



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001**

November 15, 2011

MEMORANDUM TO: File

FROM: Sherry Meador */RA/*
Technical Secretary, ACRS

SUBJECT: CERTIFICATION OF THE MEETING TRANSCRIPT
FROM THE ADVISORY COMMITTEE ON REACTOR
SAFEGUARDS US APWR SUBCOMMITTEE MEETING
HELD ON OCTOBER 20, 2011 IN ROCKVILLE,
MARYLAND

The transcript of the subject meeting has been declared as the official record of the proceedings of that meeting.

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: Advisory Committee on Reactor Safeguards
 US-APWR Subcommittee

Docket Number: (n/a)

Location: Rockville, Maryland

Date: Thursday, October 20, 2011

Work Order No.: NRC-1218

Pages 1-287

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

+ + + + +

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

+ + + + +

US-APWR SUBCOMMITTEE

+ + + + +

THURSDAY

OCTOBER 20, 2011

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

The Subcommittee met at the Nuclear
Regulatory Commission, Two White Flint North, Room
T2B1, 11545 Rockville Pike, at 8:30 a.m., John W.
Stetkar, Chairman, presiding.

SUBCOMMITTEE MEMBERS:

JOHN W. STETKAR, Chairman

DENNIS C. BLEY, Member

CHARLES H. BROWN, JR. Member

JOY REMPE, Member

MICHAEL T. RYAN, Member

WILLIAM J. SHACK, Member

GORDON R. SKILLMAN, Member

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DESIGNATED FEDERAL OFFICIAL:

ILKA BERRIOS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

C-O-N-T-E-N-T-S

Opening Remarks and Objectives, John Stetkar . . . 4

Staff Introduction 4

Discussion of Comanche Peak FSAR Chapter 11,
 "Radioactive Waste Management," Luminant 5

Discussion of the SER related Comanche Peak FSAR
 Chapter 11, "Radioactive Waste Management," NRC
 staff 51

Discussion of Comanche Peak FSAR Chapter 12,
 "Radiation Protection," Luminant 61

Discussion of the SER related Comanche Peak FSAR
 Chapter 12, "Radiation Protection," NRC staff . . 81

Staff Introduction, Stephen Monarque 86

Risk-Managed Technical Specifications Briefing, NRC
 staff 87

Risk-Managed Technical Specifications Briefing,
 Luminant 216

Subcommittee Discussion, John Stetkar 269

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

8:28 a.m.

CHAIRMAN STETKAR: The meeting will now come to order. This is a meeting of the United States Advanced Pressurized Water Reactor Subcommittee. I'm John Stetkar, Chairman of the Subcommittee meeting.

ASCR members in attendance are: Joy Rempe; Charles Brown; Bill Shack; Mike Ryan; Dennis Bley and Dick Skillman. Ilka Berrios of the ACRS staff is the designated federal official.

The committee will review Chapter 11, Radioactive Waste Management; and Chapter 12, Radiation Protection and the Safety Evaluation Report with open items associated with the Comanche Peak combined license application. There will also be a briefing on the risk-managed technical specifications. We'll hear presentations from the NRC staff and Luminant Generation Company.

We will receive no written comments or requests for time to make oral statements from members of the public regarding today's meeting.

The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions as

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

(202) 234-4433

(202) 234-4433

1 appropriate for deliberation by the full committee.

2 The rules for participation in today's
3 meeting have been announced as part of the notice of
4 this meeting previously published in the *Federal*
5 *Register*.

6 Parts of this meeting may need to be
7 closed to the public to protect information
8 proprietary to Luminant or other parties. I'll ask
9 the NRC staff and the applicant to identify the need
10 for closing the meeting before we enter into such
11 discussions and to verify that only people with the
12 required clearance and need to know are present.

13 A transcript of the meeting is being
14 kept and will be made available as stated in the
15 *Federal Register* notice. Therefore, we request that
16 participants of this meeting use the microphones
17 located throughout the meeting room when addressing
18 the Subcommittee. The participants should first
19 identify themselves and speak with sufficient
20 clarity and volume so that they may be readily
21 heard.

22 We'll now proceed with the meeting, and
23 I call on Steve Monarque. Steve, good morning.

24 MR. MONARQUE: Thank you, Mr. Stetkar.
25 My name is Stephen Monarque. I'm the lead project

1 manager for the Comanche Peak COL review and I'm
2 with the Office of New Reactors.

3 I want to thank you for giving us the
4 opportunity to present our chapter to the ACRS
5 Subcommittee. This is our third meeting. We've
6 previously presented Chapters 5, 8 and 10 to the
7 Subcommittee. This morning we will present Chapters
8 11 and 12 for the Comanche Peak combined license
9 application.

10 The staff's review for both of these
11 chapters was conducted through Revision 1 of the COL
12 application which implemented Revision 2 in the DCD.
13 We did receive Revision 2 of the COL in June of this
14 year, but staff's still doing the review.

15 And with that, I want to introduce my
16 branch chief, Hossein Hamzehee for opening remarks.

17 MR. HAMZEHEE: I don't have any.

18 CHAIRMAN STETKAR: You've always been a
19 man of few words.

20 MR. MONARQUE: With that, I conclude my
21 remarks.

22 CHAIRMAN STETKAR: Thanks, Stephen. And
23 with that, I'll turn it over to, I guess, John?
24 Don?

25 MR. WOODLAN: I'll start it off.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Oh, okay.

2 MR. WOODLAN: Good morning. Glad to be
3 back here again. My name is Don Woodlan. I'm the
4 licensing manager for Luminant for the new unit,
5 Comanche Peak units 3 and 4. And like I say, it's a
6 pleasure to be here in spite of the Rangers' loss
7 last night.

8 MR. WOODLAN: As you pointed out, we're
9 here today to give a briefing on Chapters 11 and 12,
10 and then we'll talk a little bit about risk-informed
11 technical specifications and where we're heading
12 with regard to those. As you probably already know,
13 having looked over some of the materials, Chapters
14 11 and 12 are really not anything all that unusual.
15 We're pretty much following what current operating
16 plants are doing and the guidance that's been
17 developed for new plants. And so we're adopting it.
18 Most of it should look very familiar. Something a
19 little different; we'll talk about it, is the
20 interim radwaste storage building that we're
21 constructing on site.

22 With respect to risk-informed technical
23 specification, this is a fairly new area. We're the
24 first Part 52 plant to pursue these, and so I think
25 the concept of doing a briefing at this point in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 time to introduce the Subcommittee to what we're
2 doing is a really good idea. And of course, we'll
3 follow up with the full presentations when we do the
4 chapters, probably 16 and 19.

5 I guess that's all I really wanted to
6 say in the way of an introduction. Like I say, I'm
7 the licensing manager, so I'm going to give my seat
8 up to somebody who knows something technically, and
9 I'll turn it over to John Conly to start Chapter 11.

10 MR. CONLY: Thank you, Don. Good
11 morning. My name is John Conly. I'm the COLA
12 project manager for Comanche Peak, Units 3 and 4. I
13 will present Chapter 11 of the FSAR.

14 The agenda or the order of presentation:
15 I'll make a brief introduction; we'll look at an
16 overview of the chapter and discuss briefly the SER
17 open items; we'll look at proposed license
18 conditions; and finish with site-specific aspects in
19 the FSAR.

20 The FSAR uses the incorporation by
21 reference methodology and there are no departures
22 taken from the US-APWR design control document in
23 Chapter 11. All COL items are addressed in the
24 FSAR. The NRC staff has two open items in the SER.
25 There are also 17 SER confirmatory items consisting

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of the staff confirming that FSAR markups that we
2 submitted to the Commission in response to RAIs
3 actually make it into the COLA revision. There are
4 four proposed license conditions by the staff and
5 there are no contentions pending before the ASLB.

6 An overview of the chapter. As you
7 know, there are five sections in Chapter 11. There
8 were 30 questions asked in the chapter, all of which
9 have been responded to and resulting in two SER open
10 items.

11 You are familiar with all of the
12 acronyms on this slide perhaps except PERMS, Process
13 Effluent Radiation Monitoring and Sampling System.
14 PERMS is a lot easier to say.

15 The first SER open item noted by the
16 staff is 11.02-1 regarding detailed design
17 information for site-specific sampling locations in
18 our evaporation pond, and I'll describe that in more
19 detail later. The resolution of this open item is
20 that Luminant will submit a supplemental response
21 and additional information.

22 The second open item in the SER is
23 11.04-1 regarding detailed design information for
24 the interim radwaste storage facility Don alluded to
25 earlier. We will address that in more detail in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 presentation, and the resolution of the SER open
2 item is that Luminant will submit a supplemental
3 response with further information.

4 Regarding the proposed license
5 conditions, the NRC noted in the SER four proposed
6 license conditions as shown on the slide, each one
7 of which requires the implementation of an
8 operational program such as the Process Control
9 Program, the Radiological Effluent Tech Specs, Off-
10 Site Dose Calculation Manual, or the Radiological
11 Environmental Monitoring Program.

12 In part 10 of COLA Revision 1, Luminant
13 had listed each operational program to be
14 implemented as a separate license condition. In May
15 of this year, Luminant simplified it's proposed
16 license condition for operational programs based on
17 discussions with the staff in February regarding the
18 model COL that the staff was developing. That
19 simplification proposed a single license condition
20 to control the implementation of all operational
21 programs annotated as being implemented by license
22 condition in FSAR table 13.4-201.

23 This is a page out of that table showing
24 that indeed there are four sub-parts for this
25 particular Process Effluent Monitoring and Sampling

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Program to be implemented by license condition. The
2 bottom line is, regardless if its one license
3 condition or four license conditions, the
4 operational programs will be implemented by license
5 condition as stated in FSAR table 13.4-201.

6 The site-specific aspects, Section 11.1,
7 the Source Terms, there are no site-specific
8 aspects. It's incorporated by reference without
9 departures for supplements. 11.2, the Liquid Waste
10 Management System, 11.2.1.5 subsection addresses the
11 cost benefit analysis which determined that there
12 are no cost beneficial liquid radwaste augments and
13 no further cost benefit analysis is needed to
14 demonstrate compliance with 10 C.F.R. 50, Appendix
15 I.

16 MEMBER BLEY: Can I take you back a
17 page --

18 MR. CONLY: Yes, please.

19 MEMBER BLEY: -- to that table? When I
20 thumb through the table and look at the things; and
21 maybe this is really a question for staff rather
22 than for you, a lot of the items on there look very
23 similar to the kind of things we see in ITAACs and
24 other systems. I'm just wondering why these end up
25 being license conditions rather than tests and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 inspections.

2 MR. CONLY: Reg Guide 1.206 --

3 MEMBER BLEY: Requires it. Okay.

4 MR. CONLY: -- has this table.

5 MEMBER BLEY: Got you. Okay. I saw
6 that going through, but that's just the way it is.

7 MR. MONARQUE: I think I can answer.
8 There's a SECY 05197 which discusses operational
9 programs --

10 MEMBER BLEY: Yes.

11 MR. MONARQUE: -- and it lists the
12 license conditions we would have for such
13 operational programs, including the process of
14 monitoring effluent.

15 MEMBER BLEY: Okay. But then when you
16 get down to the detail, they're really essentially
17 like ITAACs, so you'll confirm them by inspections,
18 I suppose. Is that right?

19 MR. MONARQUE: That is correct.

20 MEMBER BLEY: Okay. Thanks.

21 MR. MONARQUE: Program.

22 MR. CONLY: It would probably be
23 beneficial to walk through the flow diagram just to
24 refresh nomenclature. Beginning in the upper left
25 of this figure, liquid radwaste is collected from

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 tanks in the auxiliary building, in the reactor
2 building and from the containment vessel sump and
3 transferred to the waste holdup tanks, the four
4 tanks on the upper left. Next are the radwaste
5 effluent inlet filters where suspended solids and
6 radioactive particulates are removed. At this point
7 the US-APWR design allows for portable or temporary
8 additional equipment. And you can see that going
9 off to the upper right is the tap for that
10 additional equipment. Space is provided in the
11 auxiliary building. We will describe that in more
12 detail later.

13 CHAIRMAN STETKAR: You haven't made that
14 decision yet?

15 MR. CONLY: Yes.

16 CHAIRMAN STETKAR: You have? Okay.

17 MR. CONLY: We have decided to use de-
18 watering system. Additional liquid waste treatment
19 skids could be brought in in the future as
20 technology improves, etcetera. So there are two
21 separate areas that are available to us.

22 CHAIRMAN STETKAR: Okay. But so far you
23 just made the decision about the de-watering for
24 the --

25 MR. CONLY: That's correct.

1 CHAIRMAN STETKAR: -- processing, yes,
2 solid stuff. Okay.

3 MR. CONLY: Next are the activated
4 carbon filters to remove organic contaminants that
5 could foul the ion exchange columns followed by the
6 waste demineralizers themselves where the ion
7 exchange resin removes radionuclide impurities. The
8 waste effluent outlet strainer then removes any
9 fines left from the resins. And finally the treated
10 effluent is stored in the waste monitor tanks
11 awaiting discharge. The Liquid Waste Monitoring
12 System boundary is at the waste monitoring tank
13 discharge isolation valve. There is a radiation
14 monitor prior to discharge to either the Squaw Creek
15 Reservoir or to the evaporation pond, and we'll
16 address that in more detail later.

17 CHAIRMAN STETKAR: Address the radiation
18 monitor or the pond itself?

19 MR. CONLY: The pond itself.

20 CHAIRMAN STETKAR: Okay. Let me ask you
21 a question about this drawing, if you're finished
22 with the overview of the system. This drawing does
23 not show the bypass line around the effluent
24 discharge valves that apparently Comanche Peak added
25 to the certified design. There are some RAIs about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it. The figure in the FSAR shows the discharge line
2 bypass, and indeed it bypasses the radiation
3 monitor, you know, some discussion about
4 administrative controls that will provide samples
5 for the discharge and how that will be controlled
6 administratively, but curious that our Subcommittee
7 is not seeing the representation of the system as it
8 will be installed at the plant, and I'd like to know
9 why.

10 MR. CONLY: This is the flow diagram
11 from the DCD itself.

12 CHAIRMAN STETKAR: It is. It is not the
13 flow diagram for the Comanche Peak Nuclear Power
14 Station, which is the subject of our meeting here.
15 Because I had some questions about that bypass line
16 and this drawing would have given me the opportunity
17 to ask about those questions, if indeed the bypass
18 line was shown on this drawing.

19 MR. CONLY: Let me ask Mr. Sang to
20 address that.

21 MR. SANG: My name is Irving Sang. Good
22 morning. Yes, we received the RAI and we looked at
23 the bypass around the radiation monitor and also the
24 two on/off valves. And our decision, working with
25 Luminant and MNES is to maintain administrative

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 control on that. It is still on the P&IDs, piping
2 and instrumentation diagrams. That's the current
3 status.

4 CHAIRMAN STETKAR: Okay. But it does
5 exist?

6 MR. SANG: Yes.

7 CHAIRMAN STETKAR: Okay.

8 MEMBER SKILLMAN: This is Dick Skillman.
9 May I please ask a question?

10 CHAIRMAN STETKAR: Sure.

11 MEMBER SKILLMAN: You've identified on
12 your second slide that there are no departures. Why
13 is not that line identified as a departure?

14 MR. SANG: We still have that line on
15 the P&ID drawing. It's not showing up on the
16 process flow diagram.

17 CHAIRMAN STETKAR: Are you saying that
18 it shows up on the P&ID for the certified design?

19 MR. SANG: Yes.

20 CHAIRMAN STETKAR: Oh. Oh, well, that's
21 interesting that there are pieces of pipe in the
22 certified design that don't show up on the drawings
23 in the design certification document.

24 MEMBER SKILLMAN: Bingo. That's the
25 issue.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: That's the issue. I
2 wasn't aware of that line at all when we looked at
3 the design certification. There was no mention made
4 of it. It does not show up on any drawing in the
5 DCD. So now that brings into question about the
6 completeness of the information that you're
7 providing for the design certification so that
8 people can perform a reasoned review of that design.
9 This is not a DCD, but if you guys could take that
10 back, please. To me that's really upsetting. If I
11 see a flow diagram in the design certification
12 document, I would like to have confidence that
13 indeed I can get water from point A to point B and
14 know how to get water through the flow paths from
15 those points.

16 MEMBER SKILLMAN: Yes, and not have it
17 go someplace else --

18 CHAIRMAN STETKAR: And not have it go
19 someplace else.

20 MEMBER SKILLMAN: -- not shown on the
21 drawing.

22 CHAIRMAN STETKAR: And it was not -- I
23 mean, we've done our interim review of Chapter 11
24 for the DCD, and as you said, this is a copy of the
25 drawing from the DCD. I thought this was something

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that Luminant had added to the design to increase
2 operational flexibility for some reason.

3 MR. SANG: We have not shown all the
4 bypass lines on these process flow diagrams. In
5 general, we have bypass line on the filters,
6 etcetera, and we --

7 CHAIRMAN STETKAR: Some things like
8 bypassing filters are one thing. Bypassing the
9 radiation monitor and the automatic isolation of the
10 discharge point from the plant is a bit different in
11 the sense of system design information and system
12 operation information.

13 MR. SANG: I understand, yes.

14 CHAIRMAN STETKAR: It's a little
15 different than bypassing a demin. So I don't know
16 where the appropriate point to ask the question is
17 essentially for the COL. The question that I had is
18 I could design that system with the bypass line
19 tapped into the discharge downstream of the
20 radiation -- between the radiation monitor and the
21 isolation valve such that even if I was using the
22 bypass line I would at least have a monitored
23 release with alarms in the control room. And
24 according to the design certification information
25 the radiation monitor also trips the discharge pumps

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 so that even if I was using the bypass line with the
2 manual valve with administrative controls, I would
3 at least shut it off if I had high radiation.

4 MR. SANG: Agreed. We will look into
5 that, but currently when we look at the drawing --

6 CHAIRMAN STETKAR: That sounds like a
7 question for the design certification though, if
8 that exists there. So I guess we'll table that for
9 the design certification and put it on our -- we
10 keep a tickler list of these questions, so this one
11 will come back for the DCD.

12 MEMBER BLEY: Well, I guess before we
13 leave this, there have been other cases where we've
14 seen some of the DCD drawings for some of the
15 designs are not complete and we've raised the issue
16 with staff, if they get the P&IDs and look through
17 them, to confirm single failure, that sort of thing.
18 And the story changed from no to yes, indeed we
19 looked through them. So the fact that staff didn't
20 pick this one up as a possible bypassing of
21 monitoring and protection is troublesome as well.

22 CHAIRMAN STETKAR: The reason I picked
23 it up is (a) it shows up on a drawing in the COL
24 FSAR and the staff asked questions about it, you
25 know, in regards to the proceeding that we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 hearing today. There were no questions asked about
2 it during the DCD, at least --

3 MR. MONARQUE: Mr. Stetkar, I think we
4 have a response to your question.

5 CHAIRMAN STETKAR: Okay.

6 MR. MONARQUE: I'll turn it over to
7 staff.

8 MR. WILLIAMS: My name is Steve Williams
9 with --

10 CHAIRMAN STETKAR: Steve, you got to get
11 real close to the mic, otherwise -- that one doesn't
12 pick up quite as well as some of the other things.

13 MR. WILLIAMS: I'm with NRO in the
14 health physics section, and we did ask an RAI. It
15 was RAI 5474, question 11.2-17, in April. And they
16 did respond to it.

17 Usually if you had a setup like this,
18 which I've done effluent programs before. I worked
19 at Three Mile Island and we -- anytime you have a
20 bypass line like that, you want to release without a
21 rad monitor, you have to go to the tech spec
22 conditions for release. You go to the tech spec.
23 It requires you take two representative samples and
24 also that they're verified by two plant staff and
25 signed off by a supervisor in accordance with plant

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 procedures and tech specs before you could release
2 that tank without the rad monitor through the bypass
3 line.

4 CHAIRMAN STETKAR: And how many times
5 have we read double sign offs with all
6 administrative controls not working?

7 MR. WILLIAMS: I don't have any
8 statistics --

9 CHAIRMAN STETKAR: Okay.

10 MR. WILLIAMS: -- on that, but that's
11 the requirement.

12 CHAIRMAN STETKAR: How difficult is it
13 to tap in that bypass line between the radiation
14 monitor and the two fail closed valves as opposed to
15 the point where they have it tapped in?

16 MR. WILLIAMS: Right. Yes, I understand
17 that.

18 CHAIRMAN STETKAR: Since this is your
19 paper design.

20 MR. WILLIAMS: Right.

21 MEMBER SKILLMAN: This is Dick Skillman.
22 For me this issue is one of configuration control
23 and fidelity with the design certification. And as
24 far as I see this, had that line that John had been
25 talking about been shown on this diagram, we would

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 not be having this discussion.

2 CHAIRMAN STETKAR: Well, we'd have had
3 the discussion --

4 MEMBER SKILLMAN: Perhaps in --

5 CHAIRMAN STETKAR: -- in the earlier
6 meeting.

7 MEMBER SKILLMAN: But for me this issue
8 is configuration control and assuring that what
9 we're doing here with no departures is accurate.
10 And so I think the questions that we raise, Steve,
11 are appropriate questions --

12 MR. WILLIAMS: Right. Right.

13 MEMBER SKILLMAN: -- so that we can
14 understand how this application fits the design
15 certification.

16 MR. WILLIAMS: Sure, I understand that,
17 but also the staff was aware of it and we did
18 evaluate it in terms of design.

19 MEMBER SKILLMAN: Okay. Thank you,
20 Steve. Thank you.

21 CHAIRMAN STETKAR: I didn't recall --
22 you know, we don't see all of the RAIs and I have to
23 apologize if we missed that one, but --

24 MR. WILLIAMS: Well, it's in the SER on
25 page 11-12.

1 CHAIRMAN STETKAR: 11-12?

2 MR. WILLIAMS: Right.

3 CHAIRMAN STETKAR: Okay. Thanks. I'll
4 go back and look it up, because I must have missed
5 it when I read through. It was pretty prominent in
6 the SER for the COL.

7 MR. WILLIAMS: Right, we spent
8 significant time on that --

9 MEMBER BLEY: Yes, just clarification,
10 you're talking -- there's an RAI for the design
11 cert, or for the COL?

12 MR. WILLIAMS: For the COL.

13 CHAIRMAN STETKAR: Oh, for the COL?

14 MR. WILLIAMS: Right.

15 CHAIRMAN STETKAR: Oh, I'm sorry. I
16 misunderstood twice. I'm not been doing all that
17 well this morning. I thought you were saying it was
18 an RAI for the design certification.

19 MR. WILLIAMS: No, it's right in page --

20 CHAIRMAN STETKAR: No, that's where -- I
21 can quote it. I have it written down here.

22 MEMBER BLEY: I think the question was
23 why wasn't it?

24 CHAIRMAN STETKAR: Why wasn't it for the
25 design certification if indeed the line exists as

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 part of the certified design? Why wasn't that
2 question asked when the design certification --

3 MR. WILLIAMS: Well, that I can't answer
4 because I wasn't involved --

5 CHAIRMAN STETKAR: Okay.

6 MR. WILLIAMS: -- in the DCD review and
7 evaluation, but I definitely can go back and look at
8 that and see if it --

9 CHAIRMAN STETKAR: I mean, that's
10 becoming more of our -- I mean, there's still a
11 concern about controlling the releases through that
12 line and does the design -- you know, is the design
13 adequate to give us assurance that the releases will
14 be monitored, but it's a question of whether we
15 should be raising those questions. We should be
16 raising those questions. We will raise those
17 questions. Whether those questions are pertinent to
18 the certified design or the COLA, it sounds like
19 they're pertinent to the certified design because
20 essentially they're just adopting the certified
21 design with this particular --

22 MR. HAMZEHEE: You're right, John, but
23 just in general some of these systems under DCD are
24 more conceptual design and the details are on the
25 COLA applications, or in general they don't provide

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 a lot of details under DCD?

2 CHAIRMAN STETKAR: Well, obviously the
3 flow diagram didn't.

4 MS. WHITE: Excuse me, Dr. Stetkar?

5 CHAIRMAN STETKAR: Yes?

6 MS. WHITE: Frostie White with
7 Mitsubishi. We actually do provide the diagram in
8 the FSAR. It's figure 11.2-201 and it shows the
9 bypass lines.

10 MEMBER BROWN: I've been looking at that
11 and I -- which sheet? There's 10 sheets.

12 MS. WHITE: Sheet 9.

13 MEMBER BROWN: Oh, sheet 9?

14 MS. WHITE: Nine and ten.

15 CHAIRMAN STETKAR: We can look that up.
16 Let's keep the meeting moving. I'm having a little
17 trouble opening the file here. And it's sheet what?

18 MS. WHITE: Nine and ten.

19 MEMBER BROWN: I'm looking at 9 right
20 now. What's the symbol for the radiation monitor?

21 MS. WHITE: RE.

22 MEMBER BROWN: RE? Okay. We don't have
23 a symbol list here, so -- all right. So those are
24 the two isolation valves you're talking about that
25 -- in both places.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Frostie, what's --
2 I'm having trouble opening my file here. What was
3 the figure number, 11.2 --

4 MS. WHITE: 11.2-201. Sheet 9.

5 CHAIRMAN STETKAR: Oh, that's 201.
6 That's from your -- I know. I have -- there's a
7 blowup of it. I know it's in the COLA FSAR. It's
8 not in the DCD.

9 MS. WHITE: I think I can explain that.
10 There is a --

11 CHAIRMAN STETKAR: Okay. Okay. So --

12 MS. WHITE: There's a COLA action item
13 in the DCD that says that the applicant will provide
14 P&IDs. These are flow diagrams and so they're
15 distinguished between the two, and that's why we
16 provided these under the FSAR even though they're
17 part of certified design.

18 CHAIRMAN STETKAR: I got that.

19 MS. WHITE: That's the simple different.

20 CHAIRMAN STETKAR: Maybe I'm just being
21 dense, but a bypass line around the plant discharge
22 valves and radiation monitor that exists in the
23 certified design and is neither shown on the flow
24 diagrams in the design control document nor
25 questioned by the staff during their review of the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 certified design gives me problems.

2 MS. WHITE: I understand.

3 CHAIRMAN STETKAR: As far as Luminant is
4 concerned, I don't have any problem with you folks.
5 You folks are accurately representing the depiction
6 of the system. The FSAR indeed is accurate and
7 indeed the discussion, you know, in your responses
8 to the staff's RAI regarding this, you know, is
9 basically what you're planning to do. So, you know,
10 as far as Luminant and Comanche Peak is concerned,
11 you know, the questions that I had are really not
12 relevant to today's meeting. It's just that the
13 first time I saw that line and the first time I saw
14 any discussion of its use happened to pop up in the
15 RAIs that were issued for Luminant and in the FSAR
16 drawing that indeed shows that line, where it's
17 tapped in and things like that.

18 MS. WHITE: Right.

19 MEMBER BROWN: But your earlier point I
20 think raises a question about why is it bypassing
21 the radiation monitor in the first place?

22 CHAIRMAN STETKAR: Well, that's right.
23 I mean, if you look --

24 MEMBER BROWN: I mean, I thought that's
25 what you --

1 CHAIRMAN STETKAR: Well, but I was going
2 to ask them because I thought they added it. You
3 know, there are places to put that tap in that would
4 keep the radiation monitor in play, and indeed the
5 radiation monitor, as it's described in the
6 design --

7 MEMBER BROWN: Yes.

8 CHAIRMAN STETKAR: -- in both the DCD
9 and the FSAR --

10 MEMBER BROWN: I think that was Dick's
11 point earlier.

12 CHAIRMAN STETKAR: -- trips the pumps.
13 Now regardless of closing the valves, it trips the
14 pumps. So it would stop the discharge flow
15 regardless of whether you're using, you know, the
16 normal discharge line or the manual line. Anyway, I
17 think we've probably --

18 MS. WHITE: We're going to take a look
19 at it. We'll take a look at it. Mitsubishi will.

20 CHAIRMAN STETKAR: Oh, okay. No, I was
21 going to say, putting your other hat on.

22 MS. WHITE: My other hate.

23 MR. HAMZEHEE: John, just another quick
24 question: Isn't that comment that usually in those
25 lines you put the bypass with closed valves for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 maintenance purposes?

2 CHAIRMAN STETKAR: I know a lot of
3 plants do, but I don't know -- I'm not a radioactive
4 release guy. I don't know whether they tap them in
5 upstream or downstream of the fire modeling. It
6 doesn't make any difference what's common. We're
7 talking about a new design here and things that we
8 understand about un-monitored releases, you know,
9 from our operating fleet. So if we can improve the
10 design, we ought to at least examine that.

11 MR. ROACH: Ed Roach. I'm the branch
12 chief of the health physics --

13 CHAIRMAN STETKAR: Yes, Ed, step up.
14 Those microphones don't pick up from a distance.

15 MR. ROACH: I'm am the branch chief of
16 the Health Physics Branch. And operationally
17 usually there is a bypass around that monitor
18 because periodically the effluent particulate falls
19 out and you'll see background rays on those
20 detectors and you'll need to backflush it,
21 decontaminate it, maybe even for ALARA purposes.

22 CHAIRMAN STETKAR: On the other hand
23 they're not talking about a lot of discharges from
24 this plant, so that, you know, for a short period of
25 time holding the stuff in the monitor tanks and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 delaying a batch from the holdup tanks so that you
2 can clean out the radiation monitor -- you know, you
3 can still bypass the discharge valves if you have a
4 problem with one of the air-operated valves that
5 won't close or something like that. You know, I
6 can --

7 MR. ROACH: I understand that. I
8 just --

9 CHAIRMAN STETKAR: I have to think about
10 it. You know, this isn't a necessarily a -- you
11 know, a large volume continuous discharge plant as
12 opposed to some of the operating plants.

13 MR. ROACH: I'll agree with you, concede
14 the volume available for the Liquid Waste System.

15 CHAIRMAN STETKAR: Thanks, Ed.

16 MR. HAMZEHEE: John, do we have time for
17 one more staff comment?

18 CHAIRMAN STETKAR: I do. Sure.

19 MR. WILLIAMS: Yes, but as I said
20 before, that bypass would not be used unless it
21 followed all the requirements that were in the ODCM,
22 that were in plant procedures and there was some
23 need to bypass the rad monitor. There wouldn't be
24 any other reason for them to use that. And like Ed
25 said, it would be ALARA purposes. They wouldn't

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 want to contaminate the rad monitor. So actually, I
2 worked at TMI. Ran the effluent program there. And
3 our setup is the same as the setup that they're
4 showing. And I could verify that also.

5 CHAIRMAN STETKAR: Okay.

6 MEMBER BLEY: One thing that causes us
7 to hang up on these a bit is that in Part 52, since
8 the single failure analysis is going to be done
9 later on, it's not clear that such things are
10 flagged as important when they could be. And
11 something like that missing from the DCD is
12 troublesome to us.

13 MR. WILLIAMS: Okay.

14 MEMBER SKILLMAN: This is Dick Skillman.
15 While I'm new to this Subcommittee and to the ACRS,
16 I'm not new at all to the whole process of Part 52.
17 And when the applicant communicates that there are
18 no departures, my radar goes to what is it that you
19 are presenting and what is different from the design
20 cert? And that was the question I was asking. I
21 thank you for your responses, but I'd sure like to
22 know whether or not that bypass line shows up on the
23 design cert. If it is, as you have communicated, no
24 departures are involved. If the level of detail has
25 been given over to the applicant, I understand your

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 comment. But if that comment is not there and the
2 bypass is on this application, then I think you're
3 in departure territory.

4 MS. WHITE: I understand. We're going
5 to take a look at it.

6 MEMBER SKILLMAN: And that's my point,
7 yes, but thank you.

8 CHAIRMAN STETKAR: I was going to ask
9 them about the departure also, but I wanted to make
10 sure that the line existed. With that --

11 MEMBER BROWN: One other observation,
12 John, on this same subject is that when we really
13 start looking at the I&C and have more details, you
14 know, we've raised the point about the level of
15 detail in terms of the I&C when you get to that
16 point also. So --

17 CHAIRMAN STETKAR: It's a pretty simple
18 radiation monitor --

19 MEMBER BROWN: -- the fidelity relative
20 to the DCD as opposed to what you're talking about,
21 because detail that's been provided in many of the
22 -- well, we've been trying to insist on a higher
23 level of detail so we don't get caught with these
24 types of things. So just keep that in mind.

25 CHAIRMAN STETKAR: We'll wait for that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 until we see Chapter 7 --

2 MEMBER BROWN: Yes, I just wanted to --

3 CHAIRMAN STETKAR: -- because this one's
4 pretty simple.

5 MEMBER BROWN: Just wanted to highlight
6 it because it's more complex with the I&C stuff.

7 CHAIRMAN STETKAR: John, you don't show
8 it here, but -- and this is something that I believe
9 is Comanche plant-specific, and I don't -- I guess
10 you might talk about it. Are you going to talk
11 about the tie-in to the units 1, 2 circulating water
12 discharge when you get to the evaporation pond
13 discussion?

14 MR. CONLY: Briefly, yes.

15 CHAIRMAN STETKAR: Okay. I'll wait and
16 ask about that. You can now move off this slide.

17 MR. CONLY: Subsection 11.2.2 describes
18 the evaporation pond that is site-specific. I won't
19 go through all the design features. You're probably
20 familiar with them from your study of the FSAR.

21 The key points are that the evaporation
22 pond is not part of the Liquid Waste Management
23 System. It is downstream of the waste monitor tanks
24 which hold the effluent ready for discharge. And
25 the second point is the sole purpose of the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 evaporation pond is to allow temporary hold up of
2 treated effluent before discharge into Squaw Creek
3 Reservoir if it's necessary to control the tritium
4 concentration in Squaw Creek Reservoir.

5 As shown in the last two bullets, the
6 response to a recent RAI, No. 224, stated that the
7 pond discharge pump has a recirculation line back to
8 the pond to ensure that we have a representative
9 sample before discharge. The pond discharge is
10 mixed with the unit 1 and 2 circulating water return
11 to Squaw Creek Reservoir, which is between 1 million
12 and 2 million gallons a minute.

13 CHAIRMAN STETKAR: A few questions
14 before you go to the gaseous waste. First question
15 is, as noted on the slide here, it's an acre-and-a-
16 half, four-foot-deep, two-foot-freeboard pond. So
17 it's a sizeable hole in the ground. It's lined with
18 HDPE with I guess a little matrix in between that's
19 got, you know, drainage mesh. What's the expected
20 life of the HDPE? How frequently are you going to
21 have to change out the liner?

22 MR. SANG: We consult with the
23 manufacture for this particular material. The
24 expected life is 20 to 25 years expectancy.

25 CHAIRMAN STETKAR: That's about right.

1 So probably two or three. Sometimes you only get
2 15. I mean, you've got a pretty high UV environment
3 down there --

4 MR. SANG: Yes.

5 CHAIRMAN STETKAR: -- on the -- or your
6 location. So maybe it would be closer to 15. So
7 you're talking about three our four probably change
8 outs. That was just more of a curiosity. There are
9 various versions of stuff that's called HDPE.

10 MR. SANG: Yes.

11 MR. WOODLAN: This is Don Woodlan. We
12 already have some ponds of this nature --

13 CHAIRMAN STETKAR: Oh, do you?

14 MR. WOODLAN: -- for units 1 and 2.
15 They've been in place for over 20 years. We
16 obviously inspect them periodically, do repairs, but
17 they're still functional --

18 CHAIRMAN STETKAR: Oh, okay.

19 MR. WOODLAN: -- over 20 years.

20 CHAIRMAN STETKAR: Oh, okay. Good.
21 good. That's good information.

22 As I read the process, you said that,
23 well, because of concerns about precipitate and
24 dried material remaining in the pond, if you
25 discharge the whole pond, that you'd wash the pond

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 with demineralized water so you made sure you
2 cleaned it up. How do you wash an acre-and-a-half
3 plastic-lined pond?

4 The reason I ask this is not to be
5 cynical. It is because the staff used a response to
6 an RAI as justification for why you don't need to
7 worry about wind-borne solid releases from, you
8 know, precipitates in the pond if it's dry. So it
9 is actually a relevant question.

10 MR. SANG: In the pond design, at the
11 bottom of the pond we have rows of piping,
12 perforated piping with holes drill into it to stir
13 up the bottom due to the recirculation design that
14 we have. And currently in our design we circulate
15 quite a higher flow rate, very high flow rate in
16 terms of 300 to 400 gpm. And we have nine rows of
17 pipes throughout the bottom of the pond and each row
18 would have eight holes drill into it to stir up the
19 bottom.

20 CHAIRMAN STETKAR: Okay.

21 MR. SANG: And we tie in the demin water
22 through the header system. That's how we intend to
23 wash the pond.

24 CHAIRMAN STETKAR: Okay.

25 MR. SANG: Each row or pipe will be --

1 CHAIRMAN STETKAR: You're not actually
2 going to wash it. I understand. Agitation and
3 flushing. Okay. Thanks. That helps.

4 The tie-in to the units 1 and 2
5 circulating water discharges, as I understand it, is
6 in the unit 1 turbine building. Is that right?

7 MR. SANG: Yes, the flow box is outside
8 of the waste management pond C area and from the
9 waste monitor tank it would discharge through the
10 line that's described in, I guess --

11 MR. CONLY: Again, this is sheet 9 of
12 10, figure 11.2-201.

13 CHAIRMAN STETKAR: Yes, I saw that. The
14 FSAR says the header where the Waste Management
15 System intersects with the Circulating Water System
16 is located within the unit 1 turbine building. And
17 that drawing that you show there doesn't quite show
18 where the building boundaries are, if I recall. I
19 didn't pull it up here, but I looked at it pretty
20 closely. So at least the words in the FSAR seem to
21 indicate that the piping connection is actually in
22 the turbine building. And what I'm asking is, is
23 that true or not?

24 MR. SANG: No, that's not true.

25 CHAIRMAN STETKAR: That's not true?

1 Okay.

2 MR. SANG: I'll make that correction.

3 CHAIRMAN STETKAR: Now, I had questions
4 about if you get higher than normal discharges for
5 whatever reason under emergency conditions or
6 abnormal conditions. You know, if you were in the
7 unit 1 turbine building, what implications does that
8 have for folks who have to perhaps get somewhere
9 near that intersection point? I'm assuming it would
10 be down in the bottom. But if the connection point
11 is not in the discharge building, then look at
12 Section 11.2.2 in your FSAR and there is a sentence
13 that says that it is in the turbine building.

14 MR. SANG: We will. That was the
15 original design that we have to go through the water
16 box.

17 CHAIRMAN STETKAR: Okay. And in
18 deference to the staff, I actually pulled this out
19 of Revision 3 to the COLA FSAR. So it's one step
20 ahead of what they reviewed.

21 MR. SANG: Thank you for pointing that
22 out.

23 CHAIRMAN STETKAR: And it's still in
24 there.

25 Okay. You're going to now go into

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 gaseous and solids. So does anybody on the
2 Subcommittee have anymore questions about liquids?

3 PARTICIPANT: No, thanks.

4 CHAIRMAN STETKAR: Thanks.

5 MR. CONLY: Thanks. Section 11.3
6 describes the Gaseous Waste Management System.
7 Subsection 11.3.1.5 once again is the cost benefit
8 analysis which demonstrates the addition of
9 equipment or technology is not favorable or cost
10 beneficial. Design conforms with 10 C.F.R. 50,
11 Appendix I. Of interest, the gaseous release point
12 is at the top of the containment, approximately 230
13 feet above grade. The Gaseous Waste Management
14 System discharges into the auxiliary building
15 ventilation system which discharges about 250,000
16 CFM, of which 1.2 standard CFM is from the gaseous
17 waste.

18 MEMBER RYAN: Your third bullet there,
19 what do you mean by "well within?"

20 MR. CONLY: There is a table in the FSAR
21 in --

22 MEMBER RYAN: Is it half, or 10 percent,
23 or 92 percent of the limits? I'm just curious what
24 the general range of the margin is. The calculated
25 dose is well within the applicable 10 C.F.R. 50,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Appendix I limits.

2 MS. WHITE: They're anywhere from
3 1/100th of them to 1/1000th of the --

4 MEMBER RYAN: Okay. So it's a factor of
5 100 or 1,000?

6 MS. WHITE: Yes.

7 MEMBER RYAN: Okay. That's all I
8 wanted, just a general idea. Thanks.

9 MR. CONLY: Are there other questions?

10 MEMBER SKILLMAN: Yes, Dick Skillman.
11 What is the radius of your emergency planning zone,
12 please? Don? Two miles? Five miles? Ten miles?

13 PARTICIPANT: I'm showing two and five.

14 MEMBER SKILLMAN: Fifty-thousand people
15 within two miles?

16 MR. WOODLAND: For the purposes of this
17 calculation? This is Don Woodlan speaking. Is that
18 what you're asking?

19 MEMBER SKILLMAN: Well, I'm wondering.
20 Two hundred and thirty feet above grade, that sounds
21 pretty high. It's not too high if there's a farm
22 500 yards away.

23 MR. WOODLAN: Well, we have various
24 radiuses in our emergency plan for different
25 purposes, but the standard radius is around 10

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 miles. There are some deviations on that.

2 MEMBER SKILLMAN: Thank you. That's all
3 I had.

4 MR. CONLY: Thank you, Don.

5 Anything else on gaseous?

6 CHAIRMAN STETKAR: I don't think so. I
7 had a question. I've been reading my notes here.
8 Back on the evaporation pond; this is just
9 curiosity, I understand its function. How are you
10 doing in terms of releases to Squaw Creek Reservoir
11 during the current drought situation? I mean, you
12 know --

13 MR. CONLY: I'm sorry, I don't
14 understand your question.

15 CHAIRMAN STETKAR: Okay.

16 MR. CONLY: How are we doing?

17 CHAIRMAN STETKAR: Texas, as you're well
18 aware, is going through a bad drought. I'm assuming
19 reservoir level is down pretty far from normal. Is
20 that true, or do you still have --

21 MR. CLOUSER: This is Tim Clouser from
22 Luminant. The Squaw Creek Reservoir has makeup from
23 Lake Granbury. The Lake Granbury level is low,
24 although it is currently coming up. Squaw Creek
25 Reservoir is not low.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: It's not low? Okay.

2 MR. CLOUSER: We have continuous flow
3 through the reservoir and --

4 CHAIRMAN STETKAR: Thanks. I thought
5 maybe you were down, you know, in terms of you were
6 getting -- might get into trouble in terms of
7 concentrations. So, thanks.

8 MR. CONLY: Let's move onto Section
9 11.4, Solid Waste Management System. Subsection
10 11.4.1.3 states that laundry service will be
11 performed offsite by a vendor.

12 11.4.2.3 discusses the radioactive waste
13 interim storage facility. We are preparing an
14 additional response in this area to include more
15 specific design criteria for this building. Our
16 plans are that it will store class A, B and C waste
17 from all four units for up to 10 years. We have
18 specially shielded above-grade cells, separate
19 control room and equipment room ventilation, rad
20 monitoring and fire protection systems. We have a
21 remotely-operated bridge crane, closed-circuit TV,
22 bay lights. All of this is in case we need to store
23 radwaste on site.

24 At the same time, the subsection notes
25 that Waste control Specialists in Andrews, Texas is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the only commercial facility that is licensed in the
2 U.S. to receive and dispose of class A, B and C
3 waste and they will start receiving waste for
4 disposal late this year.

5 MEMBER RYAN: They're not authorized for
6 disposal yet though?

7 MR. CONLY: That is correct.

8 MEMBER RYAN: And any forecast of when
9 that might happen from your perspective?

10 MR. CONLY: According to their Web site,
11 late this year.

12 MEMBER RYAN: Late this year.

13 MR. CONLY: Yes.

14 MEMBER RYAN: By the way, there are
15 others that are authorized. You just don't have
16 access to them. And it's not the only one
17 authorized in the United States.

18 MR. CONLY: Thank you.

19 MEMBER SKILLMAN: Before you leave this,
20 in your opening comments you made the comment that
21 there were provisions in the plant for waste. Is
22 this the specific slide you were referring to when
23 you made that comment? You had place in the aux
24 building or one of your adjacent buildings that had
25 specially designated areas for future waste? Is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 this what you're talking --

2 MR. CONLY: This is not it.

3 MEMBER SKILLMAN: This is not it?

4 MR. CONLY: This is basically a
5 warehouse situated between units 3 and 4 specially
6 designed for this storage purpose. The additional
7 temporary and mobile equipment that we're talking
8 about is in the aux building on either side of the
9 truck bay. One side we will use for the solid waste
10 resin de-watering system and the other is reserved
11 for liquid waste management skids if we need them in
12 the future. So this is not --

13 MEMBER SKILLMAN: This is not.

14 MR. CONLY: -- one of either two of
15 the --

16 MEMBER SKILLMAN: May I ask a question
17 about what is in the aux building, please?

18 MR. CONLY: Yes.

19 MEMBER SKILLMAN: Where you're going to
20 have these potentially temporary skids --

21 MR. CONLY: Yes?

22 MEMBER SKILLMAN: -- what shielding
23 provision is there, please?

24 MR. CONLY: It is described in the FSAR.
25 The walls are shielded on three sides. There's a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 shield door into the truck bay. The floors are
2 sloped away from the truck bay. Everything is
3 curbed. Go ahead.

4 MS. WHITE: With liquid return back to
5 the liquid radwaste system.

6 MEMBER SKILLMAN: Thank you. Thank you.

7 MEMBER RYAN: With your provision for A,
8 B and C, I guess, are you anticipating any
9 irradiated hardware going into this facility over
10 time, or what's the time horizon I guess that you're
11 planning on this being in service? I'm guessing
12 you'd much rather have a disposal facility off site
13 to send it all, but you're obviously planning for
14 the contingency of not having that capability. Is
15 this facility going to be plant life capable or --

16 MR. WOODLAN: Yes, this is Don Woodlan.
17 I mean, let me take a shot at answering that.

18 I think essentially we don't have the
19 details yet. As you're pointing out, there may or
20 may not be off site facilities to collect this
21 stuff. They may be easily accessible. They may not
22 be easily accessible. This is meant to give us the
23 flexibility to deal with any of those situations.
24 So we really haven't designed the internal to the
25 building yet. We've got several years to accomplish

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that.

2 MEMBER RYAN: Okay.

3 MR. WOODLAN: And so I think we'll -- as
4 we approach -- we will be constructing the building,
5 but as we approach the need, then we will finalize
6 the details and we'll build the storage areas within
7 the building to meet the needs at the time and we'll
8 stay flexible over time and continue to modify it.
9 Hopefully we don't actually need interim storage,
10 but if we need it, we wanted to have this available.

11 MEMBER RYAN: I appreciate that, but you
12 could also be in the situation where you don't have
13 enough space or headroom to design the shielding you
14 do need. So without some idea of what your range of
15 designs need to accommodate at this point, you could
16 be in a situation where you don't have the room or
17 the headroom or some other design parameter to
18 accommodate what you will need.

19 MR. WOODLAN: Absolutely there's that
20 potential, although we do have some storage for unit
21 1 and 2, so we have a little bit of experience of
22 what it takes to create an interim storage facility.
23 We in fact did convert a warehouse to interim
24 storage to support units 1 and 2. But you're
25 absolutely right; there's a potential that this in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 fact won't be enough. If there's no off site
2 storage anywhere, then we may have to pursue
3 alternate paths in the future.

4 MEMBER RYAN: Thank you.

5 MR. CONLY: Anything else? Subsection
6 11.4.3.2 addresses the Process Control Program,
7 which is one of the operational programs that will
8 be implemented by license condition, and the PCP
9 adopts NEI 07-10A.

10 11.4.4.5 addresses the mobile de-
11 watering system, which is the currently planned
12 system, and temporary or mobile system for auxiliary
13 building. The space is adjacent to the truck bay,
14 as I mentioned. The floor is curbed and sloped away
15 from the truck bay. This location provides a short
16 transfer distance for the high integrity containers
17 to the truck bay. Demineralized water is provided
18 for decontamination of the facility. The
19 connections and fittings are uniquely designed to
20 prevent cross-connecting radioactive and non-
21 radioactive systems. There are flow inhibitors,
22 backflow inhibitors in the piping and drainage is
23 collected and transferred to the waste holdup tank.
24 Non-condensibles vent to the auxiliary building
25 ventilation system. As I mentioned earlier, that's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 quite a large volume of ventilation. The equipment
2 will be vendor supplied and operated.

3 11.4.6 addresses the Epoxy Coating
4 Program, again an operational program implemented by
5 license condition. This is also addressed in 11.2.4
6 in the Liquid Waste System. The Epoxy Coatings
7 Program controls refurbishment, repair, replacement
8 in accordance with the manufacturers' data sheets
9 and good painting practices.

10 11.5 is PERMS, Process Effluent
11 Radiation Monitoring and Sampling System. There are
12 two radiation monitors in addition to those
13 mentioned in the US-APWR design control document.
14 One we addressed when we talked about Chapter 10;
15 and that is, the startup steam generator blowdown
16 heat exchanger discharge radiation monitor which
17 measures total gamma, isolates steam generator
18 blowdown if the set point is exceeded and transfers
19 the steam generator blowdown to the waste holdup
20 tank.

21 The second we have also addressed
22 earlier. The radiation monitor in the evaporation
23 pond discharge measures total gamma, isolates the
24 discharge line, stops the pump and sounds an alarm
25 in both the radwaste control room and the main

1 control room.

2 Subsection 11.5.2.6 regarding
3 reliability and quality assurance for the sampling
4 systems. Procedures are for taking and evaluating
5 samples, inspection, calibration and equipment
6 maintenance meet Reg Guides 1.21 and 4.15, including
7 periodic system checks with standard sources,
8 routine calibration and maintenance and daily system
9 channel checks.

10 MEMBER SKILLMAN: If I could?

11 MR. CONLY: Yes, please.

12 MEMBER SKILLMAN: At your 11.5.2.5, if
13 those are differences from the standard plan, are
14 those departures or are those under the applicant's
15 ability to add without departure?

16 MR. CONLY: They are applicant --

17 MS. WHITE: Supplements.

18 MEMBER SKILLMAN: They are supplements?

19 Thank you. Thank you.

20 MR. CONLY: 11.5.2.9, Off Site Dose
21 Calculation Program. Once again, an operational
22 program to be implemented by license condition. The
23 existing ODCM for units 1 and 2 will be written to
24 include all four units and brought up to date with
25 the list, the items -- documents listed in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 bottom bullet, specifically NEI 07-09A. The ODCM
2 describes monitor controls and monitor setpoint
3 calculations, provides the rationale for compliance
4 with the Radiological Effluent Technical
5 Specifications, RETS, provides planned effluent
6 discharge flow rates. Again, there will be a
7 combined ODCM for all four units.

8 CHAIRMAN STETKAR: John, are you going
9 to talk about the ODCM when we go to Chapter 12 this
10 morning also, or is this our --

11 MR. CONLY: Yes.

12 CHAIRMAN STETKAR: You are? Okay.
13 Thank you.

14 MR. CONLY: Finally, 11.5.2.10, the
15 Radiological Environmental Monitoring Program, again
16 implemented by license condition, is described in
17 the tech specs and in the ODCM. We use this program
18 to measure direct radiation using thermoluminescent
19 dosimeters and by sampling air, water, vegetation
20 and fauna in the site area, again following NEI 07-
21 09A and the two NUREGs listed in the bottom bullet.

22 MEMBER RYAN: Do you have any thoughts
23 on NUREG 0808, the ground water initiative with
24 regard to the new unit or your existing units and
25 how all that fits together?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. WHITE: I'm sorry, I couldn't --

2 MEMBER RYAN: NEI 08-08, the ground
3 water protection initiatives.

4 MS. WHITE: Oh, yes, we have a
5 discussions coming up on the ground water --

6 MEMBER RYAN: Okay. Fair enough.

7 MS. WHITE: Yes.

8 MEMBER RYAN: Later.

9 MR. CONLY: That completes my
10 presentation. If there are other questions?

11 CHAIRMAN STETKAR: No, sir. Anybody?

12 (No response.)

13 CHAIRMAN STETKAR: No. Thank you.

14 MR. CONLY: Thank you. Thank you for
15 your attention.

16 CHAIRMAN STETKAR: We will hear from the
17 staff on Chapter 11.

18 MR. OTTO: Good morning, everyone. My
19 name is Ngola Otto. I'm the project manager for
20 Chapter 11, Radioactive Waste Management System. To
21 my right here is Steve Williams. He's our technical
22 staff reviewer for Chapter 11 and he's going to
23 cover the details about the open items that we have
24 in Chapter 11. So far we have two items, one in
25 11.2 and one in 11.4, which will be discussed today.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. WILLIAMS: Hello. My name is Steve
2 Williams. I've been with the NRC for almost five
3 years in the new reactors division. I've worked in
4 health physics for over 35 years, 20 years in the
5 nuclear industry. I'm the technical reviewer, as
6 Ngola said, for Chapter 11, Radioactive Waste
7 Management, and this presentation is a summary of
8 the chapter review open items.

9 In 11.1, the source terms that are used
10 in the radwaste chapter are incorporated by
11 reference from the DCD, and there are no COL
12 information items.

13 11.2, the staff has had discussions with
14 the applicant on their initial response to this open
15 item. And as they stated, will provide a revised
16 response to this open item with additional
17 information concerning the evaporation pond, the
18 design, sample points, locations and representative
19 samples and cover that in detail in their revised
20 response.

21 Section 11.3, as they discussed, the gas
22 waste management system again is covered. I think
23 it had four RAIs and essentially no open items.

24 Section 11.4, the open item again that
25 they discussed. We've had discussions with them

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 again on their initial response. And again, as
2 they've stated, they'll provide a revised response,
3 additional information concerning design details
4 such as ventilation, structural requirements,
5 shielding, as was mentioned before, waste capacity,
6 airborne activity, rad monitors, along with the
7 acceptable programs and procedures to comply with
8 regulatory guidance.

9 CHAIRMAN STETKAR: Steve, does the scope
10 of this open item and the question address some of
11 the items that -- issues that Mike Ryan was raising
12 regarding not only design of the facility under some
13 snapshot of current expectations but design of the
14 facility to handle what they expect they might need?
15 You know, in terms of, you know, physical design,
16 physical plant, right, Mike?

17 MEMBER RYAN: You know, I guess you can
18 envision under normal operating circumstances dry
19 active waste and other waste that has to be either
20 processed and/or disposed. But if you're in the
21 business of storing resin and other irradiated
22 hardware and things like that, it's a whole
23 different ball game. You know, some of those waste
24 packages can be in the R to tens of R per hour. So,
25 I'm just curious what the scope is here at this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 point. I know that's a little bit of a crystal ball
2 question.

3 MR. WILLIAMS: Yes, it's a projection
4 more or less, but --

5 MEMBER RYAN: There are plants that have
6 thought that or have added to their facilities and
7 done pretty well at it, and there are some that are
8 boxed in by they don't have the space or they don't
9 have the capability. And I'm just curious with the
10 existing plants and the new plants being added on
11 the same site how that shapes up in this case.

12 MR. WILLIAMS: Well, I think you got it
13 right as far as it is a crystal ball and projection
14 as far as what they'll handle. At the same time,
15 they have, you know, 1 and unit 2 storage available
16 to them also. Besides, looking ahead and
17 considering a facility like this that's still in the
18 planning stages can incorporate a lot of changes and
19 revisions to take care of what it is you're talking
20 about.

21 MEMBER RYAN: Oh, yes, I mean, we're way
22 away from needing the facility, but I mean, I guess
23 I'm just curious what the scope of the plan is at
24 this point from your perspective and analysis. I
25 mean, are they going to be able to handle irradiated

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 hardware and everything down from that, or is it
2 just going to be a resin facility, or a DAW facility
3 with a little bit of resin? And what's your insight
4 as to what they'll be able to do?

5 MR. WILLIAMS: I guess the only thing I
6 can say on that is they've projected some numbers as
7 far as what they plan with normal operations. Now,
8 obviously things could change and they could have
9 additional radwaste that they hadn't planned on.
10 Like you said, it's a crystal ball type thing.

11 MEMBER RYAN: Yes, but it's not
12 altogether a crystal ball, because if you're looking
13 at a 10 or 20-year period where there's significant
14 maintenance activities, you will have irradiated
15 hardware, highly activated metals, other things that
16 go with it that you won't in routine operations for
17 five years. So my point is there's a change in
18 scope as to what level of waste you need to handle
19 on site, if you're talking about relatively short
20 periods versus a few decades. So I'm just curious
21 what strategies are in place here from your
22 perspective. Maybe that's a question we can take
23 away and think about for our next visit.

24 MR. WILLIAMS: Yes, okay.

25 CHAIRMAN STETKAR: That's why I asked,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 because you have an open item on this. You know, I
2 don't know what sort of scope the questions and what
3 sort of responses you're expecting back.

4 MR. WILLIAMS: Yes, in covering another
5 design, I mean, they projected a lot of that, and I
6 think that's what I expect to see from these guys,
7 too, as far as what their projection is.

8 CHAIRMAN STETKAR: Okay. And I think
9 that's a little bit of what Mike was asking about.

10 MR. WILLIAMS: Yes.

11 CHAIRMAN STETKAR: But projection over
12 what sort of time horizon, you know, if it's five
13 years, it's different than --

14 MR. WOODLAN: Well, can I have the floor
15 a little bit again?

16 CHAIRMAN STETKAR: Please.

17 MR. WOODLAN: Maybe I should have
18 mentioned earlier, when we scoped the size of this
19 building, we went back to our radiation protection
20 experts for units 1 and 2. And what we tried to
21 assure ourselves is that we had enough storage -- or
22 that we're building the building large enough for
23 storage up to 10 years. And that's relying on their
24 experience from operating 1 and 2 for the past 20
25 years, what they projected the type of materials we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 would need, the setups that are necessary to store
2 those materials for a 10-year period for all four
3 units. So that's what our going in design
4 objectives were.

5 MEMBER RYAN: Okay. Well, you know,
6 based on the experience for the existing two units,
7 that's a pretty good starting place I guess in my
8 view.

9 MR. WOODLAN: Yes, I don't have any
10 numbers, but their expertise is what we relied on.

11 MEMBER RYAN: Yes, yes. Okay. Well,
12 maybe we will hear more about that as time goes on.
13 Okay. Thanks.

14 MR. OTTO: 11.5, the Process Effluent
15 Radiation Monitoring and Sampling System. Again,
16 essentially I think there were four RAIs with
17 various questions and the review of this section
18 does not have any additional open RAIs.

19 And the next page is some acronyms. And
20 at this point any questions, additional questions?

21 CHAIRMAN STETKAR: Members have any
22 questions?

23 PARTICIPANT: No.

24 PARTICIPANT: No, sir.

25 CHAIRMAN STETKAR: Great. Since we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 ahead of schedule -- I'm sorry. Steve?

2 MR. MONARQUE: When you're done, I
3 wanted to go over the take away items, make sure we
4 understand them.

5 CHAIRMAN STETKAR: Oh, okay. Sure. I
6 think we're done, so let's do that.

7 MR. MONARQUE: Okay. One item I had was
8 concern by staff regarding configuration control
9 between the DCD and the COL with regard to control
10 of bypass line in the DCD. And I think there was a
11 question asked of whether or not it was a departure.

12 CHAIRMAN STETKAR: That's correct.

13 MR. MONARQUE: Okay. And that was --

14 CHAIRMAN STETKAR: Well, and, you know,
15 something to take back to --

16 MR. MONARQUE: Something to take back.

17 CHAIRMAN STETKAR: -- the DCD folks.
18 the questions that were raised during your review of
19 the COL FSAR --

20 MR. MONARQUE: Yes.

21 CHAIRMAN STETKAR: -- are actually more
22 pertinent for the DCD.

23 MR. MONARQUE: Right, and we'll
24 communicate that --

25 CHAIRMAN STETKAR: Okay.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MONARQUE: -- through the DCD
2 project.

3 CHAIRMAN STETKAR: I mean, they should
4 be raised in the context of the certified design,
5 not in the context of --

6 MR. MONARQUE: Correct.

7 CHAIRMAN STETKAR: -- necessarily of
8 this proceeding.

9 MR. MONARQUE: Right. I don't want to
10 walk away and not --

11 CHAIRMAN STETKAR: Yes, okay.

12 MR. MONARQUE: You know, I wanted to
13 make sure we understood this.

14 And then the other one was there was a
15 discrepancy in the FSAR regarding the location of
16 the discharge line which says unit 1 turbine
17 building.

18 CHAIRMAN STETKAR: Right.

19 MR. MONARQUE: And I think that was
20 brought up. And the next one, the last one was
21 change in scope and storage for low-level waste
22 facility, possibility of strategy.

23 CHAIRMAN STETKAR: Yes, that's just
24 basically --

25 MR. MONARQUE: Yes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: I think, you know,
2 we're interested -- as you heard, we sort of raised
3 the question and would be interested to see how that
4 open item that you have on the interim waste
5 facility gets resolved. Perhaps, you know,
6 sufficient information will be available in the
7 responses to the RAIs to close out that open issue,
8 the open item that, you know --

9 MR. HAMZEHEE: And usually when we come
10 back to you we let you know how we closed all the
11 open items.

12 CHAIRMAN STETKAR: Yes, yes, yes. But I
13 mean, this is just sort of a reminder to you that we
14 want to hear about sort of how they did those
15 projections.

16 MR. WILLIAMS: Yes, that's -- normally
17 with an operating plant it usually makes it a little
18 easier.

19 CHAIRMAN STETKAR: Oh, yes. Yes. No,
20 sure. Their experience from units 1 and 2 and
21 getting input from the people who, you know, are
22 tired of stuffing things in really small closets is
23 probably, you know, a good thing.

24 MEMBER RYAN: There's only so much you
25 can do with compaction and super compaction.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: That's right. With
2 that, I think to keep us moving and because I'm a
3 task master, I think I'll ask Luminant to come up
4 and see if we can get through Chapter 12 from
5 Luminant at least before we take our break.

6 MR. EVANS: Whenever you're ready, we'll
7 start Chapter 12.

8 CHAIRMAN STETKAR: We are ready, Todd.

9 MR. EVANS: Okay. Good morning. My
10 name is Todd Evans. I'm the Manager of Engineering,
11 Project Management and Operating Systems for
12 Luminant for the new build Comanche Peak 3 and 4
13 project. And today I'm glad to present to you
14 Chapter 12 of the FSAR which deals with radiation
15 protection.

16 Similar to John's presentation, after a
17 little bit of an introduction we'll give an overview
18 of the chapter, the SER open item that we have,
19 proposed license conditions and the site-specific.
20 Then we'll get into each section on the site-
21 specific aspects.

22 The FSAR uses incorporated-by-reference
23 methodology. No departures from the US-APWR DCD are
24 taken from Chapter 12. All of the COL items are
25 addressed in the FSAR. There is one SER open item

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 which we'll discuss in a little more detail here in
2 a minute. There were 23 SER confirmatory items for
3 Chapter 12. The majority of these have been
4 incorporated into Rev 2 of the COLA, the FSAR.
5 There are a few that were done after Rev 2 of the
6 COLA and those would be incorporated into Rev 3.
7 There are five proposed license conditions and there
8 are not contentions pending before the ASLB.

9 For an overview of the chapter, this
10 table gives an account of the number of questions
11 that were asked for the different sections. There
12 were a total of 24 questions that have been asked so
13 far. And as you can see, each section was handled
14 separately except for 12-3 and 12-4 questions came
15 together.

16 As far as the SER open item, license
17 conditions have been proposed to address by-product,
18 source and special nuclear material being received
19 prior to full implementation of the plant's
20 emergency plan and security plan in order to meet
21 the requirements of Parts 30, 40 and 70. The
22 resolution, a response to the questions have been
23 submitted and it's currently under the NRC staff's
24 review. There is a remaining issue on that and we
25 feel like that we will be able to resolve that and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 be able to close out this RAI and this open item.

2 For the proposed license conditions the
3 first four are listed here on this slide; 12-1
4 through 12-4. These all deal with implementation of
5 the RP Program and they include implementation of
6 the RP Program prior to initial receipt of by-
7 product, source and special nuclear materials.
8 Also, prior to fuel receipt and prior to fuel load,
9 and then prior to the first shipment of radiative
10 waste. These are actually being proposed by us to
11 be combined into two license conditions.

12 The first license condition would be
13 associated with 12-1, and then 12-2, 3 and 4 would
14 be combined into a single license condition, similar
15 to what John described in the table that he showed
16 for Chapter 11. Then the final license condition,
17 as mentioned earlier, dealing with the Ground Water
18 Monitoring Program, the licensee shall implement the
19 Process Effluent Monitoring and Sampling Program,
20 including the Ground Water Monitoring Program prior
21 to fuel load. So we intend to commit to that
22 license condition.

23 CHAIRMAN STETKAR: Todd, I didn't look
24 at the right drawing probably. Do you have ground
25 water monitoring wells down gradient and in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 reasonably close proximity to the evaporation pond,
2 that being a source of tritiated water that's -- you
3 know, I know the liners never leak, but --

4 MS. WHITE: Are you asking, sir, if
5 we're going to place them in that area, or do we
6 currently have a --

7 CHAIRMAN STETKAR: I'm asking you will
8 there be.

9 MS. WHITE: That will certainly go into
10 consideration. That will be one of the deciding
11 weighting criteria for placement of a monitoring
12 well, yes.

13 CHAIRMAN STETKAR: Okay. But and I'm
14 talking in reasonable close proximity, not out at
15 the fence line.

16 MS. WHITE: Understand. That's correct.

17 CHAIRMAN STETKAR: Okay.

18 MS. WHITE: That would be one of the
19 major deciding factors for --

20 CHAIRMAN STETKAR: But you haven't
21 actually decided on a placement of the wells yet?

22 MS. WHITE: No, sir.

23 CHAIRMAN STETKAR: Okay.

24 MS. WHITE: We're going to wait until we
25 finish up with actual post-construction drawings and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 finalize that, look at the gradients and everything
2 else before we decide --

3 CHAIRMAN STETKAR: Okay.

4 MS. WHITE: -- the best approximate
5 locations for those wells.

6 CHAIRMAN STETKAR: Okay. Thank you.

7 MEMBER RYAN: That seems like a real
8 reasonable answer. I'm guessing you've got a pretty
9 decent understanding of the geohydrologic model for
10 the site now. I'm also guessing that you realize
11 that two new units will change it a lot.

12 MS. WHITE: Yes, sir.

13 MEMBER RYAN: So do you have a strategy
14 where you're going to kind of reevaluate your entire
15 ground water monitoring and modeling effort to
16 accommodate the new units and all the rest of the
17 features of facilities that you've described?

18 MS. WHITE: Yes, sir. We have a
19 commitment to take a look at post-construction and
20 take a look at again of how the ground water
21 modeling would flow through this site post-
22 construction. And then that would be a deciding
23 factor for determining where we put those wells in.

24 MEMBER RYAN: Yes, and I guess, I mean,
25 it would seem reasonable to me that that is not

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 something you're going to do in year one after you
2 finish. It's probably a multi-year kind of effort
3 to see how things equilibrate, I guess is the best
4 way to say it.

5 MS. WHITE: Yes, sir.

6 MEMBER RYAN: So, okay. Thanks.

7 MR. EVANS: Okay. Next we'd like to go
8 into the site-specific aspects and go through each
9 of the five subsections of this chapter.

10 12.1, Ensuring That Occupational
11 Radiation Exposures are ALARA. Compliance with Reg
12 Guides 1.8, 8.8 and 8.10 by utilizing NEI 07-08A,
13 which is "Generic FSAR Template Guidance for
14 Ensuring that Occupational Radiation Exposures are
15 ALARA." Operational considerations for achieving
16 ALARA are provided by utilizing NEI 07-03A, which is
17 "Generic FSAR Template Guidance for Radiation
18 Protection Program Description." And then
19 development and implementation of operational
20 procedures for SSCs which could be potential sources
21 of contamination with the objective of limiting
22 leakage and the spread of contamination with the
23 plant provided by utilizing guidance in Reg Guide
24 4.21, "Minimization of Contamination." Our intent
25 is to comply with these Reg Guides and with the NEI

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 guidance.

2 CHAIRMAN STETKAR: And you will be
3 installing the zinc injection system?

4 MR. EVANS: That is our plan at this
5 point. In unit 1 and 2 we have not employed that
6 yet, but the plans are -- based on the industry
7 experience they're proceeding in that direction, so
8 our chemistry folks feel like that we definitely
9 would do that for unit 3 and 4.

10 CHAIRMAN STETKAR: Thanks.

11 MR. EVANS: Section 12.2 is on radiation
12 sources, most of which obviously are covered in the
13 design control document. But site-specific
14 radiation sources include the interim radwaste
15 storage building that was discussed as part of the
16 Chapter 11 discussion. Likewise, the evaporation
17 pond and then the standard calibration check and
18 radiography sources required for plant operation and
19 construction.

20 MEMBER RYAN: I'm guessing the
21 radiography sources are vendor owned and just on
22 site. You have provisions to bring them onto the
23 licensed site and take them off?

24 MS. WHITE: Yes.

25 MR. EVANS: I think it can be done

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 either way, but typically that would be the -- yes.

2 Section 12.3 deals with radiation
3 protection design features. The site-specific
4 designs include Mobile Liquid Waste Processing
5 System, ultimate heat sink, Startup Steam Generator
6 Blowdown System and the evaporation pond.

7 The Mobile Liquid Waste Processing
8 System, as mentioned earlier, has shield walls
9 surrounding the area to maintain lower radiation
10 zones and special connectors to prevent cross-
11 contamination and equipped with drain collection to
12 transfer spills and leaks to the Liquid Waste
13 Management System.

14 Ultimate heat sink is our on site
15 cooling towers as discussed in another part of the
16 FSAR and it interfaces with the Essential Service
17 Water System and is designed to minimize
18 contamination.

19 And I think we've kind of discussed the
20 evaporation pond and the Startup Generator Blowdown
21 System already.

22 Continuing on with 12.3, underground
23 piping is site-specific, especially as far as the
24 route and to things like such as the evaporation
25 pond. Some of the features of the underground

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 piping system that we will employ concrete pipe
2 trenches which are coated with epoxy and equipped
3 with a sealed cover and manholes for inspection and
4 have leak monitoring points. We'll use double-wall
5 HDPE for buried piping with manholes along the
6 routing pathway.

7 MEMBER RYAN: So the manholes will give
8 you access to the double-walled pipe exactly how?
9 Will this be a culvert and you'll be able to -- is
10 the double-wall piping going to be --

11 MR. EVANS: It would be sloped --

12 MS. WHITE: Slowed to the --

13 MR. EVANS: -- to a manhole.

14 MS. WHITE: Right. We don't want to --
15 and we're going to select intervals for the manholes
16 so that if you do get a leak, you can collect it in
17 a manhole and then we have to possibly dig up a
18 small section to repair. So that's the
19 consideration given there.

20 MEMBER RYAN: Okay. I'm trying to
21 understand if it's all flowing downhill in one
22 direction.

23 MR. EVANS: I think it would depend on
24 -- well, it would flow to a manhole.

25 MEMBER RYAN: Yes.

1 MR. EVANS: A particular section between
2 two manholes would flow to the manholes. So it
3 would be sloped to flow to the manhole.

4 CHAIRMAN STETKAR: Manholes will be
5 effectively drain slopes, sumps for leakage, right?

6 MS. WHITE: Right.

7 MEMBER RYAN: Okay. So you'll have
8 something like -- I don't know what the length would
9 be. One hundred feet or two hundred feet of pipe
10 would be represented in one manhole? Something like
11 that. Maybe 50 or maybe 1,000. I don't know what
12 the range of the pipe is, but --

13 MR. SANG: Again, this is Irving Sang.
14 Currently our plan is to stage the manhole roughly
15 about 300 feet apart.

16 MEMBER RYAN: Three hundred feet apart?

17 MR. SANG: Yes.

18 MEMBER RYAN: And have you decided that
19 that's going to give you a sufficient collection
20 volume so you'll know what fraction is leaking or
21 not, or you're collecting it all? That's the hard
22 part of manholes is you don't know what your volume
23 really is. So you don't know what fraction --

24 MR. SANG: That's correct. That's
25 correct.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER RYAN: You do not know, you know,
2 what fraction could be leaking.

3 MR. SANG: And we don't -- we can't --
4 with the current -- there are two types of leak
5 detection system. One is the current method of
6 manholes in between and the wall pipe going through.
7 And there's a basin at the end, bottom of the
8 manhole. These manholes are six foot in diameter
9 with a ladder going down to -- for maintenance and
10 calibration purpose. And there's a basin, a simple
11 floating device as a liquid level detecting
12 instrument. And with that kind of instrument is
13 very difficult to detect exact location of a leak or
14 the volume of the leak. But as soon as leak water
15 is accumulated in the basin, it will initiate the
16 alarm signal. I think this address the Reg Guide
17 4.21 issue, early detection. So I agree with the
18 comment that it's very difficult to --

19 MEMBER RYAN: It certainly gives you the
20 early detection piece, but it doesn't tell you -- I
21 guess I'm having a hard time figuring out -- the
22 flow is going be inside a pipe and I guess what
23 you're relying on is that the pipe goes through this
24 manhole area and if there's any accumulation outside
25 the pipe in this culvert, this manhole, whatever it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 is, that tells you there's a leak. But it doesn't
2 give you any idea about the magnitude or the point
3 of origin of that leak, right?

4 MR. SANG: That's correct.

5 MEMBER RYAN: So you'd only know for 300
6 foot --

7 MS. WHITE: You only know between
8 manholes, basically.

9 MEMBER RYAN: Yes, I mean, between two
10 manholes you know something happened.

11 MS. WHITE: Right.

12 MEMBER RYAN: Okay.

13 MR. EVANS: So once you get the alarm,
14 then you would --

15 MEMBER RYAN: Yes, then you've got to --

16 MR. EVANS: -- take a sample and
17 determine whether it's just rain water or whether it
18 was actual, you know, leak, that kind of thing and
19 then do your investigation to try to locate --

20 MEMBER RYAN: How deep is the pipe?

21 MR. SANG: It depends on the terrain,
22 where the location is, but general they are about
23 five, six feet.

24 MEMBER RYAN: Five or six feet is your
25 unsaturated zone? Must be a little deeper than

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that, I'm guessing. I'm just trying to think of the
2 ground water scheme you're in, because all those
3 factors can really influence whether you're actively
4 monitoring anything or not.

5 MS. WHITE: Yes. The answer's yes it's
6 deeper than six feet.

7 MEMBER RYAN: Yes, I guess you haven't
8 got to that detailed of a drawing yet.

9 MS. WHITE: No.

10 MEMBER RYAN: Okay.

11 MR. EVANS: Okay. Anymore questions on
12 that slide?

13 (No response.)

14 MR. EVANS: Okay. The last part of
15 12.3, we have some more site-specific aspects.
16 There are some radiation zones which are site-
17 specific. These are primarily in the yard areas and
18 those are designated in the FSAR. Operational
19 programs. Programmatic considerations are
20 consistent with NEI 08-08A, "Generic FSAR Template
21 Guidance for Life Cycle Minimization of
22 Contamination."

23 And operational/programmatic programs
24 include: Periodic review of operational practices
25 to ensure operating procedures reflect installation

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of new or modified equipment and personal
2 qualification and training are current; maintaining
3 of records to facilitate decommissioning by
4 retaining before and after construction surveys;
5 site conceptual model development that aids in
6 understanding the plant footprint and the effect on
7 the environment; performing final site configuration
8 that aids in understanding the migration of
9 radionuclides off site; and on site contamination
10 monitoring program along the potential pathways.

11 And then the FSAR also discusses that we
12 have availability of portable radiation detection
13 equipment as needed in different various areas of
14 the plant.

15 Section 12.4 is dose assessment. The
16 site-specific aspects of this section deal with dose
17 to construction workers. And we have it that direct
18 radiation dose will be less than 2.5 millirem per
19 year, and that the gaseous and liquid effluent dose
20 would be significantly smaller than that.

21 We have evaluated for a multi-unit site
22 for contained sources of by-product, source and
23 special nuclear materials. I would like to note
24 that the direct radiation dosage figure we're giving
25 here of 2.5 millirem is as estimated at the unit 1

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and 2 protected fence so that the actual doses to
2 construction workers should be significantly lower
3 due to the distance between unit 1 and 2 and unit 3
4 and 4.

5 CHAIRMAN STETKAR: Those doses will
6 effectively be controlled by the units 1 and 2 ODCM
7 during the construction period, right?

8 MR. EVANS: Right.

9 CHAIRMAN STETKAR: The integrated ODCM
10 won't become operational until units 3 and 4 start
11 up. I mean, you won't have any sources over on --

12 MR. EVANS: Yes, they're --

13 CHAIRMAN STETKAR: -- except for
14 radiography.

15 MR. EVANS: There are -- yes, exactly.
16 There are different milestones for implementation,
17 but that's correct.

18 And the last section in Chapter 12,
19 12.5, Operational Radiation Protection Program. The
20 program is in accordance with NEI 07-03A and
21 includes such aspects as instrument calibrations,
22 performance of radiation surveys, monitoring of the
23 RWSAT, refueling water storage auxiliary tank and
24 the primary makeup water tank, and boric acid
25 evaporator room monitoring as required by the DCD,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 source term reduction strategies, control of access
2 to VHRAs, very high radiation areas, utilization of
3 NEI 08-08A for contamination minimization, and for
4 respiratory protection aspects.

5 And that concludes discussion of Chapter
6 12.

7 CHAIRMAN STETKAR: Members have any
8 questions?

9 (No response.)

10 CHAIRMAN STETKAR: Thank you.

11 MEMBER BROWN: I do have one, and I
12 think I missed this when I was reading. It was your
13 dose thing that you just made relative to the direct
14 radiation dose. There was a table in Chapter 11
15 that talked about dose to the population from
16 gaseous effluent and all the rest of the numbers in
17 this table, table 11.3.1, were down in the millirem,
18 and this one popped up at 1.6 person-rem per year.
19 Is that the total body? And I'm not a radiation
20 health guy. Just the numbers. Everything else was
21 in the millirem per year.

22 MR. EVANS: Which table?

23 MEMBER BROWN: Table 11.3.1.

24 MR. EVANS: In the FSAR?

25 MEMBER BROWN: Yes, I believe that's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 correct. Chapter 11?

2 MR. EVANS: Oh, Chapter 11?

3 MEMBER BROWN: And I apologize for being
4 late.

5 MR. EVANS: It's okay. Now, which one
6 were you referring --

7 MEMBER BROWN: Table 11.3.1.

8 MR. EVANS: Okay. Parameters?

9 MEMBER BROWN: Yes. Well, it says
10 estimated site gaseous effluent dose calculations.

11 MS. WHITE: 12.3.1 maybe?

12 MR. EVANS: 12.3.1.

13 MEMBER BROWN: That might well be the
14 case. I'm looking at the SER with open items right
15 now and they reference FSAR Section 11.3.3.1 for
16 just tables.

17 11.3.1 DCD SER, so the reference is --
18 there's a note that says gaseous effluent doses from
19 FSAR Section 11.3.3.1 in tables 11.3-9R, or 11.3-
20 204.

21 MR. EVANS: Oh, there we go. Okay.

22 MEMBER BROWN: And the low was doses to
23 the population from gaseous effluent at a factor of
24 10 greater than everything else in the table
25 roughly. That's why it caught my attention.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Oh, I'm sorry you're right.

2 MS. WHITE: Millirem versus rem.

3 MEMBER BROWN: It's a factor of 100
4 more. Maybe even 1,000.

5 MR. EVANS: Beta dose in air, 1.62? Is
6 that you --

7 MEMBER BROWN: It says total body and
8 then person-rem thyroid were the two items. And
9 there were the two tables. I didn't go back and
10 look at the FSAR. I just looked at the -- just all
11 the numbers in the SER. Just a big difference. And
12 it was site-specific calculated dose.

13 MR. EVANS: Get up the SER here and see
14 if we can get on the same page with you.

15 CHAIRMAN STETKAR: Charlie?

16 MEMBER BROWN: Yes?

17 CHAIRMAN STETKAR: I was looking for the
18 table. It's 11.3-9R in the FSAR?

19 MEMBER BROWN: It lists three tables.
20 There's three table references. It's 11.3 --
21 Section 11.3.3.1 and tables 11.3-9R, 11.3-204 and
22 11.3-205.

23 MS. WHITE: These are calculated for a
24 single unit. This is for total in both units.
25 That's one difference.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER BROWN: It says CNPP units 3 or
2 304. That's in the description column.

3 MR. EVANS: What page of the SER are you
4 looking at?

5 MEMBER BROWN: 11-40.

6 MR. EVANS: 11-40?

7 CHAIRMAN STETKAR: If it's the SER, it
8 might be easier to ask the staff.

9 MEMBER BROWN: Yes, but I was just --
10 the staff did a reference with their note, the
11 appropriate tables in the FSAR, and that's why, you
12 know, I kind of lost the bubble going through
13 Chapter 11, so it fully escaped the applicant here.

14 MR. ROACH: Hi. This is Ed Roach from
15 Health Physics Branch. In the -- I think it's page
16 11-34 of the SER for the COL, it addresses our
17 evaluation of what the applicant did calculate to
18 show how they met the requirements for Part 20 and
19 Part 50, Appendix I, as well as the EPA regs 40
20 C.F.R. 190. And the population dose is a
21 calculation of the whole body, total body and
22 thyroid doses, and those were on the order of 1.58
23 person-rem and 1.98 person-rem, but that's to the
24 population to the entire --

25 CHAIRMAN STETKAR: That's within 50 --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. ROACH: Fifty mile --

2 CHAIRMAN STETKAR: -- radius. So it's
3 the integrated collective population dose --

4 MR. ROACH: Right.

5 CHAIRMAN STETKAR: -- within 50 miles.

6 MEMBER BROWN: Is that it?

7 CHAIRMAN STETKAR: Yes.

8 MEMBER BROWN: Okay. So it's a total of
9 everybody that's out there in the relative --

10 MEMBER RYAN: It's collective dose, yes.
11 Added up all the doses, yes.

12 MEMBER BROWN: All right. It just was a
13 big dose to the population. Like I say, I'm not a
14 health radiation health guy. Just that I noticed
15 the difference in the numbers as I was going through
16 the table. If our resident expert understands, I'm
17 happy as a pig in a mud wallow.

18 CHAIRMAN STETKAR: You good?

19 MEMBER BROWN: Yes, I'm fine. Just the
20 discontinuity between sizes, magnitudes and numbers.

21 CHAIRMAN STETKAR: Sure.

22 MEMBER BROWN: Thank you.

23 CHAIRMAN STETKAR: Any other question
24 for Luminant?

25 (No response.)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: With that, I think we
2 will recess for a break before the staff comes up.
3 We will recess until 10:25.

4 (Whereupon, the above-entitled matter
5 went off the record at 10:05 a.m. and resumed at
6 10:24 a.m.)

7 CHAIRMAN STETKAR: Okay. We are back in
8 session and we'll hear from the staff on Chapter 12.

9 MR. OTTO: Good morning again. I'm
10 Ngola Otto. I'm the project manager for Chapter 12,
11 Radiation Protection, and we're going to discuss the
12 staff's review of Chapter 12. To my right is Ron
13 LaVera. He's our reviewer for the chapter. He's
14 going to discuss the open items. We have one open
15 item is Chapter 12 out of the 25 questions we've
16 asked so far. And I'll go ahead and turn it over to
17 Ron.

18 MR. LaVERA: Good morning. My name is
19 Ron LaVera, as Ngola mentioned. My experience is 30
20 years of experience at PWR utility plants. I'm a
21 certified health physicist. I have six years of
22 experience in the Navy. I completed senior reactor
23 operator school. So that's my background.

24 Before I begin I would like to take a
25 moment to thank the applicant for the professional

1 manner in which they dealt with our questions and
2 concerns. It certainly facilitated my review of
3 this section.

4 In addition to the information that the
5 applicant talked about in their presentation, the
6 staff also sought additional clarification on
7 several items, including: Site-specific design
8 features to satisfy 10 C.F.R. 20.1406; minimization
9 of contamination; operational program elements for
10 minimizing the contamination source term in the
11 reactor coolant system; documentation of facility
12 construction for the purposes of facilitating
13 eventual decommissioning; site-specific provisions
14 for implementing zinc injection; content and control
15 of site-specific sources, in particular the
16 evaporation pond; processes for maintaining
17 construction worker dose ALARA; compliance with 10
18 C.F.R. 20.1301 and 1302 for the members of the
19 public; uses of standards for the selection and
20 calibration of radiation protection
21 instrumentations; respiratory protection program
22 consistency with Reg Guide 8.15 on respiratory
23 protection; program elements associated for primary
24 to secondary leakage minimization and program
25 elements for ESF. That's --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MONARQUE: Engineer safeguards.

2 MR. LaVERA: -- engineer safeguard
3 facilities. Thank you very much. Sorry. Did a
4 short circuit there. Engineering safety features
5 and leakage minimization program elements. Sorry
6 about that.

7 The only open item we have is the
8 question related to the 10 C.F.R. Part 30s, 40 and
9 70s, license materials. We are in the process of
10 reviewing the applicant's response to that.

11 And that concludes my presentation. Are
12 there any questions?

13 CHAIRMAN STETKAR: No questions?

14 PARTICIPANT: No.

15 CHAIRMAN STETKAR: Well, that was good.
16 Thank you very much. I'm almost sorry we didn't go
17 through that before the break, but there you go.

18 Thank you.

19 And I'd like to again thank the
20 applicant and the staff for good discussions for
21 both Chapters 11 and 12. I think 12 worked pretty
22 quiet, so --

23 MR. MONARQUE: And I wanted to confirm,
24 there's no takeaway items on Chapter 12.

25 CHAIRMAN STETKAR: I didn't hear any.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MONARQUE: Okay.

2 CHAIRMAN STETKAR: Now is the staff --

3 MS. BERRIOS: They're going to be ready
4 in 10 minutes for the --

5 CHAIRMAN STETKAR: Now I'm really sorry
6 I didn't -- let's go off the record just so that we
7 can speak at will here.

8 (Whereupon, the above-entitled matter
9 went off the record at 10:28 a.m. and resumed at
10 10:49 a.m.)

11 CHAIRMAN STETKAR: Okay. We are back in
12 session, and we'll hear from the staff I guess first
13 about risk-managed technical specifications. And as
14 you're aware, this is a very interesting topic to us
15 because this is the only applicant, at least that
16 we're aware of so far among any of the new reactor
17 design centers, that is proposing to adopt risk-
18 managed technical specifications going on. So this
19 is kind of a first of a kind, so we're pretty
20 interested in the process and how it's going to be
21 implemented and how the staff is going to -- what
22 level of detail the staff is going to do in their
23 reviews and so forth. So really appreciate the
24 opportunity to have this briefing.

25 For the record and for members; benefit,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 this is an information briefing. There isn't an SER
2 on any of this yet, so we'll be revisiting this
3 topic under the context of probably both Chapter 16
4 and Chapter 19, the PRA and the tech specs of the
5 COL application. And, you know, pending the
6 vagaries of scheduling, we're trying to keep those
7 meetings together. But they're quite a bit out in
8 the future right now, so this isn't something that
9 we're going to be hearing about in terms of an SER
10 or formal review for --

11 MEMBER BROWN: For the COLA?

12 CHAIRMAN STETKAR: For the COLA.

13 MEMBER BROWN: Oh, okay. Because, I
14 mean, there are SERs on the NEI documents that they
15 reference.

16 CHAIRMAN STETKAR: That's right. There
17 are SERs on the NEI documents already. Those have
18 already been approved by the staff.

19 With that introduction, I don't know
20 who --

21 MEMBER SHACK: I just had a quick
22 question. Is anybody doing risk-informed ISI, which
23 sort of strikes me as the easiest risk-informed
24 application to take. I mean, somehow it just seems
25 like a big leap.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 PARTICIPANT: No, no.

2 MR. HAMZEHEE: The answer is no.

3 CHAIRMAN STETKAR: Typically what you
4 see is they say, well, you know, we'll get through
5 the COLA process and then we'll do it after we get
6 our license.

7 MR. HAMZEHEE: This is the first risk-
8 informed application in the new reactors, as John
9 said.

10 MR. MONARQUE: Okay. My name's Steve
11 Monarque with the Office of New Reactors and thank
12 you for giving us the opportunity to present this
13 informal briefing today on risk-managed tech specs.

14 I want to introduce two presenters
15 today. Bob Tjader, who will go first and give a
16 historical perspective on all this, and followed by
17 Nick Saltos, presentation.

18 We've been communicating -- we've had
19 meetings and dialogues with Luminant for the past
20 three years since our initial application, and I
21 think even before their application regarding risk-
22 managed tech specs, so this has been an ongoing
23 three-year review. And with that, I'll go ahead
24 and --

25 MEMBER BROWN: Go ahead. I just wanted

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to make -- there's two pieces from what I saw in the
2 agenda. There's the risk-informed tech specs and
3 then there's the risk-informed or risk-managed --

4 MR. MONARQUE: Surveillance.

5 MEMBER BROWN: -- surveillance and
6 completion times.

7 MR. TJADER: Well, I'll get into that.
8 The risk-informed completion time and the
9 Surveillance Frequency Program. Each of those are
10 one of the initiatives. There are two parts to our
11 presentation, which I'll discuss briefly here.

12 CHAIRMAN STETKAR: Well, give your
13 presentation.

14 MR. TJADER: Good morning, members of
15 the ACRS. I'm Bob Tjader. I am in the Technical
16 Specifications Branch of NRO and I'm responsible for
17 the overall responsibility for the review of both
18 the US-APWR and the Comanche Peak technical
19 specifications. What I am going to present is a
20 brief overview of the risk-management tech spec
21 initiatives as they exist.

22 Now, as has been alluded to, US-APWR MHI
23 is the only vendor, the only design cert that is
24 incorporating what we call the risk-management tech
25 spec initiatives. Basically that is, when we say

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that, we mean basically Initiatives 4b and 5b,
2 because they're the significant ones, which I'll get
3 into briefly here. Some of the others have some of
4 the other less significant ones like missed
5 surveillances and things like that, but they're the
6 ones that have come in and basically wanted to adopt
7 the scope as approved currently.

8 The risk-management tech spec
9 initiatives; as we can see in this slide there are
10 eight of them, they were conceived by a joint task
11 force of NRC staff and industry in basically as a
12 response to the NRC policy statement on PRA, the use
13 of PRA and risk in regulatory decision making. And
14 in about the 1998 time frame, we and the industry
15 got together and tried to conceive of ways in which
16 we could improve tech specs through risk
17 information. And at that time we came up with eight
18 initiatives, and these are the eight initiatives
19 that we deal with today primarily.

20 When they were conceived they weren't
21 conceived -- in other words their numerical order
22 wasn't conceived on the degree of complexity. It
23 was just as basically they occurred to us.

24 MEMBER BLEY: What point in time did
25 this happen?

1 MR. TJADER: Nineteen-ninety-eight was
2 when the first eight initiatives were written down,
3 so to speak. And from that point on we, the staff
4 and industry together, have worked to review and --
5 they've proposed and we've reviewed and approved.
6 And it's taken many years to get approval on these
7 things, on these initiatives.

8 Basically this slide here presents them
9 in the order of relative complexity, if you will.
10 The first two initiatives approved, Initiative 2 and
11 3; 2 is missed surveillances and 3, mode change
12 flexibility, basically rely on the use of the risk
13 -- or the Maintenance Rule (a)(4) Program as it
14 exists to licensee. It does not require any
15 necessarily quantitative approach, but it does
16 require an approach that they utilize, the licensee
17 would utilize in implementing their (a)(4) Program.
18 Maintenance Rule (a)(4) just briefly says that prior
19 to performing maintenance or surveillances you have
20 to assess and manage risk. Okay?

21 Okay. Initiative 2 and 3; they were the
22 first two approved -- Initiative 2 basically -- if
23 you missed a surveillance in the past, you used to
24 have to -- at power. Let's say it was -- you missed
25 it and you determined you missed it at power and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 there's something that you have to be performed at a
2 shutdown mode. You would have to shut down to
3 perform that surveillance. Now, this allows for
4 risk assessment to determine whether or not you can
5 remain at power prior to performing missed
6 surveillances up to one surveillance frequency.

7 Mode change flexibility. Similarly in
8 the past prior to starting up all surveillances and
9 all equipments had to be completed. If in the
10 process of starting up now you find that you
11 inadvertently missed an inoperable piece of
12 equipment, you can transition up in mode to power as
13 long as you restore that equipment to operable
14 status within the existing completion time of the
15 condition and required action of that tech spec.

16 MEMBER BLEY: As if you were at power
17 essentially?

18 MR. TJADER: As if you were at power.
19 Now it doesn't apply to all systems. Now, this one
20 here, there has to be a pre-assessment of the
21 systems of which you're applying. It assumes that
22 the risk of mode 1 bounds the risk of the other one.
23 So in other words, the highest risk you would
24 experience with inoperable equipment would be in
25 mode 1 where you have a condition and a required

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 action that can be performed. Now, there are some
2 -- like diesels, this does not apply to diesels. It
3 doesn't apply to, you know, RHR systems and some of
4 the others. And there are notes in the specs that
5 that doesn't apply to.

6 The next three require an analysis, a
7 quantitative analysis prior to approval of these for
8 the systems for which they apply. Initiative 1
9 modified end states. Basically that allows you to
10 shut down the hot shutdown rather than all the way
11 to cold shutdown to repair and restore equipment and
12 then you can proceed up.

13 Initiative 6 is the only one that has --
14 mode 1 has been approved for some vendor types, but
15 not all. Initiative 6 has not yet been approved.

16 It's been in negotiation this whole while.

17 Basically that adds additional time to 3.0.3
18 shutdowns. If you do not have a condition that
19 addresses a condition of inoperability in a tech
20 spec, then you have to enter 3.0.3, which is the
21 shutdown. Or, if you find that you have not
22 completed the required actions within the allowed
23 completion times, then you have to shut down and
24 enter 3.0.3. This allows additional time prior to
25 completing the 3.0.3 shutdown, or prior to entering

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to 3.0.3 in certain cases. This has sort of evolved
2 over time, but it's -- and it's under negotiation.

3 CHAIRMAN STETKAR: Bob, how is that --
4 and I really appreciate this, because you know, this
5 is the first coherent summary of these initiatives
6 that I've heard. How is that Initiative 6
7 conceptually different from 4b?

8 MR. TJADER: Conceptually it's very
9 similar. In fact, because basically --

10 CHAIRMAN STETKAR: 4b allows you --

11 MR. TJADER: Yes, the --

12 CHAIRMAN STETKAR: -- no additional
13 time.

14 MR. TJADER: Yes. Conceptually they're
15 the same other than the fact of say that Initiative
16 6 would allow a specific period of time for an
17 existing condition prior to entering 3.0.3. It's
18 not a -- you could conceivably apply 4b to that
19 condition.

20 CHAIRMAN STETKAR: Yes.

21 MR. TJADER: And perhaps proposals will
22 come in house that do that. In fact --

23 CHAIRMAN STETKAR: Okay. I was just
24 trying to --

25 MR. TJADER: But it is in a risk-

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 informed completion time that can be adjusted,
2 depending upon the risk associated with
3 configuration of the plant. It is a specific time
4 that is additional to restore the equipment prior to
5 entering shutdown.

6 CHAIRMAN STETKAR: But I mean, if for
7 example you did a 4b analysis and determined that
8 you've got, you know, 67.25 hours to restore a piece
9 of equipment to service, risk-informed completion
10 time. Then you get up to 67.25 hours. You would
11 then normally trigger 3.0.3. And you're saying --

12 MR. TJADER: Well, no, in risk-informed
13 completion time if you use up the completion time,
14 then you're treating it as the specs treat
15 completion times now. You then take the next
16 logical -- it could be 3.0.3.

17 CHAIRMAN STETKAR: Could be 3.0.3.

18 MR. TJADER: It could be shutdown --

19 CHAIRMAN STETKAR: Well, I was trying to
20 obviously --

21 MR. TJADER: -- but you then take the
22 next -- enter the next logical action.

23 CHAIRMAN STETKAR: Let's suppose you did
24 enter normally 3.0.3. Would 6 then give you an
25 additional window?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. TJADER: Yes, if --

2 CHAIRMAN STETKAR: Okay. Beyond what
3 you calculated in -- beyond your 67.25 hours?

4 MR. TJADER: But keep in mind we
5 haven't --

6 CHAIRMAN STETKAR: I understand you
7 haven't got there yet.

8 MR. TJADER: We haven't got there yet.
9 What we haven't done is we -- I don't think we've
10 envisioned applying 4b to Initiative 6 completion
11 times. Okay? I don't think we've envisioned that.
12 That doesn't mean licensees can't propose it, but I
13 don't --

14 CHAIRMAN STETKAR: Yes, but I'm thinking
15 about, you know --

16 MR. TJADER: Yes.

17 CHAIRMAN STETKAR: -- holistic risk-
18 informed tech specs.

19 MR. TJADER: Well, to be honest with
20 you, we are finding as we are in the process of
21 reviewing and approving these, we do have to
22 consciously think about the interactions of these
23 initiatives, you know? And for instance, there's
24 mode change flexibility where you can go back up in
25 time. Well, you know, there's all kinds of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 scenarios that can come up. Well, what if you've
2 come down, you know, to hot shutdown to use -- load
3 initiative mode 1 to restore equipment, you know,
4 and then, you know, you don't restore it. And, I
5 don't know, then you're -- how does that interact
6 with --

7 CHAIRMAN STETKAR: Well, nobody would
8 ever --

9 MR. TJADER: -- the change to
10 flexibility, whatever? I'm not very good at
11 describing the complexities of the interactions, but
12 we're finding that it turns out to be somewhat
13 complex and we have to think about that.

14 MR. HAMZEHEE: Bob, correct me if I'm
15 wrong, for 3.0.3 it's more generic approach.

16 CHAIRMAN STETKAR: No, I understand.
17 I'm just trying to understand -- obviously as Bob
18 was saying, there are interactions that if I do a
19 risk-informed completion time for restoration of
20 this particular piece of equipment and determine
21 it's; let me use a round number, 80 hours, and if I
22 find that I cannot restore that within 80 hours and
23 the next step in the tech specs would be enter 3.0.3
24 and shut down, I'm curious whether Initiative 6
25 would then somehow give me --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. HAMZEHEE: Add more time.

2 CHAIRMAN STETKAR: -- add more time,
3 because this -- that 80 hours was in principle --

4 MR. TJADER: I guess I'd like to -- let
5 me qualify a couple things first of all. Initiative
6 is very limited in scope. Okay? It does not
7 apply to loss of function. Okay? Initiative 4b
8 does not apply to loss of function. You just can't
9 do that at all. I think back in the beginning when
10 we thought of Initiative 6 we were thinking of 3.0.3
11 in general where it could conceivably apply to loss
12 of function, but that has now been taken off the
13 table as part of the review process. Okay? So it
14 is very limited in scope, initiative 6, at this
15 point in time.

16 CHAIRMAN STETKAR: Well, because it
17 doesn't apply to loss of function, in my mind it
18 even -- and neither does 4b.

19 PARTICIPANT: That's right.

20 CHAIRMAN STETKAR: In my mind it gets
21 even a bit more muddy about how they interact with
22 one another.

23 MR. SALTOS: Yes, as it stands right
24 now, Initiative 6 is not included in 4b. 4b
25 excludes 6. The purpose of 6 was to extend the one

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 hour. In other words, you find the system is not --
2 loss of function, especially with some systems that
3 are not as risk-significant or some systems that are
4 not even included in the PRA, some radiological
5 control systems. To extend that to four hours, six
6 hours so they can perform the maintenance, that was
7 the idea. It was not intended to use this together
8 with 4b.

9 CHAIRMAN STETKAR: Okay. Charlie?

10 MEMBER BROWN: Yes, I mean, if you go
11 look at whatever it's the total of Part 4, I mean,
12 under 5.5-18 it says, "The program shall ensure the
13 assessment of configuration-specific risks to
14 support the extension of completion times." Item A
15 says, "When entering the spec, the following actions
16 shall be taken in accordance with NEI 06-09 within
17 the completion time of the referencing spec
18 determined that the plant configuration is
19 acceptable beyond the completion time. Then you
20 calculate the risk-informed completion time and you
21 can restore the system to operable status within the
22 RIC or the backstop of 30 days."

23 So to me, when I read this, plus 06-09,
24 plus your SER, it said -- the way I read that is
25 they're putting in place the program to extend the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 completion time beyond it. As long as you do your
2 calculation within the completion time to say I'm
3 okay --

4 MR. SALTOS: But you don't have loss of
5 function.

6 MEMBER BROWN: -- then it's a risk-
7 informed analysis.

8 MR. SALTOS: There is no loss of
9 function.

10 MR. TJADER: Yes, no loss of function.
11 But in addition to that --

12 MEMBER BROWN: That wasn't real clear
13 when I read it.

14 MR. TJADER: Well, it is in 06-09. It
15 explicitly states in 06-09.

16 MEMBER BROWN: Hey, that was 60 pages of
17 stuff.

18 MR. TJADER: But keep I mind too -- no,
19 it's very explicit, it does not apply to loss of
20 function. But let me further say that it doesn't
21 apply to all completion times. It only applies to
22 completion times within which they reference the
23 program. So in other words, there are a limited set
24 of conditions and required actions. In fact,
25 Luminant takes a very limited and conservative

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 approach to that --

2 MEMBER BROWN: You said that.

3 MR. TJADER: -- you know, in that they
4 only apply it to a limited number of systems and
5 they only apply it to basically when one train of
6 their four trains are out. Okay? So they have even
7 limited it more voluntarily. But it only applies to
8 those required actions where the completion time
9 explicitly calls out the risk-informed completion
10 time. So there's a all slew of conditions and
11 required actions where risk-informed completion
12 time, Initiative 4b, does not apply.

13 MEMBER BROWN: Two questions relative to
14 that because in their paper, the white paper they
15 submitted just said exactly what you did. They had
16 a limited range. One train. Then they had the
17 second train or third train. They had that
18 explanation. But there was no discussion in here of
19 how this gets cranked or incorporated into the COLA.
20 This is just a paper. I didn't -- there was no
21 reference --

22 MR. TJADER: Yes, well it's cranked into
23 the tech specs themselves.

24 MEMBER BROWN: No, I mean, this document
25 that they presented is -- I mean, this limitation --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. TJADER: They have --

2 PARTICIPANT: Let him get through and
3 you'll get an idea of what --

4 MR. TJADER: No, I think what the -- is
5 this in here?

6 Basically this limitation, what it does,
7 it's a description of the -- oh, that's a program.
8 The Initiative 4b incorporation into both the DCD
9 and the Comanche Peak specs, it incorporates the
10 program and it incorporates the specific specs. And
11 there are -- there is a specific required action,
12 which says -- I don't know have the Luminant
13 specific wording, but basically there's a specific
14 action that, you know, within -- if -- and it's a
15 voluntary entry.

16 If you don't anticipate restoring the
17 system or equipment within the allowed completion
18 time, perform a risk assessment to determine the
19 quantified risk-informed completion time and
20 determine what that is and apply it. So it only
21 applies to very specific not only specs, but
22 specific conditions and for risk-informed completion
23 time. It is not a carte blanche application to all
24 completion times. It is not that. Okay?

25 So but at any rate, good questions.

1 Basically what I'm going to do is I'm going to talk
2 a little bit more; I think we're doing that right
3 now, of Initiatives 4 and 5, which are the
4 significant ones, the ones that have been termed the
5 risk-management tech specs. I'll talk about them a
6 little bit more. If you're interested in some of
7 these others, I have slides, backup slides on those.

8 CHAIRMAN STETKAR: We have a little bit
9 of time here.

10 MR. TJADER: Okay.

11 CHAIRMAN STETKAR: And we have to break
12 at noon --

13 MR. TJADER: Okay.

14 CHAIRMAN STETKAR: -- is our only
15 constraint.

16 MR. TJADER: Okay.

17 CHAIRMAN STETKAR: But, you know, we're
18 running ahead of schedule.

19 MR. TJADER: Okay.

20 CHAIRMAN STETKAR: So if you could, go
21 through -- just as you said earlier, this is kind of
22 the first time I think that many of us have seen all
23 of the initiatives laid out. So if you could, you
24 know, briefly go through Nos. 7 and 8 just so we
25 understand what those, and then back to 4 and 5,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 which are really the crux of what we're going to
2 learn about.

3 MR. TJADER: Okay. Initiative 7 briefly
4 is --

5 MEMBER BROWN: Are we going to have some
6 more on -- I mean, the application of 6 to 4 seemed
7 to me to have some credibility -- I mean, not
8 credibility, some application. There's an
9 interaction there that you got to deal with, isn't
10 it? I mean --

11 CHAIRMAN STETKAR: Luminant is not
12 proposing anything regarding Initiative 6, are they?

13 MR. TJADER: Well, keep in mind
14 Initiative 6 is not yet approved.

15 CHAIRMAN STETKAR: Right.

16 MR. TJADER: It's not even out on the
17 table for adoption by even operating plans. It's
18 not -- because it is difficult and we have concerns
19 about the interaction and things like that. They're
20 not easy things to review and approve. You can
21 imagine, the NEI 06 and the 04-10 document took
22 years to negotiate. They took literally years to
23 negotiate, I mean, from '98 to 2007, you know? And
24 so they're not easy things. And because of some of
25 these complexities, with 6 -- like I said, the scope

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of 6 over time has been narrowed because of concerns
2 of applying it, you know? Perhaps -- I don't know,
3 it is not yet approved.

4 MEMBER BROWN: But their paper
5 recommended changes -- or not changes, additions to
6 NEI 06-09 and 04 whatever, because they're a new
7 plant as opposed to an operating plant.

8 CHAIRMAN STETKAR: Well, we're getting
9 -- Let's wait until we talk more about 4b and 5b.

10 MEMBER BROWN: All right.

11 MR. HAMZEHEE: I just want to say that
12 Bob has put together a very good presentation that
13 covers most of these, so to go through --

14 CHAIRMAN STETKAR: That's what --

15 MR. TJADER: Well, I put together a
16 brief presentation. If I had known that we wanted
17 to dive in deeper, I probably should have made it a
18 little more detailed, and I --

19 CHAIRMAN STETKAR: It's an information
20 briefing, so it's --

21 MR. TJADER: But any rate --

22 CHAIRMAN STETKAR: Go ahead.

23 MR. TJADER: But, no, the revisions with
24 06-09 and 04-10 that may arise are a result of
25 concerns about the quantitative metrics of Reg

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Guides 1.174 and 1.177 as they apply to the new
2 operating plants. And the Commission has directed
3 the staff to assess that through some tabletop
4 discussions which are ongoing. And those
5 recommendations haven't been made yet.

6 But depending on whether or not; and
7 that's a whether or not, a big one, whether or not
8 there needs to be changes to quantitative metrics or
9 whether or not there even need to be changes to
10 defense in depth or something like, then there may
11 need to be some supplement to the NEI 06-09. I
12 think that's what that's referring to.

13 MEMBER BROWN: But they were making
14 these modifications as part of the implementation to
15 the program in their COLA. That's the way it was
16 read. Because they're a new plant and they were
17 introducing -- we don't have experience, therefore
18 our PRAs aren't going to be as complete based on
19 the --

20 MR. TJADER: Well, they --

21 MEMBER BROWN: -- supporting background
22 data.

23 MR. TJADER: There are two trains going
24 down the track and we anticipate those trains
25 getting to the station at the same time. And one is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the evaluation of the new metrics, what the
2 Commission directed us to, and their applicability
3 to new reactors, the existing risk guidance, is it
4 acceptable for new reactors? Okay? If we find it's
5 not, then Comanche Peak has got a different problem.
6 Then they've got a problem of extracting this from
7 their tech specs because then we're not going to
8 meet their schedule.

9 CHAIRMAN STETKAR: Charles? Charlie?

10 MEMBER BROWN: I'll stop.

11 MR. TJADER: Maybe some of it will be
12 clarified in the Luminant --

13 MEMBER BROWN: I'm going to stop. I
14 just had to get all of my -- I had to do a data dump
15 here.

16 STETKAR: Well, I'd just suggest from
17 what I've seen -- Bob's given us the whole
18 background and the next talk is going to be Comanche
19 Peak.

20 MR. TJADER: Well, actually what I had
21 actually envisioned was giving you a brief
22 background on the tech specs --

23 MEMBER BLEY: Yes.

24 MR. TJADER: -- and sort of putting in a
25 perspective as to why Initiative 4b and 5b -- why

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it's significant with regard to scheduling Comanche
2 Peak and the PRA and how it affects the program.

3 Basically --

4 CHAIRMAN STETKAR: Let's see if we can
5 get through that by noon.

6 MR. TJADER: Okay.

7 CHAIRMAN STETKAR: This is brief --

8 MR. TJADER: Okay.

9 CHAIRMAN STETKAR: -- and there's about
10 25 slides here.

11 MR. HAMZEHEE: He already covered most
12 of them.

13 CHAIRMAN STETKAR: I understand. Then
14 the rest of them will go quickly.

15 CHAIRMAN STETKAR: So again, back to
16 Initiative 7.

17 MR. TJADER: Initiative 7 is basically
18 systems that are not in specs; snubbers -- snubbers
19 at one time were in spec, but that gets into the
20 whole history of the thing. But in the revised
21 standard tech specs and in the new reactor specs
22 there is not a snubber tech spec. And so if
23 snubbers are inoperable, it de facto makes the
24 support systems inoperable. And basically that
25 could provide -- in light of the fact that we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 perform maintenance at power, could provide and
2 inadequate amount of time to perform snubber
3 maintenance at power.

4 And so, since the old snubber specs
5 provided a 72-hour completion time; i.e., 72 hours
6 to do snubber specs, industry proposed a snubber
7 inoperability spec, which in the standard tech specs
8 is basically a 308 spec, depending on the standard
9 we're looking at. Basically it provides time to
10 perform snubber maintenance. Okay?

11 And then the other one is barriers.
12 Barriers -- if a hazard barrier, you know, water
13 tight barrier or fire barrier or something is
14 inoperable, it de facto would make the supported
15 system inoperable. And at times that would be sort
16 of a drastic -- and the end result would be a
17 drastic response in the tech specs to perhaps
18 something where a watch could be stationed or things
19 like that. So that allows time for hazard barriers
20 to become fouled, inoperable, whatever and restored
21 to status without taking Draconian tech spec
22 actions. That's what basically Initiative 7 does.

23 MEMBER BLEY: And what's its status?

24 MR. TJADER: Well, both snubber and
25 hazard barrier inoperabilities have been approved.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER BLEY: Have been approved?

2 MR. TJADER: Have been approved. There
3 was actually at one time thoughts of applying this
4 to much more wide variety of systems, but I think
5 that due to the complexity of doing these generic
6 risk assessments that that probably -- I don't
7 envision at this point in time 7 being any more than
8 those two initiatives at this time, the snubber and
9 the hazard barrier unavailabilities.

10 CHAIRMAN STETKAR: People have folded
11 Initiative 7 into their fire protection programs?
12 Is that how it's implemented basically, or is -- how
13 is it -- I mean, how is that initiative --

14 MR. TJADER: It doesn't in fact require
15 fire protection revisions or -- yes, I don't
16 believe. They may have some procedures in their
17 fire protection program or something that, you know,
18 addresses this, but there's nothing that is
19 explicitly required.

20 CHAIRMAN STETKAR: No. 8.

21 MR. TJADER: Okay. Eight is basically
22 -- there was an 8a and an 8b. 8a is basically to --
23 10 C.F.R. 50.36 has four criteria. They were part
24 of the initial Commission paper on improving
25 standard tech specs. The fourth criteria is that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you have to incorporate a system if engineering
2 judgment or if the staff finds it's risk significant
3 and has to be incorporated into the specs.

4 There were a few systems; RICT and some
5 RHR systems, that the staff determined initially way
6 back when the Improved Standard 92 was created that
7 should be in specs. And industry did not agree with
8 us, but they were included nonetheless. And
9 industry has promised through -- in Initiative 8b a
10 review of those systems and assessment of those
11 systems to in fact have them removed to tech specs.
12 We're waiting for that from industry and I don't
13 know if we're ever going to receive it because it's
14 been a number of years.

15 CHAIRMAN STETKAR: The equivalent of a
16 50.69-type analysis, or what?

17 MR. TJADER: Well, that's for industry
18 to determine what kind of analysis they want to do
19 on removing those systems. I don't know. But, yes,
20 that could be some sort of 50.69, system
21 significant, things like that.

22 And then 8b is in fact probably an
23 extension of 50.69, and 8b is sort of futuristic,
24 pie-in-the-sky-type things where we envision having
25 maybe risk-based rather than risk-informed tech

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 specs and using risk to actually determine whether
2 or not things should be in specs. So that would
3 probably require rulemaking and things like that,
4 but that is not yet the scope.

5 CHAIRMAN STETKAR: Essentially the whole
6 Initiative 8 is still --

7 MR. TJADER: Yes, that's --

8 CHAIRMAN STETKAR: -- on the table.

9 MR. TJADER: -- still off --

10 CHAIRMAN STETKAR: Or off the table.

11 MR. TJADER: -- the table and in the
12 future.

13 CHAIRMAN STETKAR: Okay.

14 MR. TJADER: Things like that. But the
15 big one's, Initiatives 4b and 5b, are not only on
16 the table, they've been approved for some plants
17 already.

18 Yes, the next slide. Where this becomes
19 particularly significant for Luminant and Comanche
20 Peak is that ISG-08 -- the Commission has determined
21 that at the time a corporate licensing is issued
22 tech specs have to be complete. And that means in
23 accordance with ISG-08, that either the plant-
24 specific value, the limit has to be in the specs
25 that -- or a bounding value has to be in specs, or

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that a tech spec program -- that's a 55 -- that's
2 the admin control section of 55, program has to be
3 implemented using an NRC-approved methodology.

4 And this is what Nick's presentation's
5 going to get into, is a tech spec methodology for
6 ensuring that a PRA is acceptable for the
7 applications envisioned; 4b and 5b, when the plant
8 needs to implement them; i.e., a PRA -- at the time
9 the COL is issued, the PRA will not yet be final.
10 The systems, instrumentation systems and other
11 things will not be in place where the plant-specific
12 PRA can be completed. It will be completed, the
13 PRA, sometime prior to fuel load. Okay?

14 So that means that in accordance with
15 ISG-08 we have to have a methodology in tech specs
16 to ensure that the PRA is capable. And this applies
17 to 4b and 5b. Particularly 4b is what this applies
18 to, is that the -- in other words, to do a
19 quantified risk assessment for a risk-informed
20 completion time, the PRA has to be adequate to
21 ensure that you're addressing the risk associated
22 with the configuration of the plant and determining
23 an appropriate completion time. And that's where
24 that comes in.

25 And that methodology that has been

1 proposed we are currently reviewing. We've had RAIs
2 out on it. We're negotiating it currently with
3 Luminant. I think you may have a copy of that. I
4 think that's what was referred to. And Nick is
5 going to get into that in a little more detail, or a
6 lot more detail. And basically that will be
7 essential for approving 4b for Luminant.

8 Okay. The next slide.

9 CHAIRMAN STETKAR: Bob, when did ISG-08
10 come out?

11 MR. TJADER: I believe it was probably
12 about two years ago. Originally I think it came --
13 it became necessitated through and apparent that it
14 was necessary because of instrumentation systems,
15 the fact that you wouldn't have the full package of
16 instrumentation readily available at the time and
17 you had to have then a setpoint control program, a
18 methodology for determining your instrumentation
19 setpoints, which are required in tech specs. That's
20 where it first, I think, came to light and that
21 was --

22 CHAIRMAN STETKAR: Yes, I understand
23 that --

24 MR. TJADER: I believe it was like 2009
25 time frame.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: I understand that
2 concept. I was curious how it relates to, you know,
3 expanding methods for determining PRA adequacy to
4 support things.

5 MR. TJADER: Well, as long as you can
6 have, you know, an acceptable methodology for
7 determining something, a process that you find
8 acceptable and confident in, then --

9 CHAIRMAN STETKAR: Okay.

10 MR. TJADER: -- you can apply that
11 methodology.

12 CHAIRMAN STETKAR: Well, we'll talk --

13 MR. TJADER: Basically NEI 06-09 and 04-
14 10 are methodologies for 4b and 5b, and they are
15 referenced in the tech specs. 06-09 and 04-10 are
16 referenced in tech specs and the requirements
17 contained therein become in essence tech spec
18 requirements.

19 Okay. The next slide? Going back to
20 4b; I think we've discussed this a lot, but
21 basically Initiative 4b is the real time quantified
22 calculation of a completion time based upon the
23 configuration of the plant and it is a quantified
24 risk assessment that deals not only with tech spec
25 equipment, but whatever equipment are reflected in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the PRA.

2 Basically you can extend the existing
3 framework of -- the tech specs exists as -- in other
4 words, the existing standard-type framework exists.
5 What you have then is overlaid on this, the I 4b
6 format. In other words, you apply then -- you add
7 required actions and completion time. The required
8 is is that you have to perform -- if you determine
9 that you may exceed your front stop -- we call the
10 existing completion time the front stop. If you
11 find that -- if the licensee finds that they may
12 exceed that front stop, then within that front stop
13 they have to do this quantified risk assessment to
14 determine what an appropriate risk-informed
15 completion time is, and then they can apply that.
16 And they can either apply the risk-informed
17 completion time or 30 days, whichever is less. In
18 other words, there's a 30-day what we call backstop.
19 They cannot take a risk-informed completion time
20 beyond 30 days. Okay?

21 MEMBER BLEY: Bob?

22 MR. TJADER: Yes?

23 MEMBER BLEY: Can I interrupt you?

24 MR. TJADER: Sure.

25 MEMBER BLEY: I appreciated your first

1 slide a lot, because we've been trying to understand
2 this whole history. One piece, it doesn't look like
3 you're going to talk about, so I'll ask you to. I
4 understand what 4b is. We've talked a lot about
5 that here and otherwise. There must have been other
6 4a's and c's. What were those and did they
7 disappear or did they become something?

8 MR. TJADER: No, Initiative 4a is not
9 the real time calculation of risk to determine a
10 completion time. It is where either industry,
11 through the Tech Spec Task Force, revises the
12 standard tech spec, or a licensee can on their own
13 want to revise one specific completion time and
14 change it from 72 hours to 7 days.

15 MEMBER BLEY: From basis?

16 MR. TJADER: Yes, it isn't a risk-
17 informed completion time, but it uses risk
18 information to change a completion time from one
19 value to another.

20 MEMBER BLEY: Okay.

21 CHAIRMAN STETKAR: It's how an applicant
22 would come in, or a license would come in and say I
23 want to change my diesel generator time --

24 MEMBER BLEY: Yes, okay.

25 CHAIRMAN STETKAR: -- from 72 hours to 7

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 days, or 14 days, or whatever.

2 MEMBER BLEY: Thank you.

3 MR. TJADER: And likewise with 5a and
4 5b. 5a was a licensee came in and requested a one-
5 time change to a --

6 CHAIRMAN STETKAR: To a specific --

7 MR. TJADER: -- surveillance frequency.

8 CHAIRMAN STETKAR: Yes, and it's a
9 specific surveillance frequency.

10 MR. TJADER: Now, we have internally and
11 with industry of course discussed the interaction of
12 these things, too. In other words, we have to
13 ensure that we keep in mind the application of 4b in
14 the 4a approvals and things like that, the
15 potential. So, let me leave it at that.

16 MEMBER SKILLMAN: Bob, let me ask a
17 question. I'm Dick Skillman. For Luminant, and
18 let's presume that they have found an incident where
19 they wish to exceed your front stop, they're
20 confident they're not going to exceed their
21 backstop --

22 MR. TJADER: They cannot, without coming
23 in for a notice of enforcement discretion, go beyond
24 30 days.

25 MEMBER SKILLMAN: Got it. But let me

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 finish my question.

2 MR. TJADER: I'm sorry.

3 MEMBER SKILLMAN: Does the NRC staff see
4 that process being entirely internal to Luminant, or
5 does the NRC staff see that risk assessment
6 communication of exceeding the front stop and basis
7 to believe continued operability, or whatever that
8 might be, being a negotiation between the region and
9 the applicant?

10 MR. TJADER: When the NRC staff approves
11 the application of I 4b, the implementation of NEI
12 guidance of NEI requirements contained in NEI 06-09,
13 when it approves them, we then allow the licensee to
14 implement the extension of completion times, of
15 front stop completion times following the
16 requirements and guidance in NEI 06-09. NEI 06-09
17 not only has the process in which that's done, it
18 also has documentation requirements which must be
19 retained for auditable purposes by the resident
20 inspector.

21 This is something that -- so far I 4b
22 has only been approved for South Texas 1 and 2 and
23 there's -- probably they've entered it maybe a half
24 a dozen times. And when it's done, the resident is
25 aware of it and the reviews, the application of it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 -- and we're very familiar. In fact, South Texas,
2 when they've done it for -- in advance and they knew
3 about it in advance, they've let us know in advance
4 that they intended to do it. So basically they can
5 apply it, but we will review it.

6 MEMBER SKILLMAN: Thank you.

7 CHAIRMAN STETKAR: Well, you won't
8 review it -- well, it's audited by the inspector.

9 MR. TJADER: Yes. Yes. Okay.

10 CHAIRMAN STETKAR: It's open to audit by
11 the inspector.

12 MEMBER SHACK: There's no prior
13 approval.

14 CHAIRMAN STETKAR: There's no prior
15 approval and there's no review. There's only an
16 audit.

17 MEMBER SHACK: And the discussion is yes
18 they can do it on their own and the regional
19 inspector has the option to either audit it or check
20 to see if they've been doing it or whatever.

21 CHAIRMAN STETKAR: It's logically
22 equivalent of a 50.59 analysis. You can go in and
23 audit --

24 MR. SALTOS: Well, there are
25 requirements to document certain things --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Sure. As you have to
2 document --

3 MR. SALTOS: -- that are spelled out
4 what they have to document. And even the PRA
5 analysis, from the PRA analysis.

6 MEMBER SKILLMAN: Thank you.

7 CHAIRMAN STETKAR: Go to the next slide?

8 MR. TJADER: Okay. This is what I've
9 alluded to is that the NEI 06-09 has certain
10 requirements. And these are a list, a summary of
11 the requirements, the decision making process
12 requirements.

13 CHAIRMAN STETKAR: Be careful your
14 paper. You're on the microphone.

15 MR. TJADER: Oh, I'm sorry. There are
16 requirements for PRA adequacy, capability, and there
17 are requirements for the attributes of the
18 configuration risk monitor spelled out in 06-09. Of
19 course it's a quantitative risk assessment. There
20 are quantified limits that you calculate to in ICDP
21 and ILERF and things like that. And there are
22 documentation requirements and there are staff
23 training requirements in NEI 06-09.

24 CHAIRMAN STETKAR: I'm woefully
25 uneducated about these documents. Has NEI 06-09

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 been revised since the SER approved version of it?

2 MR. TJADER: No, Rev 0 of 06-09 has --

3 CHAIRMAN STETKAR: Is still the

4 operative?

5 MR. TJADER: Is still the operative one.

6 04-10 has been revised once. It's Rev 1. And that

7 was --

8 CHAIRMAN STETKAR: The SER was written

9 on Rev 1, right?

10 MR. TJADER: Yes.

11 CHAIRMAN STETKAR: Okay.

12 MEMBER SHACK: You could change that,

13 but you would have to come back for a review.

14 MR. TJADER: Yes, basically the staff

15 would have to review and approve any revision for

16 06-09 that would be applied to Initiative 4b.

17 Whatever is approved would be incorporated into the

18 license, into the tech specs.

19 CHAIRMAN STETKAR: My only question was,

20 you know, has the industry gone to here and now, you

21 know, what's in is -- you know, an SER on, you know,

22 some outdated sort of guidance?

23 MR. TJADER: In the tech specs the NEI

24 06-09 Revision 0, specific revision, is called out.

25 CHAIRMAN STETKAR: Hence my question.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. TJADER: And they have to apply
2 that. Even if Rev 1 is approved, that doesn't
3 automatically change the specs. They'd have to come
4 in for a license --

5 MEMBER BROWN: Okay. Within that
6 context, their paper on what they did, they did call
7 out -- they say these modifications to 06-09 are
8 necessary as 06-09 was prepared for an operating
9 license as opposed to a new -- an already operating
10 plant as opposed to a new license. So --

11 MR. TJADER: Well, keep in mind --

12 MEMBER BROWN: Let me just make sure I
13 get my -- I got to get this right in my own mind. I
14 viewed those as they're taking 06-09 Rev 0 and
15 saying in order to implement this, based on the
16 words that are there now, for a new COL, that we
17 need these modifications to the NEI document. And
18 just listening to you right now, since you've
19 already written an SER on Rev 0, I would imagine --
20 or I would have interpreted that you would have had
21 to approve or write an SER on their revised
22 document.

23 CHAIRMAN STETKAR: They will and we'll
24 see that when they do that.

25 MEMBER BROWN: Yes, but even though 06-

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 09 Rev 0 may not actually be changed by NEI, you
2 still have to approve as with some of a safety
3 evaluation for them to apply these modifications in
4 their application. Is that --

5 MR. TJADER: Yes, those modifications
6 will eventually be incorporated, but --

7 MEMBER BROWN: Not initially?

8 MR. TJADER: Exactly. That's right.

9 MEMBER BROWN: Okay. So you all would
10 have to do another SE to cover this in terms of
11 their --

12 MR. TJADER: Well, we envision that SE
13 being in the SE for Luminant, you know, a COL.

14 MEMBER BROWN: Well, it will be when you
15 do --

16 CHAIRMAN STETKAR: It's the SE for
17 Chapter 16 for the --

18 MR. SALTOS: Chapter 19.

19 CHAIRMAN STETKAR: Sixteen or nineteen,
20 one of those. Sorry. It'll be 19 for the COL.

21 MR. TJADER: Well, if it is in 19, 16
22 will certainly reference it.

23 MEMBER BROWN: Well, this is in Part 4,
24 Tech Specs, Tier 1, Section 5.

25 MR. TJADER: That is the proposed tech

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 spec changes, exactly.

2 MEMBER BROWN: So that would have to be
3 applied --

4 MR. TJADER: Right, the methodology
5 would be under 19 probably.

6 MEMBER BROWN: Okay. All right. I'm
7 just trying to separate Tier 1, Tier 2, 19, all the
8 other -- the alphabet soup, or numerology that gets
9 applied to this. Excuse me. Thank you.

10 MR. TJADER: Next slide. As I've
11 already said, NEI 06-09, have the program
12 requirements for applying risk-informed completion
13 times. The methodology, 06-09 is in the
14 administrative control section of the tech specs.
15 Any revisions to NEI 06-09, any modifications that
16 are not in Rev 0 but we need to incorporate into Rev
17 0 will be specified one way or another in that
18 Administrative Controls Program. It will be
19 referenced there. And then of course any subsequent
20 changes would require a license amendment to revise
21 that methodology.

22 Next slide. Now, Initiative 5b is a
23 Surveillance Frequency Control Program. Basically
24 what that does is the surveillance requirements
25 themselves remain in tech specs. The requirement

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 for a surveillance frequency remains in tech specs.
2 But where an applicant applies the Surveillance
3 Frequency Control Program and where we approve it to
4 be applied, it then references that program and the
5 specific frequency will be relocated to a license
6 control document where they will list those
7 Surveillance Frequency Control Programs, or those
8 surveillance frequencies.

9 The frequencies that are in that program
10 are treated just as the frequencies are as they are
11 in specs. In other words, they're not adjustable as
12 the risk-informed completion time is or anything on
13 the fly, okay, or in real time rather than on the
14 fly. But they're not real time adjustable. Okay?
15 So they are firm frequencies that are in a program
16 that are listed outside of specs.

17 What the Surveillance Frequency Control
18 Program does, 04-10, it allows an approved process
19 to be applied, a process that takes both a
20 qualitative assessment and a quantitative
21 assessment, and applies it to the surveillance that
22 the licensee desires to change and determines
23 whether or not it is acceptable to change that
24 surveillance frequency. There are a whole bunch of
25 constraints and requirements on this that they need

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to follow and to adjust these frequencies. And then
2 once they've adjusted it, there's also a feedback
3 loop to determine that in fact the surveillances are
4 not being failed, you know, frequently or something
5 like.

6 The intent -- keep in mind that
7 surveillances, when there are -- surveillances are
8 checks for system or equipment operability, and the
9 intent is that when a surveillance is performed it
10 is passed. So part of the approval process and part
11 of the -- in fact, there is a whole documentation
12 sheet in the back of 04-10, a multi-page thing that
13 the licensee has to fill out and he has to have an
14 expert panel evaluate both the qualitative and
15 quantitative assessments that are done to change
16 these things. And part of the assessment is to
17 ensure that these surveillances have passed an
18 overwhelming amount of the time in which they've
19 been performed in the past for them to even be
20 considered to be adjusted. Yes?

21 CHAIRMAN STETKAR: Bob, you mentioned
22 that feedback loop that you were just talking about.
23 Is there any requirement to revisit, formally
24 revisit those surveillance frequencies at any fixed
25 interval, or under any forcing function? What I'm

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 thinking about is those -- if they're risk-informed,
2 they've used some version of something called a PRA
3 at some time in the history of the universe to
4 generate some quantitative basis for these
5 surveillance frequencies. PRAs tend to evolve over
6 time. Data, plant-specific data, generic data
7 evolves over time. Scope and content of the PRA
8 evolves over time. You might add a fire analysis to
9 your PRA that might change your perspectives about
10 certain surveillance frequencies for certain SSCs.

11 Does that process require a formal
12 reevaluation of those, because they are fixed, as
13 you mentioned. They're different than the 4b that's
14 done on the fly, if you want to call it that way.

15 MR. TJADER: There is the requirement to
16 monitor. The surveillances that have been changed,
17 there's a requirement to monitor the --

18 CHAIRMAN STETKAR: Yes, but what I'm
19 saying is every time I perform the surveillance on
20 this pump; and I have a surveillance frequency of
21 once every three years, you know, it's passed every
22 time in the last 10 years, the three times that I
23 performed that surveillance. Suppose the
24 surveillance frequency, instead of three years,
25 ought to be a year-and-a-quarter because of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 evolution of the PRA model, not because it didn't
2 fail in the last three times I tested it. Certainly
3 if it had failed twice out of the last three times
4 I'd be curious about whether or not I should go that
5 long between tests. That's my question about --

6 MR. TJADER: Well, I think --

7 CHAIRMAN STETKAR: -- revisiting the
8 basis for that three-year, let's call it.

9 MR. TJADER: -- maybe Nick could address
10 this better than I can. Here's my perspective on
11 that: My perspective is that the PRA is going to
12 assess the risk significance of that equipment or
13 component. Okay? And the PRA incorporates failure
14 rates and things like that in coming to their
15 numerical decision point. There are certain
16 numericals, IDCF, or whatever. Now, what --

17 CHAIRMAN STETKAR: But those change. My
18 point is; and maybe Nick is better, but my point is
19 those IDCFs and conditional core damage
20 probabilities, CCDPs, can change over time as both
21 the data input to the PRA and the PRA models
22 themselves --

23 MR. TJADER: Right.

24 CHAIRMAN STETKAR: -- change over time.
25 The PRA model is not a fixed beast. And if it is,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that's a problem.

2 MR. TJADER: Well, what that will do is
3 that PRA will then reflect the risk significance of
4 the system. But if the surveillance still passes
5 all the time, you know --

6 CHAIRMAN STETKAR: It passed every time
7 I tested it. Three times in 10 years it passed.

8 MR. TJADER: Then --

9 CHAIRMAN STETKAR: But I've operated for
10 a decade when according to the risk significance of
11 this thing I should have been testing it more
12 frequently because my measuring stick, my PRA has
13 changed, my understanding of the risk significance
14 has changed.

15 MR. TJADER: I think that if it were
16 risk significance -- and I think the PRA would
17 determine it would be more frequency if in fact it
18 fails --

19 MEMBER SHACK: No. no. You're looking
20 at the reliability. You're saying the reliability
21 hasn't changed. John is saying the consequences of
22 the failure have changed, therefore its risk
23 importance has changed.

24 MR. TJADER: But keep in mind the
25 surveillance is checked to ensure operability. And

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 if it passes every time you do the surveillance,
2 that means it's still operable.

3 CHAIRMAN STETKAR: Suppose it fails the
4 next time, the next three years? Now I've gone 12
5 years and I've suddenly decided that, oh my God,
6 this thing has a much higher unavailability than I
7 thought it would have had.

8 MR. TJADER: Well, if the surveillance
9 had been increased and then there was a requirement
10 to monitor the subsequent performance of that
11 surveillance, and if it then fails, there has to be
12 an evaluation as to whether or not that frequency
13 needs to be reset. But keep in mind, surveillances
14 that have not been changed in accordance with the
15 Surveillance Frequency Control Program, that are not
16 extended, we don't have any existing requirement to
17 reassess the surveillance frequencies that are in
18 tech specs right now.

19 CHAIRMAN STETKAR: That's true. But
20 they're arbitrarily set by --

21 MEMBER BLEY: Let me narrow John's
22 question a little bit and relate it to something
23 else that's going on. We're going to be doing this
24 work early on and then at some point in time the PRA
25 is going to be finalized and the plants as-built and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you're going to be starting it up, and there's a
2 change. There's about to be -- or sometime in the
3 future there will be a change to Part 52 with
4 respect to ITAACs, even though you closed the ITAACs
5 at some point, that just before startup they have to
6 go back and confirm that nothing has changed such
7 that the ITAAC closures are in fact still valid. Is
8 there going to be something like that for this set
9 of tech specs? Just before startup are we going to
10 have to go back and see has anything changed such
11 that the PRA analysis that was used to establish the
12 tech specs is still giving us the same information?

13 MR. SALTOS: This is part of our tech
14 spec methodology that I would be talking next
15 actually.

16 MEMBER BLEY: Okay. We'll look for
17 that. Given the answer to that one, John's question
18 is in the future is there some kind of updating that
19 will be done to --

20 CHAIRMAN STETKAR: In other words,
21 you've said --

22 MEMBER BLEY: -- keep current?

23 CHAIRMAN STETKAR: -- that the last
24 bullet here is over 40 percent of the operating
25 plants have already adopted or requested, you know,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 5b, which -- so my question would apply, you know,
2 to the current operating fleet, regardless of
3 Dennis' concern about the period between COL
4 issuance and fuel load, or whatever, and then on out
5 into the future.

6 MR. HAMZEHEE: John, if I may say just
7 conceptually when the staff came up in 1998 with
8 risk-informed applications and use of PRAs, to the
9 maximum extent practical, at that time, including
10 the Maintenance Rules, whenever you update and
11 upgrade your PRAs and the results change, you're
12 supposed to go back and look at all your risk-
13 informed applications and make sure that whatever
14 you use from PRAs are still applicable. And if they
15 change and your risk profile changes, then you need
16 to go back and adjust all those risk-informed
17 applications and programs accordingly.

18 CHAIRMAN STETKAR: And that's a formal
19 requirement.

20 MR. TJADER: HAMZEHEE: It was -- like
21 for maintenance, for instance.

22 CHAIRMAN STETKAR: Yes. Okay.

23 MR. HAMZEHEE: When they come out with
24 risk significance systems, every few years they have
25 to go back and make sure that list is still the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 right list.

2 CHAIRMAN STETKAR: Okay.

3 MR. HAMZEHEE: So, now how we do it for
4 new reactors and how we're going to formulate this,
5 I think --

6 CHAIRMAN STETKAR: Well, but I mean, the
7 process going forward for new reactors conceptually
8 shouldn't be any different than the process, you
9 know, for currently operating --

10 MR. HAMZEHEE: Because that's overall.
11 I'm talking about overall risk informed --
12 specifically for risk-informed tech specs.

13 CHAIRMAN STETKAR: Okay. Thanks. That
14 helps a lot.

15 MEMBER REMPE: How often do they have to
16 upgrade their PRAs or change them, if there's any
17 requirement?

18 MR. HAMZEHEE: There are requirements
19 already. Nick, would you like to --

20 MR. SALTOS: Yes, every time they have
21 any major change, of course they have to incorporate
22 right away, but periodical I think every two years.

23 CHAIRMAN STETKAR: It's I think three
24 years for the new reactors.

25 MR. SALTOS: Three years.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: There's no formal
2 requirement for frequency, if I'm not --

3 MR. HAMZEHEE: I think the reason is --

4 CHAIRMAN STETKAR: -- wrong.

5 MR. HAMZEHEE: -- for new reactors, the
6 PRA is not a regulatory requirement.

7 CHAIRMAN STETKAR: Right. Right.

8 MR. HAMZEHEE: Only when you come out
9 with the risk-informed application then the staff
10 has a right to go back and question the quality
11 adequacy of the PRA. On the Part 52, PRA is a
12 requirement. So we have also identified the
13 frequency at which we need to go back and update and
14 upgrade your models and --

15 MEMBER BLEY: Even with current ones.
16 So if you have a risk-informed application, Reg
17 Guide 1.200 --

18 MR. HAMZEHEE: Correct.

19 MEMBER BLEY: -- enforces the standard
20 which does have requirements for --

21 MR. HAMZEHEE: You're absolutely right.

22 MEMBER BLEY: -- updating the PRA on it.

23 MR. HAMZEHEE: That's part of the
24 maintenance program for the risk-informed
25 applications. You're right.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: So even if somebody's
2 going -- for a current operating plant if somebody
3 adopts 5b, that's a risk-informed application.
4 You'd fall under 1.200 and --

5 MR. HAMZEHEE: Yes.

6 CHAIRMAN STETKAR: Okay. good. Thank
7 you.

8 MEMBER BROWN: You're about to leave --
9 you're almost finished with this, so I wanted to try
10 to make a fundamental -- I'm just trying to wrap my
11 hands around 4b and 5b from a bigger picture. The
12 way I came away with all this stuff on 4b, on the
13 risk-informed completion times, was that something
14 happened. The train was out. Didn't lose your
15 functionality yet, depending on the plant design.
16 There's a set of completion times in that. And
17 within that time you calculate your risk-informed
18 extension, whatever that is, up to your backstop,
19 but that's a one-time item. In other words, once
20 it's back in service and you're back to full four
21 trains; I'm just using that as an example since that
22 was in the paper, you've reset back to where you
23 were before. And now you go along and you operate
24 for another year. The same thing happens. You have
25 to do another risk-informed -- in other words, it's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 a one-time. You execute, but it doesn't stay in
2 place. You have to evaluate each one on a case
3 basis as it occurs. Is that a fair --

4 MR. TJADER: Yes.

5 MEMBER BROWN: Now, on the surveillance
6 part though is an assessment using whatever the
7 analysis or risk-informed basis you use of you want
8 to increase the surveillance time, that is a
9 permanent change. You've allowed them to make a
10 permanent change unless you've had a change in
11 configuration of a system and/or you fail later.
12 You fail. You know, you've gone --

13 MR. TJADER: Unless the monitor
14 determines that in fact we shouldn't have increased
15 the surveillance frequency and we need to reset it.

16 MEMBER BROWN: Well, if it doesn't fail,
17 when would you ever figure out -- instead of doing
18 it every year and now you're doing it every three
19 years, why would you ever change it back to a year
20 if it didn't fail in one of the three -- what's the
21 other criteria to reset it back to one again? If
22 you had a system change, I could understand that.

23 MR. TJADER: Well, if there's a redesign
24 change --

25 MEMBER BROWN: That's what I meant,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 right.

2 MR. TJADER: -- then I think probably as
3 part of the plant change --

4 MEMBER BROWN: Okay. I understand.

5 MR. TJADER: -- then I think we would
6 evaluate --

7 MEMBER BROWN: Oh, yes.

8 MR. TJADER: -- that every part that you
9 evaluate, yes.

10 MEMBER BROWN: Yes, I understand that.
11 I'm just saying the system has not changed. You
12 went from one year to -- you know, we've been doing
13 this for 10 years. It's passed every year for 10
14 years. You change it to every three years for
15 whatever reason. Now you go along and 16 years,
16 now, ooh, it failed. You have to do a reassessment.
17 That's what I got. Now, you may decide to stay with
18 the three years, depending on what the failure was,
19 but you do have to do a reassessment at that time to
20 determine whether you got to reset it backwards. Is
21 that not -- okay. So I've got a picture of what --

22 MR. TJADER: There has to be an
23 assessment. There isn't anything that says you
24 failed, you know, the first time after you increased
25 the frequency, therefore you have to reset it.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 There's no hard statement.

2 MEMBER BROWN: Understood.

3 MR. TJADER: But I mean, if it fails
4 twice, I think we the staff would take a pretty dim
5 view of that extension and would encourage them to
6 reset it, but there's nothing that --

7 MEMBER BROWN: You really wouldn't know
8 it. The region would --

9 MR. TJADER: Yes.

10 MEMBER BROWN: Your regional inspectors
11 would know that --

12 MR. TJADER: That's right.

13 MEMBER BROWN: -- presumably.

14 MR. TJADER: Yes. If we audited it or
15 reviewed it and we found that, then --

16 MEMBER BROWN: All right. I just wanted
17 to kind of calibrate my --

18 MR. TJADER: Limerick was the pilot on
19 this and I think that they have got the program.
20 And they have only applied this on maybe at most a
21 dozen systems so far. So it's not like we've given
22 them the power to do this and now they're going to
23 go crazy. Okay? They're doing it responsibly as
24 they should. And also, keep in mind, as I said, the
25 intent of surveillances is that they pass when they

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 are performed. If you find that you don't -- if you
2 pass a surveillance, if it's not met, actually
3 during performance or otherwise -- if you know a
4 surveillance wouldn't be met if it was performed in
5 the middle, then you have to take the required
6 action. If surveillance fails, you have to enter a
7 condition in the tech spec. You have to enter --
8 what we say, enter the LCO. You then have a
9 condition of inoperability. If you fail, there a
10 few surveillances where there aren't conditions that
11 apply to them. And in those few cases, then you're
12 entering 3.0.3. Okay?

13 MEMBER BROWN: Okay.

14 MR. TJADER: Yes, so that type of thing.
15 So the licensee does not want to fail surveillances
16 because that means they are entering tech spec
17 required actions they do not want to enter. They
18 want to pass surveillances. So I don't think
19 they're going to willy-nilly extend all of these
20 surveillances, because then they're going to have a
21 whole bunch more failures and they're going to have
22 a bunch more tech spec entries and they're not going
23 to like that, I don't think.

24 MEMBER BROWN: Thank you very much.

25 MR. TJADER: Sure. Next slide, please.

1 Now what this is just sort schematically is an
2 attempt to show basically 4b and 5b. And the new
3 issues that are raised as a result of the new
4 reactors issues. In other words, the fact that the
5 PRA has to be capable for applying these. And that
6 includes the performance of peer review. Nick will
7 get into these things.

8 There are procedures at the time of
9 issuance that may not be complete. Training may not
10 be complete at the time of issuance. And plus
11 there's the risk metrics which I indicated we are in
12 a parallel train path evaluating and hopefully get
13 to the station at the same time that Comanche Peak
14 wants to issue their COL.

15 So the idea for this is just to show
16 some of the issues that are raised with the
17 application of 4b and 5b and the effects that are
18 associated primarily with PRAs.

19 The next slide. And this basically just
20 summarizes I think what the whole thing that I've
21 been driving to. In other words, that 4b and 5b
22 require capable PRAs. They will not be complete
23 until after COL issuance, sometime prior to fuel
24 load. Plant-specific PRAs are required for new
25 reactors. And plant-specific PRA and infrastructure

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 are required. They won't be ready at the time of
2 COL issuance. Therefore, in accordance with ISG-08
3 a methodology is determined to be the appropriate
4 solution for applying these risk initiatives with
5 tech specs and to finalize the tech specs at COL
6 issuance through a methodology which Nick will
7 discuss.

8 And as I said, the backup slides deal
9 with the initiatives in a little bit more detail.

10 MEMBER BLEY: I just want to whine
11 actually, Bob.

12 MR. TJADER: Okay.

13 MEMBER BLEY: You show this slide about
14 what do you need in the PRA. I think you ought to
15 add Reg Guide 1.200 on your list.

16 MR. TJADER: Okay.

17 MEMBER BLEY: What is a PRA?

18 MR. TJADER: I'll add that.

19 CHAIRMAN STETKAR: It's a big deal.

20 Thank you.

21 Any other questions for Bob?

22 (No response.)

23 CHAIRMAN STETKAR: hearing none, I'm
24 sure he's relieved. And thanks a lot. You know, as
25 much as we were babbling at you, we really

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 appreciate the overview, because as I mentioned
2 earlier, it's the first time I've really seen in the
3 four years I've been on the Committee all of the
4 initiatives in one place in sort of an idea of how
5 they do or may fit together eventually. And I guess
6 after lunch we'll hear a little bit more about 4b
7 and 5b and in particular the Comanche Peak approach.

8 And with that, we will recess for lunch
9 and come back at 1:00.

10 (Whereupon, the hearing was recessed at
11 11:54 a.m. to reconvene at 1:00 p.m. this same day.)

1 A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

2 1:00 p.m.

3 CHAIRMAN STETKAR: Okay. We are back in
4 session and we're going to hear from the staff on
5 more Comanche Peak-specific stuff. But I've been
6 told that perhaps Lynn Mrowca would like to start
7 off the discussion. Is that --

8 MS. MROWCA: At a higher level. My name
9 is Lynn Mrowca and I'm the PRA and Severe Accidents
10 Branch Chief in the Office of New Reactors. And I
11 apologize for being later. I had another commitment
12 that kept me until 11:00. So I wanted to be here to
13 give some opening remarks when we started to kind of
14 put this meeting in context.

15 And this idea, you think, is pretty
16 simple that we have an applicant that comes in;
17 Mitsubishi and then Luminant that comes in and asks
18 for risk-managed tech specs, 4b, 5b, on something
19 that we've approved for an operating plant and that
20 it would be a very easy thing to just say let's
21 supply that to new reactors and go. But it has been
22 a long road and we've had to make some decisions.
23 We've had some struggles along the way.

24 And what we wanted to do today was to
25 share those thing with you and the points that we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 had struggled with and where we are today, and to do
2 it in this information meeting prior to meeting for
3 the actual document review, which is probably
4 scheduled for mid-next year, something like that.
5 And that if you had any questions or concerns about
6 what we're doing and the approach that we're taking,
7 the laborious trail we got to get here, that we'd
8 rather hear from you now than later when we come
9 back for Chapter 19 review.

10 So what we on the higher level were
11 trying to do is instead of -- typically I think the
12 applicant goes first and provides you with I guess a
13 summary of their application. Then the staff comes
14 in with the review. But this being an information
15 meeting, we thought we'd first start with Bob Tjader
16 from the Tech Spec Branch talking about what these
17 tech specs really are, and then from a tech spec
18 perspective what was one of the bumps in the road?
19 And he mentioned it already, and that was ISG-08,
20 that tech specs must be complete at the time of COL
21 issuance. And in the schematic that he showed it
22 pointed out some of the differences that we found
23 between, you know, applying for this as an operating
24 plant and applying for this as a COL applicant, for
25 instance.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 And so we're going to go into that in
2 more detail with Nick's talk about what some of
3 those specific issues are and how we got to the
4 point where we think this methodology and the
5 deltas, the changes that we're showing in the NEI
6 documents is a way that we can move forward and say
7 that this is okay. We're still in the midst of our
8 review. We still have some things to work out, but
9 we think the concept of this methodology is the best
10 way to go.

11 After we're finished with our
12 presentation, then Luminant will come up and talk
13 about their specific -- how this is actually written
14 into the tech specs, the changes that they're
15 actually making to the methodology document so you
16 have a better idea of, you know, once we start here
17 with our background of what tech specs are and the
18 issues that we found and some of the resolution
19 you'll see in the methodology document that Luminant
20 will present. So I just wanted to give you context
21 for why we're here and the issues that we've had on
22 this path and to answer any questions, and hopefully
23 hear from you any concerns that we can try and take
24 care of now and address before we come back for tech
25 review.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. MONARQUE: Okay. And with that,
2 we'll turn it over to Nick Saltos for his
3 presentation.

4 MR. SALTOS: I'm Nick Saltos from the
5 PRA Branch in the Office of New Reactors and I'm
6 going to be presenting mostly the risk specs of this
7 exercise.

8 The following will be discussed: PRA
9 regulations for new reactors, the Regulatory Guide
10 related to risk-informed applications. Then I will
11 talk a little bit on the application-specific
12 guidance. And then I'll present the challenges for
13 new reactors in using existing guidance. And
14 finally, I will talk about -- I will address how
15 these challenges will be resolved and talk about the
16 status and the path forward.

17 MEMBER BLEY: Nick, are you going to
18 talk about the Comanche Peak methodology, or are we
19 going to wait to hear that from them?

20 MR. SALTOS: I'm going to talk about the
21 methodology in general and the one that we're using
22 for the Comanche Peak.

23 MEMBER BLEY: Okay.

24 MR. SALTOS: Okay. The PRA regulations
25 are the 10 Code of Federal Regulations 52.79(a)(46)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 which basically requires that COL applications has
2 to contain a PRA, description of the PRA, plus
3 specific PRA results. 10 Code of Federal
4 Regulations 50-71(h)(1) requires that the COL holder
5 shall develop a level 1 and a level 2 PRA that
6 covers initiating events and modes for which NRC-
7 endorsed standards exist one year prior to the
8 scheduled date for the initial fuel load. And the
9 10 Code of Federal Regulations 50.71(h)(2) which
10 requires that the COL holder must maintain an
11 updated PRA.

12 CHAIRMAN STETKAR: Before you guys --
13 and I hate to do this to you, but it is an
14 informational meeting. The first bullet up there,
15 the COL application must contain a description of
16 the plant-specific PRA and its results. What is a
17 plant-specific PRA? And let me give you an example.

18 Suppose that the design certification
19 PRA includes a subset of the equipment in systems.
20 Doesn't include all of the equipment. Even though I
21 can look at a P&ID for the design as it's available
22 in the design certification document, if I look at
23 all the pumps and pipes and valves in there, not all
24 of the pumps and pipes and valves are included in
25 the PRA model because somebody decided it was okay

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to do a simplified PRA model. Because for the
2 design certification process all I need to do is to
3 demonstrate adequate assurance that the level of
4 safety from my new plant design is better than the
5 existing plants and that I have some risk-
6 information that I could use qualitatively to do
7 things like populate reliability assurance program
8 lists or RTNSS lists for the passive plant so that I
9 have a PRA that's a simplified approximation to even
10 the information that's in the design certification.
11 Is that a plant-specific PRA for the COL applicant?

12 MR. SALTOS: Well, this is the language
13 that is used in the Code of Federal Regulations
14 52.79 --

15 CHAIRMAN STETKAR: And attorneys not
16 risk assessors, so I'm asking you as a risk
17 assessment professional.

18 MR. SALTOS: Yes. No, this is not my
19 definition. Plant-specific -- you cannot have a
20 plant-specific PRA at the COL application stage, in
21 my opinion, because you don't -- it's simple. You
22 haven't built the plant yet.

23 CHAIRMAN STETKAR: Okay.

24 MR. SALTOS: But this is the language
25 that's taken out of Code of Federal Regulations

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 52 --

2 CHAIRMAN STETKAR: Well, if somebody
3 comes in, let's say; and let me twist it around, and
4 says, well, I used this design certification PRA
5 that's named Wow and we named that design
6 certification PRA my, quote, plant-specific PRA,
7 unquote, and submit it at my COL application. Does
8 that mean anything in regulatory space? In other
9 words, when they go to load fuel, can they say,
10 well, I have a plant-specific PRA that has been
11 accepted by the NRC staff in the COL licensing
12 process and therefore I don't need to make any
13 changes to it because it is my plant-specific PRA?

14 MR. SALTOS: Yes, but --

15 CHAIRMAN STETKAR: You've had a chance
16 to look at it, you know, at the COL application
17 stage and you didn't identify any deficiencies that
18 were not plant-specific. It is --

19 MR. SALTOS: We are aware of that.
20 We're well aware of that. Our methodology is going
21 to include the process for how to go there to a
22 plant-specific PRA.

23 CHAIRMAN STETKAR: Okay. Good.

24 MR. SALTOS: They don't have a plant-
25 specific PRA now.

1 CHAIRMAN STETKAR: And the methodology
2 that you're developing --

3 MR. SALTOS: Yes.

4 CHAIRMAN STETKAR: -- would address that
5 gap?

6 MR. SALTOS: Yes, to a higher level.
7 You know, I will talk about how it's going to --

8 CHAIRMAN STETKAR: Well, high level is
9 what I want to get to, because --

10 MEMBER BLEY: I'd like to offer one
11 thing more: If you look at his second bullet on
12 50.71(h)(1), that requires that the PRA at fuel load
13 follow NRC-endorsed standards. And I think that
14 means the PRA you were talking about isn't the same
15 thing as this one.

16 CHAIRMAN STETKAR: Right.

17 MEMBER BLEY: Okay.

18 MS. MROWCA: I'll add something to that.
19 Plant-specific PRA, you could say maybe the
20 Mitsubishi design, the US-APWR is the plant and so
21 plant-specific could be used as -- you know, that
22 could be used as the COL PRA. I like to kind of
23 talk about it as a site-specific --

24 CHAIRMAN STETKAR: You mean the fact
25 that they didn't use the BWR marked 1 PRA?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. MROWCA: Well, plant versus site-
2 specific PRA. Sometimes people think that this
3 might mean --

4 CHAIRMAN STETKAR: I'm sorry, Lynn.
5 You're starting to sound more like an attorney
6 than --

7 MS. MROWCA: Oh.

8 CHAIRMAN STETKAR: -- an engineer.

9 MS. MROWCA: Well, plant-specific, the
10 difference between the DC PRA and this one for the
11 COL application is that they address external
12 hazards. And sometimes they address it in different
13 ways for different design centers. So for instance,
14 if -- like, you know, high winds, if that wasn't
15 addressed in the DC, then -- or shown that they had
16 a bounded value that now the COL is within, then
17 they need to do that as part of the COL.

18 CHAIRMAN STETKAR: I understand that and
19 they in principle will add -- for example, if they
20 -- and I don't know the details of this particular
21 applicant. I'm asking this in more of a generic
22 sense.

23 MS. MROWCA: Yes.

24 CHAIRMAN STETKAR: That if they
25 reconfigured their service water system or

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 reconfigured their off-site power supply system or
2 something like that for a site-specific, they need
3 to make sure that those differences are captured in
4 the PRA, or at least addressed somehow at the COL
5 stage. I'm asking more of a fundamental question,
6 that the DCD PRA, for things that are completely
7 unchanged at the COL application, you know, safety
8 systems and things like that, is yet incomplete
9 because it has not included all of the equipment,
10 all of the failure modes, you know, things like
11 that.

12 MS. MROWCA: Yes, and the level of
13 detail at fuel load will be different. For
14 instance, we have a standard that we've endorsed on
15 seismic PRA, so we expect to have a seismic PRA and
16 not seismic -- well, seismic margins, comparisons,
17 but also a seismic PRA.

18 CHAIRMAN STETKAR: But the real key is
19 that transition from the first bullet to the second.
20 Regardless of whether you call a plant-specific PRA
21 a Ralph or a Mary, or a whatever it is, it's just
22 simply that has -- something that has a name at this
23 stage of this process. Okay.

24 MR. SALTOS: Okay. Next slide includes
25 regulatory guidance that we use in general for this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 kind of risk-informed applications that we're
2 talking about here. And these are basically risk-
3 informed technical specifications programs which are
4 based on staff-approved methodology. And these
5 methods, the licensee is going to be able to use and
6 make changes in the completion times or in the
7 surveillance frequencies. This guidance is based
8 primarily on the Reg Guide 1.174 on risk-informed
9 decisions on plant-specific changes to the licensing
10 basis and Regulatory Guide 1.177 on risk-informed
11 changes to the technical specifications.

12 Guidance also is included that Bob
13 Tjader talked about before, the Interim Staff
14 Guidance-08 that would require that at the time of
15 the COL the tech specs have to be complete. And Bob
16 talked about three ways of completing those. One is
17 the methodology. We're using this approach, this
18 option, the methodology. We're having the
19 application-specific guidance for these two
20 initiatives, Initiatives 4b and 5b, which are
21 documents and provide criteria and requirements of
22 how to implement this tech spec programs.

23 CHAIRMAN STETKAR: Nick; and I have to
24 again the lack of familiarity, those documents
25 provide guidance about how to implement the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 initiatives given an acceptable PRA, right? Do they
2 provide any --

3 MR. SALTOS: They provide guidance on
4 the PRA also. What is an acceptable PRA?

5 CHAIRMAN STETKAR: Okay.

6 MR. SALTOS: At the high level.

7 CHAIRMAN STETKAR: But I mean, they
8 refer back to 1.200?

9 MR. SALTOS: Oh, yes. Yes.

10 CHAIRMAN STETKAR: Okay.

11 MEMBER BROWN: Is that really 06-10 or
12 is that 04-10?

13 MEMBER SHACK: Typo.

14 MEMBER BROWN: I just wanted to make
15 sure there wasn't another document thrown in here;
16 that's all.

17 CHAIRMAN STETKAR: There is and it's
18 6,000 pages long and we expect a report on it next
19 week.

20 MEMBER BROWN: Don't hold your breath.

21 MR. SALTOS: And then of course is
22 Regulatory Guide 1.200 that we're using to -- that
23 NRC is endorsing all this SME standards, all the PRA
24 standards that provide guidance on how to develop an
25 acceptable PRA for different risk-informed

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 applications.

2 Okay. Now the application-specific
3 guidance that we have, that exists for operating
4 reactors is mostly applicable also to new reactors,
5 but several changes to this guidance have been
6 proposed to address the following issues: There is
7 several issues that stem from the difference in
8 timing of the review of the approval process with
9 respect to new reactors. For operating reactors is
10 after you have the PRA, after you have the
11 infrastructure. And this is before. This is -- you
12 don't have the plant-specific PRA that we talked
13 before. You don't have all the infrastructure is
14 needed to -- in order to be able to implement this
15 risk-informed tech spec programs.

16 And there are some other issues that
17 stem from some -- for example, initial lack of
18 plant-specific operational experience. In your
19 plant you don't have plant-specific operational
20 experience, although you have the industry
21 experience. There is limited or no operational
22 experience with novel features. You have -- in this
23 design you have of course digital I&C, you have gas
24 turbine steam generators for AC power, on-site AC
25 power. You have passive accumulators as part of the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 high-pressure injection.

2 Then there are some regulations also
3 that impact the existing guidance. These
4 regulations; for example, like the Code of Federal
5 Regulations 50.71(h)(1), require that a PRA model
6 should be developed once you have endorsed standards
7 for additional initiating events and modes of
8 operation that you have for operating reactors right
9 now. And of course, there is the potential erosion
10 of enhanced safety of new reactors, which is the
11 risk metrics issue that is addressed parallel with
12 this.

13 Now, what are the challenges for new
14 reactors? Basically there are two main issues here.
15 One is to have complete tech specs at the COL stage,
16 and the other is to determine whether the current
17 guidance, the current application-specific guidance
18 ensure that there is not going to be degradation of
19 enhanced safety that the Commission expects for
20 these new reactors.

21 Now, with respect to having complete
22 tech specs at the -- that are required per ISG-08
23 for COL applicants, existing NRC-endorsed industry
24 guidance assumes that they're available at Category
25 II, Capability Category II PRA. Also, application-

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 specific infrastructure. For example, configuration
2 risk management tool and procedures and training and
3 integrated risk part of -- I don't remember exactly
4 the terminology that is used.

5 MEMBER SHACK: (Off microphone.)

6 MR. SALTOS: I'm sorry?

7 MEMBER SHACK: The decision making.

8 MR. SALTOS: Decision making for 5b.

9 Actually it's a panel of experts that has to be
10 established and take all the qualitative and
11 quantitative and work them through and consider
12 monitoring. So these are things that have --

13 MEMBER SHACK: Does Comanche Peak have a
14 5b Program for the existing plans?

15 MR. SALTOS: No, not that I'm aware of.
16 They can -- so all this infrastructure that is not
17 available at this point, but it has to be available
18 when -- before this tech spec programs are going to
19 be implemented I assume when the plant goes into
20 operation. So for tech spec completeness at the COL
21 stage an NRC-approved tech spec methodology is
22 needed that specifies how the criteria that are
23 addressed in the existing guidance will be met
24 before the risk-informed tech spec programs are
25 implemented.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 With respect to the other issues that
2 we're talking about here with the risk-informed
3 regulatory guidance, the risk metrics for new
4 reactors, there is higher safety performance
5 expectations for new reactors and we need to
6 determine whether current guidance can maintain this
7 enhanced safety. And this is not the subject of
8 this presentation. We're just talking about --
9 we're going to continue discussing the issues we
10 have with respect to have complete tech specs at the
11 COL issuance.

12 MEMBER BROWN: You're talking about the
13 risk metric guidance in general here, not
14 necessarily as it applies to completion times and/or
15 surveillance frequencies. I was trying to decouple
16 this.

17 MR. SALTOS: We're talking in general,
18 but is a crucial input to this --

19 MEMBER BROWN: Well, no, I understand
20 that.

21 MR. SALTOS: Yes.

22 MEMBER BROWN: It's just that completion
23 times --

24 MR. SALTOS: Yes.

25 MEMBER BROWN: Inherent safety

1 expectations don't necessarily -- from a plant
2 design standpoint, these are somewhat administrative
3 things in terms of how you operate, how you check
4 stuff or how long before you -- how long you allow
5 somebody to go on. There was a differentiation
6 relative to this enhanced -- you didn't want to
7 degrade your enhanced capability, theoretically the
8 new reactors, and I didn't -- just maybe I wasn't
9 thinking broadly enough that this really degraded
10 that fundamentally enhanced design feature.

11 MR. SALTOS: Well, if you extend the
12 completion intervals more and more and you extend
13 the surveillance testing intervals more and more,
14 you -- eventually you will degrade --

15 MEMBER BROWN: Oh, yes, on the limit.

16 MR. SALTOS: And the point is that this
17 regulatory guidance, the risk metrics, they put some
18 thresholds out there so they don't go -- the risk
19 that is accumulated --

20 MEMBER BROWN: My biggest concern is the
21 risk metrics is not here. But was on actual -- what
22 you expect out of a -- systems we're putting in
23 where you're -- or the analyses that you use where
24 you --

25 MEMBER SHACK: This is the man that dies

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 over 30 days for the DAS.

2 MEMBER BROWN: I'm still dying over 30
3 days. Well, that because they had no DAS left after
4 -- you know, for 30 days and that wasn't a matter of
5 having one. It was nothing left for 30 days. So
6 that was a functionality issue, not a 30-day put-a-
7 stake-in-my-heart issue. I'll take the stake out
8 every now and then. But they're different. That's
9 all I'm -- we can argue some more later, I'm sure.

10 Thank you. Just trying to calibrate
11 myself; that's all.

12 MS. MROWCA: Yes, and these two things,
13 like Nick said, they're running in parallel. The
14 second one was already presented in front of the
15 ACRS Subcommittee on PRA and reliability.

16 MEMBER BLEY: Oh, yes.

17 MS. MROWCA: I don't remember how long
18 ago. Not that long ago.

19 MEMBER BLEY: Not very long. You know,
20 it seems like as soon as I see -- that was said with
21 tongue in cheek, in jest, sort of.

22 CHAIRMAN STETKAR: Okay. Next slide?

23 MR. SALTOS: Okay. Now the changes to
24 existing guidance to ensure complete tech specs at
25 the COL issuance involve additional guidance with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 respect to the following items: PRA technical
2 adequacy; application-specific infrastructure; PRA
3 scope and standard; and uncertainties associated
4 with novel features and lack of plant-specific
5 operational experience.

6 MEMBER SKILLMAN: Nick, I'm Dick
7 Skillman. Like to ask a question, please.

8 Is this information Tier 1, Tier 2 star
9 or Tier 2? Where does this fit?

10 MR. SALTOS: My understanding is Tier 2,
11 but it's tech specs basically. Maybe Bob --

12 MR. TJADER: Yes, tech specs are Tier 2.

13 MEMBER SKILLMAN: Thank you. That's all
14 I have. Thanks.

15 MEMBER BROWN: Yes, but the place where
16 they're incorporating stuff is in Tier 1, Part 4.
17 That's where the Luminant stuff -- at least that's
18 where I extracted this 5.5. program stuff.

19 MR. WOODLAN: That's in COLA Part 4.

20 MEMBER BROWN: Yes, COLA Part 4.

21 MR. WOODLAN: Right. Tier 1 is DCD.

22 MEMBER BROWN: Oh, okay. All right. I
23 stand corrected.

24 MEMBER SKILLMAN: I asked the question
25 because I was trying to test in my own mind if the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 applicant goes down this path; this is the first
2 applicant to have this process in place, if they
3 make a change, do they have to come back to the
4 staff, or can they make that change on their own as
5 they do in Tier 2 with a 50.59-like process? It
6 sounds like it's really Tier 2, but there might be
7 some strings attached to it.

8 MR. TJADER: Well, the tech specs are a
9 part of the license.

10 MEMBER SKILLMAN: Understand that.

11 MR. TJADER: So if they make a change,
12 any change at all to the tech specs, it is a license
13 amendment. They have to come back to us. Now, tech
14 specs obviously cover systems that are -- you know,
15 and programs that might be Tier 1, but the specs
16 themselves are considered Tier 2.

17 MEMBER SKILLMAN: Thank you. Thanks for
18 the clarification.

19 MR. SALTOS: Okay. PRA technical
20 adequacy. Risk-informed tech spec programs require
21 PRA models which realistically reflect, to the
22 extent practicable, the as-built, as-operated plant.
23 And we know that the PRA capability, the required
24 PRA capability required for a certain risk-informed
25 application depends on the application itself. And

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 these capabilities are identified in the
2 application-specific guidance, like the guidance
3 that we talked before for the two initiatives, 4b
4 and 5b.

5 The PRA is peer reviewed per NRC-
6 endorsed guidance. So this PRA is not considered
7 peer reviewed yet, although it is reviewed -- the
8 design certification and the COL application PRA is
9 reviewed by the staff, it is reviewed by the ACRS,
10 but is not considered peer reviewed. And the peer
11 review is going to happen sometimes before -- at
12 least a year before fuel is put into the reactor and
13 it is going to be an integral peer review. Is not
14 going to be just part of it, parts done later or
15 anything like that. It's going to be everything
16 from scratch basically.

17 CHAIRMAN STETKAR: But the staff will
18 not separately review that PRA, will they, perform a
19 review of the PRA?

20 MR. SALTOS: My understanding is that
21 they are not going to put fuel in and perform a
22 review per se, but they can audit the PRA. As part
23 of this initiative the PRA is available anytime the
24 staff they feel like going to the site.

25 CHAIRMAN STETKAR: No, I understand

1 that. Yes.

2 MR. SALTOS: And the other thing is
3 typically operating reactors requesting NRC-approved
4 risk-informed programs such as the risk-management
5 technical specifications have plant-specific PRA
6 models with a required capability available. But
7 that's not true for new reactors. New reactors do
8 not have at the COL stage detailed plant-specific
9 PRA models needed to support risk-informed tech spec
10 programs.

11 As-built, as-operated information is not
12 available at this stage. Design certification and
13 COL PRAs may not be detailed enough to support the
14 risk-informed programs such as this that we're
15 talking about here. Risk-informed tech spec
16 programs have specific PRA capability requirements.
17 For example, in order to be able to implement risk-
18 managed tech specs, the PRA has to be able, capable
19 of assessing configuration-specific impacts. In
20 other words, the systems have to be modeled. Some
21 assumptions about relative significance -- this is
22 not significant with respect to another one,
23 therefore, I'm not modeling it. That can screw up
24 the --

25 CHAIRMAN STETKAR: Things like assuming

1 pump A is always running and pump B is in standby
2 messes things up.

3 MR. SALTOS: Yes, well, this is --

4 CHAIRMAN STETKAR: It does.

5 MR. SALTOS: Okay. But there are
6 issues. For example, I modeled the operating error,
7 which is 10 to the minus 2, or minus 3. Why should
8 I model the failure of the equipment themselves,
9 with an order of magnitude less or more, which, if
10 you're using that to calculate configuration-
11 specific impacts, can make a big -- the other thing
12 is asymmetries. There are many asymmetries in the -
13 - especially in this PRA. Always this train fails.
14 But that's not true. So this can screw up the
15 calculations and the results if -- has to be
16 addressed before the PRA capability support is --
17 this application --

18 CHAIRMAN STETKAR: Nick, have you seen
19 -- I'm assuming that -- well, maybe that's the wrong
20 term. Have peer reviews been done of PRAs for
21 currently operating plants that have applied -- I
22 know 4b has not been applied very much, but at least
23 5b. Is there guidance for those peer reviewers out
24 there to be sensitive to these types of issues?

25 MR. SALTOS: For sure there is a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 guidance to meet a Category II, the Category II PRA.
2 But also, the application --

3 CHAIRMAN STETKAR: But in some sense you
4 can meet a Category II PRA, I think --

5 MR. SALTOS: Yes.

6 CHAIRMAN STETKAR: -- and still --

7 MR. SALTOS: Yes.

8 CHAIRMAN STETKAR: -- and still have
9 some of those issues that you were just talking
10 about, artificially-induced asymmetries and things
11 like that.

12 MR. SALTOS: Yes, the rest is included
13 in the application-specific guidance. For example,
14 in order to be able to use for risk-managed tech
15 specs to extend the completion times, you -- it says
16 -- it provides guidance on how to make sure that all
17 these systems that are in 4b are included in our
18 model. You understand if there are any weak points
19 in the model. You understand the uncertainties.
20 You consider the uncertainties. If you are not sure
21 about the uncertainties, how big they are, then may
22 conservative assumptions. So all included, there is
23 a guidance there that is not in the -- it talks
24 about they have to have this configuration --

25 CHAIRMAN STETKAR: I was just curious

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 because the staff relies quite a bit on the quality
2 and experience of those peer reviewers as a
3 surrogate for an in-depth staff review of the PRA
4 with audits performed by whomever performs the
5 audits. I was just curious whether you had any
6 actual real world experience from the current
7 operating fleet on how effective those peer reviews
8 may be in identifying some of these concerns,
9 because the concerns are not unique to new plant
10 PRAs.

11 MR. SALTOS: Oh, yes.

12 CHAIRMAN STETKAR: They're concerns, you
13 know, that apply to --

14 MR. SALTOS: Except for novel features,
15 of course.

16 CHAIRMAN STETKAR: Oh, yes. But that's
17 right.

18 MR. SALTOS: Yes.

19 CHAIRMAN STETKAR: But I mean in terms
20 of the basic structure of the PRA, level of detail,
21 level of reality in terms of scope of the equipment
22 modeled, you know, operating versus standby and that
23 sort of thing, assumptions about, well, I don't need
24 to model that valve because I don't think I need to
25 model that valve. I was just curious about whether

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 there was any experience from looking at peer
2 reviews that have been performed to support risk-
3 informed tech spec, you know --

4 MR. SALTOS: Yes, I think the peer
5 reviews --

6 CHAIRMAN STETKAR: -- applications for
7 the operating experience to give you -- essentially
8 to give the staff confidence that that peer review
9 process will work such that, you know, in this
10 first-of-a-kind application for a new reactor it's
11 kind of okay to rely on that.

12 MR. SALTOS: Okay. I think the peer
13 reviews are done primarily to meet certain
14 capability category. Like for this application,
15 both for 4b and 5b capability, Category II is
16 needed. I don't think that that peer review is done
17 to make sure that all the systems are modeled that
18 are required for the application or to make sure
19 there are not some weak points in the model that
20 might impact the results of the applications.
21 Although I think if they had -- if some licensee is
22 on detail and significant number of new systems in
23 the model or made a more detailed model, is required
24 to have a supplemental peer review.

25 CHAIRMAN STETKAR: Okay.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. SALTOS: But at least for the plants
2 that initially requested to implement these
3 initiatives, I know that the staff went and audited
4 the PRAs for at least a week, and I participated in
5 three of those. And we were a group of 15, with
6 contractors also. So although these plants were
7 plants that had significant long experience with
8 PRAs, using the PRAs, and they had this and send us
9 many license amendments. And pretty much maybe it
10 was as piecemeal, but we knew the PRA. A little of
11 the fact for every license amendment we received, we
12 had a different part of the PRA. So we felt pretty
13 confident that they would have a good PRA to use.

14 CHAIRMAN STETKAR: Okay. Thanks.

15 MR. SALTOS: And for the reasons we
16 talked before, there must be guidance included in
17 the COL that specifies how this criteria that I
18 included in current existing guidance regarding the
19 PRA model are met before these applications are
20 implemented. For example, before fuel load. And
21 this guidance should specifically address the
22 unavailability of information at the COL stage with
23 respect to the criteria in existing application-
24 specific guidance.

25 Application-specific infrastructure.

1 New reactors do not have, as we said before also, at
2 the COL stage detailed infrastructure needed to
3 support the risk-informed tech spec programs such as
4 risk-managed technical specifications.

5 Examples of needed infrastructure are a
6 tool to track and calculate configuration-specific
7 impacts for Risk-Managed Technical Specification
8 Program and integrated decision making for the
9 Surveillance Frequency Control Program. Therefore,
10 there must be guidance included in the COL which
11 specifies how all criteria regarding infrastructure
12 that are addressed in the application-specific
13 guidance are met before we go ahead with
14 implementing these initiatives.

15 PRA scope and standards. Per Code of
16 Federal Regulations 50.71(h)(1), new reactors are
17 required to -- that the PRA must cover those
18 initiating events and mode of operation for which
19 NRC-endorsed consensus standards on PRA exist one
20 year prior to the initial loading of fuel.
21 Consensus standards are currently available for
22 external events and internal fires and floods and
23 have been -- and are being developed also for Level
24 2 PRA and other modes of operation.

25 CHAIRMAN STETKAR: How do you handle --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 all right -- current technical specifications apply
2 not only during plant power operation, but they also
3 in many cases -- and I haven't looked at the APWR,
4 but I assume it does apply to certainly some systems
5 during shutdown modes. There is currently no
6 guidance, endorsed guidance available for PRA for
7 shutdown modes, not to mention, you know, the
8 evaluation of fires and floods and everything else
9 that can happen during plant shutdown. I don't know
10 whether in particular the scope of -- I assume,
11 because it's just a process, in principle applies to
12 risk-managed technical specifications for Comanche
13 Peak during shutdown also. Is that correct?

14 MR. SALTOS: Not for 4b. 4b is
15 basically when you're at power.

16 CHAIRMAN STETKAR: Well, but doesn't --

17 MR. TJADER: Most of this -- the risk-
18 management tech spec initiatives are designed
19 primarily for at power operations.

20 CHAIRMAN STETKAR: I know what
21 historically what they've been designed for, but
22 don't the tech specs also have completion time
23 requirements for equipment that's out of service
24 during shutdown modes?

25 MR. TJADER: Yes, there are a few of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 those, but I mean --

2 CHAIRMAN STETKAR: There are a few.

3 MR. TJADER: There are a few, but 4b is
4 not --

5 MR. SALTOS: Is not applicable there.
6 It's applicable to Mode 1, 2, 3 basically for PWR.

7 CHAIRMAN STETKAR: Okay. So if I look
8 in the Comanche Peak tech specs, I won't see under
9 any of the shutdown mode conditions that reference
10 to -- I always forget the numbers, but whatever the
11 5.5. something or other. Is that right?

12 MR. TJADER: Yes. Well, no, not for
13 shutdown. In fact, the specs that cover Modes 1
14 through 4, there are notes where we apply risk-
15 informed completion time. There are notes that
16 explicitly exclude Mode 4.

17 CHAIRMAN STETKAR: Okay.

18 MR. SALTOS: Okay. So they're not
19 applied for shutdown except 3, Mode 3, of course.

20 CHAIRMAN STETKAR: Okay. I haven't --
21 as I said, I didn't look at the specific tech specs
22 and test that, but that solves my concern. Because
23 if it was just generically listed everywhere through
24 all modes as, you know, if you don't need X or Y or
25 the risk-informed completion time, then it would be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 a real problem during shutdowns. Thanks.

2 MR. SALTOS: Of course for 5b you need
3 to consider the shutdown risk also for surveillance
4 testing evidence. You have to consider the risk
5 from all sources from all initiators for all modes
6 of operation. But that's the good thing for the new
7 reactors is -- for the new reactors they're going to
8 have more detailed PRAs because standards have been
9 developed for -- already they've been developed for
10 example for internal fires. They've been developed
11 for Level 2. They're going to be developed for
12 shutdown by the time -- for seismic also. Operating
13 reactors don't have that. Operating reactors, they
14 have to use qualitative and semi-qualitative and
15 bounding type analysis regarding many external
16 events, even including internal fires.

17 CHAIRMAN STETKAR: Yes, that's true.

18 MR. SALTOS: So here --

19 CHAIRMAN STETKAR: You know, I'm aware
20 the standards for Level 2 and shutdown are being
21 developed in the sense that the age of the universe
22 is also increasing. The question is, you know --

23 MEMBER BLEY: There was a draft 12 years
24 ago.

25 CHAIRMAN STETKAR: Yes, it was --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 thanks. If we're confident that indeed those
2 standards will reach fruition before -- and because
3 this is the first and only so far, you know, within
4 one year before Luminant loads fuel, which I
5 recognize is also somewhere out in the future,
6 that's okay, you know? But just saying positive
7 statements that they're being developed doesn't
8 necessarily mean that we won't be having this
9 discussion, you know, one year prior to their
10 loading fuel just because the standards haven't made
11 it yet.

12 MR. SALTOS: If there are no standards
13 for some initiating event, they are going to use the
14 bounding approach that we use with operating
15 reactors.

16 CHAIRMAN STETKAR: Well, but if they're
17 not going to be for shutdown PRA, it's not clear at
18 all how you use a bounding approach quantitatively,
19 for example, to 5b.

20 MR. SALTOS: Well, it's been used -- for
21 5b it's been used.

22 MS. MROWCA: And for instance,
23 50.71(h)(1) says that they shall develop a Level 1
24 and Level 2 PRA. So even if a Level 2 standard
25 isn't available, they'd still have to develop one.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: That's interpreted as
2 a quantitative PRA.

3 MR. SALTOS: Oh, yes, if there are
4 standards, PRA standards for that, there's going to
5 be a quantitative -- it's going to be --

6 CHAIRMAN STETKAR: I'm more concerned
7 about the shutdown stuff.

8 MR. SALTOS: Because of these reasons
9 there must be guidance included in the COL to ensure
10 that the COL licensee will use results and insights
11 from the available detailed PRA model in
12 implementing risk-informed tech specs programs and
13 not making bounding analysis like operating
14 reactors. So this is a change also in the plant
15 application-specific guidance.

16 Okay. Another difference now with
17 respect to operating reactors is treatment of
18 uncertainties. Of course, operating reactors have
19 to consider key uncertainties in their methodologies
20 that are used to extend completion times and
21 surveillance testing intervals, but here we have
22 some additional stuff. We have novel features,
23 novel design features, but we don't have operational
24 experience or not much operational experience or
25 operational experience in this country. And also of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 course we don't have plant-specific operational
2 experience.

3 MEMBER BLEY: So when they do their PRA
4 at this stage to use for tech specs; and let's say
5 for initial lack of operating experience and
6 information they don't have operating procedures,
7 they don't have a crew, are you expecting them to
8 account for the range of possible situations
9 associated with those procedures to incorporate
10 something in their uncertainty analysis to show that
11 depending on how the training and procedures are all
12 put together the results could be fairly high or
13 fairly low in terms of risk?

14 MR. SALTOS: Well, the procedures are
15 going to be developed by the time that the plant
16 comes into operation.

17 MEMBER BLEY: They will, but not by the
18 time they develop the tech specs based on the PRA
19 that they have for the COL. I mean, they're using a
20 PRA now --

21 MR. SALTOS: Yes, but the PRA is --

22 MEMBER BLEY: -- to develop their tech
23 specs, so I'm reading this -- I'm hoping that when I
24 read "uncertainty" here that we're counting on them
25 to include some extended uncertainties on these

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 issues that aren't yet established.

2 MR. SALTOS: Well, no, it does include
3 uncertainty for not developing a procedure or
4 developing a procedure that is not good. These
5 uncertainties are included here. We assume that
6 they're going to develop the procedures and the
7 procedures are based on assumptions made in the PRA.
8 And if they are developed according to these
9 assumptions and -- they're supposed to be --

10 MEMBER BLEY: Last time I looked at --

11 MR. SALTOS: They're not supposed to
12 come uncertainty.

13 MEMBER BLEY: I haven't looked at the
14 PAR for US-APWR yet. I've looked at several other
15 DCD PRAs and the HRA analysis wasn't in any way
16 specific about assumptions about procedures. It was
17 a fairly sketchy rough HRA that needed to be
18 extended once procedures and training were in place.
19 So it didn't even say what it thought things would
20 like. It just was a real cursory analysis.

21 MR. SALTOS: Yes, that's possible. And
22 this is an issue that is related to the PRA, to have
23 a capable PRA. PRA capability, in other words.

24 MEMBER SHACK: But I mean, let me just
25 -- I'm assuming that the actual tech specs will be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 formed on the fuel load PRA. It'll have nothing to
2 do with the COL PRA. Your process will be set up so
3 that they will develop that, but the actual numbers,
4 for example, would come out of the fuel load PRA,
5 not the --

6 MEMBER BLEY: ISG-08 requires the tech
7 specs to be --

8 MR. SALTOS: I think their procedures
9 are not developed based on the PRA. The PRA
10 insights are good.

11 MEMBER SHACK: No, but to say the 5b
12 surveillance frequencies which comes out of the fuel
13 load PRA. What will go into this thing is a process
14 for doing that. At least that's the way I'm
15 thinking that it's happening.

16 MR. SALTOS: Yes, we're talking about
17 procedures for how -- for example, the operator is
18 going to -- what to do here is --

19 MEMBER SHACK: Well, but I keep hearing
20 Dennis saying the COL --

21 MEMBER BLEY: No, you're right. You're
22 right.

23 MEMBER SHACK: -- and the COL PRA has
24 really nothing to do with this.

25 MR. TJADER: Keep in mind surveillance

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 frequencies in the program, the initial surveillance
2 frequencies are the standard tech spec frequencies.

3 MEMBER SHACK: Right.

4 MR. TJADER: Okay? And the completion
5 times, the front stop completion times are those in
6 the standard tech specs --

7 MEMBER SHACK: And -- okay.

8 MR. TJADER: -- or that we approve in
9 the review process, primarily standards. So, I
10 mean, there's nothing contingent upon PRA at that
11 point or existing frequencies and --

12 MR. SALTOS: Of course if the plant-
13 specific PRA finds something is wrong with a
14 procedure or with the tech specs, probably will
15 point it out.

16 MEMBER BLEY: Thank you. Very good.
17 No, I back off of everything I was saying a moment
18 ago.

19 CHAIRMAN STETKAR: Nick, one thing: You
20 say -- we've had numerous discussions about how one
21 models digital I&C systems in a PRA. And in the
22 sense of standards for shutdown PRA and Level 2 PRA,
23 it's not clear to me what the future holds in terms
24 of kind of a consensus on methods of how to do that.
25 When you say in that second bullet that additional

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 guidance is needed to account for novel design
2 features, for example, digital I&C software, I think
3 I know how to handle a gas turbine generator in
4 particular and I think I probably know how to handle
5 an advanced passive accumulator. I'm not sure I
6 understand how to handle digital I&C software.

7 So in the sense of this particular
8 presentation and this particular application, do you
9 mean that within the context of the Comanche Peak
10 COLA they will need to have explicit guidance on how
11 to treat uncertainties in particular on digital I&C?

12 MR. SALTOS: In particular the digital
13 I&C software. Digital I&C software -- digital I&C
14 system in general, but the software in particular is
15 modeled in the PRA design certification. The COL is
16 going to continue to be in there in the final plant-
17 specific PRA. But this is a very small number.
18 There is -- the basic software has a probability of
19 10 to the minus 6, I believe.

20 CHAIRMAN STETKAR: Yes, but that's a
21 number in the sense that it's just a number.

22 MR. SALTOS: Yes, it's a number.

23 CHAIRMAN STETKAR: It's a place holder
24 that everybody recognizes as simply a place holder.
25 That doesn't mean anything. It's just a box. Okay?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. SALTOS: Yes, but -- yes and no,
2 because when you use the methodology to extend your
3 testing intervals, this number might have a very --

4 CHAIRMAN STETKAR: Okay. But again,
5 that gets back to the whole purpose of the design
6 certification PRA in regulatory space is only to
7 give us adequate assurance that the safety of the
8 new plant design has been evaluated and we have
9 assurance that it's improved safety over currently
10 operating plants. That's why I've seen applicants
11 come in. It's not used for anything. So that 10 to
12 the minus 6 number, you know, could be a 10 to the
13 minus 3 number and you could still have adequate
14 assurance that this plant design is substantially
15 better than current operating plants.

16 So the fidelity in that number really
17 doesn't mean anything unless it's identified as a
18 very, very risk-significant issue. It's safety-
19 related, so it's in the tech specs. So you don't
20 have to worry about its significance for RTNSS or
21 DRAP or any of that kind of stuff -- DRAP in this
22 sense.

23 MR. SALTOS: It might make a difference
24 in decision making.

25 CHAIRMAN STETKAR: Not necessarily at

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the design certification stage.

2 MR. SALTOS: No. Oh, yes. Of course.

3 CHAIRMAN STETKAR: But now as we
4 transition to that; and not at the COLA stage,
5 because we're not using the PRA for anything at the
6 COLA stage, at the fuel load stage, at that time
7 when we're actually going to use that PRA, whatever
8 we call it at the -- the fuel load PRA, let's call
9 it, then we need to have assurance that we either
10 have adequately detailed models for the digital I&C
11 hardware and software that meets some sort of PRA
12 standard, or that we have in place, as you
13 characterize it here, guidance so that we understand
14 how to address either incompleteness in those models
15 or uncertainties.

16 Now, my question now, backing way up to
17 where we are now, or you know, the process that
18 we're going through in real time now, is do you
19 expect the -- in this particular case, Luminant, as
20 the COL applicant, to have in their COL application
21 a methodology that the staff can review and accept
22 on how to address uncertainties for digital I&C?

23 MR. SALTOS: Yes.

24 CHAIRMAN STETKAR: You do? Okay.

25 MR. SALTOS: And they already have

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 included --

2 CHAIRMAN STETKAR: Okay. Okay. But
3 that's something that --

4 MR. SALTOS: I don't know if they're
5 talking digital I&C specifically, but --

6 CHAIRMAN STETKAR: Uncertainties in
7 other -- like I said, I can handle gas turbines. I,
8 you know --

9 MR. SALTOS: Well, yes.

10 CHAIRMAN STETKAR: But because we've
11 been struggling with this notion, the fundamental
12 notion of how to model digital I&C --

13 MR. SALTOS: Well, we're not going to
14 discover something new here, but because we cannot
15 -- we don't know how to model the system in details,
16 does not mean that we cannot plug a number in there
17 that is defensible and we -- and experience can
18 support. Ten to the minus -- I think it's ten to
19 the minus seven for the basic software. Ten to the
20 minus seven might be a good number, but we don't
21 know. It's very --

22 CHAIRMAN STETKAR: Well, or it might --

23 MR. SALTOS: -- very shaky now.

24 CHAIRMAN STETKAR: Or it might be one
25 under some types of scenarios.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. SALTOS: Well, I don't --

2 CHAIRMAN STETKAR: So, that's a range.

3 MEMBER BROWN: How can anybody --

4 MR. SALTOS: No, it seems to me that a
5 number 10 to the minus 4 is definitely defensible
6 based on --

7 CHAIRMAN STETKAR: Or it might be one
8 under some scenarios.

9 MR. SALTOS: One? I don't see any
10 scenarios.

11 MEMBER BROWN: Well, just a minute.
12 Hold it. I mean, you're talking about modeling or a
13 failure number for software; 10 to the minus 4, 10
14 to the minus 5, 10 to the minus 6, when you don't --
15 there's no basis for that. I mean, software -- what
16 type of failures are you looking for? I mean,
17 whether you've got an interrupt-driven system,
18 whether you've got a fixed sample time system,
19 whether you've got -- whether type of data that
20 comes into, whether you've got analog data being
21 moved from one microprocessor to another, whether
22 you've got high-speed serial data links, all of
23 that's different. And how you can come up --
24 anybody walks up to me and says 10 to the minus 7,
25 okay, I would throw up on that; and excuse my being

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 graphic, but I think that's just an unreasonable
2 number.

3 MR. SALTOS: Yes, that's the reason that
4 we want this -- instead of this number to use a
5 number that is more -- is defensible when they do
6 the calculations to determine how much they can
7 extend this surveillance testing interval or this
8 completion time. Because 10 to the minus 7 is not
9 -- to me is not acceptable.

10 MEMBER BROWN: I spent 22 years --

11 MR. SALTOS: Might be through though, I
12 don't know.

13 MEMBER BROWN: Just a minute. Okay? I
14 spent 22 years on 40 different systems, okay, trying
15 to come up with perfect software. Tested it, tested
16 it. We tested it for two-and-a-half years
17 constantly in an active plant -- a set of equipment
18 with real hardware and we kept coming up -- for two-
19 and-a-half to three years we kept detecting errors
20 in the code. And we'd go fix it. Then we'd test it
21 some more and another error would pop up. They just
22 kept popping up. I mean, there was a lot of them at
23 first and then, you know, it gets less and less.
24 But they never go away. And this was -- we're
25 talking 10,000, 15,000 lines of code, not a half a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 million or 200,000. So, you know, tossing a number
2 in, you know, like that and say, hey, we can predict
3 the performance of this code under all these various
4 circumstances is --

5 MR. SALTOS: Well, we have experience --

6 MEMBER BROWN: I'm sorry, I lost the
7 bubble here for a minute. I get very excitable
8 because we just said it's never going to work
9 perfectly, so we just assumed it failed. It was one
10 and we designed our systems and our architectures to
11 handle that.

12 MR. SALTOS: If you assume one software
13 failure, then you have a CDF of 10 to the minus 3 or
14 something.

15 MEMBER BROWN: Sorry.

16 MR. SALTOS: But that's not realistic.

17 MEMBER BROWN: That's life in the big
18 city.

19 MR. SALTOS: This is not going to be --

20 CHAIRMAN STETKAR: I think, you know,
21 we're drifting a little bit off here, but it is
22 relevant. I was more trying to understand within
23 the scope of this COL application when you say
24 "additional guidance is needed to address
25 uncertainties," you know, in particular because of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the parentheses there, about --

2 MR. SALTOS: Well, that's an example.

3 CHAIRMAN STETKAR: -- digital I&C
4 software. But I mean, it is an example, but it's
5 probably -- it's a very, very difficult -- there
6 could be a very, very difficult example, as you can
7 imagine here.

8 MR. SALTOS: If they --

9 CHAIRMAN STETKAR: And the question is
10 how -- you know, what is the expectation, and let's
11 just focus -- you know, get myopic on that topic.
12 What is the expectation --

13 MR. SALTOS: Well, user number. User
14 number is 10 to the minus 7. Use 10 to the minus 4.
15 I think 10 to the minus 4 can be defended based on
16 industry experience with I&C software. And the way
17 that this software has been developed and verified
18 and --

19 CHAIRMAN STETKAR: Okay. I guess -- but
20 I think, you know, wanted to some feedback from --

21 MS. MROWCA: Yes.

22 CHAIRMAN STETKAR: -- the Committee in
23 terms of, you know, prescriptive things like, well,
24 we'll use the 10 to the minus 4 instead of 10 to the
25 minus 7 may not be --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. MROWCA: Or understanding the impact
2 on how sensitive something is.

3 CHAIRMAN STETKAR: May not be the
4 appropriate way to do it.

5 MEMBER BLEY: I think they're you're
6 getting to something. I think --

7 MS. MROWCA: Because that's the bottom
8 line --

9 MEMBER BLEY: Our committee has been on
10 record for the last few years of saying until we
11 really understand the failure modes and digital I&C
12 software doing meaningful reliability modeling of
13 that is extraordinarily difficult or has great
14 uncertainties, maybe more than we're normally
15 willing to acknowledge. I think on tech specs that
16 are related to things driven by digital I&C software
17 it's going to be tougher to make -- to treat the
18 uncertainty in a way that is really convincing, but
19 as you were just saying, then there are ways to
20 bound off the problems so that you could still deal
21 with things you can calculate well and use that to
22 do a better job.

23 MS. MROWCA: It may not impact the AOT
24 that you're specifically looking at.

25 CHAIRMAN STETKAR: Exactly. Right.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. SALTOS: Exactly. Not all tech
2 specs are impacted equally.

3 MEMBER BLEY: That's right. That's
4 right.

5 MR. SALTOS: Exactly that's my point
6 here. If you look at my bullets down there,
7 basically that's trying to say that having key
8 sources -- identify a list of key source of
9 uncertainty and then characterize this key source of
10 uncertainty using sensitivity and importance
11 analyses results, use appropriate conservative,
12 defensible though, reliability data for novel
13 features and calculations, and then incorporate
14 plant-specific experience into the PRA as it goes as
15 you get more operational experience. So sensitivity
16 -- of course, the sensitivity is very important and
17 the importance is very important. And operating
18 experience with software is very important. We
19 don't have zero experience with software, with
20 digital I&C. I believe we have significant
21 experience. Even in the nuclear industry we have
22 some, but also in the defense industry and the
23 airline industry.

24 MEMBER BLEY: Well, we do, but there are
25 -- and that experience is sometimes pointed out that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 if for odd reasons the input information into those
2 systems isn't within the range it was tested; and it
3 could be that it's erroneous information coming in,
4 you don't know what's going to come out the other
5 end. And sometimes it's been very uncomfortable.

6 MR. SALTOS: Yes, my understanding is
7 that these software are tested extensively though
8 for operations --

9 MEMBER BLEY: Extensively under expected
10 conditions. When the input conditions, which are
11 signals, turn out not to be in the range of expected
12 conditions for operations, very uncomfortable things
13 happen. And that's happened in systems in all walks
14 of life, not just in nuclear and in automobiles and
15 airplanes and medical.

16 CHAIRMAN STETKAR: And even what we've
17 seen from the nuclear stuff there doesn't seem to be
18 extensive testing of the type that Dennis is talking
19 about. It's within design basis parameters and --

20 MEMBER BLEY: And you can't test for
21 all --

22 CHAIRMAN STETKAR: And you can't test
23 for all possibilities.

24 MR. SALTOS: Yes, I understand, but
25 that's the reason we have a probability

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 favorability. Because if we follow the results of
2 the tests, we will have zero probably. The number
3 would be basically zero.

4 MEMBER BROWN: You have to get down to
5 the details. I mean, even selecting on software,
6 basically you would start to exceed a range where
7 you get unexpected data. The default value
8 programmed in can totally screw up your system. If
9 you default to the wrong number, all of a sudden
10 that default number can bias everything else that
11 goes on. And I know that because we made that
12 mistake, okay, and had to recover from it.

13 So, I mean, there's subtle little pieces
14 in programming and expected data that's going to be
15 coming through. It's just -- it's very, very
16 difficult to anticipate. And Dennis is right on the
17 money. I mean, if you get -- some of those values
18 change a little bit or somebody doesn't think of
19 some outside-the-box circumstances, it just doesn't
20 work right. Just burps. I mean, the only way to
21 really defend yourself on that stuff --

22 MR. SALTOS: -- have a diverse actuation
23 system that is --

24 MEMBER BROWN: Well, that's the point:
25 You want independence and you want diversity. And

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 there you can model as long as you maintain -- you
2 got four trains, for protection channels. As long
3 as those are truly independent from each other, you
4 can -- I think you can draw some plausible
5 conclusions. And then you add a diverse system in
6 place. Now you have a boundary set of conditions
7 that you can work with, and I think you can model
8 that type of stuff. But if you allow -- and I'm
9 going to back to this other one, the diverse system,
10 to be out of --

11 CHAIRMAN STETKAR: Charlie?

12 MEMBER BROWN: -- service, then you're
13 back to square one. Anyway, I'll quit now.

14 CHAIRMAN STETKAR: Let's --

15 MEMBER BROWN: I know, you want --

16 CHAIRMAN STETKAR: Well, but --

17 MEMBER BROWN: We need to get on.

18 CHAIRMAN STETKAR: Well, you know, we
19 still have ongoing discussions, obviously, on
20 modeling digital I&C and PRA. And I hate to say it,
21 but nobody sitting up in the front of the room is a
22 digital I&C person, so --

23 MEMBER BROWN: No, I understand that.

24 CHAIRMAN STETKAR: We've got a couple
25 more slides to get through on this, so let's try to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 do that.

2 MR. SALTOS: Yes.

3 MEMBER BROWN: Well, I'm just trying to
4 emphasize from somebody who's got 80 reactor plants
5 with 80 sets of protection equipment out there that
6 I was responsible for for 22 years, it was not
7 painless and we had burps all the time that we had
8 to deal with. And if you think we have an extensive
9 knowledge of who else has that long of a history of
10 stuff and still finds it difficult to say this is
11 going to perform the way we think it is, even though
12 we have all these magic rules in place, it's very --
13 and the V&V that you do on it, very difficult. So
14 I'm just trying to communicate that as an experience
15 factor to those who haven't had to live with it and
16 had phone calls at 2:00 in the morning from a
17 submarine in the middle of the Indian Ocean where
18 their stuff is broken. It's just no fun. Excuse
19 me.

20 MEMBER BLEY: (off microphone.)

21 MEMBER BROWN: Huh? What was that?

22 MEMBER BLEY: It's an old joke. That's
23 two.

24 MEMBER BROWN: Oh, okay.

25 MR. SALTOS: How we propose to address

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the new reactor challenges. For the first big issue
2 that we have; that is, to ensure completeness of
3 technical specifications, we propose to -- actually
4 we been developing Comanche Peak with our review
5 also is development of tech spec methodology
6 document as part of the COL. This we intend to
7 incorporate by reference the existing application-
8 specific guidance; for example, NEI 06-09 for risk-
9 managed tech specs, into the tech spec methodology
10 document and include the additional regulatory
11 guidance. That is, the changes that we talked about
12 before into this tech spec methodology document.
13 And incorporate this tech spec methodology document
14 into the tech spec administrative controls.

15 CHAIRMAN STETKAR: And that roughly, I
16 guess, eight-page document that we've seen a draft
17 of is that document?

18 MR. MONARQUE: This is the June 30
19 document. This is the Luminant letter dated June
20 30.

21 MR. SALTOS: The Luminant --

22 CHAIRMAN STETKAR: That is --

23 MR. SALTOS: This is not complete yet.

24 CHAIRMAN STETKAR: Okay.

25 MR. SALTOS: Okay. With respect to the

1 risk-informed regulatory guidance risk metrics, we
2 have proposed options and requested Commission
3 directions; have been obtaining stakeholder input;
4 working on response to staff requirement memorandum;
5 and the staff response to the staff requirement
6 memorandum is due June 2012.

7 Status and path forward. Luminant
8 submitted draft tech spec methodology document in
9 June 2011. The staff reviewed Luminant's proposed
10 tech spec methodology document and prepared request
11 for additional information in September 2011. We're
12 continuing to work with Luminant on the development
13 of an acceptable tech spec methodology document.

14 MEMBER BLEY: Will this be -- this
15 document, given you approve it, essentially part of
16 the COL, would it get tied into the tech spec
17 chapter?

18 MR. TJADER: It'll be referenced in the
19 tech spec --

20 MEMBER BLEY: Okay.

21 MR. SALTOS: Yes, in administrative
22 controls part. That's right.

23 MEMBER BLEY: Okay.

24 CHAIRMAN STETKAR: And your SER for; I'm
25 take a shot at it, Chapter 16 would -- essentially

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it isn't being reviewed as a separate -- like a
2 topical report, is it? It's just --

3 PARTICIPANT: Oh, so it'll be part of
4 the --

5 CHAIRMAN STETKAR: It'll be part of the
6 Chapter 16 review.

7 PARTICIPANT: Oh, okay.

8 CHAIRMAN STETKAR: So all the RAIs that
9 are generated relative to that methodology will come
10 under I guess Chapter 16?

11 MR. SALTOS: Well, right now we are on
12 Chapter 19.

13 CHAIRMAN STETKAR: One of the two.

14 MR. SALTOS: I don't know where exactly
15 it would go.

16 MR. MONARQUE: And I think will 16 will
17 refer to 19.

18 CHAIRMAN STETKAR: Okay.

19 MR. MONARQUE: But both documents will
20 be tied in --

21 CHAIRMAN STETKAR: I mean, the key is
22 this isn't being treated as a separate --
23 essentially as a separate topical report or anything
24 like that.

25 MR. MONARQUE: No, it's not a topical --

1 CHAIRMAN STETKAR: It's just folded into
2 the --

3 MR. TJADER: And both Tech Spec Branch
4 and PRA Branch have reviewed and commented on that.

5 MEMBER BLEY: Since we just tossed those
6 words around, can you give us a little summary of
7 the kind of RAIs? You know, is there anything
8 really substantive that you and Luminant are trying
9 to work out now on this methodology?

10 MR. SALTOS: Actually we're talking I
11 guess Luminant. But I can give you a couple of
12 examples. They fail primarily to uncertainties --

13 MEMBER BLEY: Yes.

14 MR. SALTOS: -- especially uncertainties
15 to how you treat the key uncertainties with respect
16 to novel features. This is an important issue in
17 there.

18 PARTICIPANT: (off microphone.)

19 MR. SALTOS: Oh, okay. Thanks.

20 MS. MROWCA: Do you want us to go over
21 it in more detail now or do you want to --

22 CHAIRMAN STETKAR: It's really up to
23 you --

24 MS. MROWCA: -- ensure that Luminant has

25 CHAIRMAN STETKAR: -- because it's kind

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of a preliminary interim --

2 MS. MROWCA: -- a chance to discuss --

3 CHAIRMAN STETKAR: Yes.

4 MS. MROWCA: -- their part? We still
5 have a presentation from Luminant.

6 MR. MONARQUE: We've not received
7 Luminant's response to the RAIs yet. They're not
8 going to give it to us until June -- until November,
9 rather.

10 MEMBER BLEY: Well, let's see if they
11 mention them when they're up.

12 MR. MONARQUE: Okay. I'll be glad to
13 answer them.

14 MR. SALTOS: Yes, and of course they're
15 on the PRA developing an acceptable PRA. There are
16 questions on all these elements that I discussed
17 before.

18 CHAIRMAN STETKAR: Okay.

19 MS. MROWCA: We just wanted to get --

20 CHAIRMAN STETKAR: But I think in the --
21 the only thing I'm trying to do is keep it a little
22 bit careful because, you know, it's a public meeting
23 on the record. Obviously you're in the early stages
24 of asking RAIs about a developing document and we
25 haven't had the opportunity to see any of this, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we won't, you know, until it reaches a better degree
2 of finality.

3 MS. MROWCA: I think our main purpose
4 today was on the concept of the use of the
5 methodology and to give you an idea of what's in it,
6 and if you have any questions or concerns about that
7 today.

8 CHAIRMAN STETKAR: Do any of the members
9 have anymore questions for the staff?

10 MEMBER BLEY: Yes, I do, and mine deal
11 with this trying to come to grips with what we have
12 at COL time, what we're going to have later. Once
13 we're doing with the COL, you folks will have a
14 license and you'll have a set of tech specs that
15 link to this idea that you can do the risk-informed
16 completion times. You'll develop the PRA and submit
17 it at least a year before fuel load.

18 MS. MROWCA: No submittal.

19 MEMBER BLEY: I'm sorry, they won't
20 submit to you. They'll do it.

21 MS. MROWCA: They'll do it.

22 MEMBER BLEY: And tell they've done it.
23 And you could audit it at any time. Now what I'm
24 thinking is once you have a license -- I keep
25 looking over here where people were this morning.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 There's nobody over there. I'll look here. Since
2 this is a risk-informed application, once that
3 revised PRA is done for fuel load and it's applied
4 to developing completion times and frequencies for
5 the tech specs, doesn't our normal requirements fall
6 in place that the PRA has to -- or is subject to
7 inspection to ensure that the results, which in this
8 case would be the risk-informed tech specs, are
9 consistent with the version of the PRA that is
10 applied to them?

11 MR. SALTOS: Well, this is part of the
12 application-specific guidance. The application-
13 specific guidance has all this information --

14 MEMBER BLEY: The risk-informed
15 application-specific guidance is what we're talking
16 about?

17 MR. SALTOS: Yes, that -- 4b, for
18 example.

19 MEMBER BLEY: Yes.

20 MR. SALTOS: Or 5b.

21 MEMBER BLEY: Yes.

22 MR. SALTOS: This guidance is talking
23 about they do not have to extend the completion
24 times.

25 MEMBER BLEY: Right, but they could.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. SALTOS: If they believe that there
2 is a problem with -- they have -- there is some
3 uncertainty or they don't -- the PRA model can
4 support something, they can say we're using the
5 front stop. They don't have -- in other words, the
6 completion time --

7 MEMBER BLEY: Right, they don't have to
8 make it a risk-informed application.

9 MR. SALTOS: They don't have to make
10 anything --

11 MEMBER BLEY: But if they decide --

12 MR. SALTOS: But if they decide --

13 MEMBER BLEY: -- to do a risk-informed
14 application and change the completion time --

15 MR. SALTOS: They have -- first of all,
16 if they decide that, they have to document. We were
17 -- and this is --

18 MEMBER BLEY: Just as an operating plant
19 would have to do.

20 MR. SALTOS: Yes. We are in this
21 configuration. This and this and this and this
22 trains or systems are out. We did the PRA. We made
23 these assumptions with respect -- we consider these
24 key uncertainties. We addressed in this and this
25 way and we came to these results. Then the NRC

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 inspector can go inspect that. Actually will
2 inspect that stuff.

3 MEMBER BLEY: Okay.

4 MR. SALTOS: And if we see that they did
5 something inappropriate or the PRA that they're
6 using is not -- has something that grossly
7 underestimate or compromises safety, then of course
8 we would take an appropriate action.

9 CHAIRMAN STETKAR: What happens there
10 though, Nick? That's a kind of reactionary
11 approach, that if I'm a licensee, I make a decision,
12 you know, it's the middle of the night Sunday night
13 and I call in my PRA staff and I'm in a particular
14 plant configuration and they say, lo and behold, you
15 know, you can extend the 72 hours out to 3½ weeks.
16 Fine. Go forward. And six months later, you know,
17 an audit staff comes in and says, hey, wait a
18 minute, you know, your PRA wasn't capable of making
19 that determination. What happens then? I mean, you
20 know, they get cited?

21 PARTICIPANT: Sure.

22 CHAIRMAN STETKAR: But the whole PRA now
23 is at fault. You know, how many decisions did they
24 make --

25 MR. SALTOS: Well, I don't think they

1 can do for the PRA --

2 CHAIRMAN STETKAR: -- based on that tool
3 that was faulty?

4 MR. SALTOS: They can look if was some
5 -- if they -- they did -- they didn't consider
6 something, you know, important.

7 CHAIRMAN STETKAR: Now wait a minute.
8 You said they can't? They who? The inspectors
9 can't look at the PRA?

10 MR. SALTOS: Yes, they can look at the
11 PRA, yes, if they think there is a problem. You are
12 -- of course. If they say in a recommendation that
13 they used the PRA and they hand the concepts for
14 that part that they're using in the decision making,
15 and that's not true, then yes, they have to go
16 through their significant determination process I
17 guess to the reactor.

18 MR. TJADER: That may be with the PRA,
19 but with respect to tech specs, the tech specs have
20 the PRA requirements in there. They have the
21 methodology to ensure that the PRA is adequate. If
22 we find that the PRA is not adequate for that
23 application, then you're in tech spec space. They
24 cannot then enter for instance a completion time
25 where the PRA does not support it. That would be a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 violation of tech spec requirements. And
2 potentially if we find in hindsight that they have
3 invoked this initiative inappropriately, I think we
4 could in hindsight invoke a tech spec violation on
5 them.

6 CHAIRMAN STETKAR: But the whole point
7 is that the determination that the PRA is
8 technically adequate for this purpose is made solely
9 by a peer review of that PRA that is subject to
10 staff audit. It is not based on an NRC staff review
11 of the adequacy of that tool.

12 MEMBER BLEY: Just as it is for
13 operating plants.

14 CHAIRMAN STETKAR: Just as it is for
15 operating plants.

16 MR. SALTOS: But it's not completely
17 true given that we have extensively reviewed the
18 design certification PRA and the COL PRA. I do not
19 anticipate to see a PRA that will be drastically
20 different. So, I mean, you know --

21 CHAIRMAN STETKAR: Well, we haven't seen
22 the PRA yet either, so --

23 MR. SALTOS: Well, you're going to find
24 there are issues there that come to be connected
25 with respect to operating plants. There are. But I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 don't think that this -- you see this -- if they
2 change the completion time and they extend it, okay,
3 then I'll accumulate a little bit more risk. This
4 risk eventually, we will find out that they're doing
5 that. How many times -- it's important how many
6 times they do that because it's the sum of all this
7 accumulations that -- and this is trended every two
8 years, it's trended to see where they go.

9 MEMBER BLEY: Yes, but unless you go in
10 and look, you never know. Or if they go and look
11 and report that they made a mistake -- that can
12 happen.

13 MR. SALTOS: But the philosophy of this
14 risk-informed application is that they are going to
15 be documented and then the NRC will look at that.
16 If we don't look at that, that's -- what can I say?

17 MS. MROWCA: Yes, just to clarify is
18 that in terms of inspection of the fuel load PRA,
19 that is not required. I think we understand it's a
20 prudent thing to do, and there has been precedent
21 with the plant that has implemented 4b that there
22 was an implementation inspection afterwards. And so
23 I think --

24 MR. SALTOS: TJADER: Well, there was an
25 audit prior to also.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. MROWCA: Yes, there was an audit
2 prior to that, but there was an inspection
3 afterwards.

4 CHAIRMAN STETKAR: But there was a
5 specific focused inspection?

6 MS. MROWCA: Yes. And like I said, I
7 think that we feel it's a prudent thing to do.

8 MR. TJADER: Yes, while it's not
9 required; and I can't state that we will in fact do
10 it, I would be surprised if we don't.

11 MEMBER BLEY: Well, it's important that
12 it was done on the one case where this has been --

13 MS. MROWCA: Right, there has been a
14 precedent for doing an implementation inspection.

15 CHAIRMAN STETKAR: And, you know,
16 precedent -- we are -- this is the first one. Might
17 be the only one, but it's the first one. You know,
18 the sense of prudence and sense of confidence in how
19 the process is actually working, I think is
20 important.

21 Anything more, Dennis?

22 MEMBER BLEY: No, I've just been
23 spinning in my head. Somewhere along the line we
24 usually do -- well, on COLs I don't know that we do.
25 Do we do -- have we typically done an interim letter

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 from --

2 CHAIRMAN STETKAR: We haven't, but --

3 MEMBER BLEY: What I'm thinking is if we
4 do and -- if you come in and we do an interim letter
5 somewhere along the way, I think we ought to at
6 least go on record about having looked at this
7 process.

8 CHAIRMAN STETKAR: Yes, I think we
9 haven't -- and this -- you know, unfortunately we
10 probably won't visit this in terms of the draft SER
11 with open items until middle of next year sometime.
12 At that point, yes, we can always write an interim
13 letter. And we haven't been doing it as much for
14 COLs because there typically aren't issues that come
15 up. We do do it somewhat more routinely for, you
16 know, the DCD process. And certainly, you know, we
17 always say if there's something that we feel is
18 important enough that rises to the attention of the
19 full committee, we'll send an interim letter out to
20 essentially alert the staff, you know, formally to
21 the concern.

22 MEMBER BLEY: I guess I'm thinking this
23 is --

24 CHAIRMAN STETKAR: It's interesting --

25 MEMBER BLEY: -- interesting enough and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 significant enough that having a full committee
2 meeting on this issue sometime before you're all the
3 way done makes a lot of sense.

4 CHAIRMAN STETKAR: Yes, and that might
5 be -- it's certainly too premature to do it now.

6 MEMBER BLEY: Yes.

7 CHAIRMAN STETKAR: Perhaps when the
8 draft SER comes out on --

9 MR. MONARQUE: And we would probably
10 do --

11 CHAIRMAN STETKAR: -- 19, 16, whatever I
12 want to call it, you know?

13 MR. MONARQUE: And we will probably do
14 16 and 19 together in the same meeting.

15 CHAIRMAN STETKAR: Yes, I mean, that's
16 -- we've been trying to schedule a subcommittee
17 meeting --

18 MR. MONARQUE: Yes.

19 CHAIRMAN STETKAR: -- to do that because
20 it's so integrated, and that might be the
21 appropriate time to think of a full committee
22 meeting.

23 MR. MONARQUE: Do you see need for a
24 second informational meeting, informal meeting?

25 CHAIRMAN STETKAR: Let's hear what

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Luminant has to say.

2 MR. MONARQUE: Okay.

3 CHAIRMAN STETKAR: And then we'll kind
4 of go around the table at the end and see how the
5 subcommittee feels.

6 MR. SALTOS: But is important to
7 underline here that we're concentrating in the
8 difference between operating reactors and new
9 reactors. We aren't looking at the whole of
10 approach for risk-informed tech specs for --

11 CHAIRMAN STETKAR: Right.

12 MR. SALTOS: -- operating reactors also
13 because that's been discussed and approved.

14 MEMBER BLEY: And I think; this is a
15 personal opinion, the way you've -- it's been set up
16 seems to transition you from the new reactor to
17 something like operating reactors and what at least
18 at first blush seems a reasonable --

19 CHAIRMAN STETKAR: Yes, it does. It's
20 just that that transition getting from what it is at
21 the COL stage; and when I say "what it is," the
22 tools and the process, to what it is once you're in
23 the operating stage, which I think we do have some
24 experience with, making sure that that transition --
25 nothing gets lost in that transition, or

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 misinterpreted or something like that.

2 Any other questions for the staff?

3 MEMBER BLEY: But you still got to make
4 sure you're consistent on 16 and 19, whatever's done
5 there, that Part 4 gets done consistently also
6 because there's two programs in there, 5.5-18 and
7 19, which deal with configuration of risk-management
8 and surveillance frequency, whatever the other words
9 are, control programs. So right now they're a
10 little bit more general, but whatever falls out on
11 the rest of this you can't just leave that one out.

12 CHAIRMAN STETKAR: You reminded me of
13 something, Charlie.

14 Bob, if you're the right guy to ask, I
15 know at the COL stage, the COL -- we have COL tech
16 specs right now. They exist. They have a hook into
17 5.5-18, or whatever the heck it is, for risk-
18 informed completion times.

19 MR. TJADER: Yes.

20 CHAIRMAN STETKAR: Will the Comanche
21 Peak COL tech specs have risk-informed surveillance
22 frequencies, explicit frequencies of you shall do
23 this surveillance once every 37.26 days?

24 MR. TJADER: For those --

25 CHAIRMAN STETKAR: Because those

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 specific numbers. They are not a fly -- you know,
2 on-the-fly-type calculation.

3 MR. TJADER: Comanche Peak going to
4 adopt it as any other plant would. In other words,
5 those surveillance frequencies for which we're
6 applying the Surveillance Frequency Control Program,
7 those frequencies will be in the program.

8 CHAIRMAN STETKAR: Okay.

9 MR. TJADER: They will be there.

10 CHAIRMAN STETKAR: So as a separate
11 document that's --

12 MR. TJADER: It's a separate document.

13 CHAIRMAN STETKAR: -- referred to out of
14 the techs? Okay.

15 MR. TJADER: But as I said, they're
16 treated just the same as if they were in tech specs.

17 CHAIRMAN STETKAR: But the numbers in
18 that program won't be generated until fuel load, is
19 that right?

20 MR. TJADER: No. Those numbers are the
21 existing standard tech spec numbers as they are
22 today.

23 MEMBER BROWN: In the DCD?

24 MR. TJADER: Yes, the DCD has the number
25 or the Surveillance Frequency Control Program. The

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 number that will be in Comanche Peak's program will
2 be that number, that DCD number where it says the
3 number or.

4 CHAIRMAN STETKAR: But, okay, at the COL
5 stage, that's true. But in principle that number in
6 the Surveillance Frequency Control Program could
7 change?

8 MR. TJADER: Yes. Yes.

9 CHAIRMAN STETKAR: Okay.

10 PARTICIPANT: But you don't know when it
11 will change.

12 CHAIRMAN STETKAR: You don't know
13 whether it will? It certainly will not change --

14 MR. TJADER: It certainly won't
15 change --

16 CHAIRMAN STETKAR: -- at the COL stage.

17 MR. TJADER: It won't change at the COL
18 stage. And in fact, it won't change until they
19 obtain some operating experience.

20 CHAIRMAN STETKAR: Oh, so you even got
21 a --

22 MR. TJADER: You know, I mean, I think
23 we'd be -- that's part of the program is that they
24 have to look at their personal -- their plant-
25 specific operating experience. And if they have

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 none, there's no change immediately.

2 CHAIRMAN STETKAR: I got it.

3 MR. TJADER: And it would be some time
4 in the future.

5 CHAIRMAN STETKAR: Thanks.

6 MEMBER BLEY: I have one last question.
7 Early, Bob, you were talking that the tech specs are
8 not Tier 1 or Tier 2 because that's the DCD, but
9 they are part of the license and if you want to
10 change one, it's a license amendment. How does what
11 goes into the COL -- if it's not this Tier 1, Tier 2
12 star, how does that end up -- what is it in the COL
13 that makes it clear that it takes a license
14 amendment to change this insertion and it doesn't
15 take a license amendment to change some of the other
16 insertions at the COL stage, because I didn't
17 understand what you said?

18 MR. TJADER: Well, first of all, I think
19 what you're driving at is, for instance, the
20 Surveillance Frequency Control Program, the numbers
21 that are in the program. Any change whatsoever in
22 the tech specs proper, whether it's a comma, a
23 change in a capital or -- you know, a letter of
24 something like that requires a license amendment.
25 That's it. Now, you can invoke a methodology, an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 NRC-approved methodology to determine some numbers
2 outside of specs.

3 Now, those surveillance frequencies are
4 not Tier 1 and they're not Tier 2 star. You know,
5 those -- there's nothing in the regulations that
6 explicitly call out either completion times or
7 surveillance frequencies. And in fact, that is the
8 underlying -- one of the underlying reasons that we
9 can even apply a methodology or a program such as
10 NEI 06-09 or NEI 04-10 to completion times and
11 frequencies is that they're not explicitly called
12 out by regulation. Okay? It's an implied
13 requirement.

14 If you're going to ensure that something
15 is operable and you're going to perform a
16 surveillance to ensure that, the implication is
17 you're going to do that at a certain frequency. And
18 so we have taken that implied surveillance frequency
19 requirement and put it in specs. But because it's
20 not explicitly in regulations, we're now saying that
21 we can make that determination and put that risk-
22 manage external to specs.

23 MEMBER BLEY: Okay.

24 MEMBER SHACK: I just want to go back to
25 this notion that they're going to have to have

1 operating experience before they can do it. I mean,
2 as I read this, it seems to me that once they have
3 the PRA and it's been peer reviewed and approved for
4 the --

5 MR. TJADER: Well, perhaps there's some
6 industry experience, overriding industry experience.
7 I won't, you know, exclude that possibility. But if
8 you take a look at the process, there is both a
9 qualitative branch and a quantitative branch. And
10 in fact, since probably most of the changes in
11 surveillance frequency really wouldn't make -- hit
12 quantitative triggers, more likely than not it's
13 going to be qualitative decision making on the panel
14 that's going to make the determination. That is
15 with the understanding that the surveillance
16 frequencies -- we have the experience that they've
17 passed. So you have to have some experience that
18 the surveillance frequency reliably passes and
19 performs its function. And if you have that
20 experience, then you can make the change.

21 So if there is a new type of equipment,
22 you know, that performs the same function as it does
23 in the standard tech specs and things like that and
24 yet we don't have the experience to ascertain that
25 in fact doing this surveillance every quarter is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 adequate, then they should not make that change.

2 MEMBER BLEY: Of course if you don't
3 have that experience you don't know that the initial
4 number is very good either. So I don't see the
5 distinction, tell you the truth. I think this
6 process forces at least an engineering judgment by a
7 collective group that's probably better than a
8 priori numbers would be.

9 MR. TJADER: Well, frequently the -- I
10 mean, more often than not surveillance frequencies
11 initially were done on manufacturers' guidance or,
12 you know, engineering judgment,, things like --

13 MEMBER BLEY: Right.

14 CHAIRMAN STETKAR: Anything else?

15 (No response.)

16 CHAIRMAN STETKAR: No? Okay. We're
17 going to take a recess. Thank you very much, by the
18 way. This was good.

19 Steve, we'll revisit the notion at the
20 end of the meeting about whether we need another
21 briefing.

22 MR. MONARQUE: Okay.

23 CHAIRMAN STETKAR: Kind of go around the
24 table.

25 Let's take a break until five until

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 3:00, and we'll recess.

2 (Whereupon, the above-entitled matter
3 went off the record at 2:36 p.m. and resumed at 2:54
4 p.m.)

5 CHAIRMAN STETKAR: Let's reconvene and
6 hear from Luminant on their process or methodology.

7 MR. WOODLAN: Okay. And my name is Don
8 Woodlan. I'm still the licensing manager for
9 Luminant.

10 CHAIRMAN STETKAR: I was going to say,
11 there have been people who have come before
12 subcommittees who have made statements that, you
13 know, may put those titles in jeopardy. We won't
14 speak of the names, but we all know who they are.

15 MR. WOODLAN: As in the previous
16 presentations, we have an agenda here starting with
17 introductions and opening remarks, and then a little
18 bit of background, and then we'll get into the tech
19 spec methodology, which I'm sure you gathered from
20 the earlier presentations is a pretty key part of
21 what we're doing.

22 As part of the opening remarks, let me
23 first of all thank the staff for everything they've
24 done. They gave my whole presentation already, so
25 that helps a little bit.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Oh, good.

2 MR. WOODLAN: But no really, when we
3 decided before we filed our application to pursue
4 the risk-informed tech specs, we did that
5 recognizing it wasn't going to be easy, but we felt
6 the safety improvements offered by these programs
7 were the right thing to do and that we wanted to
8 pursue them. When we presented it in our
9 application to the staff, I'm sure there were a good
10 number of people that wondered why we did that. We
11 certainly created a challenge for them and a lot
12 more work, but I can say they never flinched. They
13 got right on board. They picked up the ball and
14 they began to run with it. I think we have the very
15 first meeting like in the spring of 2009. And since
16 then we've had a series of interactions including
17 public meetings and exchanges of documents and
18 products.

19 I think, although they talked a little
20 bit about it during their presentation, they really
21 didn't give justice to the amount of work that was
22 done to get to where we are today, because when we
23 started out, we weren't even close to knowing the
24 right answers, and we had a lot of options on the
25 table. We were looking at license conditions, we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 were looking at making it a DAC, we were looking at
2 other ways of -- back then we still had COL Holder
3 items. And there were several other options. We
4 had all these on the table as possibilities.

5 And then we gradually over time, between
6 the NRC and Luminant, discussed those, discussed the
7 pros and cons of the various options. Certainly
8 ISG-08, which I didn't really consider a new
9 product. It's always been in my mind that you don't
10 issue a license without finalized tech specs, so to
11 me that just was a clarification. We know that all
12 along. And certainly that was a driving force in
13 helping us decide what was the right solution to
14 pursue?

15 So with that, I think I'll get going
16 with the presentation. The next slide. I do hope
17 you save some questions for us from this morning.

18 Okay. This slides talks about the
19 background and the conservatism. And again, I'm
20 probably going to repeat a lot of things that were
21 said this morning. But like my wife says, who's a
22 former teacher, this is reinforcement, not
23 repetition.

24 In order to ensure safe operation of the
25 plant many things get involved; and I think a lot of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you know, but let me make just a few comments that
2 many things go into the safe operation of a nuclear
3 plant and many of those are not obvious and you
4 can't really see those by looking at the paper. You
5 know, tech specs and the license, the license
6 including the tech specs define a level and certain
7 rules and controls we have to live by.

8 But that's not what makes a safe
9 operating plant. There's many, many other things.
10 I've listed a couple here. Conservative decision
11 making is certainly one of them. One of the very
12 specific things we do is the way we control
13 maintenance using the train week concept where you
14 only work on one train during a given week. The
15 Maintenance Rule itself and the way it's been
16 implemented by all the operating plants is a
17 significant contributor. We feel that adding risk-
18 informed tech specs is another tool which allows us
19 to operate these plants safely and allows us to
20 operate them safer than we might have otherwise.

21 And I list some of the advantages here,
22 just a few of them. It promotes situational
23 awareness of equipment being out of service. And
24 the Maintenance Rule did that as well, but any time
25 you go into the risk-informed tech specs you're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 entering that realm and the entire plant staff,
2 including the operators, are going to become more
3 aware of that. We feel that's important.

4 It may; or may not, but somewhere during
5 the life of a plant there's probably a chance it may
6 avoid an unnecessary plant shutdown. And that
7 doesn't necessarily mean a full shutdown. It means
8 just maybe just starting in the shutdown. And I
9 think we all agree that taking the plant through
10 unnecessary excursions is not a good thing and is
11 not conducive to safety. So if it's not appropriate
12 to do that, you shouldn't be doing that, and these
13 risk-informed tech specs help us to not do that when
14 it's not necessary.

15 And reduce likelihood of NOEDs.

16 MEMBER BLEY: What's that? I don't know
17 every acronym in the world yet.

18 MR. WOODLAN: Notice of enforcement
19 discretion.

20 MEMBER BLEY: Okay. Thank you.

21 MR. WOODLAN: And when you think about
22 it; and to me this is part of the concept, many of
23 the NOEDs, or enforcement discretion we had to
24 pursue in the past will probably be avoided because
25 of the ability to adjust completion times ourselves

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 based on risk. That's not a trivial thing, I don't
2 think. It was a dramatic exercise for the utilities
3 and for the NRC who had to review it. And in many
4 cases you were relying on assessments, in particular
5 PRA, because we didn't use PRAs to justify any kind
6 of enforcement discretion. That had to be done very
7 much in a rush. By having these processes in place,
8 now we're more programmatic, we have a process that
9 everybody understands. To me, it's a better way to
10 go than NOEDs.

11 Okay. Next slide. Now here's where I
12 get into some of the stuff that's somewhat
13 repetitive, but I'll run through it anyhow.

14 Adoption of risk-informed tech specs first of all
15 appears in the US-APWR generic tech specs. I think
16 you're probably aware of how it works between the
17 design, the US-APWR certified design and how they
18 create generic tech specs. And then we have to
19 adopt those pretty much verbatim with the exception
20 of areas that might be in brackets which allow
21 plant-specific work to be done to fill in those
22 brackets with an appropriate number.

23 CHAIRMAN STETKAR: You don't have to
24 adopt.

25 MR. WOODLAN: Well, pretty much the way

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the processes and rules are, you pretty much do.
2 That's the way the process is written. And if
3 you're going to deviate --

4 CHAIRMAN STETKAR: You can for a rule
5 change.

6 MR. WOODLAN: Yes. We can for a rule
7 change; that's right, and I guess that could happen
8 down the road.

9 And so we've already mentioned even in
10 the generic tech specs, although it's in brackets,
11 they -- for these two -- and we worked with
12 Mitsubishi to get these two into the generic tech
13 specs. Like I say, we wanted it and so we went to
14 Mitsubishi and said we want it. Please put it in
15 the certified design. And they were very
16 cooperative. They did. They put it in there. They
17 include bracketed references to the NEI 06-09 and
18 04-10, which we've already referred to earlier
19 today. And we included it in our initial
20 application back in September of 2008.

21 I've already mentioned that we've had a
22 series of meetings --

23 MEMBER SHACK: I was sort of curious the
24 Japanese even knew about these when those
25 applications came in. Now I understand where it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 came from.

2 MR. WOODLAN: Yes, I remember a meeting
3 several months before we filed, maybe six or nine
4 months, where we sat down with Mitsubishi and
5 Luminant, expressed why we wanted them and what -- I
6 wouldn't say they didn't know what they were. I
7 don't think they understood the value of them. And
8 we went through that with them a lot, because it
9 would obviously work for them, too, to now go back
10 and modify their product to incorporate what we were
11 asking for here.

12 Yes, like I say, we've had a series of
13 meetings. We did address ISG-08, which was a key
14 element in picking the options that we went with.
15 Risk metrics, as mentioned. When we first started
16 out it appeared to be a huge mountain. How do we
17 deal with this? In fact, I believe we probably kind
18 of forced the issue. Certainly risk metrics was
19 probably thought of by some people before we
20 actually filed our application. But once we filed
21 our application, now it was on the table. You got
22 to deal with it. You got a new plant that's going
23 to be out there and you've got these old standards
24 that were written for operating plants which -- who
25 have PRAs at a different level now. Doesn't make

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 sense, and so this issue now had to be dealt with.

2 CHAIRMAN STETKAR: Don, I think I know
3 the answer to this question, but help me. Has
4 Luminant been actively involved in the tabletop
5 exercises that have been and are still ongoing with
6 regards to risk-informed -- specifically with
7 regards to risk-informed applications for new
8 reactors to kind of examine this whole issue of risk
9 metrics?

10 MR. WOODLAN: Let me answer that by
11 saying that Luminant is working with Mitsubishi as a
12 team on the risk-informed tech specs for the US-
13 APWR, and as this team, yes, we have been involved.

14 CHAIRMAN STETKAR: Okay. I was just
15 curious. In terms of actually running some of the
16 case studies and looking at the changes in the
17 values and -- you have? Okay.

18 MR. WOODLAN: Yes, and I'm --

19 CHAIRMAN STETKAR: But I mean not
20 necessarily Luminant, but --

21 MR. WOODLAN: Well, your question
22 reminded me that I forgot to introduce the other
23 people up here right now.

24 CHAIRMAN STETKAR: The folks who are
25 nodding their heads like this?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. WOODLAN: And that's because they're
2 the ones that actually did this. Next to me is Dr.
3 Tanaka. He is very strongly involved in the PRA
4 development for both the US-APWR design and for the
5 Luminant activities.

6 Russ Bywater also works for MNES.
7 Formerly he worked as an SRA, was a PRA person for
8 the NRC. So both of them have very strong PRA
9 knowledge.

10 And next to me is Tim Clouser who is
11 Luminant. Has a lot of operating experience, so if
12 you have questions like that, we'll get him the
13 answer it. A former licensed operator for 1 and 2,
14 so he brings a wealth of experience in that area.

15 CHAIRMAN STETKAR: Good. Thank you.

16 MR. WOODLAN: Okay. The second to the
17 last bullet there: As we proceeded down the path,
18 we finally recognized I think that we should look at
19 the precedents that were out there in technical
20 specification on how to deal with these challenges
21 that needed to be part of the specs but you didn't
22 want to put all the details in there. And there is
23 precedence on using programs that are described in
24 the technical specifications that have very specific
25 processes that are well defined, and those processes

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 are addressed in the technical specifications, but
2 the material can be outside. And this seemed to fit
3 that precedent, so that clearly become the best
4 approach. And in order to make that work, we needed
5 methodology. We had the NEI guidance to start with,
6 but we needed to make sure that it was adequate for
7 a new plant.

8 Okay. Next slide. This slide may help
9 a little bit with some of the discussions we had
10 earlier about how these specs get applied. This is
11 actually not any given spec. It's a kind of generic
12 explanation of how the specs work. This is part of
13 the generic tech specs, or this is what a generic
14 tech spec would look like. And the key item is the
15 box that's in red there. Without the red box is
16 what it would look like if it was just a normal
17 deterministic tech spec. You would have your item
18 A.1, do it in 72 hours.

19 With the generic tech specs that has the
20 option for the modified completion times, you have
21 that additional step in there, and it's in brackets
22 because some plants may choose not to adopt risk-
23 informed tech specs. And it gives you an "or"
24 statement that, as mentioned earlier, you can apply.
25 As long as you make your decision within 72 hours,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you can apply the risk-informed completion time
2 approach.

3 MEMBER BROWN: Which means you could go
4 for three weeks?

5 MR. WOODLAN: Yes.

6 MEMBER BROWN: I'm just using that as
7 a --

8 MR. WOODLAN: That's correct. Anything
9 up to 30 days. Thirty days is --

10 MEMBER BROWN: Thirty days. Twenty-nine
11 and twenty-three hours.

12 MR. WOODLAN: That's correct.

13 MEMBER BROWN: Yes.

14 MR. WOODLAN: Now, another way to look
15 at this, let's say we were talking a normal
16 operating plant now with 200% trains. The first one
17 there about one required train inoperable. The
18 specs probably says you need two trains operable for
19 one to accomplish the function and then redundancy.
20 This would allow you to apply this to the first
21 train and the first train only. In the case of our
22 design where we have four 50% trains, only three
23 trains would be required to be operable by the
24 technical specifications. So this would only come
25 into effect when you're taking one of those required

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 trains and you're challenged because it has a
2 problem and it appears to be inoperable. If a
3 second train is challenged, you can't apply this.
4 It only applies when one required train is
5 inoperable.

6 MEMBER BROWN: So the first train -- as
7 you explained in your other thing, if one train of
8 the four goes out, it's a nothing?

9 MR. WOODLAN: It doesn't related to tech
10 specs.

11 MEMBER BROWN: The second of the -- now
12 you're into the failed -- you don't want -- you can
13 handle one failure, but now you're going to allow
14 yourself to keep going with just two --

15 MR. WOODLAN: Yes.

16 MEMBER BROWN: -- for this RICT, risk-
17 informed completion time, whatever it comes out to.
18 That's when you would apply it. But the third
19 train, you're back to square one again?

20 MR. WOODLAN: That's right.

21 MR. CLOUSER: Well, let me just add one
22 thing I know if I could. That technically is
23 correct for risk-informed tech specs. When that
24 first piece of equipment goes out, the first of the
25 four trains, that's a safety-related piece of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 equipment and that's treated very seriously within
2 the industry and specifically at Comanche Peak.
3 That's a Critical 2 item That's a defined item
4 that's safety related and that means that it's
5 tracked daily.

6 MEMBER BROWN: I didn't mean to blow --
7 that wasn't my -- the way I phrased that didn't mean
8 it wasn't going to be taken seriously. I just
9 means --

10 MR. CLOUSER: No, and I understand that.
11 I was just taking an opportunity to make sure I got
12 that information out because we are talking about it
13 strictly from a legal perspective, but there's a lot
14 more to it than that.

15 MEMBER BROWN: Understand. Thank you.

16 MR. WOODLAN: I'm glad Tim brought that
17 up, too, and not just because you made the comment,
18 because other people -- and as I mentioned at the
19 very beginning, their perception of what the plant
20 does is only what's written on the paper. And they
21 think, well gee, if tech specs isn't required, you
22 can do anything you want with that fourth train.
23 And that's not the way you would operate a plant
24 safely. We maintain and will control that fourth
25 train.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER SKILLMAN: I'm Dick Skillman.

2 Let me ask the question now that I asked an hour or
3 two ago.

4 MR. WOODLAN: Okay.

5 MEMBER SKILLMAN: Is the red box in the
6 design certification?

7 MR. WOODLAN: In brackets, yes.

8 MEMBER SKILLMAN: Oh, it is?

9 MR. WOODLAN: Yes, in brackets though.
10 And being in brackets means that the applicant has
11 the choice of how he uses that, or she, and --

12 MEMBER SKILLMAN: Okay. Thank you.
13 That's all I need.

14 MR. WOODLAN: Okay.

15 MEMBER SKILLMAN: Thank you.

16 MR. WOODLAN: All right. You're
17 welcome.

18 MEMBER SKILLMAN: Okay.

19 MR. WOODLAN: Anymore questions on --

20 MEMBER BLEY: Yes, I had a question.
21 You're allowed to do this, so you do it. Is there a
22 requirement -- since they are LCOs, once you do
23 develop a risk-informed completion time and start
24 using that, do you have to notify NRC?

25 MR. WOODLAN: Well, that came up a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 little bit this morning. Let me elaborate a little
2 bit. Every time you pursue this you redo the
3 assessment, because assessment is based on the
4 current plant configuration. And every time you go
5 into it the plant configuration is going to be
6 different.

7 MEMBER BLEY: Yes, that I understand.

8 MR. WOODLAN: Okay.

9 MEMBER BLEY: But my question was do you
10 have to tell NRC --

11 MR. WOODLAN: No.

12 MEMBER BLEY: -- our completion time's
13 no longer 72 hours; it's 150 hours?

14 MR. WOODLAN: For this given event, no,
15 we don't have to tell them that.

16 MEMBER BLEY: Don't have to? Okay. So
17 they don't necessarily know what your completion
18 times are at any particular point in calendar time?

19 MR. WOODLAN: Okay. I answered you
20 based on requirements. We are not required --

21 MEMBER BLEY: Yes, well, that's what I
22 mean. By requirements --

23 MR. WOODLAN: We're not required to tell
24 the NRC, no.

25 MEMBER BLEY: You aren't required? Yes,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that's --

2 MR. WOODLAN: The reality is --

3 MEMBER BLEY: Of course you have a site
4 inspector who --

5 MR. WOODLAN: There will be a resident
6 there. We would not do this without calling the
7 resident. We have a standard -- at Comanche Peak we
8 have a standing order that anytime we do something
9 significant with respect to the operations of the
10 plant, if the resident isn't there to tell them, we
11 call him at home and we say, hey, we're doing this.
12 And I'm not going to speak too much for the staff,
13 but I wouldn't be surprised at all about what their
14 response and action is, very similar to -- like I
15 say, this is much like an NOED, but their response
16 is going to be very similar to when we do NOEDs
17 today and they're going to be very interested in how
18 we did it and what we did. When we do an NOED
19 today, we provide them our assessment of the risk
20 and they frequently run a parallel assessment based
21 on their own models. And if the numbers don't match
22 up, they come back to us and say something doesn't
23 look right here. Please explain.

24 I think -- Bob, do you have a comment?

25 MR. TJADER: Yes, excuse me for

1 interrupting. Yes, this is Bob Tjader. I just
2 wanted to make something clear which may not be
3 clear, and I apologize if it is clear and I'm just
4 being redundant.

5 But the fact is that with risk-informed
6 completion times, when you voluntarily enter a risk-
7 informed completion time, you've done the
8 calculation, you determine what it is and you're not
9 extending your completion time out to whatever it
10 is, up to 30 days, that is done on a one-time basis.
11 That is, that on this entry it is now 14 days. On
12 this entry it is 14 days. And in fact, when you're
13 in risk-informed completion times, what the
14 requirements have is that any time there is a plant
15 configuration change that affects the PRA, it has to
16 be recalculated and the risk-informed completion
17 time adjusted.

18 When all systems -- once you're in a
19 risk-informed completion time and now you've
20 restored systems to operable status and you're out
21 of the risk-informed completion time, everything
22 resets. The original completion time goes back to
23 72 hours and the next time you enter, if you want to
24 go beyond 72 hours, you recalculate again.

25 MEMBER BLEY: So if you wanted to reset

1 a bunch of these permanently, you'd have to go in
2 with a license amendment?

3 MR. TJADER: Exactly.

4 MEMBER BLEY: Okay. It's --

5 MR. TJADER: Okay.

6 MEMBER BLEY -- only the one time?

7 MR. TJADER: So if one stops, it
8 would --

9 MEMBER BLEY: I missed that.

10 MR. TJADER: -- remain the same.

11 MEMBER BROWN: Yes, that was the
12 question I asked when we were talking --

13 PARTICIPANT: Yes, I know, but I slid
14 past.

15 MEMBER BROWN: -- for the RICT. This is
16 -- it's a case-by-case basis.

17 MR. TJADER: Exactly. That's --

18 MEMBER BROWN: For a surveillance
19 frequencies you can change it and it stays there
20 unless you meet some other metrics to have to go
21 back and readjust or reevaluate.

22 MR. TJADER: Exactly. Yes. That's
23 correct.

24 MEMBER BROWN: And the DCD does have
25 this -- no, I just went and looked. It's there.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. TJADER: Yes, the -- Don is
2 absolutely right. In the DCD it's bracketed where
3 it has "or," you know, and then un-bracketed. Now,
4 Don will get into it further with surveillance --

5 MR. WOODLAN: Good clarification. It's
6 not redundant. It's reinforcement.

7 MR. TJADER: Okay. Thanks.

8 MR. WOODLAN: Okay. More questions on
9 this slide?

10 (No response.)

11 MR. WOODLAN: Here is an equivalent
12 slide for the Surveillance Frequency Control
13 Program. And just like before, the portions that
14 the applicant can work on are in brackets. In this
15 case it's in the frequency column, the two red
16 blocks there. The seven days is the number that is
17 recommended by the generic tech specs. It's also in
18 brackets because if you're using different equipment
19 or something, you may need to modify that number
20 just as a base number. But it includes that "or"
21 statement which allows you to go over to the
22 Surveillance Frequency Control Program. And of
23 course in our tech specs the brackets won't be
24 there. It'll be there without the brackets.

25 CHAIRMAN STETKAR: Done, in the risk-

1 informed completion times; I didn't check all of the
2 tech specs, do you have any systems for which the
3 first out actually has a time? You know, you have a
4 four-train plant and basically you can have one
5 train out indefinitely and the risk-informed
6 completion times kick in when the second train goes
7 out. Do you have any systems for which there is
8 actually a completion time for the first train?

9 MEMBER BLEY: Where you need all four.

10 CHAIRMAN STETKAR: Where the tech spec
11 is written, you know, all four shall be operable
12 during plant operation?

13 MR. WOODLAN: Why would -- I guess I
14 don't understand the surveillance for the first --

15 CHAIRMAN STETKAR: Not surveillance.

16 MR. WOODLAN: Oh.

17 CHAIRMAN STETKAR: This is risk-informed
18 completion times.

19 MR. WOODLAN: Oh, back on completion
20 times?

21 CHAIRMAN STETKAR: Yes, on completion
22 times.

23 MR. WOODLAN: I don't believe so. Do
24 you recall?

25 MR. BYWATER: This is Russ Bywater with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MNES, and we thought we might have an example, but
2 we checked and --

3 CHAIRMAN STETKAR: I'm not sure. I
4 actually checked a couple. I couldn't find any, but
5 I wasn't going to go -- the tech specs are 800-and-
6 some-odd pages --

7 MR. BYWATER: Right.

8 CHAIRMAN STETKAR: -- with the basis.

9 MR. BYWATER: There are some systems
10 that are a little different little emergency
11 feedwater where you have some diverse drivers of the
12 pumps, and that was one that we just did a quick
13 check on.

14 CHAIRMAN STETKAR: The reason I ask is
15 if there are any that do have a requirement that
16 hangs a time on, you know, the first piece of
17 equipment going out, are those also candidates for
18 the risk-informed completion times such that --

19 MR. WOODLAN: If it's required by tech
20 specs and if its loss does not negate the safety
21 function --

22 CHAIRMAN STETKAR: Yes. Okay.

23 MR. WOODLAN: -- yes, it can be.

24 CHAIRMAN STETKAR: Then that would be in
25 the -- okay.

1 MR. WOODLAN: That doesn't necessarily
2 -- I don't think we do have any in there like
3 that --

4 CHAIRMAN STETKAR: I don't -- I was just
5 curious if you knew off the top --

6 MR. WOODLAN: -- but it could have
7 happened.

8 CHAIRMAN STETKAR: -- but in -- I mean,
9 there's a statement made in the methodology that it
10 always applies only to the second train out.

11 MR. WOODLAN: And that's only when
12 there's four 50 percent trains.

13 CHAIRMAN STETKAR: Yes.

14 MR. WOODLAN: That statement was meant
15 to be for that situation.

16 CHAIRMAN STETKAR: Okay. Thanks.

17 MR. WOODLAN: Okay. This is -- we went
18 ahead and pulled for you to look at -- not
19 necessarily going to go through in detail. There's
20 two slides here that show the proposed Configuration
21 Risk-Management Program as it's stated in tech
22 specs. And you'll notice in the middle of the page
23 there in the red block there is a sentence there
24 that's in brackets. Again, this is the generic tech
25 specs. So this is how they wrote it in the generic

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 -- actually this whole 5.5.18 is in brackets because
2 if you don't have risk-informed tech specs you don't
3 need this program in your tech specs.

4 But within the brackets there's brackets
5 relating to NEI 06-09. And the reason for that is
6 in these types of tech specs, when you have a
7 program description like this, you need to link it
8 to a very specific methodology. And it's by title,
9 name, date, revision level, whatever, but it's a
10 very specific document. And that's why that's in
11 brackets and that's what we need to fill in.

12 In fact, we're working on that now. We
13 have some draft words. Probably going to provide
14 the staff within the next day or two of how we
15 intend to fill that in. It's basically going to say
16 NEI 06-09, Revision 0, as modified and supplemented
17 by the Comanche Peak supplement document. That's
18 essentially what it's going to say.

19 Under No. 3 there you'll see the 30
20 days. That's where the back stop is, so you can't
21 beyond the 30 days.

22 And this is just the remainder of it.
23 You'll see some of the key aspects. There's another
24 entry there where we'll fill in. It's much like the
25 first bracket, you'll see though that some of the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 key things that Nick mentioned in his presentation
2 that are important going forward as a Part 52 plant
3 that need to be addressed are station procedures,
4 training, the PRA model, the CRM tool itself. And
5 all those are covered by the supporting documents.

6 CHAIRMAN STETKAR: What is an
7 appropriate CRM tool? Do you have a risk monitor
8 that's actually been in place and people have looked
9 at the translation of the PRA model to whatever
10 model is used in the risk monitor, if it's a
11 different --

12 MR. WOODLAN: Well, that is not the risk
13 monitor.

14 CHAIRMAN STETKAR: It isn't?

15 MR. WOODLAN: No.

16 CHAIRMAN STETKAR: Okay.

17 MR. WOODLAN: This is the configuration
18 risk management tool.

19 CHAIRMAN STETKAR: Okay. Well, some
20 people --

21 MR. WOODLAN: I know, that would be
22 confusing.

23 CHAIRMAN STETKAR: -- call that a risk
24 monitor.

25 MR. WOODLAN: And this is the -- it's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 covered by the 06-09, but it's basically the tool
2 that you use that allows you to make the decision
3 when it's time to make a decision.

4 CHAIRMAN STETKAR: Oh, okay.

5 MR. WOODLAN: And, you know, it says who
6 needs to do what, and how you go to the PRA, and how
7 it goes to the Committee, and the decision gets
8 made. It's all part of --

9 CHAIRMAN STETKAR: I was interpreting
10 this as, you know, kind of the online risk monitor
11 that people use --

12 MR. WOODLAN: No. No.

13 CHAIRMAN STETKAR: -- and some people
14 call that a configuration risk management or
15 monitoring tool.

16 MR. WOODLAN: Yes. We do have risk
17 monitors, but that's not what this is about.

18 CHAIRMAN STETKAR: Thanks.

19 MR. WOODLAN: Now here's the equivalent
20 program for the Surveillance Frequency Control
21 Program. Again, these are the words right out of
22 the generic tech specs. And again, there's a red
23 box down there where we'll fill in the Comanche
24 Peak-specific methodology. And again, it would be
25 by rev level or date, whatever it is at the time

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that gets approved.

2 CHAIRMAN STETKAR: Now, these --
3 happened to have printed something out from Rev 3 of
4 the FSAR, and the places where you show these red
5 little squares here and the brackets don't appear
6 bracketed, for example, in Rev 3 of the FSAR.

7 MEMBER BROWN: Rev 3? They're in Rev 2
8 in brackets. I've got Rev 2.

9 PARTICIPANT: I think I have Rev 3.

10 MEMBER BROWN: Is there a Rev 3?

11 CHAIRMAN STETKAR: I have a piece of
12 paper here that says Rev 3 down here; I'm sure you
13 can read it at that distance, and it doesn't have
14 the brackets or things in it.

15 The question is though because -- and I
16 didn't go back and check the DCD. Since the tech
17 specs are repeated directly from the DCD, is this a
18 change to the tech specs from the DCD? In other
19 words, if the DCD doesn't have those brackets in
20 there -- I don't know, in terms of legal, you know,
21 sort of licensing things, if you'd made a change to
22 the text of the tech specs from the DCD to the COL
23 FSAR, is that considered a departure from the design
24 certification? I have to ask our staff folks here.

25 MR. MONARQUE: Bob's going to give an

1 answer.

2 MR. TJADER: Well, we've bracketed those
3 which allows for the appropriate revision to NEI 06-
4 09. In other words, there's going to be a Rev 1 and
5 a later SCOL comes along and wants to adopt Rev 1,
6 we have -- and because it's bracketed, it allows
7 them, the applicant, the option to adopt the
8 appropriate revision number. That is a use that
9 we're taking from the standard tech spec usage. So
10 we do not believe that that is a departure.

11 In addition to that, the appropriate
12 methodology document, which is bracketed in the DCD,
13 the applicant can have their plant-specific
14 methodology inserted there and I do not believe that
15 that is a departure.

16 MEMBER BLEY: I think the question was
17 if the DCD does not have brackets but the FSAR does,
18 would that be a departure?

19 MR. TJADER: Well, I think if the DCD
20 specs do not have brackets, then unfortunately that
21 would be a departure.

22 CHAIRMAN STETKAR: And I believe I
23 misspoke earlier. I'm just trying to find the right
24 page on the DCD, if you give me chance here.

25 MR. TJADER: I know that we are still

1 negotiating with Mitsubishi. We are still reviewing
2 responses to RAIs and I noticed that Rev 3 of the
3 DCD for the APWR tech specs does not have the latest
4 version in there. So it will appear that it'll be a
5 departure for Rev 3, but they have promised me that
6 the next version will have it in it.

7 CHAIRMAN STETKAR: And you're correct,
8 Bob. I just found the page. What I thought I had
9 when I said that I had the FSAR, I indeed have a
10 page from the DCD which does not have the correct
11 version in it, Rev 3 of the DCD.

12 MR. TJADER: And if I could just have
13 one other comment, if I might; and excuse me, Don.

14 But the CRM tool in fact includes the
15 risk calculator, if you will, and that risk
16 calculator has to have risk attributes of NEI 06-09
17 in it. In other words, there has to be an adequate
18 representation or -- and a -- I don't know if
19 "exact" is the appropriate word, but it has to
20 adequately represent the PRA. The risk monitoring
21 tool has to do that. So, yes.

22 And as far as experience, there's only
23 one plant that has a CRM tool at this time and that
24 is South Texas 1 and 2. And their CRM tool uses a
25 different process, and that is a huge database of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 20,000 pre-calculated configurations, 20,000-plus.
2 So theirs is a database approach rather than an
3 online actual monitor approach.

4 CHAIRMAN STETKAR: If that's the case;
5 that's sort of the way I understood it, we now have
6 a tool, as you called it a risk calculator, which is
7 not the PRA. It's something that's different than
8 the PRA; the PRA being a supposedly pedigreed
9 calculator, neither of which things are reviewed by
10 the staff, each of which has assumptions and
11 limitations in it. Who looks at the risk
12 calculator? Is that also subject to a peer review
13 against standards? I'm not aware of standards for
14 that conversion.

15 MR. TJADER: I don't believe there are
16 any peer review requirements for the tool, however,
17 it is subject to audit by the staff, as is the PRA.

18 MEMBER BLEY: Well, you just raised
19 something, John. This isn't quite aimed here, but
20 I've been thinking about it. I'm just jumping to
21 something a little different, but related.

22 When the site-specific complete PRA
23 before fuel load is completed, there's no
24 requirement to submit it and there's no detailed
25 review. However, NRC's lab contractors; and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 therefore NRC, maintains their own PRA models, SPAR
2 models, that are benchmarked against the real PRA at
3 the sites. And you had said the resident would run
4 it in their own models, which would be the SPAR
5 models.

6 I'm just curious if anybody's thought
7 through when the SPAR models actually get calibrated
8 against the real PRA when it's done. And that ought
9 to be something like -- not quite independent, but a
10 separate check of all of this stuff, that PRA and
11 all of these other calculations along the way. Can
12 anybody address that just to give me some
13 confidence?

14 MS. MROWCA: I can. This is Lynn
15 Mrowca, and in fact we do have right now an APWR
16 Level 1 internal event SPAR model that the NRO staff
17 is reviewing. The idea is that we can use that as
18 kind of a baseline and then develop site-specific
19 modules for seismic, for fires, for flooding, for
20 low-power shutdown, Level 2. And then we would then
21 have -- and they would be based on the site-specific
22 aspects of Comanche Peak so that we would use that
23 as our SPAR model for Comanche Peak.

24 So between now -- which like I said, I
25 think we've got a head start on, and then we would

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 come and benchmark it just like we do with the
2 operating plants.

3 MEMBER BLEY: Okay. That helps. I've
4 never quite seen what kind of benchmark is done, but
5 I understand they run many different scenarios and
6 compare them.

7 MS. MROWCA: Run scenarios and then --
8 yes, and then look at differences, look at big
9 differences and see if you can figure out what the
10 differences are.

11 MEMBER BLEY: And revise --

12 MS. MROWCA: And adjust accordingly.

13 MEMBER BLEY: -- one of the models to --

14 MS. MROWCA: And adjust accordingly.

15 MEMBER BLEY: Okay. One day it would be
16 nice for us to understand that process a little bit
17 as risk-informed applications become more important,
18 such as this one.

19 MS. MROWCA: Yes, and that would be
20 another opportunity to work with the applicants or
21 the licensees at that time to check their PRA, you
22 know, kind of an inspection by doing this
23 benchmarking with the SPAR models.

24 MEMBER BLEY: Okay. I'm sorry.

25 MR. WOODLAN: Thank you, Bob. And I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 checked. Our heads were nodding. We agree with
2 what you said.

3 Okay. Anymore questions on the slide so
4 far?

5 (No response.)

6 MR. WOODLAN: Okay. The next group of
7 slides talk about the methodology document itself,
8 which I think you have because I think you mentioned
9 it several times. It is the product that was
10 attached to our June 30 letter. That was our first
11 formal submittal of that document. And as Nick
12 mentioned, there is an outstanding RAI, which
13 actually I think we're planning on answering this
14 week, or we're very close to having a final answer
15 and submitting it.

16 It's basically broken down to a group of
17 sections. We address the NEI documents 06-09 and
18 04-10 and this is where we discuss where we are
19 making modifications to those documents. We address
20 the programs as written in the tech specs. We talk
21 about the programs, brief descriptions of both
22 programs in that methodology document, the qualities
23 of the PRA necessary to support the document. And
24 currently we have a section in there discussing risk
25 metrics that was created at the time that we thought

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we may have to do some unique things. We're now of
2 the opinion that the generic activity based on the
3 Commission's -- what was it, a SECY that they filed
4 earlier this year, and the follow up tabletops, and
5 whatever the conclusions are next year, we think
6 that section probably won't be necessary and
7 probably should not be in the methodology. But it
8 is in the version that we have originally published.

9 Now, the next group of slides shows some
10 of the modifications we made. And in lieu of the
11 way it's shown in the document, which just says
12 "insert this sentence," or something, we've tried to
13 show it in context.

14 CHAIRMAN STETKAR: Don?

15 MR. WOODLAN: Yes?

16 CHAIRMAN STETKAR: Just thinking about
17 the risk metrics; and I'm pretty well aware of
18 what's going on there, if you apply the current risk
19 metrics, and let's say that your risk-informed
20 completion time for a particular configuration gives
21 you a core damage frequency of 9.99 times 10 to the
22 minus 5, just as a number, you're still under some
23 magic 10 to the minus 4 threshold, so that indeed if
24 -- you know, if you'll allow me to draw a solid
25 black and white line at 10 to the minus 4 as being

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 acceptable, and you're just under your 30 days
2 backstop, is there any guidance -- is that okay or
3 is there any guidance anticipated to say that as an
4 application of this process I should also consider
5 margin, or is it strictly a black and white, go/no
6 go so that 9.99 times 10 to the minus 5 is check the
7 box green and 1.001 times 10 to the minus 4 is check
8 the box red?

9 MR. WOODLAN: I understand. And let me
10 give you the best answer I can. I'm not sure I can
11 get this completely right. My understanding, this
12 is a risk-informed activity. It's not a go/no go
13 based on what -- the numbers you get out of a
14 calculation or a PRA. Obviously, the numbers can
15 make it a no go if the numbers are --

16 CHAIRMAN STETKAR: Yes. Sure. Sure.

17 MR. WOODLAN: Just because the numbers
18 are adequate, it doesn't make it a go though.
19 There's a lot of things to consider, and some of
20 them are talked about in here in some of the
21 modifications we made and part of the rules. And
22 part of the challenge of being a Part 52 plant --
23 and Nick touched on several of them in his
24 presentation -- clearly, one of them is that we
25 don't have plant-specific experience.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Now, in some cases we have good
2 experience. Pumps tend to be pumps, valves tend to
3 be valves, but there are some unique applications,
4 and we don't have Comanche Peak 3 and 4 experience.
5 And all of that information; and that's just one
6 example of some of the key things or the
7 uncertainties that need to be considered, is rolled
8 in to the assessment which is then passed by our
9 team that's assigned to make the decision.

10 And I would only guess that if it was
11 close and if there were any uncertainties involved
12 at all, they would probably say this is a no go.
13 We're not going to do it.

14 CHAIRMAN STETKAR: Yes.

15 MR. WOODLAN: On the other hand, if it
16 was that close and in fact we had a lot of
17 confidence in all those numbers, it might be a go.
18 So I don't think there's a clear yes or no answer to
19 that. It will be risk-informed. Many factors will
20 go into making that decision.

21 CHAIRMAN STETKAR: Okay. I was just
22 curious. I was trying to get more of a sense of --
23 some folks have talked about the risk metrics rather
24 than having, you know, an absolute value, that there
25 we be, you know, some measure of relative margin,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 things like that. And I was just -- I was trying to
2 probe a little bit whether you'd thought a little
3 bit along those lines or --

4 MR. WOODLAN: Well, like I say, you can
5 definitely make it a no go.

6 CHAIRMAN STETKAR: Yes. Oh, yes. I
7 mean, that's pretty clear.

8 MR. WOODLAN: Yes.

9 CHAIRMAN STETKAR: I was trying to make
10 it, you know, as close to the no go margin as
11 possible.

12 MR. WOODLAN: And I don't pretend to be
13 an expert here and I just described it to the best
14 of my understanding.

15 Does somebody want to add something?

16 MR. BYWATER: No, I think you're exactly
17 right, Don. Russ Bywater, MNES. It's part of a
18 risk-informed decision making process. And as a
19 participant in benchmarking activities in response
20 to the SRM for the SECY paper 10-0121, we were
21 actively involved in trying to benchmark risk-
22 informed processes and to try to understand whether
23 or not the enhanced safety margins of new reactors
24 would be degraded in implementation of these
25 programs. And as a part of that overall process,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 you know, we would have to inform our decision
2 making, treat the key sources of uncertainty, as Mr.
3 Saltos mentioned in his presentation, and treat it
4 holistically. It's a bigger decision making process
5 than evaluating a number against a criterion.

6 As another aside, back to your previous
7 question about evaluation of risk of plant
8 configurations with NRC tools; for example, the SPAR
9 model, it was very reminiscent to me of my days of
10 doing NOED assessments as a regional office senior
11 reactor analyst and using a SPAR model that had been
12 benchmarked in one way or another to the plant-
13 specific PRA and then coming up with some results
14 and fully realizing that the results that you get
15 are not -- they're point estimates of something with
16 a range of uncertainty and that that all factors
17 into an informed decision.

18 CHAIRMAN STETKAR: Thanks.

19 MR. WOODLAN: Does anybody else on the
20 staff want to make a comment?

21 (No response.)

22 MR. WOODLAN: Okay. Back to the slide.
23 Like I say, I'm not going to spend a lot of time and
24 I'm not going to read these the way they are in
25 context. If you see something and you want to ask a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 question, okay.

2 I did want to point out though, most of
3 these changes are to adopt the operating plant
4 guidance and processes to properly fit a Part 52
5 plant. So you'll notice the words that are in the
6 middle about one year prior to initial fuel load and
7 endorsed standards. That's to make it consistent
8 with the regulations that apply to us. And
9 likewise, the words down below about operating
10 experience, that's consistent with what Nick was
11 talking about and what we have to deal with with the
12 fact that we're a new plant. We don't have plant-
13 specific operating experience, so that needs to be
14 incorporated.

15 Go to the next slide.

16 MEMBER SHACK: You're not going to allow
17 yourself any deviation from capability categories?

18 MR. WOODLAN: No, we intend to follow
19 what the guidance is requiring.

20 MR. TANAKA: Well, actually category --
21 yes. We'll follow, yes, the guidance of Reg Guide
22 1.200, which says Category II to IV is necessary for
23 the application. So it's not -- when this says all,
24 it's not literally all.

25 MR. WOODLAN: Okay?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER SHACK: Yes.

2 MR. WOODLAN: Okay.

3 MEMBER BROWN: On slide 10 how come you
4 deleted references to the Reg Guide 1.2 and the ASME
5 stuff, which is kind of the base documents for some
6 of the stuff you were talking about like, you know,
7 the Category II PRA? And then reading some other
8 parts of the NEI document, they referred to the ASME
9 Code and the Reg Guide 1.2 explicitly. And now
10 you've deleted them from your --

11 MEMBER BLEY: But they added in NRC-
12 endorsed consensus standards.

13 MEMBER BROWN: Pardon?

14 MR. BYWATER: This is Russ. I think I
15 can help address that. Again, what we are doing
16 here is we're incorporating by reference the NEI
17 documents themselves with modifications that are
18 necessary for our new plant. And in our case, where
19 we have to have PRA that meets the 10 C.F.R. 52
20 requirements and then also the 50.71(h) requirements
21 that we mentioned earlier, this is a way to address
22 that to say that we will have our PRA meeting
23 Category II for those supporting requirements
24 important to RMTS of those NRC-endorsed consensus
25 standards in effect at that time, which the language

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 in the NEI document now states of the ASME internal
2 events at power PRA standard. We want to make sure
3 it's identifying in this document now that we will
4 use the NRC-endorsed consensus standards in effect
5 at that time one year prior to fuel load.

6 MR. WOODLAN: So the operating plants
7 are linked to Rev 0 by the NEI guidance.

8 MEMBER BROWN: I understand that.

9 MR. WOODLAN: We need to comply with
10 whatever the NRC-endorsed version is at the time one
11 year before our fuel load. So if that were Rev 2,
12 we'll be applying to Rev 2. So the only reason for
13 crossing that out was to eliminate the specific
14 revision that's being linked to. And instead we're
15 relying on the words down below, which says the NRC-
16 endorsed consensus standard. So it's really not
17 divorcing us from 1.200. We're still tied, and
18 that's covered clearly in 06-09 and 04-10.

19 MEMBER BLEY: That's where NRC endorses
20 the standard is in 1.200, and it tells how they
21 endorsed it.

22 MEMBER SHACK: Yes, I mean, I had the
23 same reaction to Charlie when I read that, when I
24 noticed it was gone, but then if you go back to
25 Section 3.3, you bring back a reference to 1.200.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. WOODLAN: Oh, yes, 1.200's still in
2 the methodology.

3 MEMBER SHACK: It's still in the
4 document, so --

5 MR. WOODLAN: We just wanted to delete
6 the specific reference by revision level at this
7 point.

8 MEMBER BROWN: Yes, I read 3.3 and I saw
9 that, but I didn't --

10 PARTICIPANT: Didn't --

11 MEMBER BROWN: Well, I didn't connect it
12 because they still got --

13 MEMBER SHACK: It leaves those as the
14 three primary documents for looking at the PRA
15 adequacy, which is the two NEI documents and the
16 one --

17 MEMBER BROWN: Yes, but the ASME stuff
18 still wasn't dumped back in.

19 CHAIRMAN STETKAR: 1.200. It's pulled
20 in through 1.200. The problem is that the ASME
21 standard for at power PRA might not be what you need
22 to use by the time they get around to being one year
23 for loading fuel. There might be an ASME shutdown
24 including, you know, external events and stuff by
25 that time.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER BROWN: But does that exclude
2 them from having to reply for the operating plant-
3 type requirements later as opposed to just the
4 standard involved at the initial load? I mean, does
5 that mean -- do they ever transition back to what
6 every -- I don't know, is the thing they do with an
7 initial fuel load then going to be satisfactory for
8 all operations subsequent to that?

9 MEMBER BLEY: Well, it says NRC-endorsed
10 consensus standards which would you force you back
11 to the same place.

12 MEMBER BROWN: It just seems a little
13 bit rubbery.

14 CHAIRMAN STETKAR: I mean, some of the
15 sense that we're talking about before is that
16 because this -- it's at least my interpretation that
17 the confidence builder is that because this is a
18 risk-informed application that the PRA quality to
19 support that risk-informed application has to be
20 kept up. I mean, you know, you can't fall back to
21 something once you start operating, if that's your
22 concern.

23 MEMBER BROWN: Okay. I guess Capability
24 Category II was related to Reg Guide 1.200.

25 MR. WOODLAN: Yes, it still is.

1 MEMBER BROWN: But now the reference,
2 now the connection to it was gone in this --

3 MEMBER BLEY: Actually the capability
4 categories are laid out in the standard that 1.200
5 points to.

6 CHAIRMAN STETKAR: Yes, and 1.200
7 endorses -- as the standards are developed, 1.200
8 says, okay, now we endorse this additional standard.

9 MEMBER BLEY: With the following
10 exceptions.

11 CHAIRMAN STETKAR: With the following
12 exceptions. Okay. So just pointing to 1.200 sucks
13 it -- pulls it all in. They deleted it.

14 MEMBER BLEY: And I guess the real
15 problem is they don't want to refer to a specific
16 revision which will change as time goes on.

17 MEMBER BROWN: Well, but they could have
18 done that by just deleting the revision number and
19 say the revision level that applies at the time as
20 opposed to deleting the whole Reg Guide. It just
21 seemed to me the whole thing disappeared as well as
22 the ASME references disappeared as opposed to the
23 revision levels endorsed by the NRC at the time.
24 That's just a different way of framing it, but it
25 retains the reference to the base documents; that's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 all.

2 MR. WOODLAN: Well, I guess we didn't
3 want to limit it. The way the words were, it looks
4 like it's kind of limited to Reg Guide 1.200,
5 whereas the new words we've added shows that it's
6 not limited to 200. It's all the NRC-endorsed
7 consensus standards. Maybe we could have worded it
8 differently, but that's how we chose to do it.

9 MEMBER BROWN: Going to write another
10 one other 1.200?

11 MEMBER SHACK: Well, they have written
12 other consensus standards. 1.200 will endorse
13 although, you know, as the standard develops, from
14 internal events, to external events, to shutdown.

15 CHAIRMAN STETKAR: I mean, it's clear in
16 3.3. It says the supporting PRA will have the
17 following essential elements: Numerous documents
18 are used to describe the PRA model being used.
19 Three primary documents; Regulatory Guide 1.200, NEI
20 06-09 and NEI 04-10. 1.200 endorses those
21 standards, you know, endorses whatever standards are
22 endorsed at the time you develop the PRA.

23 MEMBER BROWN: Okay. All right. I
24 quit.

25 MR. WOODLAN: Well, we've heard your

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 concern and obviously somebody has it. Somebody
2 else might. We're still working on this document --

3 MEMBER BROWN: Well, I understand that.

4 MR. WOODLAN: -- like Nick said, and if
5 we think we can make the wording clearer, we may do
6 that.

7 MEMBER BROWN: We'll get another shot.

8 MR. WOODLAN: You will get another shot.

9 All right. The next slide shows another
10 area where we made modification. And it's
11 essentially the same thing. We're making sure that
12 this addresses how we're dealing with uncertainty
13 and we link it directly back to the DCD information
14 about key sources of uncertainty and key
15 assumptions. And again, this is all to bring it up
16 to Part 52 and make sure we're consistent with being
17 a new plant and with being under Part 52. Talk
18 about operating experience again.

19 Ready for the next slide. Another area
20 of change. Again, without going through it in
21 detail, it's the same types of additions. We bring
22 in again key sources of uncertainty and we talk
23 about operating experience.

24 CHAIRMAN STETKAR: Don?

25 MR. WOODLAN: Yes?

1 CHAIRMAN STETKAR: I just suddenly got
2 confused. The last slide, 11, where you've
3 highlighted text --

4 MR. WOODLAN: Yes.

5 CHAIRMAN STETKAR: -- then there's a lot
6 of other text, what is this text from? From what
7 did you extract this text?

8 MEMBER BROWN: The black print?

9 MR. WOODLAN: The black comes directly
10 out of 06-09.

11 CHAIRMAN STETKAR: Oh, 06-09. Okay.
12 I'm sorry. Okay. Fine. I was --

13 PARTICIPANT: You were looking for it in
14 here.

15 CHAIRMAN STETKAR: I was looking for it
16 in your methodology.

17 MR. WOODLAN: Yes, maybe I didn't make
18 it clear up front. We tried to present them in
19 context as how they fit into 06-09.

20 CHAIRMAN STETKAR: Okay.

21 MR. WOODLAN: It makes a little more
22 sense than just reading the methodology where it
23 says "insert this sentence."

24 CHAIRMAN STETKAR: Okay. I'm sorry.
25 Thank you. That helps.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER BROWN: But when I read through
2 your methodology, I hung up on "epistemic
3 uncertainty" and I said I don't remember seeing that
4 in there.

5 MR. WOODLAN: Okay. We'll just continue
6 through the slides now. This is just another
7 example of another location where we felt it was
8 important to reinforce these same facts.

9 Go ahead to the next slide. I think
10 this is the last one on 06-09. And again, you'll
11 see the same areas of discussion consistent with
12 consistent with standards. And here we do have Reg
13 Guide 1.200 still in there, which we inserted --

14 MEMBER BROWN: Well, what you've --
15 other words -- you replaced the first sentence and
16 you retained that except ASME was mentioned in the
17 other one and now it's gone. That's just a note I
18 had.

19 MR. WOODLAN: Okay.

20 MEMBER BROWN: Why was the reference to
21 ASME standards deleted.

22 MR. WOODLAN: And the next slide. This
23 is 04-10. And again, here you'll see the
24 modification that we've made to 04-10.

25 Before we leave all of these, I mean --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 well, I'll cover it on the next slide.

2 As Nick pointed out, we do have an RAI.
3 This is still a work in progress. There's still a
4 good exchange I think of discussions about what
5 modifications are appropriate to this methodology to
6 make it the right document to be discussed in tech
7 specs. We want to come up with words that clearly
8 establish the process so that it works for a new
9 plant and takes into consideration the needs with
10 respect to lack of plant-specific operating
11 experience and the tie to consensus standards as
12 required by the regulations.

13 So there are several areas that we're
14 looking at very, very closely. We want to review
15 the clarity of the document, as mentioned earlier,
16 for the current operating plants. And there are
17 some words in the documents that talk about using
18 bounding assumptions, because they don't have a lot
19 of the analyses that hopefully we'll have in place
20 and I think we're required to have such as seismic
21 and fire and things like that. We will have those.
22 So bounding analysis is not -- needs to be clarified
23 on how we apply that as opposed to the current
24 operating plants.

25 A good link to the regulations, a

1 discussion on common cause. We believe our PRA
2 covers that, but it needs to be clearer how common
3 cause is addressed if in fact there is aspects that
4 are not covered by the PRA. And then in general
5 text cleanup.

6 So these are just some of the areas that
7 we're looking at. Many of these are already covered
8 by the RAI that the NRC asked for us. And by the
9 way, we didn't have any real challenges or
10 differences of opinion from that RAI. We think we
11 have answers to the questions that meet the intent
12 of what those questions were asking, and we'll get
13 that to the staff, and we'll probably go through
14 another round once we fine those responses.

15 CHAIRMAN STETKAR: Don, I've just been
16 stewing over what -- as Bob described what South
17 Texas did --

18 MR. WOODLAN: Yes.

19 CHAIRMAN STETKAR: -- and the situation
20 here where on completion times it's a one-shot deal
21 based on the configuration. But nothing would
22 preclude you from putting together a catalog of
23 plant conditions, doing the analyses and then, if
24 you're in one of those plant conditions, invoking
25 that risk-informed time for today, right?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. WOODLAN: Well, except, as I
2 mentioned earlier, that's just one input to making
3 the decision.

4 CHAIRMAN STETKAR: Well, sure.

5 MR. WOODLAN: And --

6 CHAIRMAN STETKAR: Okay. "Invoking's"
7 the wrong word.

8 MR. WOODLAN: And I think --

9 CHAIRMAN STETKAR: Putting it forward
10 then to your committee to decide.

11 MR. WOODLAN: And I believe that's
12 exactly what South Texas does.

13 CHAIRMAN STETKAR: Okay.

14 MR. WOODLAN: They have all those models
15 that are preset in place, and when they get in this
16 situation, they go and see if there's a model in
17 place that already works. And if they do, that
18 becomes their input.

19 CHAIRMAN STETKAR: Okay. So we could do
20 just the same?

21 MR. WOODLAN: Yes, we could do the same.

22 MEMBER BROWN: You save what you already
23 did, if nothing else.

24 MEMBER BLEY: You betcha.

25 MEMBER BROWN: One would hope you'd

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 regurgitate it.

2 MR. WOODLAN: I think the other
3 hypothetical model; because I don't know that anyone
4 actually has one fully in place, is to actually have
5 a dynamic model that you just go in and punch in
6 five or six inputs and then it actually turns the
7 crank. Using your current PRA you put in the
8 conditions, the current plant conditions and then it
9 gives you a result. And that's a big challenge,
10 too, which is why I'm not sure anybody's got that.

11 Does anybody have that in place?

12 CHAIRMAN STETKAR: Some sales people
13 tell you that --

14 MR. WOODLAN: That they could do it for
15 you, yes. Okay. Maybe Bob has the answer.

16 MR. TJADER: This is Bob Tjader one more
17 time. Actually, I think there are many plants out
18 there that in the application of their Maintenance
19 Rule (a)(4), assess and manage risk, they actually
20 use their monitor, and they have pretty good
21 programs now that accurately, or if not accurately
22 actually use the PRA. So it's not so much a
23 translation of the PRA; which is what we're worried
24 about in 06-09 where we have those attributes, but
25 they actually use the PRA.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 And the programs are fast enough now
2 that you can get within a relatively short period of
3 time, matter of minutes, an ICDP of the plant, you
4 know, the core damage frequency, the state that it
5 is in right now. And they do that for (a)(4), for
6 Maintenance Rule at the time. And then they
7 actually have some of these computers in control
8 rooms where they -- you know, equipment becomes
9 inoperable. They'll put it into their program and
10 they relatively quickly know what the status of
11 their plant is. So it's not -- I don't think
12 it's --

13 CHAIRMAN STETKAR: Current day computing
14 power has helped an awful lot, you know, that --

15 MR. TJADER: I believe that plants --
16 many plants that adopt I 4b in the future will go
17 that way, rather than the database method.

18 CHAIRMAN STETKAR: Or a simplified
19 version of the PRA, you know, yet another kind of --

20 MR. BYWATER: Yes, all plants will have
21 to assess the risk of maintenance in accordance with
22 the Maintenance Rule, so this is one extension of
23 that capability.

24 MR. WOODLAN: And that's all I had to
25 say.

1 CHAIRMAN STETKAR: Great. Are there any
2 other questions for any of the members for Luminant?

3 (No response.)

4 CHAIRMAN STETKAR: If not, thank you
5 very much. That certainly helped an awful lot. I
6 think we learned a lot.

7 I have to do this. Before we go around,
8 I want to kind of get a sense from the Subcommittee
9 members about whether or not in particular we feel
10 that another information briefing on this particular
11 subject is worthwhile.

12 So think about that a moment as I scan
13 around the room here and ask if there's anybody from
14 the public here who wants to ask any questions or
15 make any statements?

16 (No response.)

17 CHAIRMAN STETKAR: Okay. And then let's
18 just -- if anybody has any closing remarks or
19 comments -- and I'll ask you each if you feel that
20 an additional information briefing on this
21 particular topic -- before we visit the interim SER
22 with open items, which will occur -- June/July kind
23 of time frame is what we're looking at right now.
24 but in that kind of time frame. It's not next month
25 and it'll be several months from now.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 I'll start with Dick.

2 MEMBER SKILLMAN: I am confused, but I
3 think it's my problem. I don't think it's
4 Luminant's problem or the staff problem. I was
5 trying to get clear in my mind what is a departure
6 from the design certification? And I don't raise
7 that point to challenge. It is my own confusion,
8 because it seems as though by going to the risk-
9 managed tech specs, as the first plant to have done
10 that, this applicant has stepped aside of what is
11 the design cert and imposed upon themselves, to
12 their credit, a huge workload that is in fact
13 different than the design certification.

14 So what I was listening for is how this
15 is handled in departure territory and how it's
16 handled with regard to Tier 1, Tier 2 star and Tier
17 2. So for me it's an administrative confusion.
18 It's not a challenge to what's being done here. But
19 I was just trying to get it clear in my mind.

20 So what I was going to say, Mr.
21 Chairman, is there may be others at the full
22 committee that would have this same confusion.

23 CHAIRMAN STETKAR: Yes.

24 MEMBER SKILLMAN: And so perhaps a
25 module in presentation; several minutes, that would

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 say here's what the design certification presents.
2 Here is what Luminant is doing at Comanche Peak and
3 here's how it's handled under Part 72 would be
4 beneficial. That's my comment.

5 PARTICIPANT: I think what might help --

6 MR. TJADER: If I might, this is Bob
7 Tjader one more time. We could certainly do that in
8 the future. The design cert specs have bracketed
9 the option for plants to adopt risk-informed tech
10 specs. We do not interpret that as a departure. We
11 interpret that as any other bracket, for instance,
12 for instrumentation setpoints or something. You put
13 in that bracket the plant-specific value, the plant-
14 specific application.

15 So if a plant is adopting a risk-
16 informed initiate, I 4b, they would put in there
17 what the design cert allows you to do, that option.
18 And furthermore, where there's a bracket in there
19 for the latest rev, for instance, they're putting
20 the plant-specific number in there. So we interpret
21 it as an application of plant-specific values, if
22 you will, those brackets. And if they don't opt for
23 that, then they just don't opt to adopt what's in
24 the brackets.

25 But what they have to adopt for the

1 optional brackets is in essence what the design cert
2 allows them to adopt.

3 MR. MONARQUE: Now, Bob; and correct me
4 if I'm wrong, that's because a DCD is giving the COL
5 applicant an option or a choice whether to use risk-
6 informed tech specs or deterministic.

7 Now, let me use a converse idea: If
8 they had mandated deterministic and the DCD did not
9 have an option for risk-informed tech specs and
10 Luminant came along, then that would be a considered
11 a departure.

12 CHAIRMAN STETKAR: Oh, yes. I mean, if
13 the DCD --

14 MR. WOODLAN: MONARQUE: If there's no
15 choice.

16 CHAIRMAN STETKAR: If what Don has up
17 there -- if the DCD only said seven days --

18 MR. MONARQUE: Seven days.

19 CHAIRMAN STETKAR: -- period.

20 MR. MONARQUE: Yes.

21 CHAIRMAN STETKAR: Then it's certainly a
22 departure.

23 MR. MONARQUE: But here because they
24 were given a choice, it's not --

25 MEMBER SKILLMAN: I withdraw my comment.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 I'm okay. As I said --

2 MEMBER BROWN: They did that for both
3 areas.

4 CHAIRMAN STETKAR: Yes.

5 MEMBER BROWN: I mean, the completion
6 times and this. There's, I don't know, a half a
7 dozen or more on the -- I don't know, there are
8 probably a few more, but a quick count was a half a
9 dozen or so, or a few on the completion times and a
10 bunch of surveillance. I mean, you all pretty much
11 covered the waterfront.

12 MEMBER SKILLMAN: As I said, the purpose
13 for my comment was not to challenge. It's
14 clarification in my own mind. And I thank you for
15 your explanation.

16 MR. MONARQUE: Oh, you're welcome.

17 MEMBER SKILLMAN: And I'm good. Thank
18 you.

19 MR. WOODLAN: Let me emphasize -- maybe
20 this -- I'm unnecessarily elaborating, but this
21 slide here kind of shows -- you notice both the
22 seven days and the Surveillance Frequency Program
23 area in brackets. If that option for Surveillance
24 Frequency Program wasn't there, the seven days would
25 still be in brackets.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER SKILLMAN: Understand.

2 MR. WOODLAN: And the reason for that --
3 and maybe now that we've had this discussion you
4 might want to go back and look again at ISG-08,
5 because that's kind of where they lay out the rules
6 that we follow as far as using brackets and how
7 plant-specifically we need to address whatever's in
8 brackets. And we saw this and that precedent in
9 ISG-08 and said this is the right technique to also
10 handle risk-informed tech specs.

11 MEMBER SKILLMAN: Thank you. I'm good.

12 MR. WOODLAN: I say that right, Bob?

13 CHAIRMAN STETKAR: You see this and the
14 calibration stuff is a good analogy, that in a lot
15 of other tech specs that we see in the certified
16 designs, a lot of the calibration setpoints are
17 treated exactly this way. This is the only one
18 where the tech specs are bracketed this way, to my
19 knowledge.

20 MR. WOODLAN: That's right.

21 CHAIRMAN STETKAR: I think that's true.

22 MR. WOODLAN: Okay.

23 CHAIRMAN STETKAR: Thank you.

24 MR. WOODLAN: Okay.

25 CHAIRMAN STETKAR: Dennis?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER BLEY: I have three things. See
2 if I can remember them.

3 No. 1, I came into today kind of nervous
4 about all of this, and I want to thank Luminant and
5 Mitsubishi and the staff for a really good day.
6 I've changed. I'm quite comfortable with this. I
7 think you're doing what looks like a really good
8 approach. I look forward to following it. That's
9 No. 1.

10 No. 2; this is for just the Committee,
11 we have enough new members that it would probably be
12 good to have another briefing like we've had in the
13 past of the overall how does the design cert
14 business work? What's Tier 1, Tier 2, Tier 2 star?
15 I hate to do that, but there's --

16 MEMBER SHACK: That's all right. We'll
17 just get confused again, but we can --

18 MEMBER BLEY: No, I think it's starting
19 to sink in.

20 MEMBER SHACK: We'll probably figure it
21 out.

22 MEMBER BLEY: Yes, the whole process.
23 No. 3 is --

24 CHAIRMAN STETKAR: For the full
25 committee?

1 MEMBER BLEY: Yes, full committee. Yes,
2 but that's a separate thing.

3 CHAIRMAN STETKAR: Yes, that's a
4 separate thing.

5 MEMBER BLEY: And No. 3 is I don't think
6 the Subcommittee needs another briefing on this
7 until there's some, you know, advancement, you know,
8 with the tabletops and all of that, and then we
9 probably do. But I think an information brief for
10 the full committee on the material we've talked
11 about today would be very appropriate and I think
12 everybody would be quite interested in it. It's
13 something new and something we've been wondering
14 about for a long time. That's all.

15 CHAIRMAN STETKAR: Okay. Bill?

16 MEMBER SHACK: I don't think we need an
17 update, like Dennis, until -- you know, when they
18 come back in, I think that'll be fine.

19 I came in sort of wondering why the
20 rush. You know, why not wait until you have a PRA
21 in hand before you do this. But I must confess I'm
22 not uncomfortable with the process and I'm not sure
23 it would really be any different if you waited.

24 By and large, I mean, I like risk-
25 informed tech specs. To me it's like taking (a) (4)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and applying it to everything. It just extends what
2 you sort of do anyway and it's a good idea. So I'm
3 quite comfortable with the whole process, I think.
4 You know, it comes down to having a good PRA.

5 MEMBER BLEY: And a good committee that
6 interprets --

7 MEMBER SHACK: A good integrated
8 decision making panel, yes.

9 CHAIRMAN STETKAR: What do you think
10 about the notion that Dennis raised about having a
11 full committee briefing on the subject?

12 MEMBER SHACK: Oh, design certs in Tier
13 1 and 2?

14 CHAIRMAN STETKAR: No, no, no. No, no.
15 Of this topic.

16 MEMBER BLEY: No, of this -- risk-
17 informed in particular, I expect, for new plants.

18 MEMBER SHACK: Since it only applies to
19 one design, I think it just can be dealt with in
20 terms of this design. I mean --

21 CHAIRMAN STETKAR: That may be the way
22 to do it is to have a committee briefing at the time
23 that we see the draft SER --

24 MEMBER BLEY: You know, the next time we
25 bring in an APWR --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Yes, that would be --
2 -- plan, you know, sort of the July-ish time frame,
3 whatever the schedule works out.

4 MEMBER BLEY: Matte of fact, when we
5 have a committee briefing, a full committee briefing
6 on this project, I think it would be appropriate to
7 devote some time to this.

8 CHAIRMAN STETKAR: Okay. We'll try to
9 think about that. That probably makes a lot more
10 sense, because it would have a little more substance
11 and relevance perhaps.

12 Mr. Brown?

13 MEMBER BROWN: To the least -- get back
14 on my chair on risk-informed non-deterministic. I'm
15 not necessarily -- again what's being proposed, it's
16 the reasonable -- seems like a reasonable approach.
17 The only big concern I have is kind of the one-size-
18 fits-all, 30-day backstop. There are some -- and I
19 just didn't go through every possible system that
20 they may not may not have, but that's -- the 30 days
21 is a long time. For some things it may be
22 appropriate and for some other things it maybe
23 should be shorter.

24 And I don't -- is the 30 days -- is that
25 in NEI 06-09? And that seems like an arbitrary time

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to say that's the big backstop number for
2 everything. So for a four-train reactor protection
3 and one train's out, I'm not sure I like the 30 days
4 hanging out there. For a gas turbine generator, for
5 certain things, which is another system that you
6 don't have to have necessarily, maybe that's
7 probably okay. So I was a little nervous -- not
8 nervous, but I just didn't care for the 30-day, one-
9 size-fits-all backstop day.

10 The second piece was on address the need
11 for another Subcommittee meeting, and I'm not
12 particular sure we need that. We ought to let it
13 develop and then assess. If we have to we could
14 always do one.

15 I found useful instead of having to go
16 through everything the paper that identified what
17 changes were made. So it was fairly easy to take
18 your paper that you wrote and say, hey, this is what
19 we're doing to modify 06-09 and 04-10 and then put
20 those. Because it was only five or six pages of
21 stuff, it was fairly easy to do. That would be
22 useful if you make more changes because you can see
23 the changes in the context of the whole thing as
24 opposed to trying to fight your way through the
25 whole document.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So other than that, I would like to see
2 somebody assess the 30-day issue as to why a one-
3 size-fits-all. That's the one open item, that I
4 don't care for all systems. Again, I didn't go
5 through every item that they had bracketed, so I
6 have no idea whether it's even a concern.

7 CHAIRMAN STETKAR: Thanks. The sense
8 that I have; and I don't know if anybody else wants
9 to add anything, that 30-day, I think I'd keep an
10 open mind about that. The staff is conducting these
11 tabletop exercises to challenge a variety of risk-
12 informed applications in the context of new
13 reactors. And they're running different proposed
14 applications. Big emphasis on 4b. Some on 5b.
15 Some on, you know, other applications.

16 The results, the numerical results from
17 those tabletop exercises, recognizing they're kind
18 of snapshots of, you know, a few people's ideas of
19 what might be useful to examine, are investigating
20 whether or not this process could result in
21 conditions that would significantly challenge those
22 safety margins, the kind of thing I was talking
23 about. And the 30-day backstop kicks in in many
24 cases in that context. So part of I think that
25 process will look at that 30-day value and see what

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 sort of margin protection is provided by that 30-
2 day, you know, as you characterize it, one-size-
3 fits-all.

4 That process is continuing. We're going
5 to have a Subcommittee briefing on the second set of
6 tabletop exercises in February, I believe. No,
7 March, early March. There's a SECY paper that's
8 coming out on that in March/April time frame of next
9 year. So you might want to -- it's under the PRA
10 Subcommittee. You may want to sit in on that. It's
11 just a warning. You want to argue about PRA, come
12 and sit on the meetings and listen to it.

13 MEMBER BROWN: The point is the NEI
14 could have addressed it from the standpoint, you
15 know, a backstop should be assessed, but should be
16 no longer than, but you should look at each system
17 that you decide to go that way. That's all.

18 CHAIRMAN STETKAR: Yes, and that's
19 probably -- you know, there, too, it was -- the
20 document was published, you know, some number of
21 years ago.

22 MEMBER BROWN: It was three, four years
23 ago, something like that, I don't know, and updated.

24 CHAIRMAN STETKAR: Five, six, seven, you
25 know, depending on how long it took.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Bob?

2 MR. TJADER: This is Bob Tjader again.
3 On the 30 days, No. 1, it is somewhat arbitrary in
4 that 30 days was in essence the longest completion
5 time that there was in the standard in general at
6 that time. And in addition, 30 days provided
7 adequate time for the licensee to come in and
8 request a Notice of Enforcement Discretion if they
9 wanted to extend it beyond 30 days.

10 Keep in mind that the risk-informed
11 completion time is calculated to an incremental core
12 damage probability of 10 to the minus 5th or an
13 incremental large early release probability of 10 to
14 the minus 6th. It is the time to reach that
15 threshold. Okay? So that is in essence the margin,
16 or whatever, that we're allowed to consume, or
17 whatever.

18 So if you're going to get to those
19 thresholds at a risk-informed completion time less
20 than 30 days, then you're still within what is
21 acceptable in NEI 06-09. If your calculation
22 permits your completion time to go to 120 days or
23 beyond, or whatever, you can go no longer than 30
24 days. So 30 days backstop is in essence for those
25 systems conservative. For US-APWR, the new reactor

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 design, 30 days is extraordinarily conservative. In
2 fact, more often than not it's going to be 30 days,
3 which is what their completion time extended will be
4 because of the four-train design and the fact that
5 they have the redundancy they have. We've seen
6 that.

7 The reason South Texas is the first
8 existing operating plant to come in for risk-
9 informed completion times is because they're a
10 three-train plant and they have two-train tech
11 specs. And this is their way of taking advantage of
12 the fact that they're a three-train design. And
13 South Texas -- in fact, many of their systems, if
14 they go into it and they then -- of course it's
15 configuration-dependent. If you have multiple
16 systems out; you know, what I'm saying is off, you
17 know, then you're likely to have an actual risk-
18 informed completion time less than 30 days. But
19 South Texas, when they have let's say single systems
20 that are out and they're in a risk-informed
21 completion time, more often than not South Texas is
22 going to have that 30-day backstop. So that 30 days
23 is conservative. So if it's a one-size-fits-all, it
24 for the most part is a very conservative fit-all,
25 particularly for US-APWR.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: Thank you.

2 MR. WOODLAN: Can I make one more
3 comment --

4 CHAIRMAN STETKAR: Sure.

5 MR. WOODLAN: -- kind of as background?
6 You mentioned about why we did this right away
7 instead of waiting; and I may to be blame for that.
8 I felt it was the right thing to do and I basically
9 wanted it in place from day one so that we did all
10 our training and our procedure development with this
11 in mind.

12 I can tell you; and I don't know if
13 they'll follow through with it, I've had more than
14 one, actually several other, licensing managers come
15 up to me and say I'm really glad you're doing this
16 because as soon as I get my COL, I plan on filing a
17 license amendment to do the same thing. They don't
18 want to potentially delay their COL, so they chose
19 not to do it up front. We took the risk because we
20 -- like I say, I wanted to have it in place. And
21 I'm glad I did, because I think it brought the issue
22 to the forefront earlier on. If we'd have waited
23 until COLs actually started to get issued, we'd be
24 two years, three years behind where we are right
25 now.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER SHACK: Arguing over risk metrics
2 for awhile longer, yes.

3 MR. WOODLAN: That's right. That's
4 right. So it turned out to be probably a good
5 thing. So it's not just; someone mentioned this,
6 you know, we're just doing this for a single plant.
7 I don't think that's the case. We're just the
8 first. I think there's a line up behind us that's
9 going to be doing it pretty soon.

10 MEMBER SHACK: No, you're the only plant
11 that's going to do it as in the COL. I mean, the
12 others are going to have to wait --

13 MR. WOODLAN: At least the first group.
14 There maybe I think future plants once it becomes
15 successful and there's a path, they'll probably do
16 it right up front. I would if I was them.

17 CHAIRMAN STETKAR: Well, it all depends
18 on, you know, expediency --

19 MR. WOODLAN: Exactly.

20 CHAIRMAN STETKAR: -- following the
21 RCOLA, basically.

22 MR. WOODLAN: That's all I have.

23 CHAIRMAN STETKAR: Thanks, Don.

24 Anything else from anyone?

25 (No response.)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN STETKAR: With that, I'd like
2 to again thank everybody.

3 MS. MROWCA: Dr. Stetkar?

4 CHAIRMAN STETKAR: I'm sorry.

5 MS. MROWCA: I just have two things that
6 you brought up during the meeting, and I don't know
7 what format you want them answered in.

8 You asked about peer review guidance and
9 what it addresses, like asymmetry of systems. And
10 then the other one was, let's see -- I have it
11 written down, but how do you want us to address
12 those, or do you not?

13 CHAIRMAN STETKAR: When you come back.

14 MS. MROWCA: So we'll capture these last
15 two things.

16 CHAIRMAN STETKAR: This is not a formal
17 -- the way we keep track of these things is we have
18 what we call a tickler file. It's not an action
19 item list. It is not a formal thing. It's just
20 something because none of us can remember things
21 more than about five minutes. If we have it written
22 down, we will ask you about it again. So next time
23 we see you folks on this topic, make sure that you
24 can answer us about it. We won't forget. But it's
25 not a -- we don't want -- the message is we don't

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 want formal response. We don't do any of that
2 stuff.

3 MR. HAMZEHEE: It's only formal when you
4 put in your letter.

5 CHAIRMAN STETKAR: Only formal thing is
6 when we're in our letter. That's right.

7 MEMBER BROWN: We haven't been
8 consistent across all projects.

9 CHAIRMAN STETKAR: We have not been
10 consistent across all projects. We won't talk about
11 the other projects on the record in this forum. And
12 we are adjourned.

13 (Whereupon, the meeting was adjourned at
14 4:16 p.m.)

15

16

17

18

19

20

21

22

23

24

25