands today, allows you to  
8 have the flexibility of doing either aesthetic,  
9 dynamic analysis -- basically, two types of  
10 engineering analysis you can do, and if you can't do  
11 that, the test.

12 So the argument here is that it allows you  
13 the flexibility to do whatever you can possibly do. So  
14 I think this is an issue that I'm pretty certain the  
15 stakeholders are going to have some significant  
16 comments and concerns about, so I don't think this is  
17 closed.

18 It was, in fact, an exemption that we  
19 granted for South Texas.

20 MEMBER ROSEN: It was granted for South  
21 Texas.

22 MR. REED: So we're not consistent.

23 MEMBER ROSEN: We felt it was very  
24 important.

25 MR. REED: So I think this one we ought to

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1 continue to look at that. Part 54 is not on the list.  
2 And what does that mean?

3 That means that right now if you want to  
4 go to Part 54 license -- let's say you get your  
5 license first, and then you want to go to Option 2,  
6 you'll have to justify that the 54.21, which is the  
7 aging management requirements, unless new rule -- that  
8 when you go to Option 2 that you still meet those, or  
9 that it's good enough.

10 In other words, you'll have to do work to  
11 show you're -- until it gets on the list --

12 CHAIRMAN APOSTOLAKIS: A plant of his  
13 renewed this license.

14 MR. REED: Right. Let's start with that  
15 one. Most are going to be like that.

16 CHAIRMAN APOSTOLAKIS: Then what --

17 MR. REED: They would probably --

18 CHAIRMAN APOSTOLAKIS: So now they're  
19 going to apply Option 2.

20 MR. REED: And they want to take let's say  
21 the RISC-3 out of aging management. That's what they  
22 would like to do.

23 CHAIRMAN APOSTOLAKIS: So you're saying  
24 they cannot do that.

25 MR. REED: They have to justify -- they

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1 have to come back to the staff right now and,  
2 basically, argue with our Part 54 staff that what  
3 they're doing under Option 2 is good enough for aging  
4 management.

5 CHAIRMAN APOSTOLAKIS: So that then is the  
6 result of the fact that 54 is not risk informed.

7 MR. REED: It's a result of the fact that  
8 right now --

9 CHAIRMAN APOSTOLAKIS: If it were risk  
10 informed, and they were using the categorization  
11 process, then it would -- 54 would have been risk  
12 informed.

13 MR. REED: That would be valid.

14 MEMBER ROSEN: Let me -- try to help with  
15 this. I really am puzzled by this. You said a plant  
16 that approved -- got this approved license -- has had  
17 a risk-informed special treatment requirements --

18 MR. REED: Okay. You want to go Option 2  
19 first. Okay.

20 MEMBER ROSEN: Yes. That plant now can't  
21 get Part 54?

22 MS. MCKENNA: No, we didn't say that.

23 MR. REED: Well, actually, now in that  
24 situation it's a little different. Now your current  
25 licensing basis has changed and since -- now you have

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1 to basically show the staff that your current  
2 licensing basis can be maintained for the next 20  
3 years.

4 But in the end, you're going to have to  
5 show that your treatment on RISC-3, which would be  
6 this programmatic treatment, I guess, if that's what  
7 it works out to be, is sufficient for aging management  
8 -- it meets the aging management of Part 54.21.

9 MEMBER ROSEN: But that's what all license  
10 renewal applicants have to do. They have to show that  
11 their plants meet the --

12 MR. REED: Exactly. But what I'm saying  
13 is right now with it not on the list, each Option 2  
14 licensee and Part 54 licensee, no matter how you have  
15 to go, will have to do work there.

16 If we put it on the list, we'd have to  
17 justify generically once and for all, hey, you guys  
18 don't have to worry about this. It's another option  
19 here. I'm not sure we can do this.

20 But if we put it there, we can say look,  
21 once and for all you don't have to worry about it.  
22 When you go, you get your license renewed -- well,  
23 50.69 is good enough for aging management. You won't  
24 have to do that piece of justification.

25 MEMBER ROSEN: Well, I think that's

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1 exactly where you ought to end up.

2 MR. REED: That's why I'm pointing it out.  
3 It's an issue that needs to be --

4 MEMBER ROSEN: I think this is a very  
5 serious issue. It's a regulatory issue. If the  
6 licensee jumps through all the appropriate hoops and  
7 gets the relief on the 50.69, that should carry right  
8 or forward into the license renewal, if license  
9 renewal is granted.

10 It shouldn't be another step you have to  
11 deal with for license renewal.

12 MR. REED: And I want to make sure that  
13 people are aware that there's an issue there.

14 CHAIRMAN APOSTOLAKIS: Let me come back to  
15 the earlier discussion. Is it fair to say that the  
16 main driver behind the decision what to keep and what  
17 -- on the list, is the defense in depth in the  
18 traditional sense? Structuralist approach?

19 MR. REED: Why things are on this list?

20 CHAIRMAN APOSTOLAKIS: Well, what  
21 requirements you're keeping. This is really defense  
22 in depth.

23 MR. SCARBOROUGH: I think we tried to  
24 eliminate everything in special treatment that we  
25 possibly could. We went through and tried to identify

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1 all special --

2 CHAIRMAN APOSTOLAKIS: But why did you  
3 keep the others.

4 MR. SCARBOROUGH: I'm sorry?

5 CHAIRMAN APOSTOLAKIS: How about defense  
6 in depth? The ones you kept?

7 MR. SCARBOROUGH: The ones we kept --

8 CHAIRMAN APOSTOLAKIS: Defense in depth,  
9 not in the sense of barriers, but you know --

10 MR. SCARBOROUGH: Right. Well, the ones  
11 we kept -- because we thought there was a way to  
12 address it. Like, for example, EQ for 50.49. We just  
13 kept the functional part of it. The programmatic part  
14 is gone. The special treatment part is gone. We have  
15 to keep the functional part.

16 CHAIRMAN APOSTOLAKIS: And why is that?

17 MR. SCARBOROUGH: Because they still have  
18 to maintain functionality. But under the sort of  
19 reduced program that's described earlier in the rule,  
20 they can do a much less detailed evaluation under EQ  
21 now.

22 They can rely more on the vendor than they  
23 did before, and they don't have to have their own  
24 testing and their own analysis. They can rely more on  
25 the vendor.

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1           But we wanted to keep -- we didn't want to  
2 throw 54.9 away entirely, because one reason why 54.9  
3 was written in the first place was that how people we  
4 addressing the current regulations for EQ wasn't  
5 successful.

6           And so we wanted to emphasize that no, we  
7 we're not throwing away the functional part. You still  
8 have to be able to survive submergence and radiation,  
9 environment. All those sorts of things that make the  
10 functional part difficult to meet. They still have to  
11 do that.

12           So we tried to pull out of here the  
13 functional parts. For 55A we kept -- because at the  
14 workshop we had there was a presentation by ASME in  
15 such that there's a process in place for risk  
16 informing the current ISI and IST's.

17           So rather than us trying to reinvent it  
18 and write guidance of how reduced monitoring you would  
19 do, there's already accepted approaches for doing  
20 that.

21           So let's just rely on that and not try to  
22 reinvent the wheel.

23           CHAIRMAN APOSTOLAKIS: Okay.

24           MR. SCARBOROUGH: So that's where those  
25 came from.

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1 MEMBER KRESS: Because you couldn't throw  
2 them out with the PRA.

3 MR. REED: Are you okay with that, George?

4 CHAIRMAN APOSTOLAKIS: Okay.

5 MR. REED: All right. Why don't we go to  
6 the remaining portions of the draft rule. Paragraph E  
7 is a submittal and approval process, and it's already  
8 been discussed a little bit.

9 Right now it's a -- it requires that you  
10 submit a license amendment. You'll get -- in other  
11 words, you're going to have to get your -- you're  
12 going to make a submittal to basically have a review  
13 of the categorization process.

14 And you'll have to describe the  
15 categorization process, describe the most achieve PRA  
16 quality and then provide -- right now on this current  
17 draft, some scope and schedule information.

18 CHAIRMAN APOSTOLAKIS: What do you mean  
19 description of measures to achieve PRA quality? If  
20 they tell you that they did a PRA review according to  
21 the industry and came out with grade 3, that's good  
22 enough?

23 MR. CHEOK: In essence, and maybe also  
24 submit to us the facts and observations from the peer  
25 review finding.

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1 CHAIRMAN APOSTOLAKIS: But you don't mean  
2 we hire these important people to do the analysis. We  
3 made sure we collect the data -- achieve. The word  
4 achieve bothers me. Description of -- I guess what you  
5 mean is provide the proof that the PRA had good  
6 quality.

7 MR. CHEOK: Basically, show to us, tell us  
8 why you think your PRA is good enough option to --

9 CHAIRMAN APOSTOLAKIS: Okay. Because to  
10 achieve may mean go back and tell us how you did the  
11 whole PRA.

12 MEMBER SHACK: Well, actually, the rule  
13 language doesn't use the achieve. It just says assure  
14 the quality.

15 CHAIRMAN APOSTOLAKIS: Where is that?

16 MEMBER SHACK: Page 5.

17 CHAIRMAN APOSTOLAKIS: To assure that the  
18 quality of the PRA used in the category is --

19 MEMBER ROSEN: Well, on this one -- the  
20 thing he's showing. Where is that?

21 CHAIRMAN APOSTOLAKIS: You're not showing  
22 page 5 the way we have it.

23 MR. SCARBOROUGH: Our page 6.

24 CHAIRMAN APOSTOLAKIS: Your page 5 is  
25 different from our page 5. But the words are the

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1 same, right?

2 MS. MCKENNA: Yes.

3 CHAIRMAN APOSTOLAKIS: It's roman three.

4 MS. MCKENNA: Yes.

5 CHAIRMAN APOSTOLAKIS: Description of the  
6 measures taken to assure -- and our page 5 is a little  
7 lower on the page.

8 MR. SCARBOROUGH: Our page 5 --

9 MEMBER ROSEN: To assure the quality.

10 CHAIRMAN APOSTOLAKIS: Yes, to assure.  
11 That's a key word.

12 MEMBER ROSEN: Not to achieve.

13 CHAIRMAN APOSTOLAKIS: Not to achieve.

14 MS. MCKENNA: So our slide was a little  
15 off here.

16 MEMBER ROSEN: Well, George found the  
17 point. George found a good point.

18 CHAIRMAN APOSTOLAKIS: Oh, I thought you  
19 said George finally made a point. After two and a  
20 half hours, he finally said something. No, I think  
21 it's a big difference. I think there's a big  
22 difference between achieving --

23 MEMBER ROSEN: I think that's very true.

24 CHAIRMAN APOSTOLAKIS: -- and assuring.

25 MEMBER ROSEN: It should say assure like

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1 the rules.

2 CHAIRMAN APOSTOLAKIS: It's commensurate  
3 with the application. I don't understand that. You  
4 mean results in a categorization process that's  
5 reasonable, right.

6 MR. CHEOK: That's basically just saying  
7 it's a good enough for Option 2 purposes. I mean, I  
8 think it's --

9 CHAIRMAN APOSTOLAKIS: You can't put good  
10 enough on paper. It's not proper english.

11 MEMBER ROSEN: It's not reg speak. These  
12 is regulationese.

13 MR. KELLY: If you write good enough for  
14 government work, they get upset about it.

15 CHAIRMAN APOSTOLAKIS: Well, it's  
16 commensurate with -- I think you need a better word  
17 there.

18 MEMBER KRESS: Well, the PRA quality guide  
19 would say this application you can use --

20 MEMBER SHACK: George, that's your whole  
21 point is that you can't judge PRA except in terms of  
22 whether its commensurate with the application.

23 CHAIRMAN APOSTOLAKIS: Right. But that's  
24 a separate issue from this. Because that implies that  
25 there are many applications of the categorization

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1 process.

2 MEMBER KRESS: Yes, I see.

3 CHAIRMAN APOSTOLAKIS: And I'm saying  
4 there is only one.

5 MEMBER KRESS: So, therefore --

6 CHAIRMAN APOSTOLAKIS: So that's what  
7 bothers me with the application.

8 MEMBER KRESS: Use PRA quality X.

9 MR. CHECK: Oh, I see what you're saying.  
10 Okay. You can just put a period after the  
11 categorization process.

12 CHAIRMAN APOSTOLAKIS: Uhm?

13 MR. CHECK: We can just put a period after  
14 categorization process.

15 CHAIRMAN APOSTOLAKIS: The measures taken  
16 to assure that the quality of the PRA -- no, no. You  
17 need the verb.

18 MR. REED: The application for 50.69 or  
19 something. I know what you're saying. It's got to be  
20 specific to this. We've got to figure it out. Okay.

21 CHAIRMAN APOSTOLAKIS: To assure that the  
22 quality of the PRA is appropriate for categorization  
23 process. That's really what you mean. Not with the  
24 application. Because then my mind goes to three  
25 different applications, and that's not what you mean.

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1 MR. REED: Right.

2 CHAIRMAN APOSTOLAKIS: Is appropriate for  
3 the categorization process. Period.

4 MR. REED: That's a good comment.

5 CHAIRMAN APOSTOLAKIS: I get all this  
6 praise all of a sudden. Right and left. I don't know.

7 MEMBER ROSEN: Who would you like us to  
8 write the letter to, George?

9 MR. REED: I might as well keep the rule  
10 language up because that's what the slide does anyway.

11 MEMBER ROSEN: We'll put it in your  
12 performance evaluation.

13 CHAIRMAN APOSTOLAKIS: This Friday.

14 MR. REED: So, basically, it will be a  
15 submittal under 59e that will list that information  
16 that the staff will then review, and then we'll  
17 approve the categorization process, and that's  
18 consistent with back to paragraph C, having an  
19 approved categorization process.

20 In addition to having a submittal on those  
21 requirements, then we also have the remaining  
22 administrative requirements, if you will, on what kind  
23 of program description, documentation and reporting  
24 requirements you'll have.

25 You'll have to have some sort of emphasis

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1 -- say our description describes -- summary  
2 description of your 50.69 process. You'll need to  
3 document maintain for the duration that the SSC has  
4 installed the basis for its categorization and  
5 treatment, made pursuant to paragraph C.

6 Then there's an interesting one here that  
7 if there's any event or a condition that could have  
8 prevented a -- the satisfaction or RISC-1 or RISC-2  
9 safety significant function, that you would report  
10 that, providing it's not already reported un 50.72 and  
11 73.

12 So that's probably for RISC-2 things, that  
13 could be an additional -- a new requirement. In other  
14 words, if there's something that RISC-2 thing does and  
15 you had a condition or an event that occurred and it  
16 prevented a safety significant function that was  
17 identified there that it could have been achieved --

18 MEMBER ROSEN: It says that could have  
19 prevented. It doesn't say it prevented. That's a  
20 whole very wide net.

21 MR. REED: That's a good point. I think  
22 we've got to be a little careful with the word or  
23 "could." That's a good comment. We have to look at  
24 that, versus the way our other reporting requirements  
25 are. And then, of course, retaining records.

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1 MR. KELLY: I believe the use of could  
2 have would allow you to take a look -- you found a  
3 piece of equipment that may have been inoperable, but  
4 had not been called upon.

5 And that would allow you to report that --  
6 you know, if it had been called upon, it would have  
7 failed. However, if it -- that's the difference, I  
8 would say there, in wording.

9 MR. REED: Okay.

10 CHAIRMAN APOSTOLAKIS: So are you back to  
11 your slides now, or are we continue --

12 MR. REED: The slides follow exactly  
13 through the language. I think it's probably just  
14 easier to keep the language.

15 MEMBER ROSEN: Actually, no. Your slides  
16 say report events that prevent safety significant  
17 functions.

18 MR. REED: That's me again.

19 MEMBER ROSEN: That's how I found the  
20 could have.

21 MR. REED: Okay.

22 MEMBER ROSEN: It's not the same on the  
23 slide as it is on the --

24 MR. REED: Once again, I'm not consistent.  
25 It was writing my own rule when I did these slides.

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1 CHAIRMAN APOSTOLAKIS: Now when was --  
2 somewhere in there you talk about updating the PRA.  
3 You've already said that.

4 MR. REED: That's in paragraph C.

5 CHAIRMAN APOSTOLAKIS: We've already  
6 covered that, right?

7 MR. REED: Yes.

8 CHAIRMAN APOSTOLAKIS: Now what if they  
9 want to update the categorization?

10 MS. MCKENNA: That's what this --

11 CHAIRMAN APOSTOLAKIS: Is that part of  
12 updating the PRA?

13 MEMBER ROSEN: That's the next thing.  
14 Change control requirements.

15 MS. MCKENNA: Right.

16 CHAIRMAN APOSTOLAKIS: Where is that?

17 MS. MCKENNA: This next to last.

18 CHAIRMAN APOSTOLAKIS: Changes --

19 MEMBER ROSEN: A heavily debated  
20 discussion in South Texas.

21 MS. MCKENNA: Yes, yes.

22 MEMBER ROSEN: Heavily discussed at South  
23 Texas, and ultimately came down with the same kind of  
24 process that's listed here, which are things that  
25 reduce effectiveness must have prior approval.

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1 MR. REED: Yes.

2 MEMBER ROSEN: Otherwise, you go ahead and  
3 change the process.

4 MR. REED: Yes, these changes -- and we  
5 have the expert here. Maybe she should answer that.

6 MS. McKENNA: I think he's right, that  
7 there is the -- embedded in the process, there are the  
8 requirements to update based on changes to the plant  
9 and data, and whatever that kind of thing.

10 This is if you wanted -- if they wanted to  
11 go in and actually change the process itself, the  
12 process that we had already reviewed and approved to  
13 begin with, and that's why there was this --

14 MEMBER ROSEN: Which we actually did  
15 midstream in the discussion at South Texas --

16 MS. McKENNA: Yes.

17 MEMBER ROSEN: -- because we were  
18 evolving. We made a rather substantial change in the  
19 process. And that became a subject of a lot of  
20 discussion. Actually, we think enhanced the process.

21 But it was enough different that you would  
22 want to have had a discussion with the staff if you  
23 were at a license process at the time.

24 Now under the circumstances at South  
25 Texas, and as it finally shook out, it seems to me

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1 that what we did would not have met this test.

2 That is, it would not -- what we did did  
3 not reduce the effectiveness. Quite the contrary.  
4 It improved the effectiveness.

5 And so we would not have had to have had  
6 prior staff approval, but we surely would have told  
7 you if we had, if we had a regulation that we were  
8 operating under, which we weren't. We were a pilot.

9 MR. REED: Yes, that's basically -- that  
10 middle bullet there is -- the last section there is  
11 going to -- the first one stating that you don't need  
12 to have a 50.59 safety evaluation to support your FSAR  
13 changes that resolve implementation of 56.9. So it's  
14 giving you relief on that for your initial  
15 implementation.

16 Then the last one's going to change in the  
17 treatment procedures and making sure that she just  
18 maintain a written basis, so it's a little bit of a  
19 less of a standard than to the categorization process.

20 Again, both those treatment and  
21 categorization processes -- 50.59 would be blind to  
22 it. It wouldn't trip the criteria.

23 MEMBER ROSEN: These may seem just like  
24 words to a lot of people around the table. To us they  
25 were crucial.

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1           Specifically, when you're dealing with  
2 this kind of thing, you can't get locked into a  
3 process that -- because you're going to find better  
4 ways of doing things, and you do not want to get  
5 locked into that.

6           CHAIRMAN APOSTOLAKIS: That has been a  
7 concern of the committee for a long time.

8           MEMBER ROSEN: So this language --

9           CHAIRMAN APOSTOLAKIS: That was the  
10 objection to Appendix T, actually, wasn't it? A major  
11 objection to Appendix T, was that --

12           MEMBER ROSEN: For that reason, it's very  
13 important that they not lock in a developing  
14 technology to one process now. That shuts off all the  
15 way into innovation and you can't do that. So this, I  
16 think, is crucial.

17           MR. REED: All set? Why don't we --

18           CHAIRMAN APOSTOLAKIS: Now you're getting  
19 into the pilots.

20           MR. REED: Yes. If you want, I can skip to  
21 the NEI guidance and go back to pilots so we can keep  
22 going in the same order, George. We can do it either  
23 way.

24           CHAIRMAN APOSTOLAKIS: Skip what?

25           MR. REED: I can go to the NEI guidance

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1 document first and go to the pilots --

2 CHAIRMAN APOSTOLAKIS: Where is that?

3 MR. REED: That would be slide 16, I  
4 believe.

5 CHAIRMAN APOSTOLAKIS: Do the members want  
6 to have a short break?

7 MR. REED: We can do it whatever order you  
8 want.

9 CHAIRMAN APOSTOLAKIS: Okay. We'll keep  
10 going.

11 MR. REED: The same order? Okay. Well,  
12 as you're aware, one of they key tasks that are  
13 supporting Option 2 is the pilot activity.

14 And it's objective is to acquire  
15 information to enable the development of the  
16 regulatory framework.

17 And also, by the way, a piece of that  
18 information is cost benefit, which is important to  
19 both industry and the staff. We'd like to have that  
20 as part of the regulatory analysis.

21 Of course, the industry would like to know  
22 if this thing is cost beneficial, whether they want to  
23 pursue it. So that's the objectives.

24 And what we're actually testing, I think  
25 as the committee's also well aware is the NEI document

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1 implementation guidance.

2 In fact, right now we're currently testing  
3 draft revision B, and the goal there, of course, is to  
4 use that in the pilot, identify the weaknesses and  
5 then use that to improve the guidance and also use  
6 that information to improve the framework.

7 We're being supported by three out of the  
8 four underscripts. So we're getting excellent industry  
9 support here from BWR, Westinghouse. They're all  
10 supporting us.

11 And the pilots there are Quad Cities, for  
12 the BWR group, Wolf Creek and Surry for Westinghouse  
13 and Palo Verde for the CE.

14 And to date we've observed major  
15 interaction of the pilots. It's been at the --  
16 observing the IDP because, in fact, the IDP is the  
17 culmination of this entire process. So it makes sense  
18 to interact at the IDP.

19 And we've observed the Quad Cities IDP.  
20 In fact, I was on that with Mike Cheok back in August  
21 and more recently, in Wolf Creek -- and also Glen was  
22 at that one.

23 And in Wolf Creek, Glen and Eileen were at  
24 Wolf Creek observing that in October.

25 Surry and Palo Verde, the last time I

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1 heard, were going to happen in January, I believe, of  
2 2002. So I believe that's January or February.  
3 January?

4 MR. HEYMER: It's January, February time.

5 MR. REED: Okay. January, February  
6 timeframe is when those IDP's will be held and we will  
7 also observe those.

8 CHAIRMAN APOSTOLAKIS: Now, the IDP, the  
9 way I see in the NEI guidance is much less structured  
10 than the South Texas project. Is there any reason for  
11 that?

12 MR. REED: Yes, there's certainly a  
13 reason.

14 CHAIRMAN APOSTOLAKIS: What is the reason?

15 MR. REED: Actually, the South Texas  
16 approach -- and I'll stop here in a second if I start  
17 to go to far array -- was a very structured approach.

18 It tried to assign a numerics to some of  
19 this qualitative stuff, which is an interesting way of  
20 trying to do it.

21 The NEI approach doesn't try to assign  
22 numerics in that same fashion. It really is -- I think  
23 it's more of a pure -- just an expert panel. I think  
24 it's fair to say it's more aligned -- consistent with  
25 what's being done on the --

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1 CHAIRMAN APOSTOLAKIS: But as I remember,  
2 it doesn't even ask the five questions the South Texas  
3 --

4 MEMBER ROSEN: No, those questions are not  
5 asked.

6 MS. MCKENNA: That's correct.

7 MR. REED: That's correct.

8 CHAIRMAN APOSTOLAKIS: What?

9 MEMBER ROSEN: The questions are not  
10 asked.

11 CHAIRMAN APOSTOLAKIS: That's what I'm  
12 saying. They're not asking the questions. So it's not  
13 just a matter of numerics.

14 MR. REED: Yes, there's certainly --  
15 there's differences.

16 CHAIRMAN APOSTOLAKIS: The structure is  
17 not just numbers.

18 MR. REED: Yes, that's true.

19 CHAIRMAN APOSTOLAKIS: And I was wondering  
20 why that's the case? I mean, they felt that it was  
21 expensive, or a waste of time, or what?

22 MR. CHEOK: I think this is a question  
23 better asked of Adrien, and I think he would probably  
24 answer the question when it comes up later.

25 At this point, if you're just looking at

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1 the proposals from the NEI documents --

2 CHAIRMAN APOSTOLAKIS: I would expect  
3 after the South Texas experience that we would go  
4 beyond what South Texas did and actually try to  
5 improve on the process, not go back.

6 MR. HEYMER: Adrien Heymer, NEI. We  
7 started off going down that approach, and there was  
8 significant debate on the five or so questions that  
9 South Texas had. So at that point in time we decided  
10 to pause for thought.

11 And I think it's worthwhile saying that I  
12 think some of the experiences from certainly the two  
13 pilots that we've looked at to date indicate that  
14 perhaps we should have some additional guidance as we  
15 regards to the IDP, especially as it relates to items  
16 that perhaps aren't in the envelope by the PRA or in  
17 the PRA.

18 And so that's where we are in that  
19 context. I think you're going to see some material  
20 added to it. One of the reasons why we didn't go down  
21 the five questions approach is there seemed to be  
22 significant debate at the time when we were drafting  
23 that document, as regards to whether or not they were  
24 the right questions, the wrong questions.

25 So we thought it far better to get into

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1 some practical work and then sort of back out -- what  
2 are the check boxes that we need to think about.

3 MEMBER ROSEN: You recognize, Adrien, that  
4 those questions are not new. Those are the  
5 maintenance rule questions.

6 CHAIRMAN APOSTOLAKIS: I'm not arguing  
7 that those five questions should be used. All I'm  
8 saying is that maybe a number of questions, perhaps a  
9 variation of these five questions would help structure  
10 the deliberations. That's really the important thing.

11 MEMBER ROSEN: And my point, George, was  
12 that the questions were -- had some foundation in past  
13 practice.

14 CHAIRMAN APOSTOLAKIS: And that's fine.

15 MEMBER ROSEN: We used -- that South Texas  
16 used.

17 MR. REED: That brings us to the next  
18 slide actually; a pretty good segue, of what the  
19 observations -- these are very boiled down lists on  
20 all of the observations. But a more condensed list of  
21 the observations to date that we've seen of the two  
22 IDP's.

23 Certainly, our experience has been that  
24 the IDP's have been very knowledgeable, capable  
25 panels.

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1 CHAIRMAN APOSTOLAKIS: Speaking of  
2 knowledgeable --

3 MR. REED: Excellent interaction, in fact.

4 CHAIRMAN APOSTOLAKIS: Let me ask what  
5 knowledgeable means. Should these people understand  
6 the categorization process and it's limitations? Do  
7 they understand, for example, what risk achievement  
8 work is? Should they?

9 I mean, would it really hurt their  
10 feelings if they had a training session for a couple  
11 of hours.

12 MR. KELLY: It's my understanding that the  
13 panels did go through a training session to prepare  
14 them for being part of the panel. But I don't -- that  
15 was not something that we had input to where we said  
16 here's how the panel should be trained.

17 MR. REED: Certainly, somebody on the  
18 panel should understand that, or there should be  
19 somebody there to support them, I agree.

20 MR. KELLY: Part of the -- our review of  
21 the two pilots that have been performed so far, we put  
22 out trip reports on those and then those trip reports  
23 we made a number of observations about things, areas  
24 that we felt could use some enhancement.

25 And some of those included things that I

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1 think, again, if they'd had a little bit more training  
2 or understanding, it would have been helpful.

3 MEMBER ROSEN: One of the thing you  
4 commented on was that the panel members did not have  
5 access to any information before the meeting. They  
6 came into the meeting and were faced with a  
7 discussion.

8 MS. MCKENNA: I think in some cases that  
9 was a function of it being a pilot and what level of  
10 resources and time commitment people would put into  
11 it.

12 But whereas, I think for an application,  
13 if you will, I think they agreed there's an efficiency  
14 to having reviewed the material and be familiar with  
15 what the preliminary findings or judgements --

16 MEMBER ROSEN: It's more than efficiency.  
17 It goes very much to effectiveness. You're really  
18 going into a meeting on a system where you're going to  
19 be asked to make -- draw judgements that will last for  
20 the life of the plant over hundreds, maybe thousands  
21 of components.

22 And to not prepare a dossier for the  
23 expert panel members several weeks in advance, during  
24 which time they can spend whatever kind of quality  
25 time they need in their offices thinking about and

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1 talking to each other and maybe to the system  
2 engineers about what's in that document, belies the  
3 importance of the process.

4 And so I was disturbed by hearing that  
5 there was so little preliminary work and pre work by  
6 the panel members.

7 I was also a little bit -- I was very  
8 concerned about the lack of training in PRA, as has  
9 already been mentioned, but also more especially in  
10 expert panel techniques because this is difficult, at  
11 best, and needs to be done with some sophistication.

12 CHAIRMAN APOSTOLAKIS: And there is -- I  
13 mean, these things are not new. There are other  
14 people in other fields of science who have thought  
15 about these things. And there is a general reluctance  
16 to bring them in.

17 But let me give you another example.  
18 There is a lot of discussion on sensitivity studies.  
19 Now, I can see a guy who really doesn't -- has never  
20 been exposed to PRA and what these things mean and so  
21 on.

22 And this person is told that the failure  
23 rates were increased to the 95th percentile. And we  
24 got a number that is very reasonable.

25 So that person might say well, gee, this

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1 is really great. It's robust. They went to 95  
2 percentile and so on. And that person may not know  
3 that these distributions themselves may be  
4 questionable.

5 It's these kinds of limitations, this kind  
6 of training, this kind of discussion that I think is  
7 required, leave alone that some of us, at least me,  
8 would argue that these sensitivity studies are not  
9 very meaningful, and you can take them to the extreme,  
10 as Steve mentioned earlier today, that they're  
11 completely meaningless.

12 So it's this kind of thing that disturbs  
13 me, that the panel doesn't seem to be sensitive to  
14 these things and there is no attempt to -- I mean, we  
15 are providing them, according to the NEI document,  
16 with the results, but we're not really telling them  
17 what the results mean. And that disturbs me.

18 MR. REED: Yes, I'd reiterate what  
19 Eileen's already said. I do believe this is sort of an  
20 artifact of the pilot process right now. Not to defend  
21 the industry, but these guys have real jobs, pretty  
22 important jobs.

23 The people on the expert panel are very  
24 important people at the plant and they're doing their  
25 job and then somebody says oh, could you please do our

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1 expert panel for this pilot activity and they're  
2 willing to do that.

3 And they did get some training, but  
4 certainly not the kind of training, I don't believe,  
5 that you would get if the plant was really  
6 implementing this thing.

7 And I don't think they would dedicate  
8 anywhere near the time they would if it was a real --

9 CHAIRMAN APOSTOLAKIS: I have a general  
10 impression from reading the whole thing that this is  
11 a watered down version of what South Texas did. And  
12 I'm trying to figure out why?

13 Did you think that they went overboard and  
14 they overdid it? Or -- I don't understand that. I  
15 mean, in some cases we seem to be going backwards. It  
16 was too good. We don't need this kind of quality to  
17 make these decisions.

18 For example, they had a very good PRA with  
19 uncertainty -- the way I understand it, they used the  
20 mean values to find the important measures, and all of  
21 sudden I have a document that says values. Point  
22 estimate. Oh, my God. Point estimates. We're going  
23 back now. 1989 and writing, and then do sensitivity  
24 studies.

25 I couldn't find the word uncertainty

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1 anywhere. Why? There are computer programs that do it  
2 very routinely. In fact, I think the sensitivity  
3 studies probably will be more difficult to do than the  
4 uncertainty analysis.

5 Plus, there is evidence that if you don't  
6 do it with the mean values, you may not get the right  
7 results. Then, of course, the answer will be the panel  
8 will take care of that, right?

9 MEMBER ROSEN: The panel won't take care  
10 of it if they're prepared the way these panels were.  
11 But I accept the point that these are pilots. It took  
12 South Texas quite a long time to realize just exactly  
13 what kind of level of devotion and prework and  
14 training was going to be needed.

15 MS. MCKENNA: I think even with the -- if  
16 you will, the reduced level, I think that with both of  
17 these they said they took more than they thought going  
18 in, which I think is also what you're confirming.

19 CHAIRMAN APOSTOLAKIS: Does a grade 3 in  
20 the peer review process include a good uncertainty  
21 analysis? I don't remember.

22 MR. CHEOK: No, it doesn't.

23 CHAIRMAN APOSTOLAKIS: Wooo. What can I  
24 say? I mean we can go to the paper by Cheok, Perry and  
25 Sherry. We can go to the paper by Agarwal and

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1 Modarres. We can go to a lot of papers that have been  
2 out there that show that with the mean values, you get  
3 decent results. But the uncertainties are pretty  
4 large.

5 If you don't -- if you use arbitrary point  
6 estimates, I don't know what you get. See, the  
7 importance measures themselves are uncertain, because  
8 they depend on failure rates, for which we have  
9 uncertain distributions, right?

10 So an approximate method of finding the  
11 importance measure is to use as input to these  
12 parameters their mean values. I think that would be  
13 okay. It's approximate, but it's okay.

14 Now the rigorous way is to do a Monte  
15 Carlo analysis simulation and find the distribution of  
16 the measure itself, which is pretty large.

17 And there is a paper out there by Cheok,  
18 Perry and Sherry for three years that shows bands and  
19 they're pretty large for fossil vesseling. Okay?

20 And then the way that's unacceptable to me  
21 is to just plug in so-called point estimates, in which  
22 case you don't know what you're getting out.

23 So that's what bothers me. I mean, what  
24 we're doing here seems to be divorced from what people  
25 are publishing and talking about.

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1           So, you know, the fact that certain things  
2 were approved for South Texas on its surface doesn't  
3 mean anything, because there was a show infrastructure  
4 there, with PRA, reviewed, uncertainties and all that.  
5 Point values -- I'm lost. That's why I'm saying we're  
6 going back.

7           And I remember the IPEEE studies, the --  
8 the comparative studies. You remember that human error  
9 probability that was out of the scale way down. That's  
10 a point estimate.

11           MEMBER ROSEN: One of the things that  
12 you're talking about that troubles me about where the  
13 NEI document is also, is it never establishes the  
14 preeminence of the PRA numbers.

15           CHAIRMAN APOSTOLAKIS: No, it puts it down  
16 every chance it gets.

17           MEMBER ROSEN: At South Texas, what we  
18 said was the best work we've done around here, the  
19 most thoughtful work, the best supported work is in  
20 the PRA.

21           So if we come in here with a conclusion,  
22 this IDP tries to take a position that says -- the PRA  
23 says it's high safety significance, but we're going to  
24 make it low, or medium, that's based on our intuition.  
25 That's clearly not going to be allowed.

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1           We're going to say if the PRA numbers are  
2 higher -- requires a higher categorization than the  
3 IDP thinks, then the IDP people need to go back to the  
4 PRA group and get them to change the PRA, and we'll  
5 understand why the PRA is coming out with what it's  
6 coming out. Not the other way around. And I don't see  
7 any of that here.

8           CHAIRMAN APOSTOLAKIS: That's what I mean  
9 by going back.

10          MEMBER SHACK: George, I guess --

11          CHAIRMAN APOSTOLAKIS: Now, the reason why  
12 I say that, because a letter by a law firm to the  
13 staff says why do you do this since you approved it  
14 for STP?

15                 Well, I'm sorry. The basis for approving  
16 it for STP was different. You can't use that  
17 argument. There was a whole infrastructure, as I said,  
18 that came along with that.

19                 And we said, okay. Certain things we don't  
20 like, but overall it's reasonable. Now we're going  
21 back to point estimates. It's a mystery to me why.

22                 Because there are computer programs. It's  
23 easy to do now. Uncertainty analysis is nothing. I  
24 mean people do it. It's not that I'm asking you to  
25 develop new programs.

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1 I understand that finding importance  
2 measures they way they should be done is not easy,  
3 because the codes have to be modified.

4 But to do an uncertainty analysis on the  
5 baseline PRA; my goodness.

6 MEMBER SHACK: But, again, George, you were  
7 the man that says why worry about it? It's the Delta  
8 CDF that counts.

9 CHAIRMAN APOSTOLAKIS: And you shut me  
10 down when I said that. So now we're taking opposite  
11 sides.

12 MEMBER SHACK: No, I'm just saying that  
13 there's much in the categorization process that can't  
14 be rigorously defended. It's the overall process you  
15 have to look at.

16 CHAIRMAN APOSTOLAKIS: But I don't know  
17 how good that is, Bill. I mean, I can understand  
18 using raw. Okay. We know it's extreme and so on. But  
19 point estimates; look at the IPE's. The point  
20 estimates that some licensees used were ridiculous.

21 So what are you going do to now? Go back  
22 to the IEP's, review them again, and all of that --  
23 anyway, keep going.

24 MR. CHECK: I think one of the  
25 requirements is that licensees are supposed to assure

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1 us that their point estimates are equivalent to the  
2 means.

3 CHAIRMAN APOSTOLAKIS: No, the document  
4 never says that, Mike.

5 MR. CHEOK: I understand the document  
6 doesn't say that.

7 CHAIRMAN APOSTOLAKIS: Aah. Okay.

8 MR. CHEOK: The review guidance basically  
9 says they need to show us that point estimates are  
10 equivalent to the means, and that they somehow have  
11 taken care of the -- the knowledge correlation somehow  
12 and that becomes important in things like the IS LOCA  
13 sequences.

14 MEMBER KRESS: How do you show point  
15 estimate is equivalent to the the mean?

16 MR. CHEOK: You basically -- I think you  
17 have to go to certain groups of important components  
18 and generate your distributions and show that your  
19 means are somewhat equal to the point estimates that  
20 you're using.

21 CHAIRMAN APOSTOLAKIS: Or you go to  
22 somebody else's PRA, I suppose. But you demanded a  
23 plant-specific PRA, right?

24 MR. CHEOK: That's correct.

25 CHAIRMAN APOSTOLAKIS: So you can't really

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1 use generic point estimates, because it's supposed to  
2 be plant specific. And we have well established  
3 methods for making sure these distributions have  
4 become plant specific. So that's --

5 My constant struggle with this is how much  
6 should I push an argument without coming against the  
7 wall that says the panel will take care of it? That's  
8 really the constant struggle here.

9 MEMBER ROSEN: The panel works well if the  
10 PRA's a firm floor. If the panel listens to the  
11 argument of the PRA and says you know, the PRA only  
12 has that as a medium, but there are defense in-depth  
13 considerations here which would lead us to the  
14 conclusion that we should not do anything different  
15 than what we're doing with this because we should  
16 leave it high.

17 And that to me works. That's the right way  
18 things should proceed. The panel uses its judgement to  
19 bring in things that maybe are not modeled in the PRA.  
20 And they, in fact, raise the level of categorization.  
21 But to do it the other way around risks chaos.

22 CHAIRMAN APOSTOLAKIS: And the least you  
23 can do is educate the panel about these things, right?  
24 You can't expect a panel to take care of weaknesses  
25 that the panel is not aware of.

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1 But you guys have -- I have not seen a  
2 review of the NEI document from you yet, right?

3 MS. MCKENNA: Well, as I said earlier, we  
4 had gone through some earlier rounds most recently. We  
5 sent --

6 CHAIRMAN APOSTOLAKIS: But we have not  
7 seen anything.

8 MS. MCKENNA: Yes, you may not have gotten  
9 it, because it was kind of in an early stage and it  
10 was still evolving. I think we didn't feel that we  
11 were ripe to come to the committee, and I think we're  
12 still not there --

13 CHAIRMAN APOSTOLAKIS: I'm not  
14 complaining, I'm just --

15 MS. MCKENNA: -- on the guidance, which  
16 was -- that point was made earlier.

17 CHAIRMAN APOSTOLAKIS: -- stating the  
18 fact.

19 MS. MCKENNA: Yes. Correct.

20 MR. REED: Yes, that's pretty much --  
21 that's what this slide's basically telling where we  
22 stand on NEI-00-04. And that's what we keep going to.  
23 We're on draft revision B is what we're currently  
24 working on and developing comments on.

25 And those -- I mean, just the last several

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1 months, the priority on Option 2 went to putting out  
2 draft rule language and this sort of got shelved.  
3 That's why we've worked to develop draft rule  
4 language, get it out on the web and have a workshop so  
5 that -- this is basically where we stand right now.

6 We have some issues in the categorization  
7 process still. One that I think you're familiar with,  
8 long-term containment integrity issue that's been  
9 raised before, I'd just mention. There are others.

10 But in treatment area, there's a  
11 significant disconnect because if you look at the  
12 draft rule language and you look at NEI-00-04, there  
13 would certainly need to be some alignment there one  
14 way or the other. Either you align the document to the  
15 draft rule or we could develop a reg guide with  
16 exceptions.

17 But I think it's probably preferable to  
18 line the document to draft rule language, assuming  
19 that we reach some sort of agreement on roughly what  
20 the rule language should be.

21 So this is basically where we stand on  
22 developing that guidance, or developing the comments  
23 on the NEI guidance and hopefully getting it to the  
24 point where we can endorse it.

25 And I think it's pretty obvious that we

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1 probably need to come back to this committee when we  
2 get to a good point and discuss this, because you have  
3 a lot of issues, specifically in the categorization  
4 area.

5 I'm sure there are probably issues in  
6 other areas too that we need to discuss with this  
7 committee.

8 CHAIRMAN APOSTOLAKIS: Now, your next  
9 slide is on the NEI document, right?

10 MR. REED: Yes, that's what I was --

11 CHAIRMAN APOSTOLAKIS: I think we should  
12 take a break now. I'm not even asking the members.  
13 Mr. Chairman, do you want a break? Yes, I do.

14 (Whereupon, the meeting went off the  
15 record at 4:00 p.m. and went back on the  
16 record at 4:13 p.m.)

17 CHAIRMAN APOSTOLAKIS: Okay. We're back.

18 MR. REED: Okay. I just have two more  
19 slides that I'll go through real quickly and we can  
20 get to the next portion of this meeting.

21 These just discuss where we go from here,  
22 our next steps. We're going to continue to review the  
23 draft -- obviously, the draft NEI implementation  
24 guidance and get the next round of comments to NEI.

25 By the way, we're going to have to come

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1 back and meet with this committee probably perhaps in  
2 the February timeframe or March timeframe.

3 We're going to have to kick that around  
4 too, when the best time to do that, because it's  
5 pretty clear from the discussions today you have some  
6 serious concerns about the guidance and we need to  
7 factor that into what we're doing.

8 We're also reviewing NEI-00-02. That's the  
9 peer review guidance. In fact, research is reviewing  
10 that in support of us.

11 CHAIRMAN APOSTOLAKIS: We haven't reviewed  
12 that before? I thought we did.

13 MR. CHEOK: You did.

14 CHAIRMAN APOSTOLAKIS: Yes.

15 MR. CHEOK: You have looked at it, yes.

16 CHAIRMAN APOSTOLAKIS: And the staff has.

17 MR. CHEOK: The staff has looked at it. We  
18 have decided that since there's a lot of people in the  
19 industry already that have done these peer reviews and  
20 perhaps did not want to re-peer review the PRA's, and  
21 since we did have some gaps between what we thought  
22 the staff expectations were compared to what was in  
23 NEI-000-02, we would write some staff review guidance  
24 as to -- to bridge the gap, so to speak.

25 And what Tim was talking about, research

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1 looking at -- NRR has written the staff review  
2 guidance. We have provided it to research for their  
3 comments.

4 MEMBER SHACK: I thought research had a  
5 task to actually evaluate whether the peer review  
6 three would be good enough for Option 2.

7 MR. CHEOK: Yes, they did, and I guess  
8 part of the review of the NRR document was to  
9 determine if grade 3 was good enough for Option 2 and  
10 the NRR's peer review guidance -- staff review  
11 guidance actually also accounts for guidance in NEI-  
12 000-04, the Option 2 process.

13 In other words, if there were weaknesses  
14 in NEI-000-02 we try to look to see if these  
15 weaknesses were compensated for in NEI-000-04.

16 And so we tried to review these two  
17 documents in concern and research's job was to make  
18 sure we did it correctly.

19 CHAIRMAN APOSTOLAKIS: When will they  
20 issue their final opinion?

21 MR. CHEOK: We actually have a report now  
22 that's quite final. We're just trying to get it  
23 concurred upon and out to everybody.

24 MR. REED: As Mike already mentioned, the  
25 way that works into this is there's a submittal and

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1 review guidance on what that -- reviewing that  
2 submittal and that's how NEI-00-02 works itself into  
3 our process.

4 We're going to continue work on serving  
5 the pilots, as I already mentioned. We have two pilots  
6 that will be in the January/February timeframe and  
7 we'll be observing -- staff will.

8 Additionally, we've already put out one  
9 version of draft rule language, which the committee's  
10 aware of and we expect that there could be additional  
11 revisions and we can put those up -- we'll put those  
12 up on the website as those become available.

13 We've yet to begin the reg analysis. We've  
14 just -- the first time we've had draft rule language  
15 is about a week ago.

16 And so it's the first time we've actually  
17 had a target of something to do a reg analysis on.  
18 So we have to begin a reg analysis in the near term.

19 We're already developing the proposed rule  
20 package. We're starting to work on the statement of  
21 considerations, in fact, developing a detailed outline  
22 right now and then, basically, filling in the outline  
23 and the different pieces of the proposed rule packages  
24 is the next step.

25 And as I think you're aware, this is

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1 basically just stating the obvious. And then once you  
2 get that package together you run into the concurrence  
3 chain, and that's just a very simplified concurrence  
4 chain. Of course, the ACRS is in there.

5 We'll have to meet with the ACRS before we  
6 accept the proposed rule package. So we need to meet  
7 in different pieces as we go along.

8 So that proposed rule package is going to  
9 be out in time -- a good ways. That's all these slides  
10 are saying.

11 CHAIRMAN APOSTOLAKIS: Any questions from  
12 the members before we move onto the NEI presentation?

13 Well, ladies and gentlemen. Thank you very  
14 much. This was very informative and now we go to Mr.  
15 Pietrangelo and Mr. Heymer.

16 MR. PIETRANGELO: Good afternoon. Thanks  
17 for the opportunity to address the subcommittee on  
18 PRA.

19 Adrien's going to go through a series of  
20 slides here in a moment that are going to talk about -  
21 - a little bit about where we've been on this, what  
22 some of the principles have been, and then share with  
23 you a presentation we also did at the workshop that  
24 the NRC had on November 15th on Option 2.

25 At that time, there were three

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1 alternatives for the treatment of RISC-3 SSC's or low  
2 safety significant SSC's that are safety related.

3 And now the staff has narrowed the  
4 alternatives down to one, which is principally the  
5 alternative two that was in the previous package.

6 We're going to have a lot of comments on  
7 the draft rule that was released earlier that's in  
8 front of you now.

9 We just finished today a risked-informed  
10 regulation working group meeting. That's our policy  
11 committee that deals with this issue and we also just  
12 met with the NRC's PRA steering committee, and let me  
13 share with you very briefly what we said with them,  
14 because that's principally going to be our message to  
15 you today, also.

16 And that is it's very difficult when  
17 you're at the high level of rule making language to  
18 have a good common understanding of what this all  
19 really means.

20 We've put forward in our guidance  
21 document, NEI-000-04, what we think a treatment  
22 program looks like for low risk significant SSC's.

23 Most of our guidance deals with the  
24 categorization process. I think there's over 70 pages  
25 of guidance on how to do categorization.

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1           We feel very good about that aspect of the  
2 guidance that's been out for industry review. We've  
3 had several interactions with the staff. The feedback  
4 we've gotten is that there's no showstoppers in that  
5 guidance.

6           We feel it's pretty comprehensive and will  
7 result in a robust categorization.

8           There's less guidance in NEI-000-04 on  
9 treatment. That's because for the RISC-1 SSC's the  
10 treatment, essentially, doesn't change very much.  
11 We're already applying our safety-related processes to  
12 those SSC's.

13           The real difference is in the RISC-3  
14 SSC's. Those are the ones that are safety related that  
15 are now low safety significant.

16           I think as a general principle it's been  
17 broadly accepted that NRC can accept less assurance of  
18 the functionality for the safety-related, low-safety  
19 significant SSC's than what's provided for the RISC-1  
20 safety significant, safety-related SSC's.

21           I think the devil in the details now is  
22 how much assurance is enough and where should that  
23 regulatory assurance be provided.

24           Does it have to be prescribed in the rule?  
25 Does part of it go into the licensing basis that a

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1 licensee maintains through either updates to the FSAR?  
2 Is it through a commitment to our guideline that  
3 specifies the treatment, and that reg guide hopefully  
4 would be endorsed by the staff.

5 That's some of the things we've been  
6 thinking about in terms of a framework for  
7 implementing 50.69.

8 So Adrien's going to go through that for  
9 you and I encourage you to ask questions about it.  
10 Again, we did provide this to the staff at the  
11 November 15th workshop.

12 I think due to the fact that the staff was  
13 under some scheduled constraints to release the next  
14 version of the draft language by the end of November,  
15 there were very few changes besides taking the more  
16 extreme alternatives off the plate.

17 So the distractions have been removed. Now  
18 we're focusing on the real thing here.

19 Again, we still have -- I think the  
20 commission's intent with regard to releasing this  
21 draft language has been met thus far.

22 We're having a lot of dialogue with the  
23 staff and any other stakeholder who wants to play in  
24 this area. And that dialogue needs to continue.

25 I think at this point, our view of the

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1 draft language that was just released, if that becomes  
2 the proposed rule, we would still have significant  
3 comments on it.

4 And that -- I think we're trying to get to  
5 a point where the proposed rule's issued so that we  
6 don't have to have significant comments on it.

7 That would be less work for us and less  
8 work for the staff to respond to ultimately.

9 And I think from -- my main point to you  
10 now though is that this is a good time for you to  
11 weigh in. Don't wait for the proposed rule.

12 I think there's some issues on the table  
13 now that are quite important with regard to how to  
14 treat SSC's commensurate with their safety  
15 significance.

16 The ACRS, and in particular this  
17 subcommittee, has been the champions of the use of PRA  
18 in the regulatory process. So you've got a stake in  
19 this and you're a key stakeholder in this process.

20 So I think the issues are out there and I  
21 think they're pretty well defined. We'll go through  
22 them and encourage you all to weigh in in the near  
23 term and not wait for the proposed rule.

24 With that, let me turn it over to Adrien.

25 MR. HEYMER: This morning one of the

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1 things that we found out is that it's worthwhile  
2 sometimes to go back and remind ourselves of some of  
3 the principles that we started off when we went down  
4 this path.

5 And it was an enlightenment to us, and I  
6 think to some people on our working group, to be  
7 reinforced of those principles.

8 And as Tony said, the principles really  
9 are that we have -- and I'll move straight to slide 3  
10 in the interest of time -- is that we have a set of  
11 equipment at the moment that we call safety related  
12 and non-safety related.

13 And we know through past experience that -  
14 - and past risk-informed applications, that some of  
15 that equipment that we call safety related is, in  
16 fact, not as important as we first thought and that,  
17 in fact, some of the non-safety related equipment is  
18 important.

19 And what happens is that when you go  
20 through that process, you end up with a safety  
21 significant and a low safety significant set of SSC's  
22 and they're a mixture of the previous classifications.

23 And we call those RISC-1, 2, 3 and 4.  
24 That wasn't where we started off, but because we had  
25 a ground rule that said that we will preserve the

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1 design basis, this is how we've ended up from a  
2 licensing perspective.

3 And what we're trying to do is apply NRC  
4 to special treatment requirements consistent with the  
5 safety significance of the equipment. The design basis  
6 have not changed.

7 And for the low safety significant SSC's,  
8 the special treatment requirements can be replaced by  
9 licensee controls that when coupled with a monitoring  
10 program provide a degree of assurance that the design  
11 basis will be satisfied.

12 It doesn't necessarily have to be the same  
13 degree of assurance as for RISC-1 because these are of  
14 low safety significance.

15 What we see today as we look at the draft  
16 rule and focusing on the draft rule that the main  
17 issue is really treatment.

18 And it's the treatment of the low safety  
19 significant SSC's. And when we look at the draft rule  
20 we see a statement right up front that appears to  
21 imply that the -- an alternative regulatory framework  
22 with respect to treatment requirements currently  
23 imposed beyond practices for commercial grade  
24 equipment to add assurance of capability.

25 CHAIRMAN APOSTOLAKIS: Where are you now?

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1 MR. HEYMER: I'm on the first paragraph of  
2 the draft rule language. That's the introductory  
3 paragraph half way down, about the third full  
4 sentence.

5 And when you read that statement, along  
6 with some of the other statements in the draft rule,  
7 it appears that we're looking at something called  
8 Appendix B prime.

9 MEMBER ROSEN: I guess I'm still having  
10 trouble finding what your reference is to --

11 MR. HEYMER: It's in the draft language of  
12 the rule. It's on page 2. It's in the introduction.  
13 It's on the --

14 MS. MCKENNA: This is Eileen McKenna. Let  
15 me clarify one thing. We were a little bit caught by  
16 the need to try to provide the information to the  
17 Committee by a certain schedule when we were putting  
18 forth the announcement.

19 So that paragraph that he's referring to  
20 is what actually in the Federal Register announcement.  
21 It's not actually part of the rule language itself.

22 MEMBER ROSEN: So we don't have that here.

23 MS. MCKENNA: So it didn't appear in  
24 there. That's the point I'm trying to make. I think if  
25 I understand where you're going though what it was

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1 trying to be was a representation that our current  
2 process embodied certain requirements beyond just  
3 saying go get good equipment to deal with -- for the  
4 safety-related things, that that was kind our concept  
5 of what special treatment meant in the first place,  
6 was trying to lay the framework.

7 We weren't trying to say that's where  
8 we're going. We were trying to say that's where we're  
9 coming from. And if that didn't come across, then  
10 something -- you know, obviously maybe our language  
11 wasn't as clear as was intended.

12 But that was what we were trying to  
13 represent, is where we were.

14 CHAIRMAN APOSTOLAKIS: We can get the copy  
15 of the Federal Register.

16 MEMBER ROSEN: I'm having trouble  
17 following you because you're quoting from something we  
18 don't have in front of us.

19 MR. HEYMER: I thought you had the Federal  
20 --

21 CHAIRMAN APOSTOLAKIS: No, we don't.

22 MR. HEYMER: Sorry. Anyway -- and I think  
23 that's -- what Eileen just described is one of the  
24 advantages of this process, is that we get something  
25 out, we read it, we read it one way, other people read

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1 it another and then we can sit down, provide comments,  
2 have a meeting.

3 And what we come up with at the end of the  
4 day is something we can all live with and, hopefully,  
5 all understand.

6 And so from the -- from just reading what  
7 we've just discussed, it appeared that the staff was  
8 saying that we're going to have a new program that was  
9 beyond the balance applied to commercial industrial  
10 requirements, and it was our position, our thought  
11 that what we provide is what we call nuclear  
12 industrial BOP, which is the balance of plant  
13 controls, plus the monitoring.

14 And I think you can't sell the monitoring  
15 aspects short because it's more of a -- it really  
16 brings in the performance-based aspect.

17 And where monitoring's impractical, then  
18 we apply some form of condition monitoring just as we  
19 have in the maintenance rule. But it's a more  
20 simplified version.

21 CHAIRMAN APOSTOLAKIS: So, Adrien, you  
22 were here during the staff's presentation. There was  
23 a long list, A, B, C, D, E and so on regarding tests  
24 and procurement and all that.

25 And you're saying that it is the

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1 industry's position that these are not needed. Is that  
2 what you're saying?

3 MR. HEYMER: No. We're quite willing to  
4 go along with the fact that yes, you do need design  
5 control, you do need procurement and to actually list  
6 these elements.

7 But in the rule, and this is the purpose  
8 of the presentation -- in the rule it's not necessary  
9 to provide a summary description of that for low  
10 safety significant SSC's.

11 It's sufficient to just state what they  
12 are. Then in the summary description in the SAR, you  
13 can go into some more detail and then even more detail  
14 is provided in the licensee's procedures.

15 CHAIRMAN APOSTOLAKIS: So if I go to pages  
16 2 and 3 of what we have, they would remove the  
17 paragraphs. You would just keep the headings.

18 Design control process, procurement  
19 process, installation process, maintenance process and  
20 then the regulatory guide would say do this and that  
21 to meet these --

22 MR. PIETRANGELO: There's a subsequent  
23 slide that lays out what we think ought to be in the  
24 rule, what should be in the FSAR, what should be in  
25 the licensee commitment that makes up the whole

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1 licensing basis for implementation of 50.69.

2 I think one our reactions to the draft  
3 rule language was a lot of what's captured in the  
4 draft rule language, and main rationale for saying --  
5 kind of our perspective is that's the same level of  
6 detail that's in Appendix B right now for safety-  
7 related SSC's.

8 And if these are low safety significant  
9 SSC's, why do you need the same level of detail on the  
10 rule? That doesn't make sense to us.

11 MEMBER BONACA: The question I have is you  
12 still have procurement. You will not put procurement  
13 in the rule; you will put it somewhere else. But  
14 still you have procurement of component.

15 CHAIRMAN APOSTOLAKIS: In the rule.

16 MEMBER BONACA: No, I'm saying --

17 CHAIRMAN APOSTOLAKIS: In the rule it  
18 would say procurement, right?

19 MEMBER BONACA: Oh, yes. They would say  
20 procurement. But --

21 MR. PIETRANGELO: Without a description of  
22 what it is.

23 MEMBER BONACA: But the question I have is  
24 do you have a disagreement on the substance of what  
25 they're asking to do versus what you would like to do?

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1 MR. PIETRANGELO: Well, that's why I think  
2 that you can't just have a discussion of the rule  
3 language.

4 It has to also include the guideline that  
5 we've submitted.

6 MEMBER BONACA: The details.

7 MR. PIETRANGELO: Because we do have a lot  
8 of discussion on the guidelines over what procurement  
9 entails, along with specific example of how it would  
10 be done.

11 MEMBER BONACA: Okay.

12 MR. PIETRANGELO: So you can't divorce one  
13 from other or else you may miss each other in the  
14 night.

15 MEMBER BONACA: Because I didn't see a lot  
16 of discrepancy between what they're proposing and what  
17 you really are proposing in your document.

18 I mean, there are similarities --

19 MR. PIETRANGELO: There are.

20 MEMBER ROSEN: Unfortunately, I agree with  
21 you, Tony. There's no way to resolve this without  
22 getting into the detail.

23 CHAIRMAN APOSTOLAKIS: I guess it's not  
24 very clear to me. What if the rule is high level  
25 guidance and then you go to the regulatory guides --

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1                   MEMBER ROSEN: That's only a question of  
2 when we get into the detail. Our high-level guidance  
3 can be in the rule, but then if there's a reg guide  
4 that endorses something, then we have to get into the  
5 detail.

6                   When we're talking about industrial --  
7 nuclear industrial controls -- that used to be called  
8 commercial treatment, as to its adequacy in the  
9 regulatory process, you're going to have to get into  
10 the detail of what the licensees will actually do when  
11 they procure a replacement component that's in RISC-  
12 3, and whether the staff will find that acceptable.

13                   And we need to weigh in, at that point.  
14 Otherwise, we're just working around the edges of the  
15 problem.

16                   MEMBER BONACA: For example, the rule and  
17 have a high level requirement, just as an example,  
18 that a seismic component still has to be able to  
19 perform in a seismic environment, and that leaves it  
20 to --

21                   Now, I don't see a problem in a high-level  
22 requirement. Now, how you do that should be -- it's  
23 important to --

24                   MEMBER ROSEN: I'm agreeing with you. That  
25 the rule can have high-level requirements. But

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1 ultimately, if the ACRS wants to have any impact on  
2 the ongoing discussion between the industry and the  
3 staff, we're going to have to get into the detail at  
4 some point.

5 MEMBER BONACA: I understand that. I'm  
6 just trying to understand if there is a philosophical  
7 difference so much that in the substantive  
8 requirements -- I mean, what needs be done to qualify  
9 a component. That's what I'm trying to understand.

10 MR. PIETRANGELO: And I don't know the  
11 answer to that right now either, but we do have a  
12 rationale for at least what should go where and why.

13 MR. HEYMER: As we've moved through this  
14 process, the question has come up; what are industrial  
15 controls? And we attempted to come up with a  
16 definition.

17 I don't want to linger on this slide  
18 because we went through and improved it at the  
19 workshop somewhat and this slide reflects some of  
20 those suggestions, both from the industry and the  
21 staff, on the so-called definition of nuclear  
22 industrial treatment.

23 But we are trying to define it here, and  
24 I think that we would agree that when you look at this  
25 and then look at some of the language that's in the

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1 draft rule, perhaps there isn't that much difference.

2 But then when you go down a step and look  
3 at specific phrases, it's those phrases coupled with  
4 one or two other statements that we just wonder where  
5 we're going.

6 MEMBER ROSEN: I wonder if that's a  
7 Freudian slip that you have the word guidelines twice  
8 in the next -- the fourth line from the bottom.  
9 Because there are lots and lots of guidelines. That's  
10 for sure.

11 MR. PIETRANGELO: Guidelines on how to do  
12 guidelines.

13 MR. HEYMER: We maintain that industrial  
14 treatment is sufficient and is basically what we've  
15 got in place today.

16 And there's three areas that we're basing  
17 that on. These areas must be taken not as individual,  
18 but as a complete package.

19 You just can't say, well, just not change  
20 in functional requirements or maintain the functional  
21 requirements.

22 I think you've got to look at each of  
23 these. You've got to look at the corrective action,  
24 along with historical performance and what you're  
25 putting in place to maintain those functional

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1 requirements.

2 And as regards to functional requirements  
3 we agree, again, that 50.69 does not change the design  
4 basis. And if it doesn't change the design basis,  
5 that's a tenet and if we want to put that in the rule,  
6 that's fine.

7 But then when you get down to the level of  
8 not changing design inputs, I think we become a little  
9 bewildered, because we can change the design today and  
10 we're still struggling with why people see it's  
11 necessary to say you're not going to change the design  
12 inputs related to design basis.

13 Well, you're not going to change the  
14 design basis and that should be sufficient, certainly  
15 for a rule, and give us the flexibility to adjust the  
16 design, providing that we satisfy the design basis.

17 And as you've spoken here, and I think as  
18 the staff recognize, even on the balance of plant  
19 side, we have engineering, we have design control.

20 If you're going to implement a  
21 modification, there's a set of procedures that you go  
22 through even on the balance of plant side.

23 Just as a simple reference, one of the  
24 pilots provided a design change package for a  
25 condenser tube cleaning modification, and this is --

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1 that's on the non-safety related side of the house.  
2 And this is the package.

3 It covers procurement, specifications, it  
4 covers engineering, it covers drawings, configuration  
5 control. So that process is there and it's in place  
6 today and we say that we can continue to use that.

7 The design control process is the same. Is  
8 if there's something on the balance of plant side that  
9 has to operate at 180 degrees and it's in 90 percent  
10 humidity, then the design reflects that.

11 The design introduces engineering  
12 specifications, which then in turn result in  
13 procurement specifications, and then you make a  
14 determination, having got some feedback from a  
15 supplier, on whether that equipment will satisfy that  
16 function in a balance of plant sense.

17 So we're going through, if you like, the  
18 same steps, the same process that we would on the  
19 safety-related side. It was just that we might ask for  
20 more bells and whistles on the safety-related side.

21 And so we think that when you drop down  
22 into the low safety significant and apply these  
23 industrial controls, they will preserve the design  
24 basis because the design is place, the testing is in  
25 place.

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1           We will monitor this equipment and we  
2 think that's an essential part. And if you're going to  
3 agree to a monitoring program, I think there's got to  
4 be some balance on the level of detail in addition to  
5 that. And that's really what we see on a performance-  
6 based approach.

7           You saw that in the maintenance rule,  
8 where it wasn't very prescriptive, but it did say you  
9 had to implement the monitoring program.

10          And so we, therefore, believe that  
11 alternative designs, different designs can still  
12 satisfy the design basis and preserve functionality.

13          Historical performance data. And I think  
14 here there's been a lot of discussion about well,  
15 that's true on the balance of plant side because that  
16 is a continually operating set of equipment.

17          There is financial interest from the  
18 licensee to make sure that equipment works, and it has  
19 worked very well.

20          Through August to date we've had a 94  
21 percent capacity factor and that's not just due to the  
22 safety-related side. It's also due to the reliability  
23 of the balance of plant side, on the industrial side.

24          There is industrial supply test data. They  
25 do tests to assure the robustness of their equipment,

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1 outside of what's required for EQ and 50.49.

2 Does that mean it's more severe than  
3 50.49? No. But they do tests in the commercial  
4 world, as well as in the nuclear world.

5 And if you look at the reliability between  
6 safety-related and non-safety-related equipment, there  
7 doesn't appear to be too much difference. They are  
8 comparable.

9 And, in fact, South Texas did a quick  
10 study where it looked at a whole range of components,  
11 put them into 33 categories and the result -- and they  
12 looked at something like 70 billion operating hours,  
13 as regards to the equipment and there was no  
14 significant difference in the reliability between  
15 safety-related and non-safety-related equipment.

16 CHAIRMAN APOSTOLAKIS: Wasn't the argument  
17 made earlier that -- or not really comparing them  
18 under accident conditions.

19 MR. HEYMER: Well, you're not comparing  
20 them under accident conditions, but you are comparing  
21 them under their design basis conditions.

22 In the balance of plant side, we have  
23 design basis requirements on that equipment, the feed  
24 water pumps, the feed water pump motors, the  
25 transducers, the transmitters and valves.

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1           And it may not be in such a harsh  
2 environment, but you're still doing the design to --  
3 whether it's to pump 400 degree water or whether it's  
4 to operate in 180 degree environment.

5           And that's just not true in the nuclear  
6 industry. If you go into the chemical industry, they  
7 have equipment that works in toxic environments and  
8 toxic gas.

9           So there is that corollary that we are  
10 talking about. This is the design and its reliability,  
11 and it meets its design function.

12           Now, when you step up, the more harsh the  
13 conditions, the more careful and clear you've got to  
14 be in the specification on how that equipment is going  
15 to perform and operate.

16           So I think it's not a design basis  
17 question. It's the harshness in the environment that  
18 it's operating. But we still look at the environmental  
19 aspects.

20           MEMBER BONACA: Regarding this comparison,  
21 I mean, some of the safety-related equipment is on a  
22 standby mode. I mean, it doesn't run.

23           So how is this comparison performed?

24           MR. HEYMER: Well, I think also you've got  
25 to take into account you don't get to a 95 percent

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1 capacity factor by just trying to draw a line in the  
2 sand and say well, we don't really care about this  
3 equipment. It's taken a while for industry to get  
4 there.

5 And through encouragement by the NRC staff  
6 and also even more encouragement by IMPO to achieve  
7 excellence, we've eventually got there.

8 And we've got there, and it's really a  
9 mindset, a questioning mindset in the plant that says  
10 that equipment's not working properly. I'm going to  
11 fix it.

12 And if you don't go out there, and if it's  
13 standby equipment you don't go out there and lubricate  
14 the stems and do the correct maintenance on a piece of  
15 equipment that's standby, non-safety related, the  
16 chances are that you're going to start slipping on the  
17 real important stuff, because that mindset permeates.

18 Well, it's not that important. I don't  
19 really need it today. I'm not in an allowed out --  
20 allow outage time issue. I'm not approaching a tech  
21 spec so, therefore, I won't fix it.

22 And if that mindset begins to creep into  
23 your operating philosophy, you begin to slip quite  
24 dramatically and you can see it in the condition of  
25 the plant, the condition of the equipment.

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1           And if you just look at the plants that  
2 have done well, they've all developed this mindset  
3 that we are going to fix stuff as and when we find it  
4 and we're not going to take sort of second rate  
5 maintenance on equipment that is -- that's in the  
6 standby mode.

7           We want all our equipment to work,  
8 otherwise we are going to declare and abandon it in  
9 place.

10           Now if you say we're going to abandon this  
11 equipment in place, I think that that's a different  
12 issue. But here we're not talking about abandoning  
13 that equipment in place.

14           MEMBER ROSEN: I want to make a comment  
15 about standby equipment or experience not being real  
16 valuable. To the contrary.

17           I think standby equipment is typically  
18 tested with an automatic start signal. It's asked to  
19 start from cold iron, to run and then to load, for  
20 example, for a diesel. And then to run until it's  
21 temperatures equilibrate.

22           And a lot of data is taken these days;  
23 very sophisticated methods to take data on all the  
24 cylinders, for instance, on a diesel, so that we know  
25 very precisely at a very gut level how it's running.

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1           And so standby equipment is tested  
2 thoroughly. And data about the successes of standby  
3 equipment operation, I think, are valuable and valid  
4 for -- to draw conclusions from.

5           MEMBER BONACA: Under the current regime  
6 they're tested. I don't know yet under the future  
7 regime where they're not any more safety related or  
8 safety significant they're going to be tested. So we  
9 haven't heard about that. That's what I'm saying.

10          MR. HEYMER: I think that's why --

11          MEMBER BONACA: We cannot take credit for  
12 performance of equipment which has been routinely  
13 tested under accident conditions because it was  
14 classified as safety related.

15                 So there is a change being taken. That's  
16 why I'm asking that question.

17          MR. PIETRANGELO: This is historical  
18 performance data though.

19          MEMBER BONACA: I understand that. Well,  
20 historical performance is because this equipment was,  
21 in fact -- had imposed on it Appendix B requirement  
22 was being tested.

23                 And I'm not saying you won't do it. I want  
24 to hear about what you'll do. I think you have another  
25 slide next in which you're talking about monitoring

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1 and testing.

2 MR. PIETRANGELO: We do. But the point is  
3 is when it was tested.

4 MEMBER BONACA: Yes.

5 MR. PIETRANGELO: And when the safety --  
6 when the non-safety related similar SSC's were run and  
7 tested that the reliability data's quite comparable.

8 Now that does not address -- and I think  
9 the staff raised this in the STP exemption request --  
10 it's not done under design basis conditions. It might  
11 be on the BOP, as Adrien's pointed out, that that is  
12 the design basis condition.

13 But at least on this -- these safety  
14 related SSC's, rarely, if at all, it's tested under  
15 design basis conditions.

16 So you can't just say historical  
17 performance data demonstrates that it will be adequate  
18 for the longer term. But nevertheless, it's still an  
19 important data point.

20 And we're not trying to oversell it. We're  
21 just simply suggesting that that is a piece of the  
22 argument that is the basis for the industrial  
23 treatment.

24 MEMBER ROSEN: Notwithstanding your point  
25 that this standby equipment is not tested at design

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1 basis conditions. There are exceptions to that.

2 For example, motor operated valves are, in  
3 fact, tested at dynamic conditions that are intended  
4 to envelope their design basis as part of the 89.10  
5 program.

6 So event there we actually do test  
7 important valves under their functional requirements  
8 for the design basis.

9 Now we don't envelope them in a cloud of  
10 steam when we're doing that or high risk -- ten to the  
11 sixth rads, but -- so there are limits. But there is  
12 testing.

13 MR. HEYMER: In response to your questions  
14 of what are going to do --

15 MEMBER BONACA: That is the heart of my  
16 question. Are we going to test them again?

17 MR. HEYMER: We are going to have a  
18 monitoring program, and that is going to involve some  
19 testing. Is it going to be the same severe testing as  
20 we've done before? Possibly not, because we don't  
21 need the same degree of assurance.

22 The frequency may be different. There may  
23 be some changes in the conditions in which you do the  
24 test. But essentially, we are going to move those  
25 valves and check that they can satisfy their function.

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1           Otherwise, what are you monitoring?  
2           You've got to monitor something.

3           CHAIRMAN APOSTOLAKIS: I'm confused now.  
4           If I read the language of the rule, it's not  
5           inconsistent with what you're saying.

6           All they're saying is data or information  
7           must be obtained to support the determination that  
8           these SSC's will remain capable of performing safety-  
9           related functions under design basis conditions.

10           You're saying the same thing. They're not  
11           telling you how often to do it.

12           MR. PIETRANGELO: No. There's no  
13           disagreement there.

14           CHAIRMAN APOSTOLAKIS: Oh, okay.

15           MR. PIETRANGELO: I think what we stumbled  
16           into at the workshop, this monitoring and corrective  
17           action is not equivalent to what we're doing under the  
18           maintenance rule right now for monitoring the  
19           reliability and availability of safety significant  
20           SSC's.

21           This is more of a condition monitoring  
22           regime, where you're looking at pump flows, you're  
23           looking at the electrical data, starting current,  
24           running current voltage, all that other stuff.

25           It's not failures over demands and

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1 unavailable hours and all that stuff. Because part of  
2 the special treatment is the maintenance rule  
3 monitoring, which the lows are excluded from.

4 MEMBER BONACA: Actually, Steve brought us  
5 a good example. I'd like to ask a question. If you  
6 have an MOV that right now has been tested under 89.10  
7 requirements and now it becomes part of RISC-3 --

8 MR. PIETRANGELO: Right.

9 MEMBER BONACA: Would it be also tested  
10 under 89.10 requirements or would it not?

11 MR. PIETRANGELO: No, it would be excluded  
12 from the 89 --

13 MEMBER BONACA: Excluded. So now you see  
14 -- because we have to understand the details. So  
15 typically you test them under design basis conditions  
16 to the most -- that they would work. Now they won't be  
17 tested anymore.

18 So I'm saying we've got to understand to  
19 what degree --

20 MR. PIETRANGELO: Yes. In lieu of that,  
21 you'd look at vendor recommendations, you'd look at  
22 your own experience with those valves. You don't  
23 forget all that stuff now that you've reclassified it.

24 And you put a program together that's the  
25 adequate confidence.

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1 MEMBER ROSEN: That's because you've  
2 concluded that the failure of that value will have  
3 limited -- it's low safety significance.

4 MR. PIETRANGELO: It should not get the  
5 same level of testing that the high -- I mean, that is  
6 kind of the whole --

7 MEMBER BONACA: Oh, I understand.

8 MR. PIETRANGELO: It doesn't warrant it  
9 because of the safety significance.

10 CHAIRMAN APOSTOLAKIS: I'm utterly  
11 confused, I must say. What do you guys disagree with  
12 this stuff? I read this language and I don't think  
13 that it's any different.

14 MEMBER ROSEN: I don't hear a lot of  
15 disagreement either.

16 MR. PIETRANGELO: We'll get to that,  
17 George.

18 MR. PIETRANGELO: There's more slides.

19 CHAIRMAN APOSTOLAKIS: This is a good  
20 thing, George, not a bad thing, if they happen to  
21 agree with the staff. Once in a while, this will  
22 happen.

23 MEMBER SHACK: It's a random event.

24 CHAIRMAN APOSTOLAKIS: Now, you used some  
25 words earlier, Adrien, that maybe for us academic

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1 types needs some explanation.

2 You said the licensing basis is preserved  
3 by the licensing inputs or can be -- I'm sorry. The  
4 design basis. The design inputs should not be  
5 specified. What --

6 MR. HEYMER: The staff state that  
7 basically, you're not going to change the design  
8 inputs related to the design basis.

9 CHAIRMAN APOSTOLAKIS: Explain to me with  
10 an example what you mean.

11 MEMBER ROSEN: Let me try.

12 CHAIRMAN APOSTOLAKIS: Okay.

13 MEMBER ROSEN: A design input is a flow  
14 and a pressure, for example, for a pump.

15 CHAIRMAN APOSTOLAKIS: Okay.

16 MEMBER ROSEN: But the design criteria is  
17 the pump must deliver adequate -- must cool a certain  
18 thing within a certain time.

19 CHAIRMAN APOSTOLAKIS: Right.

20 MEMBER ROSEN: And what you find out is  
21 that you can achieve the design input in an entirely  
22 different way. You don't have to --

23 CHAIRMAN APOSTOLAKIS: Design input or  
24 design basis?

25 MEMBER ROSEN: You can achieve the design

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1 basis in an entirely different way by running at a  
2 lower flow and a high pressure.

3 CHAIRMAN APOSTOLAKIS: Okay. And that's  
4 not allowed now?

5 MEMBER ROSEN: That would not be allowed  
6 under the staff's words, which says you have to  
7 preserve the design basis and the design input.

8 CHAIRMAN APOSTOLAKIS: That makes sense.

9 MEMBER ROSEN: And I think what NEI is  
10 arguing that the real issue is the basis, not the  
11 input.

12 MR. HEYMER: And what we maintain is that  
13 we believe we have that flexibility in the RISC-1  
14 area. And so we're a little confused at why it's --  
15 sort of additional requirements have been -- appear to  
16 be imposed in the RISC-3 area.

17 MR. FAIRWEATHER: This is John Fairweather  
18 with the staff and that was not the intent of the  
19 words.

20 The intent of the words were that design  
21 inputs related to maintaining design basis meant  
22 things like your environmental qualification envelope,  
23 which is part of the design basis, or your seismic  
24 inputs, which are part of the design basis, don't get  
25 changed by this -- it's not intended to have -- to get

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1 down to design inputs that are not necessary to meet  
2 your design basis.

3 MR. PIETRANGELO: Why don't we just say  
4 design basis?

5 MR. HEYMER: Yes. Just why don't we say we  
6 are going to maintain the design basis and then we  
7 know what that is and we can't change that, and we're  
8 always going to meet -- was it .2g ground motion or  
9 whatever is in the seismic.

10 MR. FAIRWEATHER: Well, I give you an  
11 example of where we have a little bit of a problem  
12 with that, and that's in the NEI guidance for seismic,  
13 which you've referenced the international building  
14 code criteria.

15 And you have a proposal that's kind of a  
16 hybrid between maintaining current design basis and  
17 using the international building code.

18 The hybrid is that you take the existing  
19 design input loads that you would use on a normal  
20 safety-related structure; and the international  
21 building code has factors in which you can reduce  
22 those loads for ductility.

23 And that was the intent of the language in  
24 the rule was that you can't do that kind of thing.  
25 That design inputs related to maintaining design basis

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1 are maintained.

2 MEMBER ROSEN: In principle, you're trying  
3 make sure that the structure doesn't fail, am I  
4 correct?

5 MR. HEYMER: That's correct.

6 MR. FAIRWEATHER: That's in theory, and  
7 part of the Option 2 is, as we understand it, is  
8 you're maintaining the design as it is right now.  
9 You're not changing the design, only the treatment.

10 MR. HEYMER: We can change the design  
11 today.

12 MR. PIETRANGELO: We can change the design  
13 today. And you can even change the design basis in  
14 certain circumstances.

15 MR. FAIRWEATHER: The intent is not under  
16 50.69. You can change the design of the current  
17 regulations and you certainly still have that option.

18 But 50.69's intent is not to change the  
19 design.

20 MR. PIETRANGELO: No, it's not to change  
21 the design basis. That is not the intent of 50.69,  
22 not to change the design. We can change the design.

23 MR. HEYMER: People change the design  
24 today.

25 MEMBER BONACA: I don't think you'll have

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1 a disagreement. When you're talking about a --

2 CHAIRMAN APOSTOLAKIS: Anyway, my question  
3 was answered. Thank you very much.

4 MR. HEYMER: Okay. Where were we? Forge  
5 ahead. Yes.

6 Okay. We've said, and I think we  
7 understood, the rule shouldn't necessarily describe  
8 the attributes, it should just list them.

9 And that the summary description, as we  
10 normally see in the QA topical, ought to be referenced  
11 or placed in the FSAR, which would describe those  
12 attributes.

13 And then as a further level of detail  
14 below that, there would be licensee's procedures that  
15 will be consistent with those statements in the FSAR.

16 The means of controlling changes to that  
17 program, we propose what's in place today, which is  
18 50.54a, and as regards to licensee commitments, to  
19 implement it in accordance with the NEI guideline, you  
20 would make a commitment and changes to the commitments  
21 are governed by NEI 99 -- the commitment management  
22 guidance, which is NEI 99-04.

23 MR. PIETRANGELO: Let me back up for a  
24 second and explain this in a different way.

25 If a licensee choose to implement 50.69,

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1 what really changes at their plant? What's  
2 fundamentally going to change is the treatment of what  
3 were safety-related SSC's still are that are not low  
4 safety significant.

5 That's reflected in your QA program  
6 descriptions, where you describe what you're going to  
7 do for the 16 criterion and Appendix B.

8 You've got a number of safety-related  
9 SSC's that are now going to get this other treatment  
10 and you have to reflect that in that program  
11 description, in that topical.

12 And that's what that does. That's the part  
13 that's going to change. There are no requirements in  
14 the current regulatory framework to put any of this  
15 other stuff into the FSAR or anywhere else. That would  
16 be the part that would be reflected.

17 Further, the categorization -- and this as  
18 opposed to what's discussed in the draft rule and what  
19 South Texas did, where there's a fairly lengthy  
20 description of the categorization process, as well as  
21 some new change control mechanisms for how you control  
22 these different things in the FSAR.

23 Our premise was let's use the current  
24 regulatory framework and the rules that have been  
25 established to try to implement 50.69. And that's

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1 what these bottom two bullets do.

2 If it's a change to the assurance  
3 practices, that should be reflected in the QA topical  
4 that's referenced in the FSAR, controlled by the  
5 current mechanism that controls that information.

6 The other part of the licensing basis is  
7 this commitment to our guideline, which will hopefully  
8 be endorsed in the reg guide.

9 That has a 70-page description of the  
10 categorization process. That has an additional 30  
11 pages on how to do treatment and guidance, as well as  
12 specific examples on how to do it, and we look forward  
13 to the discussion with the staff to get agreement on  
14 that.

15 But that -- the licensee would make a  
16 commitment to that, a commitment as part of your  
17 current licensing basis. That's controlled through a  
18 commitment management guideline that's been endorsed  
19 by the staff.

20 So we think the advantage of this approach  
21 is one, they're in the right places per the safety  
22 significant and two, you don't have to invent anything  
23 new in terms of change control, define -- we would  
24 need a whole new guidance document on how to define  
25 what decreased effectiveness means for what's in the

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1 current language in the rule.

2 And our premise -- unless there's a  
3 compelling reason that our current mechanisms won't  
4 work, we should try to use those. So that's where  
5 we're starting from.

6 MEMBER ROSEN: Tony, as distinct from the  
7 STP example, the only thing difference I see here is  
8 that in STP we put a new 13 -- Section 13.7 in the  
9 FSAR.

10 And you're suggesting here that we  
11 shouldn't do that.

12 MR. PIETRANGELO: There's no requirement  
13 for you to do that.

14 MEMBER ROSEN: Well, there was at STP.

15 MR. PIETRANGELO: Well, that's because you  
16 were an exemption request. This wasn't a rulemaking.  
17 So that was a special circumstance.

18 And when we had discussions in support of  
19 STP's application with some members of the staff, it  
20 was made clear to us that there's a difference between  
21 an exemption request and a generic rulemaking.

22 We're in rulemaking now. There's no  
23 requirement to put that stuff that you put in your SAR  
24 or that STP did in the current requirements.

25 MEMBER ROSEN: So presumably, if this rule

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1 came out the way you've got it now, we could take that  
2 material out of our SAR.

3 MR. PIETRANGELO: You would. You could.

4 MEMBER ROSEN: Because we also had to do  
5 the QA topical. Because that was the implementing  
6 document at the plant.

7 MR. PIETRANGELO: Right.

8 MEMBER ROSEN: And we ended up revising  
9 our operations quality assurance program.

10 MR. PIETRANGELO: I think one of the  
11 things we learned -- I mean, we spent four years  
12 redoing 50.59, redoing FSAR updates guidance,  
13 developing the commitment management guidelines,  
14 developing the design basis guidelines. We want to use  
15 all that stuff.

16 I mean, the ink's not even dry on most of  
17 that stuff yet. We shouldn't be inventing through this  
18 process new control mechanisms and new ways to go  
19 implement things in the current regulatory framework,  
20 unless there's a compelling reason to do so. We  
21 haven't found it yet.

22 MEMBER BONACA: Just help me to understand  
23 one of the issues that the staff is stressing is they  
24 want to maintain functionality. You don't disagree  
25 with that.

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1 MR. PIETRANGELO: No.

2 MEMBER BONACA: And we had an example on  
3 the table of the motor operated valves. 89.10 came  
4 about because valves were being tested not at design  
5 basis conditions.

6 So, for example, you have a valve in a  
7 steam line and you take credit for it to isolate under  
8 streamline break, for example.

9 Now one of the reasons why there was a big  
10 concern is when they began testing, in fact, many of  
11 them did not work under design basis conditions.

12 MR. PIETRANGELO: Right.

13 MEMBER BONACA: So that is why you still  
14 have 89/10 and you have retesting with some frequency  
15 or some requirements and so on and so forth to make it  
16 -- where would I get my confidence in functionality if  
17 I maintain those valves but I never test them now in  
18 the future, from here to end of the license term and  
19 those conditions?

20 I mean, what will provide me with this  
21 confidence on functionality that the staff and you  
22 seem to agree on?

23 MR. PIETRANGELO: I think one of the  
24 things that came up with 89.10 is that the actuators  
25 were undersized.

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1 MEMBER BONACA: That's right.

2 MR. PIETRANGELO: And, hopefully, most of  
3 the ones that were were replaced. I believe they  
4 probably have been by now.

5 Now you're into a maintenance and testing  
6 regime on these valves.

7 MEMBER BONACA: I agree.

8 MR. PIETRANGELO: You should have found  
9 all the ones that had undersized actuators associated  
10 with them.

11 There is data you get from static tests.  
12 There's other data you get from dynamic tests. I mean,  
13 this is where I think we do need more --

14 MEMBER BONACA: Okay. I can buy that.  
15 Now, let me ask you a question. Now you get an insight  
16 from some of the valves you still test that there are  
17 some concerns about some new effects and you have to  
18 retest all your valves. I hope that you don't have to,  
19 because it's a nightmare. But assume that.

20 MR. PIETRANGELO: Right.

21 MEMBER BONACA: Would you then go back and  
22 do the same thing on this, or is it left to the  
23 licensee to decide well, there's no safety  
24 significance so I'm not going to do it?

25 MR. HEYMER: Everybody has an operating

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1 experience program where if you have identified a  
2 problem in one area of the plant, or even in another  
3 plant --

4 MEMBER BONACA: I understand.

5 MR. HEYMER: -- that you have to go back  
6 and evaluate it. And I think depending upon the  
7 severity and the significance you would go back and  
8 may you have to say well, will these valves function?

9 And if your engineering determination says  
10 we have doubt that these valves would function, then  
11 you have to take action.

12 Now that may be as far as having to retest  
13 them.

14 MEMBER BONACA: So the utilities will  
15 maintain their commitment to functionality anyway.

16 MR. HEYMER: Yes. I mean, I think you've  
17 got to take -- there is a program in place today that  
18 feeds back that operating experience.

19 We're smarter now than we were ten years  
20 ago. We know more about valves than we did ten years  
21 ago. That stuff doesn't go away. And, in fact, the  
22 guideline has a statement in that regard.

23 MEMBER BONACA: I'm trying to test every  
24 once in a while this presumption of functionality that  
25 --

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1 MEMBER ROSEN: The industry operator -- I  
2 think it's an excellent example. The industry  
3 operating experience program Adrien referred to is  
4 part of the corrective action program.

5 MEMBER BONACA: Sure.

6 MEMBER ROSEN: And that is still required,  
7 regardless. So the sequence of events you went through  
8 is exactly what would happen.

9 MEMBER BONACA: Okay. Thank you.

10 CHAIRMAN APOSTOLAKIS: What's 99.04? Is  
11 that 00-04?

12 MR. HEYMER: No. 99.04 is the commitment  
13 management guideline, which is a process we use for  
14 changing commitments that's been endorsed by the  
15 staff.

16 So I guess in conclusion, we believe that  
17 industrial controls, as we see it, do provide --  
18 whether it's adequate confidence, sufficient  
19 confidence. I don't know. But the design basis will  
20 be maintained.

21 And not only on top of that is the  
22 monitoring element. But I think there's also an  
23 element associated with 50.65a4 in the risk  
24 management.

25 We've heard that that is not exempt. RISC-

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1 3 is still subject to those. So if that equipment is  
2 out of service, then we have to assess the risk on  
3 that and that's another input into the decisionmaking  
4 process that the plant management will go through  
5 about adjusting this -- or maintaining the equipment.

6 Very quickly now, just a run through as we  
7 see it as regards to the proposals that have been  
8 made, we note that there are high-level requirements  
9 and that Appendix T appears to have gone away, and we  
10 think that's a move in the right direction.

11 We do have concerns about having to  
12 implement this by the license amendment. We don't  
13 understand the rationale for that.

14 If you look at the other risk-informed  
15 applications that we've done in the past, it hasn't  
16 required a license amendment.

17 All we're doing is changing treatment.  
18 Treatment can be changed under 50.54a and if we have  
19 to go to the staff because it's a reduction in  
20 commitment, we make that submittal in accordance in  
21 50.4.

22 So I'm not quite sure why a license  
23 amendment is necessary, and we're struggling with that  
24 aspect.

25 So I don't know if there was light shed on

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1 that upstairs, Tony.

2 MR. PIETRANGELO: There was not.

3 MR. HEYMER: Okay. I think an item that  
4 was discussed in this subcommittee, the statement that  
5 appears -- it's on my page 4.

6 It's under -- for RISC-1 and RISC-2 SSC's,  
7 that licensees shall insure that the assumptions in  
8 the categorization and treatment begin applied to  
9 these SSC's are consistent.

10 We didn't really understand what that  
11 means and needs some clarification, and I think we can  
12 work with the staff to get that.

13 We're not talking about treatment as in  
14 the RISC-3 treatment. We're more talking about how the  
15 PRA is affected and how do you insure that the  
16 assumptions made in the PRA are correctly reflected  
17 and applied, or the other way around.

18 So I think that's the genesis, but we can  
19 have some discussions about that.

20 We've spoken about the -- as we saw it,  
21 the need to develop an additional program for RISC-3  
22 and RISC-4 and were a bit bewildered by that, and  
23 perhaps some of the clarifications that are going to  
24 be made will help us through that item.

25 We noted that part 21 would not be

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1 applied. On Appendix B that's not applied, but there's  
2 some statements on the corrective action that -- the  
3 way it's worded appears to us to be a little bit more  
4 stringent than what's required by the current Appendix  
5 B.

6 The preclude repetition is normally only  
7 associated with significant conditions of adverse  
8 quality and this says that if I had a defect and I  
9 fixed it, and everything was good and three years  
10 later it occurred -- it happened again, then that  
11 would be a violation.

12 And I think if we just finished it --  
13 correct it in a timely manner and we got the monitor  
14 process to determine has that been sufficient -- and  
15 there's some guidelines in the maintenance rule in  
16 that regard, I think that should be sufficient.

17 One item that's not on here, we talk about  
18 an oversight process and I'm not quite sure what we're  
19 trying to get at there.

20 I don't know if we mean the reactor  
21 oversight process, or the management oversight  
22 process, or what is in G is a substitute for audits,  
23 which we proposed in our guideline to be assessments.

24 So, I mean, that's something that we need  
25 to discuss with the staff.

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1           We've spoken about 50.65. Environmental  
2           qualification and EQ -- I think what's put in the  
3           language says that you're exempt from environmental  
4           qualification requirements.

5           We agree that you're still going to have  
6           to assure that the equipment's going to operate in its  
7           environment.

8           But then we go on to say "but must satisfy  
9           50.49 (e) (1) through (e) (7)." And that seems to be --  
10          we're not quite sure what we're getting with the  
11          exemption, if we've got to satisfy 50.49 (e) (1)  
12          through (e) (7), especially when you read some of the  
13          language in that specific regulation.

14          On ASME, I guess is it the glass half full  
15          or half empty? The staff say that 50.55a will  
16          continue to be applied in total and we will be allowed  
17          to use the code cases.

18          What we were thinking more along the terms  
19          -- along the lines that we would be exempt from  
20          50.55a, except that you would have to apply to code  
21          cases.

22          And if you like used EQ as the model, that  
23          you're exempt from EQ except you'd be exempt from  
24          50.55a, except that you would have to implement the  
25          code cases.

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1 I think that would be cleaner, from our  
2 perspective and perhaps we can have some discussions  
3 with the staff.

4 On seismic, we thought there might be a  
5 possibility of making that consistent with the  
6 approach for 50.55a, and we would like to have some  
7 further discussions with the staff on seismic to make  
8 sure that we have a good understanding of what the  
9 design basis is, and in that regard, what's in 97.04 -  
10 - we're using that as what is the design basis.

11 The specific example in there, that's the  
12 design basis guideline document. And perhaps we can  
13 use in some way, shape or form a national consensus  
14 standard.

15 And area that does give us cause for  
16 concern is that part 54 is not included within the  
17 scope of 50.69 specifically.

18 And I think that appears to us that you're  
19 going to a risk-informed approach, and that's the path  
20 that we appear to be on in improving the regulations,  
21 but then we got license renewal and we're not going to  
22 apply a risk-informed approach.

23 And I struggle with the rationale behind  
24 that. If there's no change in Part 54 and aging  
25 mechanism, why doesn't it apply n Part 54 if it

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1 applies in 50.69?

2 If it applies in Part 50 space, would  
3 shouldn't it apply in Part 54? So I think there's a  
4 degree of inconsistency there.

5 I don't know whether we need to establish  
6 or reestablish an understanding. Perhaps we need to  
7 just sit down at the table and talk with an open mind,  
8 as opposed to from our pillbox. And that goes for both  
9 sides of the equation, the industry and the NRC.

10 But I think, as Tony said, if we can get  
11 a better understanding to a certain extent on the rule  
12 and have that amplified in the guidance and then look  
13 at what we're doing in the pilots, incorporate the  
14 lessons learned and then adjust the guidance to  
15 incorporate the lessons learned from the pilots, and  
16 what we earn up with in the rule so that it's all  
17 consistent, we can get there.

18 We still have a fair way to go and I  
19 think, as we said before, we're talking months, not  
20 weeks.

21 CHAIRMAN APOSTOLAKIS: Any further  
22 questions or comments from the members?

23 MEMBER ROSEN: I just hope your final  
24 bullet on that slide means incorporating lessons from  
25 South Texas as well.

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1 MR. PIETRANGELO: Absolutely.

2 CHAIRMAN APOSTOLAKIS: So why don't you  
3 change the incorporating pilot and pioneering lessons?

4 MR. PIETRANGELO: We'll add pioneering.

5 MEMBER ROSEN: It would make me feel  
6 better.

7 MR. HEYMER: Mr. Chairman, you mentioned  
8 during the staff's presentation about coming back and  
9 talking about the guidance document and the  
10 categorization --

11 CHAIRMAN APOSTOLAKIS: Yes.

12 MR. HEYMER: -- and the specifics. And we  
13 would be willing to do that.

14 CHAIRMAN APOSTOLAKIS: It looks like it  
15 will be -- the earliest will be the February  
16 timeframe. So you will have plenty of advanced notice.

17 I would like to have a fairly technical  
18 discussion, so maybe you can --

19 MR. HEYMER: We'll make sure that the  
20 right people are here from the categorization and the  
21 PRA --

22 CHAIRMAN APOSTOLAKIS: Wonderful. That  
23 would be wonderful.

24 MR. PIETRANGELO: It's really an important  
25 piece of this whole --

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1 MEMBER ROSEN: Would you think that that  
2 plan is an adequate response to your request for us to  
3 weigh in?

4 CHAIRMAN APOSTOLAKIS: What? Oh, you mean  
5 having a subcommittee meeting?

6 MEMBER ROSEN: Yes. In February.

7 CHAIRMAN APOSTOLAKIS: That's not what you  
8 meant.

9 MEMBER ROSEN: Or did you envision more  
10 than that from the ACRS subcommittee and perhaps the  
11 full committee --

12 CHAIRMAN APOSTOLAKIS: Well, I mean a  
13 letter that says we agree with NEI would be really  
14 nice.

15 (Laughter.)

16 MEMBER ROSEN: At this stage it might have  
17 some substantial additional comments from other  
18 members.

19 CHAIRMAN APOSTOLAKIS: Well, that's what  
20 he wants. We'll certainly do that Adrien.

21 MR. HEYMER: And the other issue, we've  
22 got other commitments tomorrow. I'm out of town and  
23 we've got a senior executive meeting so we can't be at  
24 the meeting tomorrow.

25 CHAIRMAN APOSTOLAKIS: That's unfortunate,

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1 because it's always useful to hear the so-called other  
2 side.

3 Let's talk about the meeting tomorrow. How  
4 much time do we have tomorrow? It's not tomorrow?  
5 Thursday, isn't it?

6 MR. MARKLEY: It's tomorrow.

7 MEMBER BONACA: Tomorrow morning.

8 CHAIRMAN APOSTOLAKIS: Morning?

9 MR. MARKLEY: At 4 o'clock, after the  
10 Commission briefing.

11 CHAIRMAN APOSTOLAKIS: At 4:00 a.m.?

12 MR. MARKLEY: 4:00 p.m., George.

13 CHAIRMAN APOSTOLAKIS: After the  
14 Commission meeting.

15 MR. MARKLEY: Unless the Commission moves  
16 it forward or back. Right now it's still at 4 o'clock  
17 tomorrow.

18 CHAIRMAN APOSTOLAKIS: So we have an hour.

19 MR. MARKLEY: And a half.

20 CHAIRMAN APOSTOLAKIS: An hour and a half.  
21 What should we cover, Cynthia? Tim, come to the  
22 microphone. And that's the first question. The second  
23 is how to make sure that the full committee learns  
24 about the NEI position?

25 MR. PIETRANGELO: We left you the slides.

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1 And I hope we were able to answer your questions  
2 sufficiently so that you could convey that to the  
3 other members. I don't think we have another option at  
4 this point.

5 CHAIRMAN APOSTOLAKIS: Tim, what do you  
6 think we should do tomorrow?

7 MR. REED: Well, we can't even begin to go  
8 through the slides the way we did today. That's for  
9 sure. So we have to do something a lot shorter.

10 CHAIRMAN APOSTOLAKIS: Well, you can't  
11 prepare new slides, I imagine.

12 MR. REED: Well, that's why I have  
13 tomorrow --

14 CHAIRMAN APOSTOLAKIS: You can just delete  
15 some of the ones --

16 MR. REED: Yes.

17 CHAIRMAN APOSTOLAKIS: Yes.

18 MR. REED: I think we could try to focus  
19 on the highlights of the slides and --

20 CHAIRMAN APOSTOLAKIS: Tim, can you also  
21 maybe have one or two view graphs, given the  
22 presentation today by NEI and your past interactions  
23 with them, identifying in bullets the main  
24 disagreements or is that too much to ask?

25 MR. REED: I can try. I mean, I think it

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1 can be -- I try to be objective and fair --

2 CHAIRMAN APOSTOLAKIS: No, you don't have  
3 to argue one way or another. You say on this point  
4 there is disagreement.

5 MR. REED: Well, there's areas we haven't  
6 reached closure, that's for sure.

7 CHAIRMAN APOSTOLAKIS: Yes. Open items or  
8 something.

9 MEMBER ROSEN: I think it would be helpful  
10 also to have a slide or some bullets of what has been  
11 discussed today about some of the committee's comments  
12 on NEI's -- some of the areas where we feel --

13 CHAIRMAN APOSTOLAKIS: Well, remember now,  
14 it's only a few hours. I don't know --

15 MEMBER ROSEN: But we don't want to  
16 characterize it for the rest of the committee that all  
17 is -- let me try it the other way. We need to  
18 characterize it with the committee that there are some  
19 issues.

20 And those issues were not just about the  
21 regulation, they were about NEI-00-04.

22 CHAIRMAN APOSTOLAKIS: Oh, don't worry  
23 about that, Steve. The committee will be informed.

24 MEMBER BONACA: Well, one thing that I  
25 want to mention is in the material we received before

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1 the meeting there was a discussion of boundary  
2 conditions.

3 CHAIRMAN APOSTOLAKIS: Yes, and there was  
4 nothing today.

5 MEMBER BONACA: And then there was a  
6 discussion of three approaches that could be used and  
7 then I heard here that essentially one has been  
8 selected as -- the one in the middle.

9 I would like to hear about -- if there was  
10 a way, even just an overhead to discuss the three  
11 boundary conditions. They're important. They're three  
12 criteria that you're using.

13 And also, which option has been chosen in  
14 the proposed rule.

15 MR. REED: It's actually pretty simple.  
16 The three alternatives. One was basically a purely  
17 commercial approach for both RISC-3 and RISC-4.

18 Alternative 2 was basically pretty much  
19 what you had seen in draft rule -- I think it's a fair  
20 statement. It's not too far off of alternative 2, which  
21 is a high level, programmatic requirements that you  
22 see for RISC-3.

23 And then the alternative three was perhaps  
24 the most onerous or most detailed in the rule, if you  
25 will. It's basically taking what was the FSAR for

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1 South Texas and putting it in the rule.

2 And we got, we think a little bit better  
3 in alternative 2, but I think NEI's saying -- I think  
4 it's pretty fair, pretty close to alternative 2.

5 MEMBER BONACA: You may want to mention it  
6 without having to generate a slide and just say that  
7 also the other members have received this material,  
8 and you're left a question and you're likely to get a  
9 question regarding that.

10 MR. REED: How much do you want to go  
11 through this draft rule language again? I mean, it's  
12 really bogged us down today.

13 MEMBER KRESS: I think you need to go over  
14 slide 6, 7 and 8.

15 MR. REED: We're getting past --  
16 categorization. Is that -- okay.

17 MS. MCKENNA: That's what we figured.

18 MR. REED: We can focus on categorization  
19 and we can focus on RISC-3, if you like. I mean, I  
20 think that's the two areas that --

21 MS. MCKENNA: The treatment on RISC-3,  
22 because that is an area of disagreement.

23 MR. REED: To me, they jump out.

24 MEMBER BONACA: The other thing that is  
25 very important, in a long meeting like this, we

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1 discussed maybe for three minutes or two minutes some  
2 examples.

3 Like, to me, the MOV discussion was  
4 illustrative. It was -- because, well, I can get some  
5 confidence that although we will test these valves,  
6 since we now have learned a lot about the others and  
7 we are monitoring the others, we are correcting --  
8 there is an understanding how you get confidence about  
9 functionality without testing, and that's a hard  
10 point.

11 And you may want to provide a couple of  
12 examples of that, even verbal. You don't have to,  
13 again, but --

14 CHAIRMAN APOSTOLAKIS: If I were you, I  
15 wouldn't bring up the example of the common cause  
16 failure across systems. This is a structuralist  
17 defense, in-depth approach if I ever saw one.

18 I want to have confidence. Don't ask me  
19 why.

20 MEMBER KRESS: I think we could put off  
21 the pilot activity until later.

22 MR. REED: Yes, I think we're going avoid  
23 the pilot activity. Basically, we'll avoid all of the  
24 other slides there. I'm trying to get this down to  
25 maybe at the most --

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1 CHAIRMAN APOSTOLAKIS: If there is time,  
2 we can talk about things.

3 MEMBER BONACA: When I asked you if you  
4 would fly that plane, you said I wouldn't.

5 CHAIRMAN APOSTOLAKIS: Okay. Anything  
6 else? Any other comments from the members?

7 MEMBER SHACK: One thing I would find  
8 helpful, you know. You seem to talk past each other.  
9 You have these high-level requirements. And I think  
10 you're right.

11 You know, you really won't know what's  
12 going on here until you get down to more detailed  
13 guidance.

14 But some of the guidance in your document  
15 -- and it says to me a licensee's industrial balance  
16 of plant control program are sufficient. I see that  
17 assertion in your guidance. I see it in the lawyer's  
18 statement, but nobody ever tells me just what the  
19 attributes of that program are.

20 MR. PIETRANGELO: That's how we had it in  
21 that definition.

22 MEMBER SHACK: And I think -- well, I think  
23 even that you need to fill out a little bit --

24 MR. PIETRANGELO: Well, this is what -- we  
25 didn't show you the whole licensing basis piece, but

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1 I'd say the rule had those elements in it.

2 We would expect a summary description of  
3 those elements to go in your QA topical that's  
4 referenced in the UFSAR to describe what those  
5 elements do.

6 Then in a commitment to our guideline,  
7 there's an additional 30 pages of guidelines.

8 MEMBER SHACK: But who's going to supply  
9 that language?

10 MR. PIETRANGELO: They have to endorse our  
11 guidance and our reg guides.

12 MR. HEYMER: And we're working on, as you  
13 see in the guidance -- an appendix there that begins  
14 to describe -- now, we've got to change one or two or  
15 the words like typical, of what a program would look  
16 like.

17 And they would -- those words were taken  
18 from people's current balance of plant programs.

19 MR. PIETRANGELO: So we're not saying the  
20 discussion's over on what the elements should be.  
21 We're going to have that discussion. But is that rule  
22 language, or is that the summary description that you  
23 put in the FSAR?

24 CHAIRMAN APOSTOLAKIS: Anything else? No.  
25 Thank you very much, gentlemen. And this meeting is

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1 adjourned.

2 (Whereupon, the meeting was adjourned at  
3 5:21 p.m.)

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This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: ACRS Reliability and  
Probabilistic Risk Assessment  
Subcommittee

Docket Number: (Not Applicable)

Location: Rockville, Maryland

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.



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