



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

January 16, 2014

MEMORANDUM TO: ACRS Members

FROM: Michael R. Snodderly, Senior Staff Engineer **/RA/**
Technical Support Branch, ACRS

SUBJECT: CERTIFIED MINUTES OF THE MEETING OF THE
FUKUSHIMA SUBCOMMITTEE ON NOVEMBER 5,
2013

The minutes for the subject meeting were certified on January 14, 2014, as the official record of the proceedings of that meeting. Copies of the certification letter and minutes are attached.

Attachments: As stated

cc w/ Attachment: ACRS Members
E. Hackett
C. Santos



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

MEMORANDUM TO: Michael Snodderly, Senior Staff Engineer
Technical Support Branch, ACRS

FROM: Stephen P. Schultz, Chairman **/RA/**
Fukushima Subcommittee

SUBJECT: CERTIFICATION OF THE MINUTES OF THE ACRS FUKUSHIMA
SUBCOMMITTEE MEETING ON NOVEMBER 5, 2013,
ROCKVILLE, MARYLAND

I hereby certify, to the best of my knowledge and belief, that the minutes of the subject meeting are an accurate record of the proceedings for that meeting.

<u>/RA/</u>	<u>1/ 14 /14</u>
Stephen P. Schultz, Chairman Fukushima Subcommittee	Date

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
MINUTES OF THE ACRS FUKUSHIMA SUBCOMMITTEE MEETING
NOVEMBER 5, 2013

The ACRS Fukushima Subcommittee held a meeting on November 5, 2013 in TWFN 2B1, 11545 Rockville Pike, Rockville, Maryland. The meeting convened at 8:30 a.m. and adjourned at 4:51 p.m.

The entire meeting was open to the public.

Mr. Biff Bradley of the Nuclear Energy Institute and Dr. Edwin Lyman of the Union of Concerned Scientists made presentations which are described in further detail in the summary portion of these minutes. No other written comments or requests for time to make oral statements were received from members of the public related to this meeting.

ATTENDEES

ACRS Members

Stephen P. Schultz, Chairman
J. Sam Armijo, Member
Ron Ballinger, Member
Dennis C. Bley, Member
Charles H. Brown, Jr., Member
Harold B. Ray, Member
Joy Rempe, Member
Michael T. Ryan, Member
Gordon R. Skillman, Member
John W. Stetkar, Member

NRC Staff

Michael Snodderly, Designated Federal Official
Ed Hackett, ACRS
Mark Caruso, NRO/DSRA/SPRA
Arthur Cunanan, RES/DRA/OEGIB
Stephen Dinsmore, NRR/DRA/APLA
Daniel Doyle, NRR/DPR/PRB
Mary Drouin, RES/DRA/PRB
Richard Dudley, NRR/DPR/PRB
Shana Helton, NRR/DPR/DRMB
Steve Laur, NRR/DRA/APLA
Lawrence Kokajko, NRR/DPR
Geary Mizuno, OGC/RMR

Other Attendees

Biff Bradley, Nuclear Energy Institute
Edwin Lyman, Union of Concerned Scientists
Prasad Kadambi
Marvin Lewis

Jana Bergman, Scientech
Paul Amico, Hughes Associates
Stanley Levinson, AREVA Inc.

SUMMARY

The purpose of the meeting was to review the NRC staff's disposition of the Near-Term Task Force's Recommendation 1 on an enhanced regulatory framework. The meeting transcripts are attached and contain an accurate description of each matter discussed during the meeting. The presentation slides and handouts used during the meeting are attached to these transcripts.

SIGNIFICANT ISSUES	
Issue	Reference Pages in Transcript
1. Chairman Schultz asked about status and final concurrence of the draft SECY paper	12
2. Member Armijo asked about the change in language from, "establish a design extension category of events," to, "establish a design basis extension category of events."	13
3. R. Dudley begins describing, "Improvement Activity 1: Establish a Design Extension Category."	14
4. Member Stetkar asked about past precedence where a NUREG has been used to provide guidance for treatment criteria, change processes and FSAR update instead of a rule.	15-20
4. Member Skillman asked about the basis for the staff's conclusion that the design-basis extension category already exists. Member Skillman thinks there will be broader compliance with a higher level of quality if a rule is promulgated.	21-23
5. S. Helton mentioned that the staff would describe in the NUREG when the staff would embark on a design extension category rulemaking, such as the station blackout mitigating strategies rulemaking.	24-25
6. Member Armijo asked if the station blackout and ATWS rules would be substantially different if this NUREG had existed when they were written.	30-34
7. Chairman Schultz asked the staff to clarify what it meant to proceed with the "current design-basis extension category supplemented by a NUREG" as an interim step.	35-43
8. R. Dudley of the NRC staff describes how existing processes, such as, generic issues program, the reactor oversight program, the reactor operating experience program, the accident sequence precursor program, and the industry trends program to identify events for possible inclusion in the design-basis extension category.	44-59
9. R. Dudley of the NRC staff explains why the staff believes it would not be cost justified to use additional NRC resources to revisit the existing framework	60-62

for design-basis accidents and define the characteristics, elements, and/or risk thresholds for either design-basis accidents or the new design-basis extension category.	
10. Chairman Schultz asked what the staff envisioned the design-basis enhancement category might look like in the future (say in five years), if the staff were directed by the Commission to proceed.	63-66
11. Member Armijo asked what the treatment requirements might look like for the ongoing potential revision to the station blackout rule.	67-71
12. R. Dudley described periodic effectiveness reviews that are performed for the existing regulatory processes that the Recommendation 1 Working Group proposes to continue to rely on, to identify new safety issues.	72-86
13. Member Skillman cautioned the staff on relying only on WANO reports for international operating experience.	87
14. Chairman Schultz and Members Stetkar and Bley ask about the basis for the staff's cost/benefit estimates for enhancing PRAs.	88-103
15. B. Bradley of NEI offers to brief the ACRS at a future meeting of the industries' plan to further develop plant-specific PRAs.	104-111
16. Member Skillman asked about industry feedback on the staff's conclusion that the costs associated with Improvement Activity 1 were minimal.	112-116
17. D. Doyle of the staff discussed Improvement Activity 3, "Clarify the Role of Voluntary Industry Initiatives in the NRC regulatory process," using the FLEX program as an example.	117-145
18. G. Mizuno of OGC discussed the need for proper documentation of credited Type 2 voluntary industry initiatives and addressed Member Ray's question about the possible evolution of initiatives over time.	146-151
19. Member Rempe asked about the status of the severe accident management guidelines that were previously a Type 2 voluntary industry initiative.	152-157
20. Chairman Schultz asked how past voluntary initiatives would be reviewed to identify the safety significant initiatives, and once they were identified what is the expected outcome from the staff's review and evaluation. What should the staff and the industry expect?	158-171
21. Member Skillman questioned the staff's assumption that the safety significance of a voluntary initiative is the same at each site.	172-174
22. D. Doyle explained how the commitment to better document the treatment of voluntary initiatives might be accomplished via a revision to Management Directive 6.3.	175-178
23. M. Drouin presented Improvement Activity 2, "Establish Commission Expectations for Defense in Depth."	179-187
24. Member Rempe asked what level of independence was expected between the different levels of defense in depth.	188-194
25. Member Stetkar asked how the staff plans to measure the adequacy of the criteria to determine adequate defense in depth.	195-199
26. M. Drouin discussed the relationship between Improvement Activity 2 and the Risk-Management Regulatory Framework.	200-206

27. Member Skillman asked about the forward looking versus retrospective nature of Improvement Activity 2.	207-214
28. R. Dudley provided further discussion of the relationship between the Recommendation 1 Improvement Activities and the Risk-Management Regulatory Framework.	215-233
29. R. Dudley described next steps and future deliverables.	234-248
30. B. Bradley gave NEI's perspective on proposed Improvement Activity 1.	249-255
31. B. Bradley referenced NEI's White Paper on the staff's three proposed improvement activities (ML13234A022).	256
32. B. Bradley gave NEI's perspective on proposed Improvement Activity 2 and 3.	257-267
33. E. Lyman gave the Union of Concerned Scientists perspective on the three proposed improvement activities.	268-278
34. P. Kadambi commented that a high level objective such as to reduce regulatory uncertainty would be helpful.	279-280
35. M. Lewis commented that the staff is too focused on the paperwork process rather than preventing and mitigating severe accidents	281
36. Chairman Schultz surveyed the members concerning what they would like the staff to present to the Full Committee and what messages they would like to deliver to the Full Committee.	282-300

Documents provided to the Subcommittee

1. SECY-13-XXXX, "NRC Staff Recommendation for the Disposition of Recommendation 1 of the Near-Term Task Force Report," Pre-Decisional Draft Working Group Document, September 30, 2013 (ADAMS Accession Number ML13297A299)

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Fukushima Subcommittee
Advisory Committee on Reactor Safeguards

Docket Number: (N/A)

Location: Rockville, Maryland

Date: Tuesday, November 5, 2013

Work Order No.: NRC-382

Pages 1-300

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
+ + + + +
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
(ACRS)
+ + + + +
FUKUSHIMA SUBCOMMITTEE
+ + + + +
TUESDAY
NOVEMBER 5, 2013
+ + + + +
ROCKVILLE, MARYLAND
+ + + + +

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

COMMITTEE MEMBERS:

STEPHEN P. SCHULTZ, Subcommittee Chairman
J. SAM ARMIJO, Member
RONALD G. BALLINGER, Member
DENNIS C. BLEY, Member
CHARLES H. BROWN, JR. Member
HAROLD B. RAY, Member
JOY REMPE, Member

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1 MICHAEL T. RYAN, Member
2 GORDON R. SKILLMAN, Member
3 JOHN W. STETKAR, Member
4

5 DESIGNATED FEDERAL OFFICIAL:

6 MICHAEL SNODDERLY
7

8 ALSO PRESENT:

9 EDWIN M. HACKETT, Executive Director, ACRS
10 BILL BRADLEY, NEI
11 MARK CARUSO, NRO
12 ARTHUR CUNANAN, RES
13 STEPHEN DINSMORE, NRR
14 DANIEL DOYLE, NRR
15 MARY DROUIN, RES
16 RICHARD DUDLEY, NRR
17 SHANA HELTON, NRR
18 N.P. KADAMBI, Consultant
19 LAWRENCE KOKAJKO, NRR
20 STEVEN LAUR, NRR*
21 MARVIN LEWIS*
22 EDWIN LYMAN, UCS
23 GEARY MIZUNO, OGC

24 *Present via telephone
25

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P R O C E E D I N G S

8:29 A.M.

CHAIRMAN SCHULTZ: The meeting will now come to order. This is a meeting of the Fukushima Subcommittee, a standing subcommittee of the Advisory Committee on Reactor Safeguards.

I'm Stephen Schultz, the chairman of the subcommittee. ACRS members and attendants are Dick Skillman, Harold Ray, Dennis Bley, Sam Armijo, John Stetkar, Mike Ryan, Ron Ballinger, Charlie Brown, and Joy Rempe.

Mr. Michael Snodderly of the ACRS staff is the Designated Federal Official for this meeting.

The purpose of today's meeting is to review and discuss the NRC staff's development of a notation vote paper with three proposed improvement activities for addressing the Near Term Task Force Recommendation 1 which is intended to establish a more logical, systematic, and coherent framework for adequate protection that appropriately balances defense-in-depth and risk considerations. This paper is due to the Commission on December 9, 2013.

The subcommittee has held four prior subcommittee meetings on this subject on August 15th and December 4, 2012 and May 23rd and September 4th,

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1 2013.

2 Today, the subcommittee will continue to
3 gather information, analyze relevant issues and facts,
4 and formulate proposed positions and actions as
5 appropriate for deliberation by the full committee.

6 The rules for participation in today's
7 meeting have been announced as part of the notice of
8 this meeting previously published in the Federal
9 Register.

10 This entire meeting will be open to the
11 public attendants. We have received no written
12 comments from members of the public regarding today's
13 meeting.

14 Biff Bradley of the Nuclear Energy
15 Institute and Dr. Edwin Lyman of the Union of
16 Concerned Scientists have requested time to make oral
17 statements and are scheduled to present on our agenda.

18 A transcript of the meeting is being kept
19 and will be made available as stated in the Federal
20 Register notice. Therefore, we request that
21 participants in the meeting use the microphones
22 located throughout the meeting room when addressing
23 the subcommittee. All participants should first
24 identify themselves and speak with sufficient clarity
25 and volume so that they may be readily heard.

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1 We may have participants on the phone line
2 today. To effectively coordinate their participation
3 in this meeting we will be placing the incoming lines
4 on mute until the public comment period which is
5 scheduled to be held near the end of the meeting.

6 This meeting is preliminary to a session
7 we plan to hold with the staff at the week's full
8 committee meeting on November 7th. This meeting was
9 postponed from mid-October due to the shutdown. We
10 are holding it today with the intention to make the
11 schedule for this important paper and therefore, the
12 full committee will meet as planned on November 7th.

13 Pending the full committee deliberations, we
14 anticipate writing a committee letter to the
15 Commission on this Recommendation 1 topic at that
16 meeting.

17 We will now proceed with the meeting. The
18 agenda today first provides the general overview of
19 the Recommendation 1 initiative, followed by detailed
20 discussions of the three proposed improvement
21 activities.

22 First, I'll call upon Shana Helton. Shana
23 is the Acting Deputy Director for the Division of
24 Policy and Rulemaking in the Office of Nuclear Reactor
25 Regulation. I'll ask her to open the presentation

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1 today. Shana.

2 MS. HELTON: Thank you very much and
3 before I make my remarks I just would like to thank
4 the committee for their flexibility with scheduling
5 these meetings and the full committee meeting and
6 supporting the staff schedule in light of all of the
7 delays associated with the federal shutdown. We
8 really appreciate that. So thank you.

9 As you noted, about a month from today,
10 the staff will finish its work on NTTF Recommendation
11 1 and deliver its recommendations to the Commission.
12 The intent of Recommendation 1, as everyone is well
13 aware, is to ensure that the NRC has a logical,
14 systematic, and coherent regulatory framework for
15 adequate protection that appropriately balances
16 defense-in-depth and risk considerations.

17 We began our efforts in August of 2011 and
18 we have come a long way since then. The committee has
19 seen several iterations of our work, so you are well
20 aware that every part of our regulatory framework was
21 examined. Nothing was considered to be exempt. The
22 results of the staff's examination was the
23 identification of three recommended improvement
24 activities. Improvement Activity 1 would be to
25 establish a design basis extension category of events

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1 and associated regulatory requirements. Improvement
2 Activity 2 is to establish Commission expectations for
3 defense-in-depth. And Improvement Activity 3 is to
4 clarify the role of voluntary industry initiatives in
5 the NRC regulatory processes.

6 We've constructed the staff's paper such
7 that the Commission could vote to approve some, all,
8 or none of these potential improvement activities.
9 During this effort, I should note we were able to
10 confirm the robust nature of our existing regulatory
11 framework. But in the spirit of continuous
12 improvement, our paper is making a recommendation to
13 go forward with these potential enhancements to
14 improve the clarity, efficiency and effectiveness of
15 our regulatory approach. Although these proposed
16 enhancements are not required to ensure safety of
17 existing nuclear power plants, staff believes that
18 they would result in modest safety benefits.

19 We thank this committee for its determined
20 effort to review, evaluate, and comment on our
21 thoughts and findings throughout the process. We have
22 found ACRS comments to be highly valuable as we've
23 constructed our staff recommendation. We're eager to
24 discuss our draft final paper with you today.

25 With me today on the NRC staff is Mr. Dan

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1 Doyle, Mr. Richard Dudley, both in the Office of
2 Nuclear Reactor Regulation; and Ms. Mary Drouin from
3 the Office of Research.

4 I will note that our agenda has a certain
5 order of presentations in addition to the federal
6 shutdown. Now we've got a daycare shutdown. There is
7 a pipe break in the daycare downstairs. So we might
8 need some balance, some familial responsibilities with
9 the order of presentations, and depending on how the
10 day goes, we might need to move the discussion of
11 Improvement Activity 3 to earlier in the agenda. So
12 thank you in advance if we have to do that.

13 CHAIRMAN SCHULTZ: We'll be pleased to
14 accommodate that.

15 MS. HELTON: Thank you.

16 MEMBER SKILLMAN: Are you looking for
17 volunteer grandparents?

18 (Laughter.)

19 We have several.

20 MS. HELTON: I believe the volunteer
21 grandparents are at the ready at home for some of us.

22 So with that, I'll turn it over to Mr.
23 Dudley.

24 CHAIRMAN SCHULTZ: Dick, welcome.

25 MR. DUDLEY: Thank you. It's good to be

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1 back.

2 On Slide 2, this is the outline of our
3 presentation today. First, I'll just do a brief
4 chronology of the past activities. Then we will
5 discuss in some detail the three recommended
6 improvement activities: Improvement Activity 1, to
7 establish the design extension category of events and
8 associated regulatory requirements. I will give that
9 discussion. Improvement Activity 2, to establish
10 Commission expectations for defense-in-depth will be
11 presented by Mary Drouin. And Improvement Activity 3,
12 to clarify the role of voluntary industry initiatives
13 in NRC's regulatory process will be presented by Dan
14 Doyle.

15 What we intend to do during each of these
16 individual improvement activity presentations is to
17 both respond to the questions that you asked at the
18 last meeting on September 4th and we'll also highlight
19 in those presentations the changes that we made to our
20 approach since September 4th when we briefed you last
21 on these improvement activities.

22 And finally, I'll have a single slide,
23 very brief, that summarizes the status and the next
24 steps in our review.

25 So on Slide 3 now, again, I'm not going to

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1 go through the details of this chronology other than
2 to say we started in August of 2011 and over the
3 period of time we had three public meetings. We
4 released three white papers. We had two written
5 comment periods and accepted written comments and
6 we've evaluated those comments during the effort and
7 we've met with this subcommittee on five different
8 occasions.

9 So going now to Slide 4 on the chronology,
10 if you go down to a little past the middle, the bullet
11 on September 30, 2013, that is the first time we
12 provided this subcommittee with our completed draft
13 SECY paper and all the enclosures. We continued to
14 work on that paper during October and then on October
15 25th our Management Recommendation 1 Steering
16 Committee completed its initial concurrence review of
17 the draft SECY paper and all enclosures and they
18 provided us with a number of changes, edits, and
19 actually changes in direction. So we'll highlight all
20 of those changes to you today in our presentations.

21 And we provided you on October 31st with
22 another version of our SECY and enclosures that had
23 been marked up to show you the changes that had been
24 made since September 30th and those were primarily due
25 to direction from the Management Recommendation 1

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1 Steering Committee.

2 CHAIRMAN SCHULTZ: Dick, is there a formal
3 schedule for a follow-on concurrence review,
4 management concurrence review? This one is called the
5 initial one, so I --

6 MR. DUDLEY: Right, we received a number
7 of concurrences from a number of members and from
8 other members we did not receive concurrence. We
9 haven't really figured out a schedule for how that's
10 going to resolve. We will certainly have it resolved
11 by November 26th when we have our final Management
12 Recommendation 1 Steering Committee meeting. So we'll
13 kind of work through that process.

14 We're going to also provide back to our
15 Steering Committee any markups of the SECY and
16 enclosures that we think we should make as a result of
17 this meeting or the written letter that we get from
18 this committee. So there will be a number of
19 additional interactions with our Steering Committee
20 and I'm sure that somewhere along the process we'll
21 finally achieve concurrence, but I can't really tell
22 you when. Sometimes it depends as you work through
23 the process when people finally come around or perhaps
24 may not be comfortable with our paper also.

25 MS. DROUIN: We will definitely achieve

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1 concurrence by December 3rd. We have to.

2 MR. DUDLEY: That is true. Absolutely.

3 MEMBER ARMIJO: Dick, I had a quick
4 question. In looking over the changes to the
5 document, I was looking for what might be substantive
6 change versus maybe typographical or editorial
7 changes. On page 2 on Improvement Activity 1, the
8 language was changed from "establish a design
9 extension category of events" to "establish a design
10 basis extension category of events."

11 Now am I reading -- is that --

12 MR. DUDLEY: That is just editorial.

13 MEMBER ARMIJO: Editorial. So no change.

14 MR. DUDLEY: No conceptual change. And in
15 fact, it was in error when the initial -- when we
16 provided you the document on the 30th. It didn't say
17 design basis. So there's no conceptual change at all.
18 We intended to use that term. Somehow it got dropped
19 out, but we put it back in.

20 MEMBER ARMIJO: Okay, thank you.

21 MR. DUDLEY: Yes. Okay, so -- oh, and the
22 October 31st document that we provided to you is also
23 published and released. We emailed it to all the
24 stakeholders for whom we had email addresses. And
25 it's in ADAMS and publicly available.

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1 Now going to Improvement Activity 1 on the
2 design-basis extension category, on Slide 6 is the
3 summary of our proposed approach to this new design-
4 basis extension category. We proposed a category
5 which is generic in that it is based on regulations
6 that are generically applicable to reactors of a
7 particular type and it is not a plant-specific
8 approach. And it does not require a plant-specific
9 PRA to implement. The new category would include
10 requirements needed for adequate protection as well as
11 those that are justified as cost effective,
12 substantial safety enhancements.

13 On the third bullet, this is new. We
14 decided -- we originally told you that we would
15 establish this new category by modifying internal
16 staff guidance. But we thought about it a little more
17 and we decided that what we really need is a single
18 document where we sit down and we write up how this
19 entire category is supposed to work. And so what
20 we're going to do now is we're going to document the
21 details of this overall approach that we would use to
22 issue new design-basis extension rules in a publicly-
23 available document. It will most likely be a NUREG.
24 And we could update it over time as we issue new
25 design-basis extension rules. So it could kind of be

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1 the document that keeps current what this design-basis
2 extension category is.

3 This document would include the guidance
4 for making sure that our rules have -- all of our
5 design-basis extension rules have treatment criteria,
6 that they have appropriate change processes for
7 licensee-initiated changes, that they have FSAR update
8 and documentation requirements as necessary, that
9 training requirements are specified, and that analysis
10 methods and even acceptance criteria are specified.

11 Yes?

12 MEMBER STETKAR: I'm trying to look
13 forward through your slides here, so stop me if you're
14 going to discuss some of these things in more detail
15 later, but do you have a model in mind that's worked
16 well where a NUREG, the conceptual framework of a
17 NUREG to -- I don't know, provide definitions and
18 guidance for this type of activity has worked well in
19 the past because I have an example where it has and
20 that's NFPA-0805 stuff. That NUREG, nice idea, NUREG
21 would have been really nice if people that thought
22 clearly about it, how it was going to work, but it's a
23 NUREG. So they didn't really think clearly about it
24 because it was just a NUREG.

25 MR. DUDLEY: I guess --

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1 MEMBER STETKAR: And here we are almost
2 ten years later and people are still arguing about the
3 NUREG.

4 MR. DUDLEY: Well, I guess I'll take your
5 comment as a challenge that when we write this NUREG,
6 we'll have to make sure that we apply -- that we are
7 very dedicated and we make sure that we get this thing
8 right. We're going to do it in a transparent process.
9 We're going to have public meetings. We're going to
10 release drafts. We're going to have public comment
11 periods. And so I believe that we will be able to
12 write this NUREG with the appropriate amount of public
13 interaction and staff resources that I think we can do
14 it and get it right.

15 MEMBER STETKAR: It's a little different
16 than a rulemaking though?

17 MR. DUDLEY: Pardon?

18 MEMBER STETKAR: It still gets a different
19 level of attention than a rulemaking.

20 MS. DROUIN: What I thought I heard you
21 were saying was the fact, the mere fact that a NUREG
22 does not carry as much weight.

23 MEMBER STETKAR: Exactly.

24 MS. DROUIN: As some other documents.

25 MEMBER STETKAR: It tends to be considered

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1 less important and more in a state of flux.

2 MS. DROUIN: Like a management directive,
3 for example.

4 MS. HELTON: But one thing that I'll offer
5 is that certainly we look at lessons learned from that
6 NFPA-805 and other examples that might apply. This
7 particular NUREG is essentially guidance to staff on
8 how to conduct rules. So it would have things for the
9 staff to consider about change criteria, does 50.59
10 apply? So it's really guidance that would be
11 implemented in a rulemaking. We're going to do a
12 public process on the NUREG as Dick said, but when
13 staff applies that guidance to a new design extension
14 type of rulemaking, of course that rulemaking activity
15 would go through the public process as well. So it's
16 a little bit different, I would say, than the NFPA-805
17 examples since this is guidance on how to construct a
18 rule that is then going through a very public process
19 where we have multiple iterations of public comment.
20 I don't know if that helps answer the question.

21 MR. DUDLEY: We would also implement the
22 NUREG by modifying the existing staff guidance under
23 office letters, Inspection Manual. There's a whole
24 bunch of things you need to modify, but we realize
25 that we needed some single document that held it all

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1 together and that's why we proposed the NUREG.

2 MS. DROUIN: I mean one of the things that
3 we could consider and you know, this has not been
4 discussed in the Working Group and we do have EG as an
5 example, but we could write, for example, one idea is
6 to write a brief management directive. Because
7 management directives carry a lot of weight. And then
8 the management directive can reference that you follow
9 the NUREG. So it's not just a NUREG sitting on a
10 shelf. We have a directive that is telling the staff
11 that they must use this NUREG. So there's ways we can
12 work around giving weight to the NUREG.

13 MEMBER ARMIJO: Could you be more direct
14 and just simply write a design-basis extension rule
15 and go through the rulemaking?

16 MR. DUDLEY: We could do that.

17 MEMBER STETKAR: That's my concern. Once
18 we know the recommendation has started essentially
19 with that notion, it's now sort of sliding into the
20 situation as normal. We'll write some NUREGs and
21 update some Reg. Guides. So we're done or not.

22 MEMBER ARMIJO: Yes. It seems like it's a
23 very difficult thing you're trying to do to
24 effectively get a rule that applies to the licensees
25 and guidance to the staff and everything through the

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1 back door of a NUREG. I don't mean that in a
2 derogatory way.

3 Whereas, if you just said look, these are
4 the rules we want people to implement and just do it
5 through a rulemaking would be direct. Everybody would
6 understand it. The process would be clear. And when
7 you're finished, you know it doesn't have the problems
8 that NFPA --

9 MEMBER STETKAR: You don't have lingering,
10 frequently asked questions and different
11 interpretations among the staff as you go on. At
12 least the words in the rule are the words in the rule.
13 It's a law.

14 MR. DUDLEY: Well, the major intent of the
15 guidance in the NUREG is for the staff to do certain
16 things. The major intent when you write a rule is for
17 licensees and applicants to do certain things. I
18 believe and I don't know the NFPA-805 situation,
19 whether that was supposed to control licensee
20 activities or whether that was supposed to control
21 staff activities.

22 (Laughter.)

23 MEMBER BLEY: It was kind of both.

24 MR. DUDLEY: In this case we're directing
25 our guidance more at the staff than at licensees.

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1 This is how we write rules. So I don't think that
2 perhaps the issues that came up in NFPA-805 were
3 because the NUREG couldn't require licensees to do
4 certain things, but I believe the NUREG can indeed, if
5 implemented properly by implementing guidance and
6 management directives and other things, a NUREG could
7 direct the staff to have a disciplined and consistent
8 approach.

9 MS. DROUIN: And management directives are
10 like rules for the staff. I mean you could look at
11 them that way.

12 MEMBER ARMIJO: I could have a situation
13 where the rule requires the staff do certain things
14 and require certain things which then translate into
15 things that are expected from the licensee, that the
16 licensee says that doesn't apply to us. You're kind
17 of caught in a -- you know, you're stuck.

18 MEMBER SKILLMAN: I'm with Sam and John on
19 this one. I spent years as a licensee doing design
20 and I will be candid in saying we regarded Reg. Guides
21 as maybe appropriate, maybe not. And we tested the
22 appropriateness of the application of the Reg. Guide
23 with the Region. In other words, it was a
24 negotiation.

25 I think that there is an issue here of

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1 getting the cart before the horse. If I bring your
2 attention to your page 8 of your -- what's it called
3 here, your -- I think it's your Attachment 1 or
4 Enclosure 1, "after reviewing the current NRC
5 regulations that address so-called beyond the design-
6 basis of events, SBO ATWS 10 CFR 50.54(hh), the NRC
7 staff determined that a de facto category to address
8 what would be termed design-basis extension events
9 already exists."

10 I think this is a case where beauty is in
11 the eye of the beholder. I think that's what the NRC
12 thinks. I don't think that's what the licensees
13 think. And so the idea of establishing this design-
14 basis extension notion at least from my perspective
15 ought to carry with it a change in the regulation.
16 There ought to be a recognition, hey, we have notched
17 our thinking beyond what is current, 10 CFR 50.2,
18 50.55(a), Appendix A to 10 CFR 50. There's something
19 that you need to include that is beyond what is your
20 present license.

21 So I think the notion that using a Reg.
22 Guide is appropriate for giving guidance to the staff
23 may be okay, if it's written as general guidance for
24 the NRC staff, but I think the licensees need to be
25 comfortable with the idea that as a consequence of the

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1 Fukushima events, being the entire body of regulation,
2 some extensions are appropriate for safety.

3 And guess what? You've already done a
4 bunch of these, station blackout, those types of
5 things, but there are some other ones that you ought
6 to consider, too.

7 I think if it's cast in that light,
8 industry would be more amenable to negotiate what are
9 those extension events and you probably would get a
10 whole lot more buy-in at a fleet-wide level as opposed
11 to when the utility is saying well, I'm not doing
12 that. That's just a Reg. Guide. I don't really need
13 to do that. I've got to work around and I've got to
14 patch. And I have another way to do that.

15 By casting it as a true change in the
16 rule, I think there will be broader compliance with a
17 higher level of quality. But yet, the rule wouldn't
18 require licensees to do anything. The rule would
19 just, I guess, pronounce to licensees the NRC's view
20 of the structure of this new category. Right? And
21 then by doing that, I think you believe that we'll be
22 able to write better rules or get better licensee
23 participation in writing those rules. I think it
24 anoints the extension category with a different
25 strength and pedigree, than by anointing it through a

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1 Regulatory Guide.

2 MR. DUDLEY: Or a NUREG.

3 MEMBER SKILLMAN: A NUREG, excuse me.

4 MEMBER STETKAR: I think also going
5 through the rulemaking process which tends to be much
6 more publicly visible perhaps than granted that
7 industry stakeholders pay a lot of attention to NUREGs
8 and Reg. Guides, but not necessarily a broader
9 spectrum of the public.

10 If you establish that category in a rule,
11 you'd almost be forced to think hard about the
12 criteria for what goes into that category where you
13 might not think quite as clearly about those criteria
14 when you're developing a NUREG. You might not.

15 MR. DUDLEY: That's the only constraint.
16 I would argument that the process we went through for
17 Recommendation 1 was very open, very transparent, and
18 I think very disciplined. And we got a lot of good
19 input and we -- I think we're coming up with a pretty
20 good -- and I would imagine that this NUREG would be
21 established through a similar process which I believe
22 is a little more flexible, but certainly has most of
23 the aspects of the rulemaking, except for the Federal
24 Register notice.

25 MS. HELTON: One thing I'd like to

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1 emphasize is that the NUREG, again looking at Slide 6,
2 the third bullet down, the NUREG would lay out when
3 the staff embarks on a design extension category
4 rulemaking. The staff should consider things such as
5 what is appropriate treatment criteria? What is an
6 appropriate change process? How will this relate to
7 FSAR updates? What will the rule require in terms of
8 life insurance training analysis methods? And that's
9 the guidance the staff follows when they embark upon a
10 new rulemaking. It's forward looking, so this isn't
11 going to be guidance that impacts any rules that are
12 already on the books like SCO or ATWS. It would only
13 be for upcoming rules such as NTTF Recommendation 8 or
14 the station blackout mitigating strategies rulemaking.

15 And in fact, as we're proceeding with
16 those other rulemakings, we're gleaning insights from
17 the Recommendation 1 because these are things that
18 staff feels are important to think about anyways as we
19 go forward with any sort of new rulemaking activity.
20 So it really is just bringing discipline into the
21 rulemaking process as we go forward and develop new
22 rules that fit into the design extension category.

23 MEMBER BLEY: So you're saying you expect
24 the design extension category to actually be part of
25 these other rulemaking activities, be defined there in

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1 the rule?

2 MS. HELTON: Well, the new rulemakings
3 that are happening as a result of Fukushima
4 essentially populate the already existing de facto
5 design-basis extensions that's identified as Member
6 Skillman quoted, I think, from page 8 in the
7 enclosure. So that's a de facto category that already
8 exists.

9 As we move forward with rulemakings
10 responding to the Near-Term Task Force Report and the
11 Commission direction stemming from that, those rules
12 populate that already somewhat de facto category that
13 we think already exists. And if we do a rulemaking
14 for Recommendation 1, that's certainly an option. The
15 Commission could certainly direct us to do that in
16 lieu of a NUREG or a management directive. But if we
17 do that rulemaking, I would just state that things
18 that are already in motion with station blackout
19 mitigation strategies and the emergency procedure
20 integration and filtering strategies, those things are
21 going to happen before we ever get a Recommendation 1
22 rulemaking. And even so, now that we've thought about
23 it, we're going to pay attention to things like
24 treatment criteria change process because that's just
25 an important way of doing good rulemaking.

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1 MEMBER STETKAR: I guess what I'm what
2 I've been struggling with for a few months and what
3 I'm continuing to struggle with a bit, quite a bit,
4 with the recent incarnation of the paper, touches on a
5 little bit of what you just said. And that is I
6 naively thought, probably naively, that in this new
7 framework there would be essentially three categories
8 of things. And I'll call the first category things
9 that are number one. And I'll call the second
10 category things that are number two. And I'll call
11 the third category things that are everything else
12 just to avoid all of the semantics that you get tied
13 up in and that there would be some guidance developed
14 and say here are criteria for putting things into this
15 number one, this number two, and everything else. And
16 that if you're in number one, here are a set of
17 criteria that we have established for dealing with
18 those.

19 Treatment criteria, how do you consider
20 them as part of your licensing basis? And here's a
21 set of criteria that we've established for this
22 category number two. And they're different. They're
23 probably not as stringent as the criteria as number
24 one, but they're applied consistently. So I
25 understand that if something I, as a licensee, we as

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1 regulators, understand that if something is in
2 category two, this is the philosophy that I apply for
3 treatment of those things.

4 We don't seem to be getting there with
5 this, especially because when I look at well, in this
6 box that I'm calling number two now, we have things in
7 that box that are there because they're considered to
8 be necessary for adequate protection of public health
9 and safety. And we have things that are there because
10 they are considered to be cost justified from safety
11 benefit perspective. And we have things that are
12 there because somebody decides that they ought to be
13 there because they're important enough to be there.

14 And each of those things might be treated
15 differently and we'll decide how we're going to treat
16 each one, but they're in that second box, because they
17 can't be in the first box for some reason. And each
18 one of those three things might be treated differently
19 depending on what we decide, as you mention, when we
20 write the particular rulemaking for each of those
21 events as they come up. So I'm not sure what the
22 benefit of the second box is at all. What does it do
23 for us that's different from what we do now?

24 MR. DUDLEY: What the box does that is
25 different from what we do now is that we know that

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1 everything that goes into that box each rule, whether
2 it's adequate protection or safety enhancement that we
3 need to be more thorough and complete when we issue
4 the rule with respect to treatment criteria which
5 would even include design criteria, quality assurance
6 criteria, all of that sort of thing.

7 MEMBER STETKAR: But Dick, if I populate
8 that now with a dozen rules, that box with a dozen
9 rules, I could have a dozen different treatment
10 criteria, right, in this concept?

11 MR. DUDLEY: You would have different
12 treatment criteria for the legacy rules that we're
13 going to grandfather into that. But our hope going
14 forward is that we can have a standard set of
15 treatment for rules, perhaps for safety enhancement.
16 We've committed to a standard set of treatment
17 requirements to our deputy EDO, but we haven't
18 committed to a single standard set.

19 MEMBER STETKAR: And the paper is pretty
20 careful about saying well, that's a nice goal, but we
21 don't think we're going to get there because in
22 practice we think we're going to have to tailor these
23 treatment criteria to the specific notion when the
24 particular issue comes up and that rule is issued.

25 MR. DUDLEY: Right.

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1 MEMBER STETKAR: Which doesn't leave me
2 with a good sense of consistency.

3 CHAIRMAN SCHULTZ: Let me come back to the
4 discussion we had earlier which is this is a Reg.
5 Guide. To the extent we're going to prescribe then
6 treatment criteria, change processes, FSAR update,
7 expectations for a series of rules which John
8 described could fall upon a spectrum of different
9 types of results from rulemaking, it's unclear to me
10 how one design is going to assist in developing that
11 process in a uniform way.

12 MEMBER REMPE: I get confused because like
13 one of the cons in your paper says we're not going to
14 have explicit criteria, but then later there's a table
15 and it talks about you're going to have increased
16 clarity going forward with new requirements and you're
17 going to identify QA requirements and if there's not
18 criteria, how can you come up with a set of
19 requirements?

20 MR. DUDLEY: Well, some certain rules in
21 the past didn't have any QA requirements. I mean what
22 we're trying to do is be complete. We've come up with
23 a list of the criteria and parameters that we believe
24 we should address one way or the other on each and
25 every design-basis extension rule. And we're

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1 certainly going to ensure that those things are
2 addressed in every rule going forward which is
3 different from what we've done in the past with the
4 legacy beyond design-basis rules that we've issued.

5 We are not proposing criteria or a
6 cookbook or something that tells you exactly how to do
7 it. I don't know that -- I don't know that we can do
8 that. Certainly if we do, it would take a lot of
9 resources and we might come up with something that
10 puts us into a situation that ultimately when we go to
11 implement that on a particular activity it would drive
12 us to do something that we didn't think was a good
13 idea. So we're not planning to invest the resources
14 to try to develop these criteria that specifically say
15 how you would make these decisions in the future.

16 MEMBER ARMIJO: Dick, if this NUREG had
17 existed before you wrote the station blackout and ATWS
18 rules, would they be substantially different?

19 MR. DUDLEY: I think the ATWS rule, it
20 says the only thing it has with respect to treatment
21 or anything it says reliable. Some of this, I guess
22 maybe the shunt trip or whatever should be reliable.
23 That's it. Okay?

24 So yes, it would be substantially
25 different. We would --

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1 MEMBER ARMIJO: So instead of writing
2 these rules on an ad hoc basis, the NUREG would
3 provide very clear or better definition of how to do
4 it and that's all you're trying to do with this NUREG?

5 MR. DUDLEY: Yes. Exactly. It would
6 provide a list of things that we needed to specify in
7 each and every rule that over the past and the legacy
8 beyond design basis rules we got better as time went
9 on. And each rule may be addressed a little more, a
10 little more, but nothing, I believe, no rules that
11 we've issued to this date address all of the things
12 that we have, that we would put in this NUREG to
13 ensure that they need to be addressed in each future
14 design-basis extension rule.

15 MEMBER BLEY: Let me ask you a related
16 question. If, in fact, there were a Recommendation 1
17 rulemaking, you would still need something like this
18 NUREG?

19 MS. HELTON: Yes.

20 MR. DUDLEY: Right.

21 MEMBER BLEY: Because that would be short
22 and concise whatever the rule is.

23 MR. DUDLEY: You could do the NUREG first
24 and then if for whatever reason we didn't think it
25 would be effective, we could then codify it or take

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1 large parts of it out and do a rulemaking also. But
2 you know --

3 MEMBER BALLINGER: Why not do it in the
4 reverse order? Do the rule and then like Dennis was
5 saying, you end up having to write a NUREG which
6 provides guidance for the rule.

7 MR. DUDLEY: I think if we did the rule
8 first, I think we'd get up writing a Reg. Guide.

9 MEMBER BALLINGER: Okay, either way.

10 MR. DUDLEY: But I think --

11 MS. DROUIN: I think by establishing first
12 what you want to be included in these future rules and
13 it's really what is it, what? We aren't going to get
14 into the prescriptive of how to, but you know, the
15 NUREG or whatever it ends up being would identify what
16 you need to be included. So I think that needs to
17 come first. You need to have that thinking first,
18 what are all these things that have been overlooked in
19 the past and you know, we want to make sure that
20 they're captured in the future.

21 And then we can stand back and say okay,
22 you know, do we need a rule to enhance this in terms
23 of trying to implement it? Does it need a rule?

24 MR. DUDLEY: Let me skip to the bottom of
25 Slide 6 and there's another new position that's in the

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1 paper now and it says that the Commission may direct
2 that the staff -- that the design-basis extension
3 category that we're proposing under NTTF
4 Recommendation 1, the Commission could direct that
5 this be an interim step on the way to perhaps
6 reconsideration of some of these issues by the NUREG-
7 2150 risk management regulatory framework. So if that
8 were the case, what we might do is implement this
9 approach, as detailed in this SECY paper, go with it
10 for five or six years and then five or six years from
11 now, take a look at it and see how it's working and
12 then decide are there any additional things one might
13 want to do to improve it or to change it substantially
14 or something like that.

15 Previously, the paper said that the risk
16 management regulatory framework would accept the
17 Recommendation 1 recommendations for the activities
18 that were similar in both activities. We've modified
19 the paper based on management direction such that we
20 could use the Recommendation 1 design-basis extension
21 category as an interim step that could later be
22 refined, corrected, or adjusted perhaps under the risk
23 management regulatory framework.

24 CHAIRMAN SCHULTZ: Before we go into more
25 detailed discussion on that point, because I think

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1 there will be some, your earlier bullet two up on the
2 implementation with respect to this NUREG in parallel
3 with on-going rulemaking activities, Fukushima
4 rulemaking activities. We haven't gotten to it
5 directly, but what is the schedule you're envisioning
6 for developing this NUREG? And how is it going to
7 mesh therefore with rulemaking?

8 MR. DUDLEY: I all depends on when the
9 Commission makes its decision. I believe that it
10 would take -- we could probably get a draft out maybe
11 in six months. If the Commission say approved us to
12 move forward with this activity in say April, then
13 within six months we could probably get a draft NUREG
14 published.

15 CHAIRMAN SCHULTZ: With the public
16 interaction that you had described --

17 MR. DUDLEY: We would get it out and then
18 we would be doing the public interaction.

19 CHAIRMAN SCHULTZ: Afterwards.

20 MR. DUDLEY: Yes. Right.

21 CHAIRMAN SCHULTZ: Or as the next step.

22 MR. DUDLEY: I think it's going to be hard
23 to catch up with the on-going rulemaking. So what
24 we're doing right now --

25 CHAIRMAN SCHULTZ: But it's important to

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1 achieve what you're looking for here or what you're
2 proposing.

3 MR. DUDLEY: So what we've been doing is
4 kind of a back door coordination exercise and Shana
5 has directed that all of the on-going Fukushima
6 rulemakings be given a copy of the SECY paper and that
7 they read the sections that we have in here on the
8 things that beyond design-basis rules should address.

9 So what we're trying to do is to bring them along. I
10 mean they can do what they think is appropriate and
11 even if the Commission hasn't approved the draft paper
12 I give them, if they think in that rulemaking that
13 there's good information in there, then they can go
14 ahead and start implementing that as part of that
15 rulemaking process. That's what we're trying to do to
16 try to catch up with these Fukushima rulemakings that
17 are a little bit ahead of us.

18 CHAIRMAN SCHULTZ: Okay, so then with
19 regard to what you have down here as the last bullet,
20 interim step, what would change? If one moves forward
21 with the NUREG concept and approach, then that is an
22 interim step to be changed later in the more robust
23 way? I'm not exactly sure what the last bullet -- how
24 the last bullet -- the last discussion point applies
25 to this activity.

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1 I mean either we move forward with this
2 NUREG or we don't. What's the advantage of moving
3 forward with it as an interim step? What's it missing
4 compared to what the RMRF would provide later which
5 could be much later?

6 MR. DUDLEY: The Commission could direct
7 us through RMRF to relook at our categorization
8 approach some number of years in the future. With
9 respect to number one, how well is the Recommendation
10 1 approach working? And number two, whether or not we
11 want to augment that with some sort of a plant-
12 specific component that might be provided by
13 probabalistic risk assessment. That's a possibility.

14 The one thing -- the generic approach,
15 again, as we've said before, does not address plant-
16 specific risk outliers and it's possible in the future
17 that the Commission would want to -- it's possible the
18 resource situation will be different. I don't know if
19 it will be better or worse, but if there are
20 additional resources available in the future, it's
21 possible the Commission might want to pursue some sort
22 of a plant-specific augmentation of this generic
23 regulatory framework. That's another possibility.

24 MEMBER SKILLMAN: Dick, let me ask this
25 question. One of the -- if you will, foundational

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1 concepts of NTTF-1 is that the current body of
2 regulations is a patchwork.

3 MR. DUDLEY: Yes.

4 MEMBER SKILLMAN: Of Reg. Guides, NUREGs,
5 information bulletins and so on. How do you answer
6 the critics that say what you're intending to do is
7 dandy, but it's the exact same thing that NTTF-1 was
8 intended to rectify?

9 MR. DUDLEY: We're addressing it in two
10 ways. we're putting out additional criteria and
11 controls on voluntary initiatives. The patchwork as I
12 read NTTF Recommendation 1 was a -- that we address
13 beyond design-basis events with a patchwork of
14 voluntary initiatives and regulatory requirements.
15 That's the patchwork that I thought NTTF was talking
16 about.

17 So we're addressing voluntary initiatives
18 in Improvement Activity 3 to get a better handle on
19 those to make sure that if we accept them that we
20 ensure that they're maintained consistently
21 implemented over time. So we're addressing that part
22 of the patchwork.

23 And the other part of the patchwork, the
24 beyond design-basis rules that vary all over the map,
25 you know, with respect to their scope, the ATWS rule,

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1 the station blackout rule. All of these rules over
2 time as we wrote them, each one got better and better
3 and included additional criteria and the rules, I
4 think, were towards the end of the process, the
5 50.54(hh) was better, much better than the ATWS rule.

6 But what we would be doing is saying that all the new
7 rules that go into this category will be thorough and
8 complete and will address all of the criteria that we
9 identify in the NUREG as necessary to being addressed,
10 to have a thorough and complete rule.

11 So there would still be a few patches,
12 some of the legacy rules are there. We're not going
13 to try to change them because for one reason or
14 another they've been implemented. We understand them
15 and we've determined that we're getting what we
16 thought we needed to have from those rules, otherwise
17 we would have amended them. And if we go back and
18 amend one of those legacy beyond design-basis rules,
19 we will do it under -- we will do that amendment under
20 this new process so that any of those that need to be
21 adjusted will then be brought into consistency with
22 the newer ones that will address all of the criteria
23 that we called out in the NUREG. So I think we
24 addressed the patchwork.

25 MEMBER STETKAR: But Dick, does that -- it

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1 doesn't address one of the things -- this notion of
2 patchwork, you can interpret however you want to
3 interpret it. One of the things I keep bringing up is
4 this notion of consistency in terms of the criteria or
5 how you put things into this bin 1, bin 2, everything
6 else category. And from listening to you, it doesn't
7 address things like right now in my design basis, I
8 have to design against a tornado that has a once in
9 ten million year chance of hitting my plant. I have
10 to do that. I have to design against an earthquake
11 that has something on the order of once in ten
12 thousand to maybe once in fifty thousand years chance
13 of hitting my plant. I have to design against a flood
14 that I have no idea how frequently it might hit my
15 plant. And this notion doesn't address those
16 inconsistencies.

17 MR. DUDLEY: Right, it does not.

18 MEMBER STETKAR: So if somebody decides
19 that ATWS is the most important thing in the world,
20 despite the fact that it might be a 10^{-9} per year
21 event, it will still be thrown in this box or whatever
22 other event pops up.

23 MR. DUDLEY: The activities that you
24 mentioned, I think those with the most safety
25 significance are certainly flooding and seismic. And

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1 flooding and seismic are being relooked at right now.

2 MEMBER STETKAR: That's our notion today
3 because we had Fukushima. We didn't think about
4 flooding very much before Fukushima. Everybody is
5 always worried about seismic events and pushed those
6 away. People have worried about fires and were sort
7 of addressing fires, kind of, sort, kind of
8 deterministically, kind of probabalistically. So your
9 notion of what's most important to safety today is
10 tailored by what happened at the Fukushima nuclear
11 power plant. If we had been having this discussion in
12 19 -- when did the Browns Ferry fire happen?

13 MEMBER BLEY: '76? I don't know.

14 MEMBER STETKAR: Mid-'70s. You would have
15 known that the most important safety issue was fires.
16 It was much more important than seismic events or
17 flooding. When the meteorite hits the plant, you'll
18 know that meteorites are the most important safety
19 issue and we didn't think about those.

20 So be careful about this notion of we're
21 addressing the most important issues to safety by what
22 we're doing today. We're addressing what we're doing
23 today by what we're doing today. This framework, I
24 thought was to provide a thought process for things
25 that come up, evolve, emerge, whatever or things that

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1 maybe we haven't thought about that we ought to think
2 about. And that gets into this notion of what
3 criteria do you use to populate these events.

4 MR. DUDLEY: Risk criteria, right.

5 MS. HELTON: Steve Dinsmore from NRC staff
6 might want to respond?

7 MR. DINSMORE: Hi, this is Steve Dinsmore
8 from NRR Plant Licensing Branch. I guess we focused
9 on this earlier on and Fukushima gave a lot of impetus
10 and a lot of emphasis that we were looking at
11 specifically one or two plants that have upstream dam
12 failures that could -- so we were looking at them.

13 Also, we were looking a seismic. They
14 came up with new seismic hazard analysis or hazard
15 curves about 2004 or something. And we took all those
16 curves. We ran them through whatever models we had.
17 So we were kind of looking at -- the problem with
18 those types of events if not that we're looking at
19 them, but not that we're not looking at them. Yes, we
20 don't really know how frequent they are. But making
21 every plant do a plant-specific PRA, for example, that
22 wouldn't help that lack of information. It would
23 simply --

24 MEMBER STETKAR: My whole point is because
25 somebody wrote a NUREG and they believe that they can

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1 quantify a frequency of hurricane force winds at 1 in
2 10 million per year, people actually design their
3 plants against that. So they, for example, feel
4 comfortable with estimating those silly little low
5 numbers, and yet we tell people you have to design
6 your plants against those silly little low numbers.
7 And you're saying well, we don't understand these
8 other frequencies, so we're still working on it.

9 MR. DINSMORE: I guess the first part of
10 that is I'm not sure the original design criteria were
11 based on the frequency. I think the tornadoes --

12 MEMBER STETKAR: The standard review plan
13 has 10^{-7} .

14 MR. DINSMORE: I has 10^{-7} for the external
15 event frequencies. But if something was found to be
16 bigger than 10^{-7} it would have gone into the design.
17 And if was less, then it would not have.

18 MEMBER STETKAR: Right.

19 MR. DINSMORE: So it's the same thing that
20 we're kind of talking about here is if we know this
21 thing is going to occur at this higher frequency than
22 we previously thought, we will deal with it, but
23 knowing that is the problem, not so much what we do
24 with it once we know.

25 MEMBER SKILLMAN: I'd like to go back to

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1 John's comment because I think that's maybe the
2 overarching issue that is, at least affecting me and
3 perhaps some of my colleagues. What it seems that
4 you're doing and I apologize if my comment sounds
5 pejorative. It's not intended to be. It's intended
6 to be constructive. It sounds like you're going after
7 a way to take care of big events that emerge.

8 John's comment was wasn't NTTF-2 really
9 intended to create overarching philosophy or
10 regulation that includes these types of things, some
11 of which have not occurred yet? In other words, it
12 seems like you're going right for the jugular vein on
13 let's establish this category beyond design-basis when
14 in reality, NTTF was really intended to be a much
15 larger focus on the entire body of regulation
16 including legacy regulation plus what needs to be
17 provided for the future so that we're not surprised
18 with an event like Fukushima.

19 It's just a way to look at this, but I
20 really thought John put his finger on it. Wasn't
21 NTTF-1 really to kind of raise the bidding? I'll give
22 you some examples, some legacy regulation that really
23 hit the spot. EQ, maintenance rule, probably the
24 single greatest benefit that industry fought, lost,
25 and NRC won, but benefitted industry was the

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1 maintenance rule, 50.65, really a good piece of
2 regulation. It probably saved lives, saved equipment,
3 prevented LOCAs. Perhaps that ought to be among the
4 diamonds in the legacy regulation that prevented what
5 could have been many events, simply because it is
6 practical and implementable and when the industry got
7 on board, particularly with systems health, it changed
8 the bidding in terms of how people took care of their
9 equipment.

10 John's point, raising the whole bidding
11 for the industry for regulations seemed to be what
12 NTT-1 was all about. And as we sit here today, it
13 seems like you've said hey, we've got it, we're going
14 to make this new category called design-basis
15 extension and we're going to write a NUREG and that's
16 going to tell the staff how to deal with this new
17 stuff. It seems like we're looking at it
18 inappropriately.

19 MR. DUDLEY: Can I go to Slide 8 and maybe
20 try to address some of these things? We're planning
21 to go forward with our proposal and we would use
22 existing processes and criteria to identify issues and
23 concerns as candidates for rulemaking. And we briefed
24 you on these processes last time on September 4th and
25 I've even discovered additional processes I wasn't

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1 even thoroughly aware of on September 4th that I want
2 to discuss with you today. But we would use the
3 generic issues program, the reactor oversight program,
4 the reactor operating experience program, the accident
5 sequence precursor program, the industry trends
6 program. That's a very, very valuable program, I
7 believe. And I have a detailed slide on it later on
8 and then the Annual Agency Action Review Meeting where
9 the industry trends program information is evaluated
10 every year per requirement or per procedure by the
11 Agency senior managers in the Agency Action Review
12 Meeting.

13 I think we have very robust processes in
14 place now for our generic regulatory framework to
15 identify issues and criteria that need to be further
16 evaluated for the potential for rulemaking. We can
17 discuss those in more detail.

18 Let's go to Slide 12. The industry trends
19 program looks at safety performance of the industry
20 using performance indicators averaged across all
21 operating reactors. They use 7 different industry
22 program performance indicators and 17 reactor
23 oversight program performance indicators. I think
24 mitigating systems performance, of course, is one of
25 those things. And part of that program, they assess

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1 the safety significance of any -- if they can identify
2 any statistically significant trends associated with
3 any one of those 24 different performance indicators,
4 then they try to determine the cause of it and respond
5 to any safety issues that might be identified. The
6 industry program also takes in the accident sequence
7 precursor program results and looks at those.

8 MEMBER STETKAR: That's done on a plant-
9 specific basis through the ROP though, all of that,
10 right? I mean you look at your plant trend versus the
11 rest of the industry and decide what your problem is
12 at your plant.

13 MR. DUDLEY: I don't know. I don't have
14 the details of how that works, but the industry trends
15 program also monitors the baseline risk index for
16 initiating events, so not only do we look at
17 mitigating system performance. We also look at the
18 frequency of initiating events. And they provide
19 feedback to the ROP program.

20 MEMBER STETKAR: And that's why some
21 plants go from green to white because they have too
22 many initiating events. But it's a plant-specific
23 issue. That's my whole point. Many of these things
24 you're highlighting here are done on a plant-specific
25 basis. It's not an industry trend.

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1 MR. DUDLEY: I don't know that that's
2 correct. I mean I'm not the expert. Maybe we can get
3 -- maybe I'll have to get the industry trends --
4 someone here to elaborate on that. My understanding
5 is that it is a programmatic assessment that's done
6 also, at least that was my understanding.

7 MEMBER STETKAR: I think the industry -- I
8 don't know either, in terms of what the Agency does.
9 I know what's done at the individual sites in terms of
10 ROP and it is site-specific. If you have too many
11 plant trips per year, you'll elevate the staff
12 scrutiny from green to white to yellow to whatever.
13 If you have a mitigating systems performance index
14 indicator that's an outlier, your plant will be
15 elevated in terms of reactor oversight process. But
16 it's your plant.

17 MR. DUDLEY: I guess I was given these
18 slides by some folks who put this program together and
19 I don't know if they're here that anybody can help me
20 with it. but the program provides feedback to the ROP
21 and to licensing programs for generic communications
22 and potential rulemaking. So that is not necessarily
23 only a plant-specific process I don't think.

24 MR. DINSMORE: This is Steve Dinsmore
25 again from Plant Licensing Branch. The ROP is plant

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1 specific. This is a different program. I'm not quite
2 sure --

3 MEMBER STETKAR: Oh, the industry trends
4 program -- because a lot of the indicators I see
5 coming out of here --

6 MEMBER BLEY: At the last subcommittee
7 meeting we kind of put on the record that we would
8 like to dig into that sometime, but maybe not --

9 MEMBER STETKAR: As I said, I'm not
10 familiar with what the staff does across the board in
11 terms of overall industry trends, but I know a lot of
12 the indicators that you're mentioning are applied in
13 the ROP on a plant-specific basis.

14 MR. DUDLEY: I understand that that's how
15 they determine the colors and all of that, but there's
16 also an overall assessment that's done and then the
17 information from the industry trends program is looked
18 at the annual action review meeting and any trends in
19 industry and licensee performance that are identified
20 senior managers make sure that they believe that we're
21 doing things as appropriate to address any new trends,
22 certainly any new negative trends. The trends, I
23 think we would be fine with that.

24 MS. HELTON: And in addition to that, of
25 course, the Agency has several ways for information to

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1 resident inspectors at the plants or the regional
2 headquarters office to report things of concern to
3 Headquarters such as the desk interface agreement
4 program. So in looking at do we need to take major
5 changes to the regulatory framework and the working
6 group and it kept going around and around. We were
7 not set out to implement Recommendation 1. The
8 Commission direction was to provide recommendations on
9 how to disposition Recommendation 1.

10 Some of the factors that were in the back
11 of staff's mind, there are other external things going
12 on with reducing regulatory burden. There have been
13 some executive orders on that. We're constricted by
14 things like the backfit rule and regulatory stability
15 is always a goal.

16 So looking at all of these different ways
17 that we have of collecting information, this is part
18 of what factored into our recommendation today.

19 CHAIRMAN SCHULTZ: So these are ways in
20 which information is collected. And then the action
21 review meeting, I presume, is evaluation of the
22 information collected. Going forward in terms of the
23 recommendation for disposition, are there
24 recommendations associated with evaluating these
25 programs, enhancing the programs, coming up with

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1 better ways to document the results of the decision
2 making? These things are happening, but I'm not sure
3 how much information gets out to the staff or even
4 back to industry related to the overall findings.

5 MR. DUDLEY: I think that's the operator
6 experience program.

7 CHAIRMAN SCHULTZ: That's also, but these
8 two elements that are listed here are very important.

9 The operating experience comes out next, but I would
10 see that as a third component. And again, I'm just
11 wondering whether -- what the recommendation is. Is
12 it that we have programs that are existing, but have
13 we determined that their functioning well and would
14 fit therefore into a program of the design-basis
15 extension category?

16 MR. DUDLEY: On September 4th, you asked
17 us to come back and for each and every one of these
18 programs that we propose to rely on that we brief you
19 on the periodic reviews that are done of that program
20 to determine -- about its continued effectiveness. I
21 have a set of slides to do that.

22 CHAIRMAN SCHULTZ: Okay.

23 MEMBER STETKAR: This is part of it.

24 MR. DUDLEY: We jumped ahead to a part
25 that we're going to hear.

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1 MS. HELTON: Just to make sure we
2 understand. The question is really geared towards are
3 these data points that support the existing staff
4 recommendation on Recommendation 1 or is our paper now
5 geared towards making a recommendation to improve
6 these programs? Is that essentially what you're
7 asking? I do think that Dick's slides will get to
8 that later on. Okay.

9 CHAIRMAN SCHULTZ: I'd like to hear that.

10 MS. HELTON: Sure, absolutely.

11 CHAIRMAN SCHULTZ: And to know -- I didn't
12 see a discussion in the paper associated with each of
13 these programs. It's coming to us here.

14 MS. HELTON: Right.

15 CHAIRMAN SCHULTZ: But in terms of an
16 evaluation and then recommendation going forward, I
17 wanted to understand how that might be added or
18 incorporated.

19 MS. HELTON: Okay, thank you. I think we
20 understand the question.

21 MEMBER ARMIJO: I'd just like to say that
22 I now understand what you're doing. I think you're on
23 the right track. This thing of issuing a rule
24 directly going to a design-basis extension rule is
25 really not -- I was on the wrong track. I think

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1 having a process that makes sure that any new rule is
2 done in a systematic and consistent way. I think
3 that's the right way to go. So you've clarified that
4 for me.

5 The question then is what hazards or
6 problems feed into this design extension category and
7 how does that happen, whether it's a result of
8 operating experience or result of a new insight or
9 some new assessment of a hazard. I think that's
10 outside the scope of this activity.

11 MR. DUDLEY: We're choosing to make it
12 outside the scope of what we're proposing because
13 we're proposing to rely on existing programs which
14 each time I look into them are even -- it seems like
15 they're even more thorough and robust. I was not even
16 aware of the details of the industry trends program
17 when we were here on September 4th. And I apologize
18 for that. But I've learned more about it recently.

19 MEMBER STETKAR: I still come back to
20 something that I mentioned in September. I will
21 acknowledge that there are many programs that the --
22 both the industry internally has and the staff to
23 identify things that might merit additional attention,
24 something happens at a plant or you see a trend or --
25 the bigger question is once I've identified that, what

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1 do I do with it? Which of these boxes do I throw it
2 into? Does it merit throwing it into a box first of
3 all? And if the answer to that question is yes, we
4 ought to look at this, what criteria do I use for
5 throwing it into a box?

6 MR. DUDLEY: Can I say something?

7 MEMBER STETKAR: Because everything I see
8 is ducking that issue. And that is the sense that I
9 got. See, I interpreted NTTF-1 recommendation
10 differently than you did, Dick. I interpreted it as
11 setting up that framework that says we will establish
12 these boxes. We will establish criteria for what
13 enters each box and we will establish treatment
14 criteria for things that are in the box. That's a
15 little bit different than what I heard your take on
16 it.

17 MR. DUDLEY: On Slide 8, this is what we
18 propose. We propose Item 1 to use the existing
19 programs and processes to identify the potential
20 safety issues. Once those issues are identified you
21 still need to figure out do I need to issue a rule or
22 do I not? And then you have to figure out what kind
23 of rule is it? Is it -- do we change the safety grade
24 design basis? Do I add something there? Do I issue
25 an adequate protection rule, but not make it part of

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1 the safety grade design basis? Or do I issue a safety
2 enhancement rule, a significant safety enhancement
3 rule? Or if it's not a backfit, if this rule is just
4 for forward looking issues, the only criteria are that
5 the safety benefits of that rule have to be cost
6 justified. So there are four different criteria right
7 now that we have for issuing rules.

8 We propose to maintain using the existing
9 criteria and they're laid out in reg. analysis
10 guidelines, but the reg. analysis guidelines are not
11 static. They are being updated over time by a number
12 of ongoing activities. We currently have been
13 authorized by the Commission to change -- to update
14 them, to change the dollars per person-rem and
15 increase the replacement energy cost that will affect
16 the cost effectiveness criterion for whether or not we
17 can issue a rule.

18 Also, in Improvement Activity 2, we're
19 proposing to incorporate additional new criteria into
20 the reg. analysis guidelines to factor in defense-in-
21 depth into the decision process. So those are
22 improvements that are two improvements that are
23 ongoing and a third improvement that we're
24 recommending as part of Improvement Activity 2 to
25 enhance the criteria we use to determine once an issue

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1 is identified, whether or not we should readjust the
2 threshold, that we should issue a regulation. So
3 that's our proposal.

4 MR. MIZUNO: This is Geary Mizuno from
5 OGC. To expand about what Dick Dudley was talking
6 about to respond more directly to the question about
7 how we conceived of and interpreted NTTF
8 Recommendation 1, it is my view that I think the
9 working group had the position that NTTF
10 Recommendation 1 was not an indictment of the Agency's
11 failure or the processes, NRC's processes in terms of
12 identification and ultimately obtaining an acceptable
13 safety solution to issues.

14 Patchwork was not intended to reflect that
15 there were gaps and that things were not being caught.

16 What we viewed patchwork being and I think reflected
17 by the discussion that led up to the recommendation is
18 that patchwork was meant to connote the fact that we
19 have a lot of different ways of addressing this stuff
20 and when you ultimately explain, look at the
21 regulatory infrastructure, it's inconsistent in the
22 way that it does stuff.

23 We achieve safety, but we use a lot of
24 different terminology, processes are not clear. So
25 patchwork was really focusing on that infrastructure

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1 itself. Not the fact that there are gaps, but that
2 they go back and forth and up and down. And
3 therefore, what we're trying to do in order to respond
4 to the NTTF Recommendation 1 was to talk about more
5 consistency, more capability to explain what we're
6 doing, have a more logical, consistent and logical
7 process, one that is comprehensive so that the same
8 rationale can be applied across the board. So that's
9 the way that we looked at NTTF-1. Not that there were
10 gaps in terms of getting to identify and deal with
11 issues, but that we're dealing with them in ways which
12 are not easily explainable and that results in a lot
13 of lack of transparency and lack of explainability to
14 our stakeholders, both the industry as well as the
15 general public.

16 And also, problems in terms of the NRC
17 staff in dealing with things because you end up with
18 the staff not having good processes which provide for
19 consistent outcomes in terms of the treatment matters
20 that we're dealing with. And that our language that
21 we use to explain these issues of how the Agency deals
22 with these issues is also inconsistent or not clearly
23 explainable. For example, design basis, versus non-
24 design basis.

25 There's no necessary link up with the

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1 concept of adequate protection versus substantial
2 safety enhancement under the backfit rule. And it's
3 that lack of linkage, if you want to call it, or
4 comprehensive explanation, which is what we viewed the
5 patchwork as being, not that we had gaps.

6 So given the fact that we did not have
7 gaps in how we dealt with stuff and that safety was
8 being assured which is what the NTTF specifically said
9 in Recommendation 1, we felt that existing processes,
10 existing NRC processes to identify and deal with from
11 the safety or technical standpoint emerging issues was
12 acceptable, rather it's how the ultimate
13 infrastructure is complete and how we explain
14 ourselves in terms of why infrastructure is being
15 changed was the primary focus of improvement.

16 MEMBER BLEY: Yes, that was a very nice
17 discussion. And your discussion at our last meeting,
18 I think, was very helpful and folks might check the
19 transcript on that for its value.

20 However, some at least authors of that
21 study did feel that there were gaps of some sort
22 there. I think what you say works if we put together
23 a coherent structure. It will cover all the things
24 you talked about and if there are gaps, I don't think
25 we've proved there are none, it will very much help to

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1 ensure they're not.

2 Some of them pointed out specific rules
3 like the original station blackout rule, like some of
4 the things in flood that were done to address specific
5 issues that came up, but didn't take advantage of
6 generalizing that for alternative situations that
7 could put you into similar conditions. And I think
8 the kind of structure you just discussed can help us
9 be there.

10 MR. DUDLEY: I mean we address in our SECY
11 paper, Enclosure 1, page 10, there's a little heading
12 that says limited scope of proposed approach. And we
13 call out there and I can just read a little bit of it.

14 "We note in this activity it is limited to establish
15 in the new category of design-basis extension
16 condition. It does not involve reevaluating existing
17 regulatory construct or design-basis accidents and
18 events including formally defining the
19 characteristics, elements, and/or risk thresholds for
20 both design-basis accidents and events for the new
21 design-basis extension category." I mean we addressed
22 the issue.

23 MEMBER STETKAR: That section, by the way,
24 I really like that discussion. And make sure that the
25 Commissioners all read that very, very carefully.

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1 (Laughter.)

2 You don't have to agree with it, but it is
3 a very good discussion.

4 MR. DUDLEY: We acknowledge that the
5 portion of our existing regulatory framework on
6 design-basis events and accidents, as well as its de
7 facto practice of addressing matters which would fall
8 in proposed new design extension category is complex.

9 The regulatory framework is involved over time and
10 may not be as logical, consistent or coherent as might
11 be a framework developed all at once from a clean
12 sheet of paper. But that's hard to do when you've got
13 a bunch of existing operating plants that are designed
14 in accordance with this framework that's evolved over
15 time.

16 Nonetheless, the existing framework for
17 design-basis accidents and events is reasonably well
18 understood by the NRC and licensees, developing the
19 characteristics and risk thresholds would be complex
20 and the benefits of this development effort would be
21 directed, for the most part, at NRC decision makers in
22 determining the categorization of future regulatory
23 requirements. Applicants and licensees for the most
24 part would not benefit directly from the developmental
25 effort except as potential comments on our proposed

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1 categorization criteria for new or amended
2 requirements.

3 The staff believes it would not be cost
4 justified to use additional NRC resources to revisit
5 the existing framework for design-basis events and
6 accidents and define the characteristics, elements,
7 and/or risk thresholds for either design-basis
8 accidents or the new design-basis extension category.

9 Given these considerations, the staff did not include
10 a proposed action for developing the characteristics,
11 elements, and risk thresholds for design-basis
12 accidents and events or for the new design basis
13 extension category as part of Improvement Activity 1.

14 I mean we make it clear that you could do
15 more. It would be very complex. It would be resource
16 intensive. It would require likely adjustment -- it
17 could require backfit on operating plants. And we
18 don't -- we believe that the amount of -- right now we
19 have limited resources and we're looking at known
20 safety issues at the current time and we don't think
21 those resources right now should be diverted from that
22 effort to this sort of an effort. But perhaps in the
23 future as we proposed this as an interim step, perhaps
24 in the future one would want to relook at some of
25 these things. But we're not recommending it at this

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1 point in time.

2 MS. HELTON: An additional consideration
3 here is on Slide 7 originally when the NTTF report was
4 written, I think the authors -- I've heard some of the
5 authors say this that they envisioned Recommendation 1
6 happening first, and then proceeding with the other
7 recommendations. Of course, that's not how the staff
8 was tasked to proceed by the Commission. And we are
9 already going forward with the role, you know, high
10 priority safety initiatives, given that these things
11 are continuing to go forward, that's certainly
12 consideration with this recommendation today.

13 MR. CARUSO: Can I say something?

14 MS. HELTON: Absolutely.

15 MR. CARUSO: What I wanted to say was also
16 in response to some of John's comments, too. I kind
17 of look at it as kind of a three-part problem. The
18 first part is what are these things that can happen,
19 these bad things that can melt the core or release
20 radioactivity that I feel I've identified in the
21 report and I need to address them. Then it's once you
22 identify those what are the key equipment and human
23 activities that are important in making that thing go
24 away. And then the third thing is what kind of
25 regulatory requirements do I want to put on that stuff

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1 for availability, reliability reporting?

2 I think in our approach, we're coming
3 pretty close to what NTTF had in mind as far as the
4 treatment part because each of these requirements that
5 would go in this category are going to require
6 treatment. It's going to be required. So as opposed
7 to now for new reactors where we have treatment and
8 reliability assurance program. We have treatment for
9 RTNSS. But none of that stuff is required. So that's
10 the real strength there. I think that the NTTF was
11 looking at some sort of wanting a systematic way or
12 perhaps even a plant-specific way to identify these
13 conditions and the important equipment to a PRA or
14 whatever. And then identifying treatment requirements
15 for it.

16 I think the treatment requirements were
17 sort of consistent. It's the scoping in of conditions
18 and equipment that were taking a different approach.
19 It's not plant specific. We're recommending a generic
20 approach. And we're saying that what we have in place
21 now for identifying bad conditions generically the
22 programs that we have in place in the Agency,
23 operating experience, trending, all these programs
24 Dick has talked about -- we don't think they're
25 broken, we think they're just fine and they can do a

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1 good enough job and that not that the other approaches
2 are bad, plant-specific PRAs, it's that we've
3 identified in the paper the reasons we don't feel it's
4 necessary to go that way.

5 And one of the reasons that Shana was
6 saying is when you start to look at the other rules
7 that are coming out of Fukushima, that are addressing
8 broad groups of equipment and with all those rules
9 that are to come into place, we're saying well, gee,
10 you know, if we have a rule on mitigating equipment
11 and we do it this way and we have treatment
12 requirements for it, you know, you're going to get a
13 long way there. And when you start to try to account
14 for that and say, you know I'm getting there. Anyway,
15 that's the point I wanted to make.

16 CHAIRMAN SCHULTZ: Dick, I just wanted to
17 come back for a moment. Your last statement was that
18 so this is what we're proposing at this point in time
19 and perhaps in the future, five years down the road,
20 some other forcing function would cause a different
21 type of look at the regulatory process.

22 What do you envision that to be? Is there
23 anything in your mind in terms of discussion that for
24 us what you would be thinking might driving that
25 process? New reactors are saying we already have it

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1 in place.

2 MR. DUDLEY: The risk management
3 regulatory framework is going to produce a plan for
4 looking at all of the RMRF recommendations. It's
5 possible as part of the RMRF that we would say for
6 regulatory framework or for their recommendation on
7 how we should modify the regulatory framework we could
8 possibly say let's wait six, seven years from or five
9 or six years after the Recommendation 1 design-basis
10 extension category has been implemented.

11 And then let's just wait and five or so
12 years later, under RMRF or under a plan approved under
13 RMRF, we would then reevaluate how the generic design-
14 basis extension category has been working, evaluate
15 how well the NUREG and existing staff guidance that we
16 wrote is grooming or improving the regulations that we
17 issued, the beyond design basis regulations that we're
18 issuing that fit in this new category and then
19 determine whether there should be some enhancements or
20 adjustments to that -- to the regulatory framework put
21 into place under Recommendation 1.

22 And I just postulated that you know, maybe
23 you want to -- we know what we're not getting is plant
24 specific risk outliers and it's possible at that point
25 in the future maybe people's PRA have evolved to a

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1 point that their quality is better and maybe we
2 wouldn't need to issue to a PRA requirement at some
3 time in the future. Maybe PRAs would be good enough
4 to do a plant-specific review to look for plant-
5 specific risk issues. I don't know. It's just kind
6 of postulating different ways that you can go about
7 it.

8 CHAIRMAN SCHULTZ: Thank you. Where are
9 we?

10 MEMBER ARMIJO: All the way to the third
11 slide, right?

12 MR. DUDLEY: Let's see what I've skipped
13 that's important.

14 MEMBER ARMIJO: We were on Slide 5 and
15 then went to 7. We kind of flopped around.

16 CHAIRMAN SCHULTZ: Then we moved ahead to
17 8 in order to answer a question.

18 MR. DUDLEY: Let me go to 7. We're on 7.
19 So I just want to say again, we're not recommending,
20 let's see. Slide 7 tells how we would look backwards
21 and I told you we would just look backwards and
22 grandfather in the existing legacy beyond-design basis
23 rules without changing them. And we don't
24 recommending doing additional looks for additional
25 beyond design-basis events in a retroactive fashion

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1 that would cause us to change the licensing bases of
2 the existing operating reactor plants because -- as
3 we've already mentioned, the Fukushima activities are
4 already looking for a number of vulnerabilities,
5 looking at a number of vulnerabilities, identified as
6 part of the different recommendations 2 through 11 and
7 the mitigating strategies rule is putting together all
8 of this equipment that if you found some new event
9 that you didn't even know about, it's likely that the
10 mitigating strategies equipment is already going to
11 give you at least partial mitigation for that event.

12 We also said that the existing plants did
13 look at one time for plant-specific vulnerabilities in
14 the IPE and the IPEEEs and new reactors, of course,
15 are required to have PRAs. So they're already
16 addressed, plant-specific vulnerabilities and severe
17 accident mitigation design alternatives.

18 So now on Slide 8, just for completely,
19 this is how we proposed to look forward. We've gone
20 over that slide before, but we used adequate
21 protection and safety enhancement, the same criteria
22 that we're using now, although the reg. analysis
23 guidelines will evolve and will be improved, enhanced
24 in the future, specifically with respect to
25 incorporating criteria for defense-in-depth.

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1 MEMBER ARMIJO: Just to go back to make
2 sure I heard it right --

3 MR. DUDLEY: Yes.

4 MEMBER ARMIJO: If you were going to amend
5 the station blackout rule.

6 MR. DUDLEY: Right.

7 MEMBER ARMIJO: It's your idea that you
8 would use this -- the treatment criteria processes --

9 MR. DUDLEY: Any amendments to the legacy
10 beyond design-basis rules would be done in accordance
11 with the new criteria and the criterion in the NUREG.
12 And whenever we determine that one of those rules
13 needed adjustment, maybe something with ATWS, who
14 knows? Then we would make sure that those rulemakings
15 are done fully consistent with the new criteria. So
16 theoretically over time, they might all actually come
17 into --

18 MEMBER ARMIJO: But if they did not need
19 to be amended --

20 MR. DUDLEY: We would not.

21 MEMBER ARMIJO: -- they would stay as is.

22 MR. DUDLEY: We would not adjust them.

23 MEMBER ARMIJO: Okay.

24 MR. DUDLEY: Because for whatever reason,
25 we've adjusted them or whatever, interpreted them in

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1 the past and we've concluded that whatever we're
2 getting out of those rules and each one you get
3 something different, but we concluded that whatever
4 we're getting out of those rules in terms of safety
5 benefit is adequate because if we weren't, we would
6 have amended that, we would be amending them.

7 MEMBER STETKAR: Just for the record
8 because I hear, I read words and I hear words spoken,
9 but sometimes don't clarify things for me. The NUREG
10 will not specify criteria, right? The NUREG will just
11 say when you amend the station blackout rule, you need
12 to have criteria for X, Y, Z, W, A, B, C, right?
13 It won't specify those criteria. It just says you
14 ought to do this?

15 MR. DUDLEY: It will also have a standard
16 full set of treatment requirements in it, treatment
17 requirements. We are committed to do that to our
18 deputy EDO.

19 MEMBER STETKAR: Well, you said you were
20 going to try to do that.

21 MR. DUDLEY: We're committed to do one
22 standard full set, but it may turn out we need more
23 than one standard full set, but we promised to do one,
24 all right?

25 MR. CARUSO: We'll at least identify the

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1 categories of what the treatment areas are and
2 possibilities for that that we have placed and provide
3 some guidance as to how do you look at this particular
4 situation and pick and choose from that menu what you
5 really need should it be an XB? Should it be
6 something less?.

7 MEMBER STETKAR: No, I understand that.
8 But you say, you'll go to the NUREG and it will give
9 you the criteria it will give you, in this concept, it
10 will give you an index file that says okay, I've made
11 the decision. I'm going to pick one from Column A and
12 I'm going to pick two from Column B and I'm going to
13 pick number 37 from Column C for this particular rule.

14 MR. DUDLEY: I hope I understand what you
15 said, but yeah -- there will be choices from which you
16 can choose. There will be an algorithm that tells you
17 you must choose this one. I just wanted to make sure.

18 MEMBER STETKAR: Right.

19 MR. DUDLEY: So for example, it says you
20 can put it in tech specs, you can put it in your
21 reliability assurance program. You can put it in
22 something else in terms of -- or you can -- that would
23 be one way of monitoring the status of equipment.
24 There would be a different -- you can have Appendix B
25 quality assurance. You can have augmented quality

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1 assurance. You can have some nonsafety quality
2 assurance.

3 CHAIRMAN SCHULTZ: But it would be a menu
4 of --

5 MR. DUDLEY: It will be a menu, but it
6 will not say that --

7 CHAIRMAN SCHULTZ: For example, Sam's
8 example, if you were --

9 MR. DUDLEY: It would be a menu and
10 whatever amount of guidance we can come up with, like
11 on change processes you could give some guidance. If
12 you can write it so that the new rule addresses a new
13 accident that becomes analyzed in the FSAR and you
14 require licensees to put when we issue that new rule
15 that new accident in the FSAR, then I think the old
16 50.59 process could still work.

17 The mitigating strategies rule for which
18 there's no defined accident, that's never going to
19 work, so you're going to have to customize some sort
20 of a change process for the mitigating strategies rule
21 and Tim Reed knows that and he's working on that and
22 they'll come up with something that's appropriate for
23 that rule which is ongoing right now.

24 So let's go now to Slide 10. Slide 10 --

25 CHAIRMAN SCHULTZ: Just in terms of

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1 schedule, let's give you five minute to reintroduce
2 this topic and then we'll take a break. We do have a
3 time after the break, 45 minutes, to complete the
4 presentation and stay on our overall schedule. But I
5 would like to take a break at 10:15.

6 Unless you would like to start it now, if
7 that would be more convenient for you.

8 MR. DUDLEY: I'm wondering if Dan should
9 talk about voluntary initiatives at this point? I
10 just have -- I only have six or seven slides left. So
11 let's just take the break now. I've only done six or
12 seven slides.

13 I'll finish up when we come back.

14 CHAIRMAN SCHULTZ: And we would go to Mary
15 next, unless you want to --

16 MR. DUDLEY: I want Dan to --

17 MS. HELTON: If that's okay with the
18 committee, we can switch the order and do Activity 3.

19 CHAIRMAN SCHULTZ: That's the order you
20 were requesting earlier. We can certainly do that.

21 MS. HELTON: Okay, great. Thank you.

22 (Off the record.)

23 CHAIRMAN SCHULTZ: The meeting is called
24 back to order, and Dick, we'll come back to you for
25 the presentation. Thank you.

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1 MR. DUDLEY: Thank you.

2 CHAIRMAN SCHULTZ: Thank you, Dr. Schultz.

3 MR. DUDLEY: The remaining slides are in
4 response to the question asked by the Subcommittee on
5 September 4th, to come back and explain the -- what
6 sort of periodic effectiveness reviews are done for
7 the existing regulatory processes that the
8 Recommendation 1 Working Group proposes that we
9 continue to rely on, to identify new safety issues.

10 The first program was the Generic Issues
11 Program. Under the Generic Issues Program, there is
12 not a formal requirement for periodic effectiveness
13 reviews. But nevertheless the program is revised on
14 an as-needed basis, as determined by management, just
15 as part of due diligence for managers.

16 In fact, the Research and NRR office
17 directors decided in March of 2012 to put together a
18 Tiger Team, to go back and look at the Generic Issues
19 Program. They were directed to identify and propose
20 further refinements to the processes associated with
21 generic issues.

22 They used a business process improvement
23 approach. They also included staff from six different
24 program offices to ensure independence of the people
25 involved in the review and staff also from Region I.

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1 That evaluation, I believe, is recently completed.
2 The recommendations are now being documented and
3 forwarded to management for review and implementation.

4 I'm not sure if they're pre-decisional at
5 this time or not, and I don't know what the
6 recommendations are. But that is the --

7 CHAIRMAN SCHULTZ: Do you know about what
8 schedule they're on, Dick, in terms of completing
9 their report? Arthur's still here?

10 MR. DUDLEY: Arthur Cunanan, right?

11 MR. CUNANAN: Yeah. I'm Arthur.

12 MR. DUDLEY: It's on. Go ahead.

13 MR. CUNANAN: I'm Arthur Cunanan, Office
14 of Research, Operating Experience and Generic Issues
15 Branch. It's still under review with Brian Sheron.
16 We share everything right now with the office
17 director. But I think possibly next year is when they
18 can be, review the recommendations and accept them.

19 CHAIRMAN SCHULTZ: Thank you.

20 MR. DUDLEY: Thank you. On Slide 11, the
21 reactor oversight program does indeed have a well-
22 defined self-assessment requirement in inspection
23 manual Chapter 0307, and annually the staff evaluates
24 the overall effectiveness of the ROP, through its
25 success in meeting the pre-established goals and

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1 expected outcomes.

2 The goals are to be objective, to be risk-
3 informed, to be understandable, predictable, to ensure
4 safety, effectiveness and openness, and the staff
5 develops recommended improvements in focus areas based
6 on feedback and lessons learned from this evaluation
7 approach.

8 So that's the annual internal self-
9 assessment. In addition, the ROP is frequently the
10 target of external audits and reviews. It's been
11 evaluated by the GAO, the Office of Management and
12 Budget, the NRC Inspector General and this committee
13 has also looked at the ROP.

14 So there are a number of different
15 external reviews that have been conducted of the ROP,
16 and they have a website, and at this URL you can
17 actually go and see some of the results of those
18 evaluations.

19 On Slide 12 is the Industry Trends
20 Program. I've already mentioned that really. I don't
21 know that I need to go into it again. But I just
22 think it also is a good example of how we try to use
23 risk information to inform our processes and I believe
24 it's done generically.

25 It's a plant-specific program in certain

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1 cases, but it's also done generically, and it provides
2 feedback to licensing programs for potential generic
3 communications, or for potential rulemaking.

4 Again, we look at both the changes and
5 frequency of initiating events, and things like
6 changes in mitigating system performance to infer from
7 that, you know, potentially statistically significant
8 changes in risk.

9 MS. HELTON: Dick, I can jump in real
10 quick?

11 MR. DUDLEY: Yes, sure.

12 MS. HELTON: So I got an email from Steven
13 Lauer, who is a very active member of the Working
14 Group on TTF Recommendation 1, but he is off site
15 today and he thought the Committee might be interested
16 in knowing that SECY 13-0038 is the annual report to
17 the Commission on the Industry Trends Program, and an
18 excerpt that he wanted to highlight from that SECY
19 states "The ITP complements the reactor oversight
20 process. The ITP monitors industry-level performance,
21 whereas the ROP provides oversight to individual plant
22 conditions and events."

23 CHAIRMAN SCHULTZ: What SECY is that again
24 Shana?

25 MS. HELTON: 13-0038.

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1 MEMBER STETKAR: And that's this year's
2 report?

3 CHAIRMAN SCHULTZ: Yes.

4 MS. HELTON: A new report to the
5 Commission, yes. So he sent this email in response to
6 some of the earlier discussion that we were having on
7 the side.

8 CHAIRMAN SCHULTZ: I'm not sure if it fits
9 here, or with regard to the Reactor Operating
10 Experience Program, but where does the agency or when
11 does the agency get information from international
12 programs?

13 MR. DUDLEY: That's the Operating
14 Experience Program.

15 CHAIRMAN SCHULTZ: Okay.

16 MR. DUDLEY: I have a backup slide if you
17 want to look at that.

18 CHAIRMAN SCHULTZ: Yeah, I'd like to when
19 we get to it.

20 MR. DUDLEY: Okay. So the -- and again,
21 the Agency Action Review meeting also looks at the
22 assessment of the ROP effectiveness, and it also looks
23 at the Industry Trends information, and senior agency
24 managers every year make sure that they believe that
25 any potential adverse trends associated with the

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1 industry trends are being appropriately addressed by
2 the NRC.

3 On Slide 13, the Reactor Operating
4 Experience Program is also required to be periodically
5 assessed by the office instructions, LIC 4 ON (ph) and
6 REG-112 that establishes this program. The periodic
7 assessment is required for the Center of Expertise,
8 for evaluating operating experience, and for
9 evaluating construction experience, and they determine
10 the effectiveness of these programs and identify
11 needed improvements.

12 This reassessment resulted from a
13 recommendation in the 2003 Davis-Besse Lessons Learned
14 Task Force, and past assessments have included looking
15 at the efficacy of the operating experience contracts
16 program, and then they also did a self-assessment of
17 Operating Experience Smart Sample program.

18 The OpESS program, it's an effort that
19 provides inspection staff with detailed synopsis of
20 operating experience that's believed to have generic
21 safety implications. The Operating Experience Program
22 also has been the -- had the good fortune of being
23 audited by a number of external groups.

24 The General Accounting Office looked at
25 Operating Experience Programs in 2006 and 2013, and

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1 the NRC Inspector General looked at this effort in
2 2013.

3 On Slide 14, the last two processes I want
4 to discuss are the public petition processes, the
5 petition for enforcement under 2.206, and petition for
6 rulemaking under 2.802 and 2.803. These processes do
7 not have formal requirements for periodic
8 effectiveness reviews.

9 But nevertheless, the management
10 directives that set these processes up are revised on
11 an as-needed basis as determined by management, and
12 for the 2.206 process, Management Directive 8.11 has
13 been undergoing revision for about the last year and a
14 half, and they're updating and streamlining the
15 process, and they expect that that reevaluation will
16 be -- that new management directive will be issued in
17 early 2014.

18 Also, the petition for rulemaking process.
19 Again, there are no periodic effectiveness reviews,
20 but the PRM process provides status reports to the EDO
21 twice a year, and the petition for rulemaking process
22 also requires that all petitions for rulemaking that
23 have significant policy issues that the staff
24 recommends denial, those denials must be approved by
25 the Commission.

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1 So the Commission is involved in the most
2 significant decisions regarding denials of petitions
3 for rulemaking. So there's some oversight just by the
4 Commission's involvement.

5 So these, the petition for rulemaking
6 process is also looked at periodically, as determined
7 by management direction, and as a result of a review
8 that the staff did on the petition for rulemaking
9 process, we did decide to revise our rules for 2.802
10 and 2.803 for how the petition for rulemaking process
11 works.

12 That rulemaking has been ongoing for a
13 couple of years. A proposed rule was published,
14 excuse me, just in this May, May 3rd. The public
15 comment period is now closed, and we're evaluating the
16 public comments on those proposed revisions to the
17 petition for rulemaking process.

18 My last slide is Slide 15, and another
19 question that you asked us on September 4th was to
20 explain what NRO's role is in the Reactor Operating
21 Experience Program. What I know now is that NRO and
22 NRR jointly maintain the Center of Expertise, which
23 evaluates both operating experience and construction
24 experience.

25 Many NRO folks have operating experience,

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1 and NRR folks may have construction experience. So
2 this Joint Center evaluates both types of experience.

3 So the offices share their knowledge and coordinate
4 with one another when we collect and screen and
5 evaluate and communicate information on international
6 and domestic reactor operating and construction
7 experience.

8 NRO incorporates the lessons learned into
9 licensing, inspection and construction, in accordance
10 with 10 C.F.R. Part 52. NRR would then incorporate
11 lessons learned into our changes to our Reactor
12 Oversight Program, or to changes in Part 50
13 regulations. So that completes --

14 (Simultaneous speaking.)

15 MR. DUDLEY: --those responses to the
16 questions that you folks asked at the last meeting.

17 CHAIRMAN SCHULTZ: The Center of
18 Expertise. Is that a defined group of individuals
19 that meet periodically or have assignments or how does
20 that work?

21 MR. DUDLEY: I think that's my
22 understanding. They are all provided with information
23 with certain of these -- with this information, and
24 then they meet periodically to discuss it. I think I
25 have a backup slide.

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1 MS. HELTON: Harry, a little more detail
2 on that. I'm not intimately familiar, but I do know
3 that the staff are reassigned, say from NRR to go to
4 the Center of Expertise in NRO, and that Center of
5 Expertise then manages any work related to that field,
6 for those offices.

7 MR. DUDLEY: Okay.

8 MS. HELTON: It's almost a staff resource-
9 saving type of initiative, and there's a backup slide.

10 MEMBER ARMIJO: Okay. You have the
11 international, right? I was going to ask that
12 question, so that this chart solves that problem.

13 MR. DUDLEY: Slide 50 --

14 MEMBER ARMIJO: Yeah.

15 MR. DUDLEY: Is the Operating Experience -
16 - is an overview of the Operating Experience Program.
17 I believe this also is the same as the Construction
18 Experience Program. You would just add operating
19 experience/construction experience. It's all looked
20 at, I believe, by the same clearinghouse of folks, and
21 they take inputs from industry, as you can see in the
22 upper left box.

23 They take inputs from NRC, and they take
24 international inputs that are then fed into this group
25 of knowledgeable folks, who screen, evaluate and then

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1 apply that information, and then communicate it to
2 influence agency programs on the right-hand side. At
3 the top, yes, yes.

4 MR. CUNANAN: Hi. I'm Arthur Cunanan
5 again with the Office of Research, Operating
6 Experience and Generic Issues Branch. I'm also a
7 member of the -- a backup member for the OpE
8 Clearinghouse, and we meet three times a week (mic
9 moving) in all our Research and NRO that's got to go
10 through the screenings of OpESS.

11 If it's related to construction, then they
12 would evaluate it. They will screen it and evaluate
13 it to NRO for evaluation further to their members.

14 MEMBER ARMIJO: Yeah. Just as a follow-
15 up, it's a little bit off track, but in the
16 International Operating Experiences, how comprehensive
17 is that?

18 You know, with so many plants being built
19 and operating now in China, also India and other
20 countries, do we really have access to their operating
21 experience that might influence ours?

22 MR. DUDLEY: I'd have to ask Arthur.

23 MEMBER ARMIJO: Maybe that's -- I didn't
24 know if I wanted to ask that question.

25 MR. DUDLEY: Arthur, could you respond to

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1 that also? I certainly can't.

2 MR. CARUSO: I just want to point out that
3 with a number of countries, the NRC has bilateral
4 agreements and there are regular interactions and
5 meetings where particular experience for the reactors
6 in the country are discussed. Now that's not with
7 every country.

8 MEMBER ARMIJO: Well, you know, the
9 traditional French, Germans, Europeans, Japanese. But
10 China building so many plants and --

11 MR. CARUSO: Well we haven't -- we don't
12 have an exchange program for inspections with the
13 Chinese, and we have had many visits over there,
14 office director level visits, and there's quite a
15 connection, I believe, with the Chinese over the
16 construction of the AP-1000s.

17 MEMBER ARMIJO: Good, thank you.

18 MR. CUNANAN: Yes. International OpE does
19 take into -- we do take it into account, but it has to
20 be evaluated further, if it's related, directly
21 related to the plants that we have here.

22 MEMBER ARMIJO: Okay. Thank you.

23 CHAIRMAN SCHULTZ: So the magic boxes, the
24 one in the middle that we would be interested in here,
25 and that is the Clearinghouse and how that works?

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1 Well, one of the outcomes is going to be what might be
2 identified as need for licensing changes or
3 rulemaking.

4 MR. DUDLEY: Right.

5 CHAIRMAN SCHULTZ: So who's in that box or
6 what's in that box in more detail? Do we have a quick
7 explanation of that?

8 MR. CUNANAN: Well, when I did a couple of
9 meetings with the OpE Clearinghouse, it's just
10 information that the plant sends to us, and then it
11 gets screened to the various operating experience,
12 related to like human factors or material. And then
13 based on our screening, we would send it to the
14 appropriate people.

15 MEMBER BLEY: You did get the daily INPO
16 reports, right? Do you know what we call it?

17 MR. CUNANAN: Yes, also from INPO, and
18 then it gets into the appropriate people, and they
19 would evaluate it, whether it would be -- would relate
20 to operating experience, to go even further than that.

21 MEMBER STETKAR: But do you do an type of,
22 and I realize you said you're backup.

23 MR. CUNANAN: Yes.

24 MEMBER STETKAR: So you can say "I don't
25 know" any time you want to. Do you do -- you say you

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1 do screening. You know, from what you described, as
2 you determine the appropriate discipline, let's say,
3 that this is, you say, human factors or maybe
4 equipment performance or maintenance or whatever.

5 But do you do in that group a screening,
6 in terms of importance? Because down at the bottom it
7 says storage, which implies that some things go
8 through and some things don't go through.

9 MR. CUNANAN: Yes. That gets evaluated
10 too.

11 MEMBER STETKAR: Okay.

12 MR. CUNANAN: And it's discussed further
13 within that OpE Clearinghouse.

14 MEMBER STETKAR: But are there criteria
15 that people use, or is it just a qualitative judgment
16 experience?

17 MR. CUNANAN: I'm not sure.

18 MEMBER STETKAR: Excellent.

19 MR. CUNANAN: Anyway, so I think, you
20 know, if it's for plant-specific events, I mean we do
21 have processes to evaluate risk importance with models
22 and all that sort of stuff. So at least to some
23 extent, for certain conditions, we incorporate risk in
24 the evaluation.

25 MEMBER STETKAR: But that's plant-

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1 specific.

2 MR. CUNANAN: Yes.

3 MEMBER STETKAR: This is -- we're trying
4 to focus here, I think, a little bit more on how those
5 events filter up through an agency-wide allocation and
6 prioritization process, which is, I understand, what
7 we're seeing here.

8 MR. CUNANAN: Well, there also is --

9 MEMBER STETKAR: You know, it might have
10 been important at a particular plant, but this group
11 might have said well, that's such a plant-specific
12 issue that it doesn't rise to the level of
13 significance that we want to pass it through for
14 further evaluation by the, you know, potential
15 rulemaking or enhanced oversight of the industry.

16 CHAIRMAN SCHULTZ: Or how and when it is
17 saved for trending.

18 MR. CUNANAN: Right, okay.

19 MEMBER SKILLMAN: I'd like to make a
20 comment here. I think it's accurate to say that all
21 present 104 licensees report in on INPO, because on a
22 daily basis, the plant staffs are reporting OE.
23 That's part of their evaluation. That's part of their
24 every other year evaluation at INPO.

25 A plant that does not report on OE gets a

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1 ding. So OE domestically is very important. But if
2 you were to find access to the WANO reports, you would
3 find that the foreign reactor operators are not as
4 rigorous in reporting.

5 So if you are depending on that
6 international OpE to feed your green box with a great
7 deal of rigor, I believe you will find yourself
8 lacking. The threshold for entry for OE in the United
9 States is very, very low, and if the local operators,
10 domestic operators don't report, there is consequence
11 in their E&A, evaluation and assessment.

12 Now there have been some very significant
13 events in foreign plants that have only a smidgen of
14 information in the WANO OE, but not all foreign
15 operators are part of WANO. So I would offer that
16 there is a gold mine of information on low level and
17 in some cases fairly significant events that we may
18 not have gotten access to.

19 I'll give you an example kind of in
20 reverse. The French knew early on of CRD and
21 cracking. It took a number of years for the U.S.
22 operators to say holy smoke, that can happen to us.
23 If you think about it, that was -- well, the Davis-
24 Besse was 2002.

25 The French were dealing with that six or

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1 eight years earlier, and I think we in this country
2 were saying oh, we've got better heads, we've got
3 better welding, we've got better material control,
4 we've got better chemistry, can't happen to us. Well,
5 it did.

6 So I'm just suggesting that if you're
7 depending on the international OpE as a varsity team
8 feed into your green box, then there needs to be some
9 ratcheting up into how we get more information. With
10 the newer reactors that are coming online worldwide, a
11 huge opportunity for new information that can help us,
12 and help them too. Thank you.

13 MR. DUDLEY: Are there any other questions
14 or enhancements or additional information you would
15 like me to talk about on the design basis extension
16 category?

17 MEMBER STETKAR: Dick, are you going to --
18 or perhaps Mary, one of you two in -- there's a new
19 Attachment 1 to Enclosure 1 of the draft SECY paper
20 that outlines the basis for the staff's cost estimates
21 for enhancing PRAs.

22 There are many, many statements throughout
23 the paper that say well, we don't think requirements
24 for PRAs are justified because the safety benefits or
25 the risk improvement or you used the words, are not

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1 justified by the costs. This -- the attachment, which
2 is new, something we only saw, you know, six days ago
3 or something like that.

4 CHAIRMAN SCHULTZ: It's all red.

5 MEMBER STETKAR: It's all red. It's
6 entirely red, provides some information, you know, and
7 perspective on the cost side of that equation. It
8 doesn't provide any information on the why the cost
9 doesn't justify -- why the safety benefits or why the
10 risk improvements or why anything are not justified by
11 those costs, recognizing there's a range in those cost
12 estimates.

13 Are you planning to discuss any of that in
14 this meeting or --

15 MR. DUDLEY: We have access to the SECY
16 paper, and we can put that chart up, and Steve
17 Dinsmore is the one who helped make some of these
18 estimates as to how we came up with those numbers.
19 But if you want to discuss the specific chart, we can
20 bring it up and discuss it.

21 MEMBER STETKAR: The chart, the chart I
22 had less -- I mean the cost estimates are obviously --
23 there's a lot of uncertainty in it, and if you looked
24 on a plant-specific basis, you know, there would be a
25 wide range. I hesitate to give you my estimate of

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1 what the cost would be, because it is very plant-
2 specific, and I don't do that kind of level of cost
3 estimating any more. The costs are clearly somewhere
4 in the range.

5 MR. DINSMORE: I believe I understand your
6 question.

7 MEMBER STETKAR: No, but what I'm
8 interested in --

9 MR. DINSMORE: We didn't give you
10 benefits.

11 MEMBER STETKAR: That's right, because the
12 statements in the paper basically say the cost of
13 improving the PRAs are not justified by either the
14 perceived safety benefits, you know, there are various
15 phrases that are used throughout the document.

16 But it's basically the benefits are not
17 justified by the cost. You now have, you now have,
18 you know, with fairly broad uncertainty, but at least
19 some bounds on what the costs might be. It's still
20 not clear to me, even if the cost was \$10 million, why
21 the safety benefits are not justified.

22 MEMBER BLEY: The safety benefits are
23 accrued over a long period of time as issues arise.

24 MEMBER STETKAR: Right, through a broad
25 range of issues, and I just -- I just for the record,

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1 I had forgotten I was going to look it up last night.

2 How much was Crystal River willing to spend to fix
3 their containment in billions? There's more than one
4 billion.

5 MEMBER BALLINGER: It was up around two,
6 wasn't it?

7 MEMBER STETKAR: I think it was, one to
8 two billion. That cost alone, even on the upper end
9 of the PRA, could have paid for all of the PRAs for
10 every single unit in the United States, with ample
11 margin even on the upper end of the cost estimates.

12 Just to put that into perspective about
13 how expensive these PRAs are. What they were willing
14 to consider --

15 CHAIRMAN SCHULTZ: You could find some the
16 examples also.

17 MEMBER STETKAR: Oh yeah. I mean a few
18 pumps, for example.

19 MEMBER BLEY: You can find real examples
20 of things that have actually accrued.

21 MEMBER STETKAR: Have actually accrued,
22 that's right.

23 MR. DINSMORE: Yes. So I guess if I could
24 answer the first question, it's fairly
25 straightforward, of why we didn't give you the

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1 benefit, the main reason is because we have the
2 backfit rule, which has a 10 to the minus 5 floor. If
3 it's not greater than 10 to the minus 5, you should
4 have done a backfit on it, and 10 to minus 6 kind of
5 for LERF.

6 But so we kind of thought that if there
7 had been things around which obviously rose to that,
8 to above 10 to the minus 5, 10 to the minus 6, then
9 they should have gone through the backfit process. So
10 most of the improvements we were looking at would have
11 been below those, 10 to the minus 5, and I forget what
12 the backfit rule gives you for an acceptable
13 expenditure, 10 to the minus 5 increase. But I'm not
14 quite sure.

15 It didn't seem -- it's not a very large
16 number. So and then there's the question of where you
17 get a whole bunch of little ones. We kind of talked
18 about that too, that you might have a bunch of little
19 ones over time, that might cumulatively come up to a
20 big safety increase. But we didn't really know to --

21 MEMBER BLEY: My problem is you draw a
22 very firm conclusion with no discussion or analysis at
23 all on the benefits side.

24 (Simultaneous speaking.)

25 MEMBER BLEY: That's the way it is, with

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1 no justification at all.

2 MR. DINSMORE: Yeah. There was some
3 justification -- I'm not sure on SECY.

4 MEMBER BLEY: Not written down.

5 MR. DINSMORE: But yeah, okay. That's
6 fair enough. But how about that argument? Would that
7 be something that you guys would consider, that you
8 know, if it's been a big, safe individual ones, we
9 probably should have at least already found, whereas
10 if it was -- and a bunch of little ones is a lot
11 harder to --

12 MEMBER STETKAR: Let me ask you this, and
13 I hate to be dramatic, but sometimes I have to be.
14 Fukushima happened here. The frequency of that event
15 is much less than 10 to the minus 5th or 10 to the
16 minus 6th per year, evaluated in most PRAs.

17 Now one can argue whether you did it for
18 that site. Maybe it was on the range of 10 to the
19 minus 4 or not. And yet it was a horrendous event.
20 That's why we're having a lot of these discussions
21 here. So simply screening on the frequency of one
22 event, and that's something you mentioned.

23 The cumulative effects of many mid-10 to
24 the minus 6ers, let's say, there's real benefit from
25 that. There's also real benefit of just looking at

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1 your plant and understanding where your
2 vulnerabilities are. That's not a tangible
3 necessarily benefit.

4 But I think Dennis' point, and I might
5 reiterate, is that the statements in the SECY paper
6 are very sharp and clear. The benefits are not
7 justified by the cost. You've now added the
8 attachment that least puts the cost into perspective,
9 and the uncertainty and the discussions that you've
10 had to derive those.

11 There's still no, no discussion whatsoever
12 about why the benefits are not justified. Whether the
13 arguments that you mentioned, Steve, you know, or the
14 approach that you'd like to take. But there is just
15 no discussion on that other side of the coin.

16 CHAIRMAN SCHULTZ: And I think that that's
17 a very important point, because of the way the
18 statements are express in that way in the document. I
19 think in fact what was done was there was a decision
20 made for this activity, that it was not -- for this
21 activity, it was not going to include a process which
22 supported plant-specific PRAs in developing a
23 regulatory framework.

24 In fact, that's being done elsewhere.
25 It's another activity. That was not something that

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1 you could have achieved within the time frame or one
2 could consider the scope of this activity.

3 But to draw the types of statements in a
4 way in which they appear to be conclusions about the
5 efficacy of having plant-specific PRAs or using plant-
6 specific PRAs in a regulatory framework, I think it's
7 overreaching by far, for this document.

8 MR. DUDLEY: I mean we subjectively
9 estimated safety benefits only, all right. We only
10 looked at safety benefits. There are other benefits
11 of PRAs. You could have cost savings, you could have
12 decreased licensing costs. There are other, you know,
13 there are other benefits of PRAs, and we did not
14 estimate those.

15 We didn't really think we would be good at
16 doing that. That's more of a licensee type thing, and
17 but we only looked at the safety benefits, and we made
18 a subjective assessment that we believe that the net
19 safety benefits would be small, based on what basis
20 that Steve just was --

21 CHAIRMAN SCHULTZ: Would likely be small.

22 MR. DUDLEY: Likely, likely. Yes, right.
23 It's subjective absolutely, and maybe we haven't --

24 CHAIRMAN SCHULTZ: What John's going to do
25 is a circumstance where the likelihood was --

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1 MR. DUDLEY: Well, there might be one --

2 CHAIRMAN SCHULTZ: --very small, and the
3 consequences were very large. So again, I think we
4 need to be very careful about how this information is
5 presented, because it can be used to reference a wrong
6 conclusion, I believe, in terms of the --

7 MR. DUDLEY: Well, we can go back. We'll
8 certainly go back.

9 MEMBER BLEY: I just, you know, sitting in
10 the room guessing what it's going to be is very
11 different than maybe talking to people who have had
12 experiences, where they might have examples they could
13 show you that would be quite different. In fact, this
14 goes way back.

15 But if you read the testimony of the NRC
16 in the Indian Point hearings of 1981, there's a
17 comparison between what we thought ahead of time and
18 gave people orders to do, and what the PRA came up
19 with and what the changes there came to. I think the
20 quote was "what we did didn't make any difference, but
21 the things that came out of the PRA made a whopping
22 big difference in safety."

23 Now Steve said those things were already
24 done. They haven't been done now, but if you think
25 real hard about, you know, some of the floods, and

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1 maybe we'll cover those some other way. But having
2 this on hand, so that when the next big issue comes
3 up, you can address it through systematic analysis,
4 rather than find six new valves or whatever it is.

5 It isn't clear to me on the surface,
6 without any good looking, that you've got a solid case
7 that there's no safety --

8 MEMBER STETKAR: Something as simple as
9 routing the cables for a new system through Location X
10 versus Location Y.

11 MEMBER BLEY: Can cost a lot of money.

12 MEMBER STETKAR: Costs a lot of money, and
13 without the metric to tell you what the safety benefit
14 of Location X versus Location Y is. Now can you
15 quantify? Yeah, you can, once you have the model. It
16 can tell you, tell you how much safety benefit you had
17 for selecting Location X versus Location Y, doing the
18 fire analysis and flooding analysis and things like
19 that.

20 But without the tool, you can't tell that.

21 So I don't know what the safety benefit of having the
22 PRA is. The problem is I can tell you a lot of
23 stories, but they're all plant-specific proprietary
24 stuff that I can't share in this forum.

25 MS. DROUIN: Well, and another --

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1 MEMBER STETKAR: They're quantifiable.

2 MS. DROUIN: Another benefit that's not
3 taken into -- or it should is the averted cost to the
4 licensees of reviewing those PRAs.

5 MEMBER STETKAR: You know, I thought about
6 that a little bit, Mary.

7 MS. DROUIN: And that's a huge cost.

8 MEMBER STETKAR: That is, except for the
9 fact that if the licensees, which many of them, not
10 all, are using their PRAs today for focused risk-
11 informed applications, they still incur some of those
12 peer review costs and maintenance costs within that,
13 you know, within those application areas.

14 So you can't just necessarily assign all
15 of the review and maintenance costs to this particular
16 activity.

17 MS. DROUIN: No. I mean you'd have to
18 take into account the review cost by the peer reviews
19 that the licensees are paying for. But we are not
20 doing reviews of the licensee's base PRA, and you
21 know, the last time we did one was 20 years ago, and
22 that cost almost a million dollars, and it was for not
23 the size of the PRAs they are today.

24 So you know, it's you know, for the staff
25 to come in and peer review, do a review of the license

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1 PRA is not cheap, and the licensee would have to pay
2 for that cost.

3 MEMBER STETKAR: If the staff were going
4 to do a detailed, independent peer review of every
5 PRA, which the staff is not doing under NFPA-805 to my
6 understanding.

7 MS. DROUIN: No, because we're following
8 the --

9 (Simultaneous speaking.)

10 MEMBER STETKAR: So why would you need to
11 do it for these?

12 MS. DROUIN: --and, you know, the peer
13 reviews that are out there, which is -- would have
14 been very beneficial.

15 (Simultaneous speaking.)

16 MEMBER ARMIJO: The licensee has to have a
17 peer review of its own, right? That costs money.

18 MEMBER STETKAR: That does cost money.
19 But my whole point is they need to have that
20 independent -- if they're using the PRA for now
21 focused applications, like tech spec improvements,
22 like the other initiatives that have been implemented.

23 It's my understanding the PRA must meet
24 certain technical requirements to support those
25 current licensing applications. The PRA should be, I

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1 don't know if they have been, but they should be peer
2 reviewed to give the staff assurance that indeed it
3 meets at least within that application those quality
4 requirements, and it needs to be maintained so that
5 it's consistent with, you know, the as-built, as-
6 operated plant within those applications.

7 Those are some costs that the utilities
8 are already incurring. They aren't for the utility
9 who's not using PRA at all, who simply get an IPE, put
10 it on the shelf and said okay, we checked off that
11 box. Those people are not incurring any of those
12 costs today, because they're basically not using PRA.

13 But anybody who's using it has already
14 incurred some of the review costs, right?

15 MS. DROUIN: Yes.

16 MEMBER STETKAR: And they're incurring
17 some of the maintenance costs, because they need to
18 keep it up to date, at least to support their, you
19 know, give you assurance that indeed nothing has
20 changed in the plant or the risk profile that would
21 negate any of the licensing conclusions that they'd
22 make.

23 So there's a little bit of this, and the
24 staff already has some, you know, audit budget for
25 kind of looking at that stuff. So some of the

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1 maintenance and review costs, I think, can be -- you
2 have to be a little bit careful about how inflated
3 they might be. That's why I tended to discount some
4 of that. I was just looking at, you know, how much
5 out of pocket.

6 Because they also -- they're measurable.
7 I mean people talk about millions of dollars because a
8 million dollars to most folks sounds like a lot of
9 money. Yeah.

10 (Simultaneous speaking.)

11 MEMBER STETKAR: But that's also part of
12 the emotion that gets instilled in this discussion,
13 because you start talking about my God, it could be as
14 much as \$7 million or something like that to a plant,
15 over the remaining life of the plant, and additional
16 costs, you know, in terms of the fees that you pay the
17 --

18 MS. DROUIN: Well you know, it's complex.

19 MEMBER STETKAR: It is.

20 MS. DROUIN: And as I've always said, it's
21 really not fair when you're looking at the cost, to
22 make that decision based on one activity. You have to
23 look at it, you know, across all the activities.

24 MEMBER STETKAR: That's right, that's
25 right. And that's also a little bit of where it comes

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1 out in the paper, because it says well, for the
2 specific purpose of developing a PRA to support
3 criteria, for example, for allocating something to the
4 design basis extension category, we can't justify it.

5 For the specific purpose of providing
6 sufficiency or adequacy criteria for defense indepth,
7 we can't do it for that. You can never do it for one
8 thing in isolation.

9 MS. DROUIN: That's right.

10 MR. DINSMORE: Yeah, this is Steve
11 Dinsmore again.

12 MS. DROUIN: And unfortunately, that's how
13 we keep measuring and making that decision, is on
14 these very specific things, instead of stepping back
15 and saying okay, if you're going to do it, you're
16 going to be using it in a multitude of fashions, of
17 areas.

18 MR. DINSMORE: You know, this is Steve. I
19 guess again, when we're looking at the benefits, well
20 first of all the costs were taken to be a very --
21 almost a Phase 4 PRA. I don't know if you're familiar
22 with it.

23 MEMBER STETKAR: I've never heard about
24 that before I looked it up last night.

25 MR. DINSMORE: It has to be a very high

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1 quality PRA, first because we kind of knew what that
2 might entail, and second because we were pretty sure
3 that you'd be making basic decisions using it. So it
4 had to be good.

5 So if you step below that, and just say
6 that the licensees need a PRA, how much is that going
7 to cost, we don't really know until we know what we're
8 going to use it for, which is kind of what Mary was
9 saying, that it's hard to look at specific things.

10 But so the cost in there for a really good
11 PRA, we didn't really get any costs or enough for a
12 quality PRA. And again, the reasons we were using the
13 benefits claim, and we have these insights from the
14 SPAR models, uncertainty, external events, NTTf stuff,
15 they did already search for.

16 But like two gentlemen said, that's very
17 qualitative, and we do have to write that up. But I'm
18 not sure how we're going to get a quantitative
19 benefit.

20 MEMBER STETKAR: You probably can't, but
21 let me ask you just something, since you --

22 MR. BRADLEY: Can I make a statement
23 possibly, before we wander off this subject?

24 CHAIRMAN SCHULTZ: Sure.

25 MR. BRADLEY: I'm sorry. I don't mean to

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1 interrupt. Biff Bradley, NEI. I think the industry
2 would love to come talk to the Committee or the PRA
3 Subcommittee about our vision for PRA, and I would
4 offer that it's way more complicated than what's being
5 laid out here. The Reg Guide 1.200 is not being
6 followed in practice in the large applications we're
7 doing.

8 We're -- it's a lot more than just putting
9 a few hard dollar figure. It's a very complicated
10 situation. We're trying to establish an industry
11 vision and plan to go forward, but it's contingent on
12 fixing some fundamental problems with the way PRA is
13 being employed right now, in MPA-805 (ph). It's far
14 more complicated than this discussion would lead one
15 to believe.

16 MEMBER STETKAR: I think we'd really like
17 to hear about that, if you do want to come and talk to
18 us.

19 MR. BRADLEY: We support having better
20 models. We support having better risk understanding.
21 We're inhibited from doing that by the regulatory
22 process that's being carried out right now.

23 MEMBER RAY: Biff, let me ask a question.
24 Do you extend your comments to external events as
25 well?

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1 MR. BRADLEY: Is that for me?

2 MEMBER RAY: Yes.

3 MR. BRADLEY: External events, I think I'm
4 not as knowledgeable in that area. I think it suffers
5 from some of the same issues as fire with respect to
6 larger uncertainties, spatial interactions and other
7 things that we found difficult in practice to get a
8 regulatory context around.

9 So I think it's showing some of the same
10 issues. But I think the industry would -- certainly,
11 we would like to use PRA and get back to the vision of
12 PRA as we thought, a realistic tool to assess risk.

13 MEMBER ARMIJO: Let me interrupt, Biff.
14 The answer is simply to say external events, in my
15 judgment, compounds the problem that you're
16 describing.

17 MR. BRADLEY: It is a serious problem.

18 MEMBER ARMIJO: Yeah.

19 MR. BRADLEY: But it also is a very plant-
20 specific problem. Examples are one-size-fits-all
21 regulation really isn't the right place to be going
22 now post-Fukushima. We really need the benefit of
23 these risk studies, and we support them.

24 You know, I don't want to come across like
25 we're against it, but there are some fundamental

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1 issues that need to be dealt with, before we can all
2 succeed with doing this.

3 MEMBER STETKAR: Just for one, we're going
4 to get off topic here, but the issue of external
5 events does complicate the process. But experience
6 has shown that if you treat each individual issue as
7 it arises, as if it were an independent problem that
8 shall be solved with its own methods, within its own
9 models, that makes life really difficult.

10 If you start thinking about spatial
11 effects and tailor your PRA to do that. So you pick
12 up spatial effects of fires and flooding and seismic
13 at one time. It's not necessarily as confounding and
14 compounding as you might think, nor as it is, if you
15 try to address each of those issues in isolation, in
16 its totality.

17 So but it requires you then to have the
18 notion that I'm going to develop a PRA that can
19 address all of those issues, and how best do I do
20 that. Now one thing I wanted to ask you, Steve, you
21 did mention it, and I quite honestly had not heard of
22 the phases of PRA quality ever before.

23 I don't read everything. I now have read
24 the memo COMNJD030002, proposing a Commission policy
25 statement on regulatory decision-making and PRA

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1 quality, which apparently died a death of its own.
2 The Phase 4 PRA quality in that document is
3 characterized in the pilot phase "The NRC would expect
4 a fully quantified approach to PRA."

5 I don't know what that means, "quality in
6 which PRAs are as good as can be reasonably expected
7 within the state of the art. The Commission also
8 expects that ultimate PRA quality will more and more
9 nearly approach the available state of the art
10 capabilities with full scope, full quantification and
11 full uncertainty analysis, all based on realistic
12 models and abundant data.

13 "Advancement toward that high level of PRA
14 quality should be a continuing process, in which the
15 PRA quality would increase as the state of the art
16 progressed."

17 Now you said you based your cost estimates
18 on achieving whatever that is. I don't know what that
19 is. So I'm going to go back to the ASME/ANS PRA
20 standard in Reg Guide 1.200, and say were those the
21 PRA that you've made your cost estimate for, fit
22 within capability category 2, as they're now defined
23 under the guidance in Reg Guide 1.200?

24 Because I don't understand what this Phase
25 4. It says -- it says well, we gotta make it as good

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1 as it can ever get, and that target is going to keep
2 moving as go ahead, which is not something that we
3 ever want to hold anybody to.

4 MR. DINSMORE: If I may start by saying,
5 we actually used this thing, this SR a lot, because it
6 allowed us to go ahead and start giving license
7 amendments out before the -- even before the ASME
8 standard was developed. So it was very useful, and it
9 kind of got put on the shelf for the last couple of
10 years because we've kind of reached an internal way of
11 doing all this stuff.

12 But now that we've got NFTA-005 came out,
13 it jacked up the requirement, again because the PRA
14 has to be good enough to support the decisions. The
15 decisions were getting more important. So the first
16 part of that question, it didn't disappear. It was
17 just kind of used for a long time, and then kind of
18 set aside.

19 As for the specific thing about how the
20 capability categories fit into the Phase 4, that's
21 probably -- kind of my personal opinion is that's
22 pretty much a Category 3 PRA.

23 MEMBER STETKAR: I'm just trying to get a
24 sense of --

25 MR. DINSMORE: It's full state of the art.

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1 You've got everything in there you can possibly get,
2 and therefore you could use it to --

3 (Simultaneous speaking.)

4 MEMBER STETKAR: So it counts less if we
5 get to capability category 2.

6 MS. DROUIN: There is a plan called the
7 phased approach plan, you know. First there was the
8 COMSECY that came out from past Chairman Diaz, and at
9 the time Geary Holahan was on his staff, and they
10 wrote this idea of the phased approach.

11 We were requested to write a plan back,
12 and we did write a plan. Phase 4 was always going to
13 be something that we were never going to support,
14 because it was going to support really a risk-based
15 approach, and we were never going to go to a risk-
16 based approach.

17 So and you have to look at that and look
18 at the SECY paper, where we wrote the phased approach
19 plan.

20 MEMBER STETKAR: I'm just trying to get,
21 you know, in practical sense, trying to think about if
22 I had a PRA today, what would I need to do to it, to
23 achieve -- you know, how much money would I need to
24 spend to achieve that goal, versus to achieve a goal
25 that people are indeed using today, for risk-informed.

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1 MS. DROUIN: Well you know, the ASME is
2 not supporting and the NRC has never supported Phase
3 3, I mean sorry, Category 3. If you read Reg Guide
4 1.200, it says we endorse capability category 2.

5 Now there is a ballot that is out within
6 ASME and ANF, and that is to get rid of capability
7 category 3, and just have capability category 1 and
8 capability category 2, because capability category 2
9 is always to be the state of practice.

10 Now the state of practice over time will
11 change, will improve, and that's why standards change
12 over time in any given area, because you get more
13 information.

14 You improve your methods, you improve your
15 tools. So you always update your standards, you know,
16 to be, you know, to reflect, you know, your best
17 current information into what you have available.

18 MEMBER STETKAR: It's also, in terms of --
19 and we're dwelling on this too long, so I'll just make
20 a final kind of comment. In terms of doing this
21 qualitative cost-benefit decision process that you
22 describe, is it if -- the question then comes well, if
23 the costs are estimated based on time to achieve that
24 capability category 3 or Phase 4 or whatever, but the
25 best that could ever be done PRA, then perhaps the

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1 cost would be less for capability category 2.

2 I don't know, because I don't know the
3 details that went into those cost estimates. You
4 might achieve 95 percent of the benefits, though, for
5 that lower cost.

6 So for example, if you inflated your costs
7 because you want to estimate the cost of doing the
8 best conceivably possible PRA that nobody's ever done
9 yet, and say well, the benefits are not justified by
10 that cost, what would be the cost of improving it to
11 achieve capability category 2?

12 I don't know whether those cost estimates
13 would change, because people -- you're comparing a
14 philosophical PRA to an actual PRA. But perhaps the
15 benefits would be essentially the same.

16 MS. DROUIN: Well, I think that you've hit
17 on a very --

18 MEMBER STETKAR: And that's, I think, a
19 little bit of what Biff was talking about also, in
20 terms of -- perhaps you don't need to do the most
21 perfect PRA to achieve 90 percent or more of the
22 benefits.

23 MS. DROUIN: I agree. I think that if you
24 looked at a PRA that was done on all the supporting
25 requirements to capability category 2, to a PRA that

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1 was done to all the supporting requirements to a
2 capability category 3, I don't think that you're going
3 to necessarily get better insight and better results
4 out of that PRA.

5 MEMBER STETKAR: But the uncertainties
6 might be smaller, but in terms of overall conclusions,
7 I think I tend to agree with you.

8 MS. DROUIN: Yep.

9 MEMBER STETKAR: Sorry.

10 CHAIRMAN SCHULTZ: That's all right. Any
11 other questions for Dick before we move on to Dan's
12 presentation?

13 MEMBER SKILLMAN: Just one. Through the
14 presentation, Dick, on Improvement Category 1, the
15 costs for the licensees is minimal, right? I'm
16 wondering what the feedback from industry has been,
17 relative to that assessment? Do they agree with you
18 or do they disagree with you?

19 MR. DUDLEY: Well, I guess it has to do
20 with how you count cost. We by writing more thorough
21 rules, the rules that come out in the future would
22 likely maybe be a little more expensive to implement.
23 So if we implemented this design basis extension
24 approach, there could be some potential future
25 liability, and the rules would be a little more

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1 difficult to comply with.

2 But the way we do regulatory analyses, we
3 don't -- those costs haven't been incurred until that
4 rule gets written at that time. So we would -- the
5 way we do reg analyses, there are --

6 It would be no effect on licensee cost,
7 because when we undertake this activity, it's solely
8 within the NRC, and except for the public meetings
9 where we will solicit public input and participation,
10 which we also do not count as a cost, because that's
11 not a requirement. That's a voluntary, you know, it's
12 voluntary participation by the industry.

13 So the way we do the reg analysis, the
14 licensee cost of this new category could be zero. In
15 fact, there will be some nominal cost of licensee
16 participation in the public comment period, in
17 reviewing our products and providing us comments on
18 our approaches. There might be some future increased
19 burden associated with the rule, if we write the rule
20 that's more thorough and more comprehensive.

21 But those also are not -- by our process,
22 they're not considered as costs at this stage in the
23 process.

24 MEMBER SKILLMAN: Has there been pushback
25 from industry on that point of view?

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1 MR. DUDLEY: I believe that it was a
2 public comment that industry said hey wait a minute.
3 If you tighten, if you write these rules that are more
4 thorough, there will be some additional burden
5 associated with industry. Maybe we can get Biff
6 Bradley to comment on that.

7 CHAIRMAN SCHULTZ: You might certainly be
8 able to argue also that if there's more certainty in
9 the process, more understanding of the process, that
10 the long-term costs of abiding by a rule, implementing
11 and then abiding by a rule, may be lower.

12 MR. DUDLEY: It can go both ways.

13 CHAIRMAN SCHULTZ: Rather than something
14 that is fuzzy.

15 MR. DUDLEY: Yeah, that's right. I mean
16 if we write a rule that there's uncertainty, and a
17 licensee implements it one way, and then we later on
18 say well, you know, that really isn't what that rule
19 meant, and then they have to go change something, then
20 there's some costs there too that perhaps the -- so we
21 don't figure in those costs, and that's why we --

22 CHAIRMAN SCHULTZ: But one of the goals of
23 what we were doing here is stated as developing a more
24 effective approach to licensing.

25 MR. DUDLEY: Yes, yes, right.

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1 MEMBER SKILLMAN: And I'd ask Biff or
2 anyone, do you have any comment on that?

3 MR. BRADLEY: Oh, I appreciate that.
4 Yeah. We have provided input to the staff on cost of
5 PRA, in the context of a number of regulatory
6 analyses, comments or reg basis comments. I think we
7 tend to have a higher estimate of the cost, not by
8 orders of magnitude.

9 But I think we tend to believe the costs
10 are greater than what the staff has typically put in
11 the reg analyses. I think the most important thing is
12 it's not a one-time cost. It's a cost for the life of
13 the plant, and the -- what we found is once you have
14 to put all the regulatory trappings on it.

15 I think the best data points we have for
16 this, we have hard data on this. If you go back and
17 look at implementation of 805, we've actually tried,
18 in a large regulatory application, to apply PRA. What
19 you see is multi-thousand page license amendment
20 requests, multi-million dollar review fees on the PRA,
21 above and beyond 1.200.

22 Imposition of deterministic assumptions
23 into the PRA that skew the results and make your large
24 investment somewhat not as beneficial as you would
25 like. So as I said earlier, it's more complicated.

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1 But the costs, I think it's easy to underestimate the
2 model.

3 Go back and look at 805, at the actual
4 hard data there, and I think you'll get a better sense
5 of what we're really talking about when we put a PRA
6 into a major regulatory context. It's a little
7 different than doing a IP Triple E or something, where
8 once you get all the bells and whistles and trappings
9 on there, it becomes a different --

10 It's like buying something under Appendix
11 B versus going down to the hardware store, you know.
12 It's a whole different order of cost that come into
13 play, and it's more than just a one-time cost to
14 produce the model.

15 We're also looking for benefit from these
16 models. From a model that we can have results, we can
17 have confidence in. So I'll stop there.

18 MEMBER SKILLMAN: Thank you.

19 CHAIRMAN SCHULTZ: Any other questions at
20 this point? Just to an administrative point. In
21 order to accommodate the schedule that we have for
22 Dan's presentation, we are going to go beyond what we
23 had originally scheduled for lunch, and go straight
24 through this presentation, and it should be completed
25 around 12:30 or at the latest 12:45, and then we'll

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1 have our lunch period.

2 That will keep everyone's time frame in
3 line with regard to each of the presentations. So
4 Dan, welcome.

5 MR. DOYLE: Okay, thank you. So I'm
6 jumping to Slide 22, the title slide for Activity 3.
7 I only have two other slides about this. I have a
8 number of backup slides that I can bring up if
9 necessary.

10 But my purpose here was to summarize,
11 again, what we're recommending, to highlight a few
12 things that have changed since the last time we were
13 in front of you, and see what other questions you may
14 have.

15 So just to briefly characterize this
16 activity and describe it, it's not as broad as the
17 other two in its scope. It's very focused on
18 basically one branch in the decision tree for trying
19 to decide if there should be a new regulatory
20 requirement.

21 In a situation where there's an industry
22 proposal and a regulatory requirements that's bended
23 off, should we go ahead and impose this regulatory
24 requirement, or is it acceptable in some cases to
25 allow this industry proposal, this industry

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1 initiative, which is not equivalent, could be
2 described as voluntary in some cases, is it acceptable
3 to allow that other thing to substitute for the NRC
4 action?

5 So that's what this activity is about.
6 I'm going to go through -- so we've looked at the
7 current policy and we agree with some parts of it.
8 We're making some recommendations for some changes
9 that I'll discuss, and we're recommending some actions
10 to take about existing initiatives of this type that
11 are out there.

12 So the first point is that we do agree
13 with this current policy, in that we would reaffirm
14 that it is not acceptable to allow an initiative like
15 this to substitute for NRC regulatory actions for an
16 adequate protection issue, that the NRC should in all
17 cases impose the regulatory requirement, if that's the
18 conclusion, that these things may not serve as a
19 substitute for adequate protection issues.

20 The next point, well sort of implied from
21 there is that it is acceptable, in some cases, not for
22 things that are adequate protection, but for things
23 that are in this other range, that are safety
24 enhancements that may be justified, where the costs
25 may be justified, that in some cases it is acceptable

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1 allow them to substitute for those types of things.

2 So I'm going to use another slide. On the
3 next slide, you see the Type 2 PRs on there. So just
4 to remind everyone that Type 2, when we say that,
5 that's a shorthand, and that means that the industry
6 initiative is not a method of compliance with an
7 existing regulatory requirement.

8 That's for something where there's not
9 really a regulatory requirement. It's something that
10 the NRC is considering imposing a requirement for, and
11 this could substitute for that.

12 So not a method of compliance with an
13 existing requirement. The action that the NRC is
14 considering may be cost-justified, and the initiative
15 may serve as a substitute. So that's what Type 2
16 means.

17 So for my second bullet, we are proposing
18 to specify that industry initiatives may only be
19 credited in the baseline case for the regulatory
20 analysis in this decision-making process, when there
21 is high likelihood that the industry will effectively
22 implement and maintain the initiative over time.

23 So there was a question, I think, two
24 meetings ago and at our last meeting, we listed
25 several things that provide a little bit more detail

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1 on what exactly that means. But that is the -- what
2 would be developed in this activity.

3 But the high point is that this question
4 of is there high likelihood that this will be
5 effectively implemented and maintained, and a general
6 recognition that this is not the same thing as
7 imposing a regulatory requirement. That is
8 understood, I think.

9 MEMBER BLEY: And how ensuring that
10 there's a high likelihood is something for the future
11 that you'll develop.

12 MR. DOYLE: That's right.

13 MEMBER BLEY: Okay.

14 MEMBER BROWN: What's the baseline case?

15 MR. DOYLE: The baseline case --

16 MEMBER BROWN: Is that the regular -- is
17 that the regular safety design basis case?

18 MR. DOYLE: The baseline case is referring
19 to a regulatory analysis, where you are -- you're
20 doing this analysis to try to determine what the
21 effect or what the benefit is of imposing this
22 regulatory requirement. So the baseline case would be
23 sort of the future of how would the future look if we
24 did not take this action that's being proposed.

25 So just sort of the status quo to the

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1 future. Not necessarily what exactly is happening
2 today, but doing the best to estimate the baseline of
3 what would happen in the case of whatever the topic is
4 that's being proposed. So the baseline, that's what
5 the baseline is referring to.

6 MEMBER BROWN: So you have to make an
7 assumption that without doing anything, adequate
8 protection is still in place, without the industry
9 initiative. While --

10 MR. DOYLE: I guess I'm just -- I was just
11 explaining what baseline means.

12 MEMBER BROWN: I understand that. It's
13 based on your definition of what the baseline is,
14 you're -- in order to not be in conflict with one, the
15 first bullet, you have to -- you have to determine
16 that if the industry did nothing, we'd have adequate
17 protection, and we don't need an enhanced -- we don't
18 need to do anything else on a regulatory basis.

19 MR. DOYLE: You're correct, that's right.

20 MEMBER BROWN: Okay. I just want to make
21 sure I understood that's what baseline -- that's how I
22 interpreted reading that part.

23 MR. DOYLE: Yes. Okay.

24 MEMBER BROWN: And that applies to the
25 enhanced safety enhancement rules as well, right? I

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1 mean adequate protection as well as enhanced -- well,
2 there's two different categories I guess you all
3 talked about earlier. I'm still trying to separate
4 those a little bit.

5 MS. HELTON: For the adequate protection
6 rule --

7 MEMBER BROWN: I look at that as the
8 plant's okay doing nothing.

9 MS. HELTON: Right. If we were to
10 undertake a regulatory action under the guise of
11 adequate protection, then you're not really concerned
12 with costs and benefits. We can proceed with that,
13 regardless of whether or not it's cost-justified,
14 because we feel it's necessary for adequate
15 protection.

16 (Simultaneous speaking.)

17 MEMBER BROWN: --okay.

18 MS. HELTON: We usually provide, though, a
19 regulatory analysis that effect of cost and benefits,
20 just as additional information to the decision-maker.
21 So what Dan's talking about is for those cases where
22 we're in the backfit rule say, and we want to do the
23 regulatory analysis, to see if a proposed regulatory
24 action would be cost beneficial. So we look at the
25 baseline case, which may not include the voluntary

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1 initiative, and then we do an analysis.

2 Here's what the world looks like with the
3 voluntary initiative in place. What's the delta and
4 safety and cost, and that's how we base our decision.

5 Currently, I think our regulatory analysis
6 guidelines, allow us to credit in that baseline case
7 voluntary initiatives.

8 That's what this activity is geared at.
9 If we don't -- if we don't give credit to them,
10 there's a higher safety delta, we might go forward
11 with the regulatory action.

12 MEMBER STETKAR: I think -- let me see if
13 I can clarify some of Charlie's questions. The
14 previous discussion, and I'll still use my Bin 1, Bin
15 2, Bin 3 analogy, something can be assigned to Bin 1
16 because it's determined that it's necessary because of
17 adequate protection.

18 Something can also be assigned to Bin 2,
19 because it's determined that it's adequate protection.

20 So we don't know which bin to throw it into, simply
21 because of adequate protection. But it's certainly in
22 one of those two. Other things can be thrown into Bin
23 2, because there is justification for the need of
24 regulatory action, right.

25 So only the things, the things in Bin 2

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1 require regulatory action. Something that is a
2 voluntary initiative, let me make sure that I
3 understand this, would not be in Bin 2, because it's
4 not a regulatory action. Is that correct?

5 In other words, if the industry proposes a
6 voluntary initiative, and this process says yes, we
7 have high confidence that that voluntary initiative
8 will need solve the problem that we're looking at, and
9 indeed we have a high likelihood that, you know, that
10 initiative, whatever is required to support that
11 initiative, will be maintained, no regulatory action
12 is necessary.

13 MR. DOYLE: That's true.

14 MEMBER STETKAR: So therefore because Bin
15 2 only includes -- but are rulemaking, that can't be
16 in Bin 2, right?

17 MEMBER BLEY: I'm confused. Can you align
18 your Bins 1, 2 and 3 with --

19 (Simultaneous speaking.)

20 MEMBER BLEY: --with 1, 2 and 3 up there?
21 They're orthogonal.

22 MEMBER STETKAR: No. I can -- they're
23 orthogonal in a sense. In the Activity 1, we've
24 defined three categories. I'll say three. They're
25 talking about a new design enhancement, whatever it's

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1 called, design something.

2 Design basis extension category, sorry.

3 That category that is not safety-related
4 deterministic, etcetera, simply applies to things that
5 we have rulemaking for; is that correct? Is that
6 correct?

7 MR. DOYLE: Could you say that one more
8 time? I mean I guess I could try to say --

9 MEMBER STETKAR: To go into the design
10 basis extension category --

11 MEMBER BLEY: It's gotta be a rule.

12 MEMBER STETKAR: It's gotta be rulemaking.

13 MEMBER BLEY: Right.

14 MEMBER STETKAR: If it's rulemaking, it's
15 not a voluntary initiative.

16 MEMBER BLEY: Right.

17 MR. DOYLE: That's true.

18 MS. HELTON: Right.

19 MEMBER STETKAR: So any voluntary
20 initiative that is accepted, any Type 2 voluntary
21 initiative that is accepted by the staff will not have
22 treatment applied as if it were in the design basis
23 extension category; is that correct?

24 MR. MIZUNO: I'm going to take exception
25 with the staff, okay. I think the answer is that a

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1 design basis extension matter could be either a rule
2 or it could be the subject of a voluntary initiative.

3 Which way you go will be determined by following this
4 approach.

5 You first determine -- let's just say,
6 let's just take Event X or Issue X, okay, whatever it
7 may be, seismic, new corrosion issue, okay. We've
8 determined it's not adequate protection, okay.

9 MEMBER BLEY: It's not in the current
10 rule.

11 MR. MIZUNO: It's not a current rule,
12 okay. So now the question is the NRC is deciding
13 should we go forward with rulemaking to address
14 phenomenon X or issue X? Under this approach, we
15 would first determine, because we've already
16 determined it's not inadequate protection.

17 We would first determine is there a high
18 likelihood of maintenance of an industry initiative?
19 Is it -- if in fact an industry initiative is being
20 proposed, okay. If there is --

21 MEMBER ARMIJO: What about FLEX? Yeah, I
22 understand that. What about FLEX? Is FLEX going to
23 be a rule, or would it -- could it be satisfied by a
24 voluntary initiative?

25 MR. MIZUNO: Okay, let's use FLEX. Okay,

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1 that's a -- we have a voluntary industry initiative
2 there, okay.

3 Under this approach, okay, and again I
4 have to assume that the Commission has made a
5 determination that FLEX is not adequate protection,
6 okay, which I'm not sure whether they've actually said
7 that finally or not, okay.

8 MEMBER BROWN: And assume that it's not
9 adequate protection.

10 MR. MIZUNO: That it's not adequate.
11 Because if it's adequate protection --

12 MEMBER ARMIJO: Then there's no measure.

13 MR. MIZUNO: --then it must a rule.

14 MEMBER BROWN: It must be a rule. That's
15 what I'm trying to say.

16 MEMBER STETKAR: We don't know whether
17 it's in Bin 1 or Bin 2.

18 MR. MIZUNO: Right. But nothing in here
19 is going to help you decide whether this is adequate
20 protection or not, okay? So I'm just saying once
21 someone, the decision-maker, the Commission, makes a
22 determination this is not adequate protection, now
23 you're going to -- and we know it's not a rule, now we
24 have FLEX.

25 Industry has come in with this and says we

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1 think that this is sufficient to address your issue.
2 The staff should, under this process, make our initial
3 determination, is there a high likelihood of
4 maintenance.

5 If the Commission, I'm sorry, if the staff
6 makes a determination and shows that yes, there is a
7 high likelihood of maintenance, then the Commission --

8 Then the staff would perform the
9 regulatory analysis, taking to account the benefits
10 that are already to be achieved under the industry
11 initiative, and then determine --

12 MEMBER STETKAR: That would be the
13 baseline case.

14 MR. MIZUNO: Right, and then determine is
15 there any additional benefit that is not going to be
16 achieved through the industry initiative, and would
17 that then meet the regulatory analysis requirements
18 for forefit, or the substantial safety benefit test
19 for backfits, okay, because you know we have --

20 Again, we have to worry about both future
21 plants as well as existing plants. If it doesn't pass
22 any of those things, okay, then that -- then the NRC's
23 rulemaking effort dies, and you're going to rely
24 solely on the industry initiative.

25 However, if there is an increment, okay,

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1 that is not achieved by the industry initiative, and
2 we're talking about existing plants, we can
3 demonstrate that it's a substantial safety increase,
4 then the rulemaking will proceed. Or may proceed, may
5 proceed, right.

6 If for future plants or, you know, going
7 forward, if we can show that from a regulatory
8 analysis standpoint that there is a justified benefit,
9 given the cost, then the rulemaking would proceed, but
10 only for future plants. I mean for plants that are
11 licensed after the final rule.

12 MEMBER BLEY: That really helps me, but
13 before we dig deeper into it, is the staff in
14 agreement with what Geary's told us here?

15 MS. HELTON: Yes.

16 MEMBER BLEY: Or do we have something that
17 needs to get resolved at some other point in time?

18 (Simultaneous speaking.)

19 MS. HELTON: --in consideration, if I
20 could jump in real quickly. Within the context of
21 voluntary initiatives, what about FLEX? FLEX is
22 certainly something that the industry took on
23 voluntarily. However, the NRC issued the mitigating
24 strategies order. That's an adequate protection
25 order. FLEX is a way that the industry is choosing to

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1 meet that order. That would be a Type 1 voluntary
2 initiative.

3 That's not really the focus of the staff's
4 presentation today. We're really talking about these
5 Type 2 voluntary initiatives, which are not a method
6 for meeting an existing regulatory requirement, such
7 as the mitigating strategy order.

8 MEMBER BLEY: But the issue -- you're
9 agreeing, okay. The issue could be one that fits into
10 this design basis extension category?

11 MS. HELTON: It could be, and thank you
12 for mentioning that.

13 MEMBER BLEY: I mean that's where all this
14 discussion started.

15 MS. HELTON: Exactly, and thank you for
16 mentioning that, because that reminds me of the other
17 thing that I wanted, the other point that I wanted to
18 make, is that we don't need to have those categories
19 set, in order to go forward with the staff's
20 recommendation on how to improve our treatment of
21 voluntary initiatives.

22 It's an interesting philosophical
23 discussion, and I don't disagree with what Geary said.

24 I'm not sure about the other staff. But in order for
25 us to tighten up our control, you know, oversight,

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1 inspection, audit, however we go forward doing it, you
2 know, one of the backup slides, Slide 561, shows a
3 number of existing Type 2 initiatives.

4 If you look at that list, you'll see that,
5 you know, a number of these things are now the subject
6 of ongoing orders or rulemaking activities,
7 Recommendation 8, Recommendation 4 and others, and
8 then we --

9 You know, part of our recommendation at
10 the end will talk about, for those things that are not
11 covered on here, we plan on doing a screening to go
12 after those existing Type 2 initiatives that we think
13 have the most safety significance, to see if they've
14 been implemented and maintained, in accordance with
15 the assumptions that we made when we did a regulatory
16 analysis, that gave credit in the baseline case to
17 these Type 2 initiatives, and decided not to take
18 further regulatory action.

19 If our audits or what-not have come to the
20 conclusion that you know, these Type 2 initiatives are
21 kind of bad on the vine. There's not enough activity.

22 We're not comfortable with the level of safety that
23 they're providing, that could feed back into our
24 regulatory process in the form of do we need to do a
25 plant-specific backfit? Do we need to do a generic

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1 order? Is it a rulemaking activity?

2 At that point, I think then you start to
3 think about the design extension category that Geary
4 was talking about. Did that help?

5 MEMBER STETKAR: Yeah. You've really
6 confused me now.

7 MS. HELTON: Oh good.

8 MEMBER STETKAR: Let's take one off this,
9 and no, no, no. Go back to your backup slide.

10 MS. HELTON: Sorry.

11 MEMBER STETKAR: Hydrogen igniters. Okay.
12 That's an existing initiative. You said the staff is
13 already looking at that. Maybe we need to tighten up
14 things, I think I'll use your words, for that issue,
15 for that initiative.

16 But you don't care about whether or not
17 there is a design basis extension category of event or
18 not. That's what I heard you say. You don't care,
19 because you can proceed -- the way that the world
20 works, you can proceed and tighten that stuff up, and
21 you can do it differently for each of those however
22 many things there are.

23 I thought the whole purpose of having this
24 other category, if indeed these Type 2 initiatives
25 could fall within that design extension category of

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1 events, was to instill some sort of consistency in the
2 way we treat things that are important enough to put
3 in that category.

4 So now I don't understand why you don't
5 care whether or not there's a design extension --
6 design basis extension category, or whether any of
7 these events would fall in that category.

8 MR. MIZUNO: Okay, John.

9 MEMBER STETKAR: Now you're going to say
10 that's retrospective and we're only looking at
11 forward-fitting, and I'm saying to me, that's silly.
12 But go on.

13 MR. MIZUNO: No, no. I think it is very
14 important, because again, the purpose -- whether or
15 not we're relying upon a voluntary industry initiative
16 for these Type 2 things, okay, it's -- it doesn't
17 depend upon the existence of the categorization of the
18 design basis extension, okay.

19 But if we are going to go forward with
20 rulemaking, if we determine that we can go forward
21 with rulemaking on, and we don't need -- we're not
22 going to rely upon a voluntary industry initiative,
23 then the categorization becomes very important,
24 because if this is a -- because we assume that this is
25 in fact one of these Category 2 things, I think,

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1 although I have to admit, there's a possibility that
2 we might call this thing a design basis, a real design
3 basis thing.

4 But I think the likelihood is very low, as
5 a practical matter. The guidelines that -- for
6 treatment of everything that we're going to develop
7 under the categorization improvement activity would
8 become relevant and would have to be followed in our
9 rulemaking that deals with that particular subject.

10 MEMBER STETKAR: But Geary, that goes back
11 to what I thought my original interpretation was. You
12 used the key word "rulemaking," that if it's
13 determined that rulemaking is necessary, then it could
14 be thrown into this design basis extension category.

15 If it's determined that rulemaking is not
16 necessary, as it was determined with hydrogen
17 igniters, for example, then that particular initiative
18 would not be part of the design basis extension bin
19 of things; is that correct?

20 MR. MIZUNO: Okay. Let me be -- let me
21 answer that precisely, okay. It might be that in the
22 course of explaining why we're relying upon the
23 voluntary industry initiative, we might say that we
24 consider it to be within design basis extension
25 category.

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1 In other words, we might characterize it
2 as that. But since it is a voluntary industry
3 initiative, we are not going to impose, because we
4 don't have any capability to do that, to say that the
5 industry initiative must have all the attributes and
6 comply with the internal guidance that we've created,
7 in terms of how you deal with things like QA and
8 change controls and EQ and all these other things that
9 we're talking about.

10 The industry has put up their best effort
11 or what they can agree to as to how to demonstrate
12 that the underlying safety issue is being adequately
13 addressed. They might have a lot of variation. It
14 might not comply with our thing.

15 Hopefully, they will actually look at it
16 and try and get their initiative to comply with that.

17 But we can't force them, and so that's the nature of
18 voluntary initiative, voluntary industry initiative.
19 They offer up something. Can we actually say no, you
20 have to actually do it legally. That's rulemaking or
21 issuance of orders. They're basically the same.

22 MEMBER BLEY: But you might hit a point
23 where you say look, if you don't do this other thing,
24 we're going to hold a rulemaking on this.

25 MR. MIZUNO: But under this initiative,

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1 we're only going to do it consistent with what we told
2 you here, which is first, is there a high likelihood
3 that the industry initiative is going to be
4 maintained?

5 MEMBER BLEY: But that isn't -- that isn't
6 defined yet. Unless that's defined, it could --

7 MR. MIZUNO: Part of our activity will be
8 to develop those kind of criteria, and then if we have
9 that high likelihood, we will then do the regulatory
10 analysis, do the backfit analysis. Can we justify
11 going forward, okay.

12 If we can't, the industry initiative is --
13 fully achieves what we, or you know, substantially
14 achieves what we have, and we, you know, the criteria
15 for regulatory analysis are not met, given the fact
16 that we have the industry initiative there, or we
17 can't backfit on it, given the existing --

18 Given the benefits that are going to be
19 achieved by the initiative, that we would not proceed
20 to rulemaking, and we would not have the consistency
21 that we would get under Improvement Activity 1.

22 That's a given. I mean that sort of
23 follows. I don't think we need to tell people that,
24 you know.

25 MEMBER BLEY: There's a place where -- I'm

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1 sensing John's discomfort, and let me try something
2 and maybe both of you can address this. Some event's
3 sitting there.

4 If we were to do rulemaking, it would fit
5 into this new category. If we don't do rulemaking,
6 the event's still there, and in principle it could fit
7 into one of the categories, either the design basis or
8 this extension.

9 But if you handle it under the Type 2 with
10 the industry initiative, and I think John's problem is
11 if it's called a design extension basis event, design
12 basis extension event, then all of this stuff has to
13 apply to it. I think the truth is it can fit in that
14 category, but we won't be bringing all of that burden
15 to it if the industry effort appears to be reliable
16 enough.

17 MR. MIZUNO: That is correct, and I think
18 the way the industry would say it, in that situation,
19 was that this is a design basis extension category
20 event. But our industry initiative was able to
21 address it sufficiently, so that rulemaking was not
22 justified. So the NRC can walk away and be satisfied
23 that the design basis extension category event or
24 accident, whatever we want to call it, has been
25 addressed sufficient to satisfy NRC's regulatory

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1 goals.

2 MEMBER STETKAR: I hear those words, and I
3 understand that concept. But I come back to the way
4 that that design extension, design basis extension
5 category is characterized in the SECY paper, with the
6 words that we've heard orally and the words that I
7 read about the goal is to apply consistent
8 requirements for treatment within that category.

9 Well certainly these events, put in that
10 category, are not going to see, achieve that
11 consistent.

12 MR. MIZUNO: That's correct.

13 MEMBER STETKAR: So there's that. The
14 adequate protection ones are not going to have that
15 consistent set.

16 CHAIRMAN SCHULTZ: I think consistent
17 approach was defined for rulemaking activity, not for
18 design basis extension category.

19 MR. DUDLEY: That's correct.

20 MEMBER BROWN: But it still fundamentally
21 comes down to -- I want to get back to the adequate
22 protection thing, because we diverged in the
23 discussion. It comes down to if you determine that a
24 voluntary initiative is in place, and you don't decide
25 to go with a rulemaking, therefore some of the other

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1 stuff that would fall under that if you had a
2 rulemaking, in terms of what you would expect industry
3 to do, you have to come to the conclusion that if
4 those aren't done, you still have adequate protection.

5 That's the way that first bullet and the
6 second -- that's the way you've got those two bullets
7 set up. So I'm a little bit fuzzy on your discussion
8 about how you can do these things, but it's not a
9 design basis extension. Adequate protection is still
10 -- you need a rule.

11 MEMBER BLEY: And nobody's arguing that.

12 MEMBER BROWN: I know. But if they go to
13 a voluntary -- they're arguing a voluntary initiative
14 will decide that they don't put it into one of these
15 other baskets --

16 MEMBER BLEY: Not on adequate protection.

17 MS. HELTON: Not on adequate protection.

18 MEMBER STETKAR: You can't put on a
19 voluntary initiative to an adequate protection issue.
20 No way.

21 (Simultaneous speaking.)

22 MEMBER BROWN: Mutually exclusive. I
23 don't see how the adequate protection, the design --
24 beyond design, the design basis extension category, I
25 don't -- how is that divided up? Is some of that not

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1 adequate protection?

2 MEMBER BLEY: Oh yeah. It depends on what
3 the event is, and if the event would be an adequate
4 protection issue, then they have to go by rule.

5 MS. HELTON: Right.

6 MR. MIZUNO: Right. So you could have a
7 situation --

8 MEMBER BLEY: You'd have to look at each
9 one.

10 MR. MIZUNO: Right. So you could have,
11 again, because the staff has decided that this design
12 basis extension category of events can consist of both
13 adequate protection measures and safety hazards, you
14 could have an event categorized as adequate
15 protection, in which case the staff must -- the NRC
16 must always go through rulemaking to address that
17 event.

18 You would not be permitted, under the
19 existing Commission policy of relying upon a voluntary
20 industry initiative.

21 MEMBER STETKAR: But essentially, I think
22 in my simple-minded nature now, because that design
23 basis extension category can have sort of three
24 flavors of events. It can have adequate protection,
25 events that are thrown in there because they're

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1 adequate protection decisions, which obviously entail
2 rulemaking.

3 They're events that there was a regulatory
4 analysis performed to show that there's a cost
5 beneficial safety improvement, and therefore you
6 proceeded with rulemaking. Those are not adequate
7 protection, but they're justified on a cost-benefit
8 basis, and involved rulemaking.

9 What I'm hearing today is there may be
10 events in there that were not justified as cost
11 beneficial to justify rulemaking, but may be in there
12 because they were important enough that without the
13 voluntary initiative, they would have required
14 rulemaking. Is that --

15 MEMBER ARMIJO: No. I heard something
16 slightly different, that there could be a situation in
17 which you had a safety enhancement that either made or
18 didn't make the -- meet the criteria. But the staff
19 would still be satisfied with a voluntary initiative,
20 provided it met the requirements. So it was --

21 MEMBER STETKAR: I think we're saying the
22 same thing. But those could be in that -- in the
23 design basis enhancement category.

24 MR. MIZUNO: Yes, yeah.

25 MEMBER STETKAR: But they don't involve

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1 rulemaking.

2 MR. MIZUNO: Correct.

3 MEMBER STETKAR: They do not involve
4 rulemaking.

5 MS. HELTON: The nature of the staff's
6 recommendations with respect to Activity 1 on the
7 categorization are really geared toward rulemaking
8 requirements, and so I think I philosophically agree.
9 It's an interesting linkage, and the discussion's
10 very interesting.

11 But the way that with Improvement Activity
12 3 focused on voluntary initiatives of the industry
13 here. But I don't think we were really linking that
14 specifically to Improvement Activity 1, since in
15 Improvement Activity 1, we were really looking at when
16 you go through a rulemaking in the design extension
17 category, what are the necessary -- what are the
18 necessary elements for that rulemaking?

19 What existing rules already might populate
20 that design extension category, and forward-looking,
21 you know, let's be more cognizant about whether things
22 fit into design basis or the design extension. And
23 then, you know, fundamentally, the staff's
24 recommending to go forward with all three improvement
25 activities, and it could fit together the way that

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1 you're describing.

2 But for what we're recommending with the
3 voluntary initiatives, it's really -- it can be done
4 independently. If the Commission directs the staff --
5 we kind of present it in the SECY paper, an a la carte
6 menu if you will, we can make some improvements in the
7 categorization; we can make some improvements with
8 defense indepth; and/or we can make some improvements
9 in voluntary initiatives.

10 This discussion aside, I think it's really
11 a consumable portion. There are some issues with how
12 voluntary initiatives have progressed over time.
13 We've got some suggestions for making an improvement
14 in that regard. That's really the focus of our
15 recommendation, as it turned out in the paper. But
16 this is a really interesting --

17 MALE PARTICIPANT: Discussion.

18 CHAIRMAN SCHULTZ: But the first bullet is
19 a reaffirmation. The second and the third bullet are
20 new expectations.

21 MR. DOYLE: That's right.

22 CHAIRMAN SCHULTZ: New expectations that
23 will apply to an industry initiative that's proposed,
24 in order to be accepted as something that's going to
25 be considered in the regulatory process.

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1 MS. HELTON: Right.

2 MR. DOYLE: That's right. So we've
3 already talked about the second bullet. So the third
4 bullet is the part of it, is the oversight part. So
5 that's another part of our recommendation, is
6 basically to increase or improve, clarify oversight
7 for situations where we have decided not to impose the
8 requirement, because of the existence of this
9 initiative, and that we believe it will be effective,
10 that we will provide guidance and revise the oversight
11 processes to verify implementation and effectiveness
12 of future Type 2 initiatives that we believe are
13 important.

14 So we're not promising every single one,
15 but that there would be -- that that question would be
16 asked, and one of the comments that we got is why are
17 we trying to put a footprint on things that are not
18 important I think was the essential gist of it.

19 Just to respond to that here, is that to
20 point out again that for these Type 2 things, the
21 shorthand, what we mean by that is for things that
22 could justify a regulation, if not for this industry
23 reaction. So we're not talking about just any
24 industry initiative or for things that would not rise
25 to the level of justifying regulations.

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1 So just to make that point, to respond to
2 the comment questions that have come up.

3 CHAIRMAN SCHULTZ: But again, Bullets 2
4 and 3 will create a new, whatever page that was, 61,
5 a new list of industry initiatives that would
6 recognized by the agency as being acceptable in a
7 continuing fashion. If the effectiveness and the
8 maintenance of the programs run forward, as expected,
9 they will be credited. They can be credited in future
10 regulatory evaluations.

11 MEMBER ARMIJO: If they meet the criteria.

12 MR. MIZUNO: The answer is yes, and what
13 we're -- what we've been discussing and what we would
14 actually do if the Commission approved it, or sorry,
15 if we go forward with this, I mean I think we are
16 going to, is that we have to worry about how is this
17 list going to be prepared, and how is it going to be
18 documented?

19 Are we going to -- is this going to be a
20 solely NRC-generated list? How are we going to
21 promulgate it to the licensing bases? In what manner
22 would it be documented in licensing basis, all that
23 kind of stuff. We understand that we have had Working
24 Group discussions about that, but we realize that we
25 cannot solve that.

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1 We know that there's that issue, and we
2 have to resolve it, and that will be resolved, you
3 know, in the future. But we do know that that issue
4 of documentation exists, and I think our SECY paper or
5 the enclosure both talk about the possibility of
6 having to go forward with some additional regulatory
7 products, which may include rulemaking to require or
8 to implement our vision.

9 But we haven't yet determined what is
10 necessary. All we know is that the issue exists, and
11 we have to come up with answers.

12 MEMBER RAY: Let's consider 50.55(a) for a
13 minute. ASME comes out with a change to the Code.
14 It's got to be incorporated as a change that's
15 permitted in a revision to 50.55(a). What's the
16 analog here for an initiative? Nothing can stay the
17 same forever. It's got to be subject to change.

18 MR. MIZUNO: Yes, I agree.

19 MEMBER RAY: So they're presumably, but I
20 don't know for sure, you have some mechanism to
21 recognize changes.

22 MR. MIZUNO: We recognize that. The issue
23 of, I'm going to call it change control of a voluntary
24 industry initiative is something that we need to deal
25 with, and the only question is how do we do that and

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1 whether we actually can rely upon the initiative to --
2 hopefully the industry recognizes that, and they will
3 actually say in their initiative how they're going to
4 deal with that issue.

5 But if they don't, whether we either
6 impose an internal reporting mechanism or have an
7 actual rule that requires it or have some oversight,
8 again, I mean we -- like I said, we recognize the
9 issue. We know that things cannot just remain stable.

10 Licensees are going to want to change things. They
11 are going to change things, because these are
12 voluntary industry initiatives, and we just have to
13 have a handle on that and know what our position is,
14 in terms of having regulatory oversight.

15 MEMBER RAY: Well, okay. You don't know
16 the answer now is what you're telling me.

17 MR. MIZUNO: That's correct.

18 MEMBER RAY: But it does seem to me that
19 we ought to know that before we finish whatever input
20 we're going to make to it.

21 MR. MIZUNO: Well I mean we --

22 MS. DROUIN: We're not trying to figure
23 out all the answers here. We're just making a
24 recommendation to move forward, and to inform the
25 Commission that, you know, if we go down this route,

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1 it's also going to involve doing these other things.

2 We will not have developed those other
3 things, but you know, we would just identify for the
4 Commission --

5 MEMBER RAY: That's fine, Mary. But I
6 mean I just -- I never saw this reflected. It's as if
7 the initiative is at one moment in time, and then ten
8 years later it's still the same thing as it was
9 before, and that just can't be true.

10 MS. DROUIN: Well then, that's on our --

11 MR. DUDLEY: Right. We'll figure out how
12 to deal with that.

13 MS. DROUIN: We need to go back and re-
14 read and our SECY paper, and see where it's giving
15 that perception, because that's not the perception we
16 wanted to give.

17 MEMBER RAY: Well, okay. That's fine. I
18 accept that. But it's important enough that to me it
19 needs to be explicit and clear, that you've got to
20 adhere to this initiative until and unless a change is
21 accepted.

22 MR. DUDLEY: What we're doing with this
23 SECY paper right now is trying to get the Commission
24 to authorize us to spend the time and the resources to
25 fully investigate the area of voluntary initiatives.

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1 We haven't done it yet. You've made it very clear
2 that we haven't, and we acknowledge that.

3 If the Commission approves that we spend
4 the time and the resources to fully evaluate and come
5 up with ways to address these voluntary initiatives,
6 then we will go forward with that effort and this
7 Committee will be part of that second step.

8 MEMBER RAY: That's fine. I just -- I
9 think that this is incomplete. It's so easy to say we
10 will simply accept or endorse or, as you say, a peer
11 review and verify an initiative, as if it was just a
12 moment in time and then it's gone.

13 MR. DUDLEY: Right.

14 MEMBER RAY: And that's not what you
15 intend, and the fact that it's not mainly complicates
16 life.

17 MS. DROUIN: Right, and we can have it
18 evaluated, you know, to its ultimate detail, and if
19 the Commission approves this and, you know, whoever
20 gets the duty, you know, like Dick will get.

21 (Laughter.)

22 MS. DROUIN: I've explained this, you
23 know, to the extent that it needs. I mean you know
24 the staff may come back and say hey look, whoa, this
25 is a lot more complicated than we ever thought. There

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1 are a lot more tentacles here, and you know what?
2 Commission, this is not a path to go down.

3 MEMBER RAY: Well, I would just suggest --
4 you mentioned IP Triple E here. I mean that's
5 something that happened at a moment in time. But
6 people see it in so many different ways, as something
7 that happened in the past and it's over with, or
8 something that's still --

9 I've had arguments with people over
10 whether it's part of the licensing basis or not, and
11 people use it in ways that are advantageous to them,
12 and choose to ignore it in ways that are not. I'm
13 just telling you, this is something that is a good
14 example, in my mind, of where there was something very
15 useful and valuable done at a point in time, but its
16 status today is very murky, I think.

17 MS. DROUIN: Absolutely.

18 MR. DOYLE: That's correct.

19 MEMBER RAY: And so I would urge you to
20 just use that as an example of how you can do
21 something really good, and then ten years later,
22 nobody knows really what its status is any longer.

23 MS. DROUIN: Well, and that's why, you
24 know, we have in there, you know, we'll effectively
25 implement and maintain the initiative, and then we as

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1 a regulator is going to make sure that on these
2 voluntary initiatives that are important, that they're
3 implemented and maintained over time.

4 MEMBER RAY: Okay. Well we've said
5 enough.

6 MR. MIZUNO: I guess the only thing I
7 might just observe was that IPE and IP Triple E were
8 not industry initiatives. So the fact that there's,
9 you know, a lack of clarity as to its status, that's
10 the NRC's fault. We have to accept responsibility.

11 (Simultaneous speaking.)

12 MEMBER RAY: I wasn't trying to assign
13 fault. I was just trying to use an example.

14 MR. MIZUNO: We know that there's
15 problems. I mean that's -- you could argue that
16 that's part of the patchwork that they were talking
17 about, okay.

18 So that's again, we understand that and
19 all these improvement activities are trying to get at
20 the very issue that you're talking about, I mean just
21 an aspect of that, although obviously IPE and I Triple
22 E, most of it is really not focused in terms of
23 Activity 3. It's more Activity 1 and 2, 1 especially.

24 MEMBER RAY: Well, it's also something
25 that's not well-understood, in terms of what its

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1 current status is, as I said. So therefore people use
2 it when it's an advantage and they ignore it when it's
3 not.

4 MR. MIZUNO: We agree.

5 MEMBER REMPE: Could you talk a little bit
6 about what you think will happen for accident
7 management guidelines? They're a Type 2 initiative.
8 Is it going to be addressed in another near term task
9 force? Actually, you don't expect it to fall within
10 this review probably or --

11 MR. DOYLE: Correct. It's already a part
12 of Recommendation 8.

13 MEMBER REMPE: Right. So you think even
14 though it is a Type 2, you probably won't be touching
15 it --

16 MR. DOYLE: It's just listed here and it's
17 discussed as an example up to now. But that
18 Recommendation 8 we're feeling is going to address
19 that in the future.

20 MEMBER REMPE: Okay.

21 MS. HELTON: Well, it will if that
22 rulemaking goes final. That's always a Commission
23 decision as to whether or not to finalize a
24 rulemaking. But right -- assuming that the Commission
25 approves the staff's proposed draft final rule, then

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1 it would come off the list.

2 MEMBER REMPE: So it will be taken away as
3 a voluntary industry action is what you expect, right?

4 MS. HELTON: Right, and in fact that's not
5 alone. There are a number of other things on this
6 existing Type 2 initiatives list that are actually
7 covered under some of the other ongoing actions from
8 the NTTF recommendations. But this is -- today, from
9 a completeness perspective, and it gives an idea of
10 the kinds of things that we're talking about with Type
11 2.

12 MEMBER REMPE: By the way, did we get a
13 copy of these backup slides?

14 MEMBER BALLINGER: I was kind of looking
15 around to see if I could find them.

16 MEMBER REMPE: I don't think we have
17 gotten one in the past.

18 MR. DOYLE: After the meeting, we have --
19 we brought, I think, everything that we could think
20 might be useful, and after the meeting, we're going to
21 send a copy to a representative of all the
22 presentation slides and any backup slides that were
23 used.

24 MEMBER REMPE: Electronically? That would
25 good.

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1 MEMBER BLEY: It's always attached to the
2 transcript.

3 MEMBER REMPE: Yeah, but that takes a
4 while. It would be nice, especially since we're
5 having a full Committee meeting later this week, it
6 would be nice to have.

7 MEMBER ARMIJO: If we could get them
8 before the full Committee meeting, that would be
9 helpful.

10 MR. DUDLEY: We'll do it this afternoon.

11 CHAIRMAN SCHULTZ: That would be helpful,
12 thank you.

13 MEMBER BROWN: Bullets 3 and 4. Bullet 2
14 and Bullet 3 states that you are going to establish,
15 provide guidance and oversight processes to verify the
16 effectiveness. So in other words, you're saying we're
17 going to confirm the high likelihood of voluntary
18 initiatives for future Type 2 initiatives.

19 The next bullet says we're going to go
20 look at existing Type 2 initiatives, and verify
21 implementation. When I flip to the next slide, it
22 just says we're going -- this is a process for future
23 Type 2. That's what the first bullet says. We'll
24 consider -- we'll update the guidance and the policy
25 for oversight of future Type 2 voluntary initiatives.

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1 Does that mean all? Once you've finished
2 Bullet 4, they never get looked at again, to verify
3 that they're likelihood is still valid or whatever?

4 MR. DOYLE: I think all of the existing
5 processes that were discussed earlier in the meeting
6 would, you know, continue to possibly catch concerns
7 with any of those activities. So if the NRC at some
8 point in the future decides that it needs to impose a
9 requirement related to --

10 MEMBER BROWN: I'm not talking about
11 requirement. I'm not talking about -- just you're
12 going to have an oversight process.

13 MALE PARTICIPANT: Inspection process.

14 MEMBER BROWN: Yeah. You're going to have
15 an oversight process, inspections, whatever they may
16 be, for future Type 2 industry initiatives.

17 MR. DOYLE: Yes. What we're proposing is
18 yes, that after --

19 MEMBER BROWN: Why not -- why wouldn't
20 existing Type 2 initiatives be folded in that, not as
21 a requirement, but as an oversight process review?

22 MR. DOYLE: Well, because the -- that
23 list, I think, is a little confusing or it's -- it was
24 -- the process in the past is, has been ad hoc and
25 very different. So everything on that list is not the

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1 same. There is not necessarily a regulatory analysis
2 for each of those things, and what exactly the
3 industry was proposing is sometimes not clear for
4 those things. So that was really -- that list was
5 developed to --

6 MEMBER BROWN: The page slide 61 list?

7 MR. DOYLE: 61, yes, was developed in
8 response to a question of like well, has this happened
9 in the past and what are some examples? So this is --
10 the main point that I am trying to communicate is the
11 concept of this decision process, not specifically
12 these things.

13 So this was included because the question
14 came up. But I think you pull the string on most of
15 these things, it would be challenging to really nail
16 down exactly what was committed or exactly what's
17 being proposed, and how that factored into some NRC
18 decision to not do something.

19 It's very convoluted and I think it would
20 be difficult to fold all of these things into the
21 future oversight process. I think that would be very
22 challenging. But we're proposing to screen these and
23 look at them more closely, and the ones that we think
24 are the most important and significant, to go at a
25 number of sites and verify the implementation and look

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1 and ask the question do we need to take action.

2 MEMBER BROWN: But that's a one-time --

3 MR. DOYLE: That's a one-time thing,
4 right.

5 MEMBER BROWN: Okay. After you've put
6 that one to bed, you walk away and I mean for
7 instance, hydrogen igniter backup power.

8 That would seem to be based on what had
9 been, you know, discussions that have been going on,
10 ongoing for the last couple of years. That would be
11 of a higher level of interest, in terms of maybe
12 folding that into looking at it from one of the future
13 ones you have to look at.

14 It just seems to me that just writing them
15 all off, as opposed to look at going through your list
16 and saying now which ones may be of a higher level of
17 safety concern, and not folding them into the future
18 list --

19 MR. DOYLE: I wouldn't characterize it as
20 writing them off, just because they're not --

21 MEMBER BROWN: Oh, I'm sorry. I didn't
22 mean to -- I wasn't trying to be pejorative.

23 MR. DOYLE: We're not trying to -- we're
24 not going to have --

25 MEMBER BROWN: On your one-time look and

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1 say that's a one-time look. I understand what one-
2 time looks are typically.

3 MR. DOYLE: Right, okay.

4 CHAIRMAN SCHULTZ: Could you amplify that
5 Bullet 4 for us, Dan?

6 MR. DOYLE: Yes. So the --

7 CHAIRMAN SCHULTZ: Just for my
8 understanding, what do you expect the outcomes to be
9 from this activity?

10 First off, in terms of identifying the
11 most safety-significant initiatives, how is that going
12 to be done? Is the full list going to be ordered,
13 rank ordered in some fashion and a line drawn to
14 identify those that decide not to look at, or below
15 the line do we not get credit for those, and is it --

16 Or to put it a different way. If the
17 staff looks at these safety-significant items and
18 determines that they're being implemented --
19 implementation is still effective and the maintenance
20 of the program is looking good at six to nine
21 facilities, does that mean that the industry gets
22 credit for those going forward?

23 MR. DOYLE: There is no -- well, the
24 result would be that not that they get credit, because
25 we're not really proposing a system for sort of

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1 ongoing credit for something on an ongoing basis.

2 But these are all -- this is really to
3 support a decision, which I think was part of what
4 Member Ray was getting at, is that I do view this as
5 for the decision of do we impose this requirement or
6 not?

7 But then there's also the oversight aspect
8 for things in the future. But that's not in the form
9 of giving credit in some specific place, other than
10 the credit means in your decision, in the NRC's
11 decision to impose this requirement or not, do we
12 credit it, do we take it into account when we're
13 developing this baseline case in the future?

14 That's where the credit is. So if we look
15 at these existing initiatives and believe that they
16 are being maintained, then the credit would come in if
17 in the future the NRC decided that it did want to put
18 a requirement in place.

19 Then we would acknowledge those things, we
20 would give them credit, we would factor them into this
21 baseline case. Yes, that's where the credit will
22 come.

23 CHAIRMAN SCHULTZ: And for those that
24 you're not reviewing, would they be given credit?

25 MR. DOYLE: Right. Well, I think if the

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1 NRC again proposed a requirement related to one of
2 those other items that we didn't look at, it would be
3 basically how we do it today and how we've been doing
4 it, you know, up until, you know, in the future if
5 this activity is not done.

6 It's just ad hoc, you know. Ask the
7 question does this make sense to look at that? Well,
8 there's some industry initiative that deals with this
9 issue. Well, let's get some information about it.

10 We have early interactions with industry
11 and the public, and ask the right questions, get the
12 right people involved and decide if how much credit
13 that thing should be given in the future.

14 So that's how we've done it in the past,
15 and that's how it would work for these other things
16 that are not examined under this look, this one-time
17 look.

18 CHAIRMAN SCHULTZ: Okay. But it doesn't
19 disqualify them out of hand, because they weren't
20 looked at now?

21 MR. DOYLE: Yes.

22 CHAIRMAN SCHULTZ: Okay.

23 MR. DOYLE: That's right.

24 MEMBER SKILLMAN: Dan, when you
25 communicate most safety-significant at six to nine

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1 facilities, are you allowing that among the six to
2 nine facilities you might have a dual unit site, and
3 what is most safety-significant at one unit might not
4 be the same as what is most safety-significant at the
5 second unit.

6 If there's a fleet, what is most safety-
7 significant at one plant in the fleet might not be as
8 safety-significant at another plant in the fleet.
9 What I'm trying to get at is are you intending to rank
10 order all of your Type 2s for the industry, or just on
11 a per unit basis?

12 MR. DOYLE: We're not going to attempt to
13 rank these on an industry level and assume that the
14 significance is the same at all sites. So we're not
15 going to specifically have this rank and conclude that
16 or make some statement that it's the same everywhere.

17 But I think there would be an attempt to
18 do sort of a, I guess you could say a ranking or a
19 screening, or an attempt to determine some, maybe just
20 one, perhaps low power shutdown risk that are -- that
21 would be worth sending some staff to go look and
22 reexamine whether or not the assumptions that were
23 made in the past to support the NRC not taking action,
24 like the low power shutdown or the rule, are were
25 those assumptions valid? Is that still the case?

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1 The question is do we need to -- the
2 purpose of this look, is to determine do we need to
3 take any action? That could be either at that site;
4 that could be some reporting requirement or it could
5 be a new rulemaking.

6 So that is a good question, a good point,
7 that there may be different levels of risk at
8 different units, perhaps on same site, or different
9 sites owned by the same operator.

10 So but that's -- I think the focus was to
11 go out and look at some, to go reexamine this
12 Fukushima, and the discussions after that has
13 highlighted that this is possible for the NRC to
14 credit these things.

15 It's just brought it to the top of
16 activities being proposed in Recommendation 1, that
17 there is an opportunity to improve the framework here,
18 that we essentially do this ad hoc and in some cases
19 rely on some things, make some assumptions, and
20 there's not a clear follow-up on that, that we think
21 there's an opportunity to clarify not for adequate
22 protection.

23 There should be this question of is it
24 highly likely to be implemented, and then if you do,
25 the NRC does rely on these things to have some follow-

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1 up in the future, depending on the situation. So
2 that's the purpose, and this lookback at the existing
3 ones was from a questionable, you know, what about
4 these decisions in the past? Should we go look, look
5 at.

6 This most safety-significant at six to
7 nine is attempting to look at some, and it's not to
8 that level of detail of ranking them at all sites or
9 anything like that. That's not the purpose of it.

10 MR. DUDLEY: It wasn't ever thought to be
11 a site-specific evaluation, I don't think. We're just
12 trying to get a -- if we find an initiative that we
13 think is -- when we look at the initiatives and we
14 find that that one or several that are the most
15 safety-significant, we're then just going to go out
16 and pick a certain number of sites, try to get a
17 representative sample, to then see how well that's
18 been maintained.

19 If it hasn't been maintained well, we'll
20 consider taking action for that issue, either site-
21 specific or on a generic basis, to initiate a
22 rulemaking.

23 MEMBER BLEY: Let me ask, follow this up a
24 little differently. Reading your document, even for
25 future events, where you'll be doing inspections and

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1 audits, you talk about enforceability being difficult,
2 and that about the only thing you can do is write a
3 notice of deviation.

4 Given that, do the words up here imply
5 that for previous Type 2 initiatives, which are
6 actually either equipment or practices in operating
7 facilities, the residents and inspectors are precluded
8 from (cough) as they do inspections or audits?

9 MR. DOYLE: No.

10 MEMBER BLEY: And if they're not
11 precluded, I guess I don't see what the distinction is
12 between them, because like you say, at most they can
13 write a notice of deviation, and they can do that now,
14 I would assume, if they're not meeting commitments.

15 MR. DOYLE: Well they can -- they're not
16 precluded from looking at previous industry
17 initiatives, or things, equipment or practices related
18 to that.

19 MEMBER BLEY: And what's the difference?

20 MR. DOYLE: The difference between what?

21 MEMBER BLEY: Future and existing, if all
22 we're going to do is occasionally have inspections or
23 audits that might find a deviation with a commitment,
24 then what are you --

25 MS. DROUIN: We don't it. We don't do it

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1 today.

2 MEMBER BLEY: Well, that's what I'm
3 asking. Are we precluded in the future from doing
4 that?

5 MR. DOYLE: Well, yes.

6 MEMBER BLEY: I would think the guy
7 walking around the plant would say hey, this thing
8 isn't --

9 MR. DOYLE: He would be precluded --

10 (Simultaneous speaking.)

11 MR. DOYLE: We would be precluded in the
12 future from issuing a violation associated with
13 something that's not a requirement. That's the case
14 now --

15 MEMBER BLEY: Yeah, but that's true for
16 anything that's in Type 2.

17 MR. DOYLE: So yes. So that's the same.
18 So you're asking what the difference is --

19 MEMBER BLEY: Why are we saying we're not
20 going to look at the past ones, if in fact all we're
21 doing is picking them up in inspections and audits,
22 and the most do with that is write a notice of
23 deviation if they aren't meeting their commitment?

24 MR. DOYLE: I'm trying to have feedback
25 for the decision to follow-up on the assumptions that

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1 were made. So the purpose of the oversight in the
2 future for these types of initiatives would not be to
3 look to be able to have violations or issue, or do --
4 take actions that are all about enforcement related to
5 those things if they are not done.

6 The purpose would be to gather information
7 and feed back to the decision of where we decided not
8 to impose the requirement.

9 MEMBER BLEY: You're talking around what
10 I'm asking. What you say in your document is the only
11 thing we can do with future Type 2s is if we pick them
12 up in an audit is write a notice of deviation.

13 MR. DUDLEY: Well, we're also looking at
14 maybe issuing a reporting requirement, and have
15 licensees report to us if they decide to stop
16 implementing a voluntary initiative.

17 MEMBER BLEY: Okay.

18 MR. DUDLEY: We may have, we may write --
19 even though we can't issue a violation, if we go out
20 and do inspect or audit these things, we can write a
21 notice of deviation, and a lot of times that gets the
22 issue taken care of. The licensee will --

23 MEMBER BLEY: And my point there was you
24 can do that with the current one.

25 MS. DROUIN: Yes.

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1 MS. HELTON: Yes.

2 MR. DUDLEY: Right.

3 MEMBER BLEY: So the big distinction
4 between the two is what I'm having difficulty with.
5 The words are it kind of sounds like you're not
6 allowed to look at the existing ones, but yeah, you
7 are.

8 MR. DUDLEY: You are.

9 MEMBER BLEY: Maybe you won't have
10 reporting requirements on them?

11 (Simultaneous speaking.)

12 MS. DROUIN: It's safety-significant. I
13 mean, you know, we've got voluntary initiative Type 2.

14 MEMBER BLEY: Yeah, we do.

15 MS. DROUIN: Okay. We know that some of
16 them have not been implemented the way they should
17 have been and have not been maintained. Put that
18 aside for a minute.

19 So we're going to say going into the
20 future, we don't want to continue the way we've gone
21 in the past. So for the ones that are safety-
22 significant, you know, we're going to add this on to
23 the many, many duties that the inspectors already
24 have.

25 So we can't come in and just have the

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1 inspectors just go chase everything down. So we're
2 going to look at it from a safety perspective, and say
3 okay, you know, inspectors. Go look at, you know, the
4 -- and that may change over time, because it may, as
5 we get more data and the licensees are doing a good
6 job, you know, maybe we don't inspect it as often or
7 whatever, you know. That will play out over time.

8 Now we've taken care of the future. Now
9 we say okay, let's go look at the past. Now we don't
10 want to chase down every voluntary initiative, because
11 some of them may not be safety-significant. So the
12 first thing we want to do is identify whether those
13 are safety-significant, and then we want to do some
14 sampling, and from the sampling to give us some
15 information of whether an issue on previous ones, on
16 previous safety-significant ones.

17 If there are, you know, we're going to
18 have the inspectors go look at those, and then
19 depending on what we find will dictate how we move
20 forward. I mean it's not any more complicated than
21 that, is it?

22 MEMBER STETKAR: Dennis, there's one
23 sentence that -- and Geary alluded to it quite a while
24 ago here, but there's one thing in here that says "In
25 the course of revising its policies and procedures,

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1 the staff may identify a need for a regulation
2 requiring the licensee to report certain information
3 regarding voluntary initiatives, and/or notify the NRC
4 if it intends to change its decision to implement or
5 maintain any industry initiative that the NRC has
6 publicly identified and relied on as a basis for not
7 pursuing rulemaking."

8 That's the only teeth that I could find in
9 this, that's different from the status quo. That is
10 the only difference I could find.

11 (Simultaneous speaking.)

12 MALE PARTICIPANT: And they may do that
13 for anything.

14 MS. DROUIN: Yes.

15 MR. MIZUNO: Well, this is Geary Mizuno.
16 I know you're saying teeth, in terms of a regulatory
17 legal requirement.

18 But remember, we have many different
19 considerations, and it may be just as effective, and
20 our management may determine that an inspection
21 approach on a periodic basis is sufficient, and that
22 we don't want to take the hit of having a reporting
23 rule in place.

24 MEMBER STETKAR: I understand. But I
25 think Dennis' point is you can do that now.

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1 (Simultaneous speaking.)

2 MEMBER BLEY: If the resident's going
3 around and you had a valve that was put in, and he's
4 sees the operator's disconnecting it, a week, two
5 weeks? I mean he can write a deviation on that right
6 now.

7 (Simultaneous speaking.)

8 MR. MIZUNO: Yes. All we're saying though
9 is you have to understand is right now, inspectors are
10 not tasked with looking at whether a particular matter
11 that they actually observe is in keeping with or in
12 keeping with the full set of voluntary initiatives.
13 There are so many voluntary initiatives out there.

14 (Simultaneous speaking.)

15 MEMBER BLEY: Do you know what that scope
16 is? I don't have a clue as to what that scope is.
17 There's so many voluntary initiatives.

18 MR. MIZUNO: Right. So I think what we're
19 trying to do here is to limit that scope.

20 MR. DOYLE: We have a list in the
21 attachment, Attachment 3 I think.

22 MR. MIZUNO: Part of our effort here was
23 to identify what that scope was. So we created a
24 list. We're not talking about what can we do. Yes,
25 we could -- we don't have, we don't need any rule to

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1 have an inspector go out and do that. All we're
2 saying is that right now, our current process doesn't
3 have that in place to --

4 MEMBER BLEY: As a requirement for the
5 inspector.

6 MR. MIZUNO: Correct, and so we're looking
7 at do we need to do something more to regularize that,
8 and how can we do that in the most resource-effective
9 manner, given as Mary Drouin said, the inspectors have
10 many obligations, and there are only two of them at
11 every site.

12 MEMBER BLEY: At the site I was thinking
13 of, you know, we've got a number of residents at every
14 site. They're familiar with the whole plant. They
15 wonder they whole plant, day after day after day. If
16 they see something laying apart for a week or two, I
17 assume they raise that as an issue, you know.

18 MR. DUDLEY: But do the residents even
19 know what all voluntary initiatives are in play at
20 each facility? They're not --

21 MALE PARTICIPANT: Well, they should.

22 MR. DUDLEY: They're not listed in any
23 particular place.

24 MS. DROUIN: Trained.

25 MEMBER BLEY: Does anybody know?

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1 MR. DUDLEY: I mean that's part of the
2 infrastructure that we're looking at, and going
3 forward, we want to have a handle on which initiatives
4 are in place, so that the resident can know what this
5 licensee is committed to do. So we're looking at --

6 (Simultaneous speaking.)

7 MEMBER BLEY: I'm sorry, go ahead.

8 MR. DUDLEY: So we just -- we do need to,
9 we believe, improve the situation and improve the
10 infrastructure, and this long list of initiatives, it
11 should probably be publicly available, because right
12 now, I don't think this information is all that
13 visible to members of the public. We need to make
14 sure that it can be transparent.

15 MEMBER SKILLMAN: I'd like to go back one
16 slide for a minute please.

17 MS. DROUIN: I don't go backwards.

18 (Laughter.)

19 MEMBER SKILLMAN: I'm stuck on the safety-
20 significant initiative at six to nine facilities, and
21 I just want to introduce the thought that what is
22 safety-significant might be dependent upon when you
23 pose this question. If you go to Arkansas right now,
24 heavy lifts might be very important. If you go to
25 Quad Cities, it might be cultural environment. If you

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1 go to, I think it was Limerick, it's a shutdown risk.

2 So you can have your catastrophe of the
3 day kind of swamp what is the most important safety
4 initiative. So I'm curious how you make sure that
5 what it is that you are appropriately trying to ping
6 really is representative, versus swamped by the
7 problem of the day? That's the thrust of my comment.

8 MR. DUDLEY: Okay, and we will certainly
9 try to factor in exactly what you say, the fact that
10 there are plant-specific issues, which you also
11 mentioned, and there are specific times in the
12 operating sequence of the plant that other issues are
13 more or less important.

14 We'll try to factor all that in our
15 assessment of which safety-significant issues that we
16 go out and inspect.

17 MEMBER SKILLMAN: Thank you.

18 MEMBER BALLINGER: I mean is this not a
19 job that the resident inspector can help you with, if
20 it's plant-specific? The resident inspector should
21 know, for example, that well he'd better know that
22 heavy lifts are a problem in Arkansas. That's an
23 extreme example.

24 But shouldn't the resident inspector have
25 an idea about the specific plant, which one of these

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1 voluntary initiatives are operative and important?
2 They could give you information so that you can decide
3 on which six to nine plants are important.

4 MR. DUDLEY: We can discuss that with our
5 Division of Inspection staff, and see whether they
6 think we should involve individual, you know,
7 information from individual residents or not. Right
8 now, we're not thinking that we need to.

9 MEMBER BALLINGER: I think I'm with
10 Dennis. I mean I think those resident inspectors can
11 play a pretty key role.

12 MEMBER BLEY: I think they probably do.

13 MEMBER BALLINGER: They probably do.
14 That's why --

15 MS. DROUIN: In each region, we have the
16 individual that's called the senior reactor --

17 MR. DUDLEY: Inspector.

18 MS. DROUIN: Senior risk.

19 MR. DUDLEY: SRA, senior risk analyst.

20 MS. DROUIN: Senior risk analyst.

21 MR. DUDLEY: Senior risk, all right.

22 MS. DROUIN: And those people are truly
23 familiar with the plant holistically, and understand
24 how it fits into risk, which then tells you, you know,
25 how important safety is. So you know, those people,

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1 you know, will play a role in this to the degree we
2 need them.

3 MR. DOYLE: Okay. So this slide talks
4 about this oversight for the future initiatives, and
5 there's a little more detail on how that would be
6 done. So this is the first sub-bullet there is we
7 would be updating internal staff guidance.

8 To highlight that in a previous version of
9 the paper, we had said either to issue a Commission
10 policy statement or revised internal guidance. So we
11 took out the part about suggesting doing the policy
12 statement. So what the paper says now is we're
13 proposing to revise the internal staff guidance.
14 That's how this would be done.

15 And examples of what we mean by guidance
16 is Management Directive 6.3 and the inspection program
17 guidance or office level instruction, or creating an
18 office level instruction for oversight of a particular
19 initiative in the future. No longer recommending the
20 policy statement. That's not necessary.

21 And the last bullet is this -- the
22 discussion we've had about possibly having a reporting
23 requirement or having a list somewhere that could be
24 looked at, so it would be clear at a particular site
25 this is what the licensee has proposed these types of

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1 initiatives.

2 This is a separate class of things, then,
3 regulatory commitments which are tracked in a
4 different program.

5 But the suggestion here and the paragraph
6 that was quoted earlier from the paper about the teeth
7 part, that suggestion there is to have this list and
8 this documentation requirement, to notify the NRC if
9 there's a change.

10 That's not being recommended, but we are
11 recommending exploring this, looking at a small sample
12 of existing initiatives that at a number of sites, and
13 then updating this guidance, and that may include
14 proposing a rule for this reporting requirement in the
15 future. But that's not a recommendation right now.

16 If the staff did wish to recommend that in
17 the future, then we would follow the normal process
18 for pursuing rulemakings and recommending them to the
19 Commission. Those are the two slides that I had.

20 CHAIRMAN SCHULTZ: Okay. It just seems as
21 if a documentation and reporting requirement, that
22 that could take many, many forms. But it certainly
23 seems like a component of any initiative that might be
24 proposed. It could take many forms. Reporting to the
25 resident inspector, reporting to Headquarters,

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1 reporting to the PRA team I mean, and documenting that
2 accordingly.

3 You'd think that it would be an element of
4 any industry initiative. Not a may, in other words,
5 but --

6 MALE PARTICIPANT: You think.

7 CHAIRMAN SCHULTZ: Yeah. The bullets that
8 you didn't address in your discussion, I didn't
9 understand the context, in this context what you were
10 getting at with regard to the Management Directive
11 6.3.

12 MR. DOYLE: That's an example of the type
13 of internal guidance that would be updated, to reflect
14 this new process of the policy.

15 CHAIRMAN SCHULTZ: Okay. So there's
16 elements in there that we would have to --

17 MR. DOYLE: We would provide guidance to -
18 -

19 (Simultaneous speaking.)

20 MR. DOYLE: --Management Directive 6.3.

21 MR. DUDLEY: Guidance to the staff, how to
22 implement this approach.

23 CHAIRMAN SCHULTZ: Okay. Those are the
24 tentacles that we need to make sure we caught. Okay,
25 thank you. Any other questions?

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1 MS. DROUIN: We're not proposing we
2 develop any new stuff. We're proposing to revise
3 current documents, and those are a sample of three.

4 CHAIRMAN SCHULTZ: Uh-huh, okay. Any
5 other questions for Dan on this Element No. 3?

6 (No response.)

7 CHAIRMAN SCHULTZ: Okay. With respect
8 just for clarification for the presenters, we asked
9 for the additional slides. Are we thinking only of
10 the slides that they have presented here to us? Okay.

11 MEMBER BROWN: We want a list of backup
12 slides.

13 MEMBER BLEY: All of them.

14 (Simultaneous speaking.)

15 CHAIRMAN SCHULTZ: I think it's
16 appropriate for them to -- yeah, that was the
17 question.

18 MEMBER REMPE: Slide 61 would be nice to
19 have.

20 (Simultaneous speaking.)

21 MR. DOYLE: And by the way, yes, we will
22 provide that. Both of those slides, by the way, were
23 used in the last presentation. They were sort of
24 normal presentation slides. There was no change to
25 those. But yes, we will send those here.

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1 CHAIRMAN SCHULTZ: Good. Well thank you.
2 So with that, we will adjourn for lunch, and we do
3 have an hour scheduled for lunch.

4 MALE PARTICIPANT: Good.

5 CHAIRMAN SCHULTZ: If we return at 1:45,
6 in terms of the segments that we have allocated time,
7 we'll be on schedule. So we'll return at 1:45.

8 (Whereupon, at 12:34 p.m., a luncheon
9 recess was taken until 1:46 p.m.)

10 CHAIRMAN SCHULTZ: I'll bring the meeting
11 back into session. And the next presentation is by
12 Mary Drouin. Mary, welcome to this afternoon, and we
13 look forward to your presentation.

14 MS. DROUIN: Thank you.

15 VI-VII. IMPROVEMENT ACTIVITY 2: ESTABLISH
16 COMMISSION EXPECTATIONS FOR DEFENSE-IN-DEPTH

17 MS. DROUIN: Okay. Slide 17. Improvement
18 activity 2 deals with a defense-in-depth policy
19 statement for reactors and just safety. And the SECY
20 paper is recommending that the Commission improve
21 development of such of a policy statement. We are not
22 developing a draft policy statement, a white paper
23 policy statement, whatever you want to call it, as
24 part of this effort. We're only recommending that one
25 be approved. But we tried to give the Commission an

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1 idea so if they approve it, you know, what our vision
2 of this policy statement would be. So we have tried
3 to give some examples of what might be in such a
4 policy statement. So, you know, we are saying that.

5 So we talk about, you know, what the
6 defense-in-depth structure would be, definition, you
7 know, a set of defense-in-depth principles, a set of
8 levels of defense, decision process, and decision
9 criteria. So these are all the things that in our
10 view would be in the policy statement.

11 And I have to step back for a second
12 because we should have revised this slide because it
13 is development of a reactor policy statement and
14 associated implementation guidance. So some of those
15 bullets would go in the implementation guidance, not
16 in the actual policy statement. You know, and how
17 many times all of us have looked at this slide and not
18 caught that until right now.

19 Now, we will not develop anything, as I
20 said before, until we get Commission approval to move
21 forward. And, you know at that point, you know, we
22 will start getting stakeholder input. And, you know,
23 we will I am sure be meeting with the ACRS on numerous
24 occasions if the Commission tells us to go forward and
25 do this.

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1 So this is an example of our thinking of
2 what the concept of the defense-in-depth for reactor
3 safety.

4 MEMBER STETKAR: Mary, remind me for a
5 moment. We have had some discussions with you
6 regarding the defense-in-depth topic under the risk
7 management task force.

8 MS. DROUIN: Yes, yes.

9 MEMBER STETKAR: Is the current vision
10 that this would be a, this policy statement that we're
11 discussing today would be a, separate standalone
12 nuclear power reactor-only policy statement or would
13 it be just an element of the broader policy statement
14 that has been discussed under the RMTF? And I didn't
15 see any slides --

16 MS. DROUIN: Well, if you would like,
17 there is a slot here that is part of the relationship
18 of 2150 and RMRF, that it might be better. We don't
19 have any slides --

20 MEMBER STETKAR: Yes.

21 MS. DROUIN: -- because we did not know
22 that was an item. But it might be better to discuss
23 that then.

24 MEMBER STETKAR: Okay.

25 MS. DROUIN: And let's just stick right

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1 now to this. And then we can talk about the
2 relationship because it is complicated. And I don't
3 know that we -- to be quite honest, I don't know that
4 we have a clear answer for you.

5 MEMBER STETKAR: Okay. Well, we'll get to
6 the complexity later, then. Thanks.

7 MS. DROUIN: You know, but on the surface,
8 just to give you a preview, on the surface, it does
9 have the appearance that there would be a separate
10 policy statement for reactor defense-in-depth and a
11 separate RMRF policy statement that includes
12 defense-in-depth. That is the way it appears on the
13 surface, but it's not real clear. And so we'll show
14 you the words that, you know, make--

15 MEMBER STETKAR: I read the words. And
16 that's why I asked.

17 MS. DROUIN: Yes. So, anyway, you know,
18 the concept --

19 CHAIRMAN SCHULTZ: Mary, before you go
20 forward, I just had a related question. One of the
21 documents that we were looking at with respect to
22 defense-in-depth is something that you worked on
23 previously, which is the NUREG-1860 document, --

24 MS. DROUIN: Yes.

25 CHAIRMAN SCHULTZ: -- which is feasibility

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1 state for risk-informed and performance-based
2 regulatory structure for future plant licensing. So I
3 was interested in knowing what the nexus was between
4 that work and what might be -- what you might be
5 proposing for this application.

6 MS. DROUIN: Let me just talk real quick
7 to that. Do they have the unfinished --

8 CHAIRMAN SCHULTZ: It's a nice piece of
9 work that was developed by that document.

10 MR. DUDLEY: Your enclosure?

11 MS. DROUIN: Yes. Was it in here?

12 MR. DUDLEY: No. This is just enclosure
13 1.

14 MS. DROUIN: Okay. We went back and
15 historically looked at what has been done, written on
16 defense-in-depth, going back all the way to 1947

17 CHAIRMAN SCHULTZ: Right.

18 MS. DROUIN: -- to try and get a sense of,
19 you know, what has been the thinking on
20 defense-in-depth. Now, we had done that in 1860. So
21 1860 had taken a look also.

22 CHAIRMAN SCHULTZ: Yes.

23 MS. DROUIN: A lot of the thinking we have
24 done here really does pull from 1860, but I don't want
25 to give over-credit to 1860 because 1860 really built

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1 upon the 30 years of history.

2 CHAIRMAN SCHULTZ: Correct, but it did
3 derive a fairly concise description of those elements
4 that --

5 MS. DROUIN: And you see some

6 CHAIRMAN SCHULTZ: -- you are proposing be
7 done here going forward.

8 MS. DROUIN: -- of that. When you read
9 the SECY paper and when you read RMRF, you know, you
10 will see pieces of it here and there. So, you know,
11 we didn't just lift it, but, you know, we did look at
12 it. There was some good language there. You know,
13 the concepts of, you know, the structuralists and the
14 rationalists, that concept exists, you know, doing
15 that hierarchical approach. You know, those concepts
16 and everything came out of 1860.

17 So, you know, in doing what we did here --
18 and you'll see a lot of similarities here as what you
19 read in the white paper on RMRF. And that was done
20 deliberately because we have done a lot of thinking
21 here. And we thought, you know, why do we want to
22 redo that thinking?

23 CHAIRMAN SCHULTZ: Sure.

24 MS. DROUIN: You know, I mean, we should
25 not throw that out. We shouldn't start all over

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1 again. We want to, you know, take credit for all of
2 the thinking that has been done.

3 So hopefully I answered --

4 CHAIRMAN SCHULTZ: That's fine.

5 MS. DROUIN: -- the question. You know,
6 we're updating that enclosure right now. There was a
7 major workshop in June in France. And we got a lot of
8 that material. There was another major workshop in
9 October. Unfortunately, it happened the week we were
10 furloughed. So we were having two senior people go,
11 and they couldn't attend. But hopefully we'll get
12 that material and see if there is anything to learn
13 from that because we are also trying to bring stuff in
14 and, you know, learn from the international folk.

15 So in looking at all of this -- and you
16 will see this is very similar to 1860. Eighteen sixty
17 had a fifth level, which dealt with security. This
18 doesn't deal with security. So you don't see that
19 level here.

20 But this is looking at -- and, you know,
21 this is where your PRA, you know, plays a role. And,
22 you know, what are the good lines of demarcation when
23 you keep asking, you know, what if, what if, what if.

24 You know, and at the very beginning, you don't want
25 anything to happen. You know, you want to try and

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1 preclude your events.

2 Now, these are all goals. You know, you
3 can never preclude, but you hopefully have your design
4 in operation, you know, such that, you know, you can
5 minimize, you know, those events that challenge
6 safety. So, you know, that's your first level of
7 defense. If your event still occurs, you know, you
8 want to mitigate it and try and prevent, you know,
9 going on to core damage. So that is your second
10 level. You know, if you still reach core damage, you
11 want to try and prevent from being released. So you
12 want to contain, you know, and confine those
13 radioactive materials. And then your fourth level is
14 that if you do release it to minimize the effects, you
15 know, to the public.

16 So this would be, you know, at your -- you
17 want to call your structuralists, your basic levels of
18 defense. When you talk about, you know, reactor
19 safety, these are what we are talking about.

20 Now, this next one -- and I think you have
21 seen this before. This would be, you know, the heart
22 at what is in the implementation guidance. And this
23 is new territory. There has been some work done in
24 this area by, you know, a few people, but this is now
25 trying to answer the question, okay. How much design

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1 and operation do I need for level 2 in preventing core
2 damage from a defense-in-depth perspective? How do I
3 know when I have enough? So, you know, these are
4 examples of the kinds of questions, you know, are your
5 principles implemented? You know, are your levels of
6 defense measures met? Now, you're going to have to
7 have criteria in answering those questions. You know,
8 are your safety margins adequate? You know, are your
9 known uncertainties adequately addressed? You know,
10 are your accepting guidelines met? And we just added
11 a little bit more here to show that it's, you know,
12 not quite so simple because you know, these are not
13 black and white answers.

14 For example, when you are talking about
15 your quantitative acceptance guidelines, well, you
16 know, maybe you are just challenging them versus
17 really exceeding them. And so there may be, you know,
18 the ability to come in and say, "Okay. I am just
19 challenging them. And this is only temporary. And I
20 am going to be able to monitor. So, then, maybe I am
21 okay." So these are the kinds of questions and things
22 that, you know, we would need to consider, you know,
23 in developing, you know, and making the determination
24 whether or not you have adequate defense-in-depth.

25 And the other thing to get for this

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1 picture is that this would be done for each level. So
2 you can't not meet. You can't just rely on one level
3 of defense. You can't just put everything in
4 preventing your events from occurring and not worrying
5 about mitigation. So we don't support the approach I
6 like to use that was the Gulf incident, where they had
7 the accident and they had no idea, nothing in place of
8 how to mitigate it. And you saw, you know, the
9 disaster that caused. So, you know, you have to have
10 something for each of the levels.

11 MEMBER REMPE: Mary, when I was reading
12 the enclosure, I saw comments about independence
13 between the various levels. And it was kind of back
14 and forth. And as you come up with guidance on this,
15 where do you think you are going to fall? Are you
16 going to ask for a lot of independence? How will you
17 treat it if some of these barriers aren't independent?
18 Have you thought about that much?

19 MS. DROUIN: We have not thought about,
20 you know, to what extent do you need independence. We
21 know that it is a criterion that we have to think
22 about.

23 So in terms of all of these things, you
24 know, we have not thought about the degree to which
25 you need to dwell into these and how much you need.

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1 That's what we have to work out. And this is where,
2 you know, the real challenge is going to be because
3 it's not that we haven't made these kinds of decisions
4 in the past. We have. We make them all the time.
5 But we don't keep track of it, and we revisit each
6 time for every new decision. We go back and relook at
7 it.

8 So we want to try and give, you know, some
9 kind of guidance so that, you know, as we have future
10 discussions, you know, we're all talking, you know,
11 from the same set of criteria and, you know, we have
12 common intelligent discussions and we don't have to go
13 back and reargue this, you know, all the time, which
14 is what we do.

15 You have probably heard me say this
16 before, but, you know, I think it bears repeating. I
17 think what we're trying to do here with
18 defense-in-depth is the same thing we tried to do and
19 did with the SALT process. And that is where, you
20 know, in a very subjective manner, you know, made the
21 determination on whether, you know, the plants in
22 their region were performing adequately in how they
23 graded them. And there was no process. And I think
24 licensees had the complete right to complain that, you
25 know, one region was being held to a different

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1 standard over another. And, you know, at the time, I
2 will tell you, you know, the NRC people fought that.
3 They were in love with the SALT process. And they
4 said, "You can never make this happen. You know, I
5 know a rock when I see it. But you know what? The
6 ROP is not perfect, but it is a great success as
7 compared."

8 And it gives everybody the same criteria
9 against which you can have these discussions. It
10 doesn't mean that you're all going to arrive at the
11 same conclusion, but you're using the same criteria
12 and the same process to get there. So to me, this is
13 the same thing, you know. Defense-in-depth has been
14 very subjective. And so now we're trying to identify
15 the criteria and the process, you know, to have so we
16 can have these common discussions and remove as much
17 as we can the subjectivity from the process.

18 Slide 20 is just, you know, a reiteration
19 of the previous slide. It's just putting words to it,
20 you know, looking at the significance of the known
21 uncertainties. You know, coming up with quantitative
22 acceptance guidelines, for example, having goals on
23 your component, your system and your human
24 reliability, having accident or damage prevention
25 quantitative goals, perhaps having something on risk

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1 of exposures of workers or public, overall risk. So
2 these are, you know, examples of the kind of
3 acceptance guidelines that we could come up with,
4 performance monitoring, that desire to, you know,
5 monitor the degradations in your performance, the
6 hazards that have to be considered, what are some
7 design standards, consequence criteria, response
8 capability. So these are just examples of, you know,
9 the kinds of criteria that we would be exploring and
10 coming up when we look at the decision process on
11 adequacy.

12 And a PRA may be used. And I have in
13 there, you know, "but in conjunction with
14 deterministic criteria." So you would not, you know,
15 fundamentally make a decision just based on
16 probabilities, but it could certainly provide
17 tremendous insight on how far you can go or whether
18 you have gone far enough.

19 Okay. Slide 21. I think this follows on,
20 you know, with my last bullet in that, you know, there
21 will be some -- well, I have to take back what I said.

22 You know, there will be some probabilistic criteria
23 where, you know, you are going to screen just on
24 probabilities. And meteors are a good example. Those
25 are screened on probabilities and we don't look at it

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1 from a deterministic because the probability of it is
2 so small.

3 MEMBER ARMIJO: John would argue with
4 that.

5 MEMBER STETKAR: Smaller than a 10-7 per
6 year high-wind event?

7 MS. DROUIN: Yes, I think it is.

8 MEMBER STETKAR: Have you ever looked at
9 it?

10 MS. DROUIN: Have I ever looked at what?

11 MEMBER STETKAR: Meteorite strikes.

12 MS. DROUIN: Personally myself? No. So
13 I'm just going --

14 MEMBER STETKAR: I don't want to get into
15 meteorites, but the whole notion of this is without
16 that consistent set of evaluation tools, you don't
17 know the answer to that. You just think that it's
18 less likely. Maybe it is. Maybe it isn't.

19 MS. DROUIN: Well, you --

20 MEMBER STETKAR: 10-7 is a small number,
21 you know. So we know we have words that say once in
22 10 million years for a wind of a certain amount, we
23 can say that's small enough to not worry about. We
24 have no defense-in-depth against a direct meteorite
25 strike of a certain size. We don't. That's something

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1 that is an acceptable risk. We just don't know how
2 likely it is. So we don't know, for example, if we
3 are willing to accept that lack of defense-in-depth at
4 whatever frequency and consequences. We don't have a
5 metric to understand how much defense-in-depth we need
6 for other types of things, do we?

7 MS. DROUIN: I do think that there are
8 certain things that we are not going to design against
9 and that we probably will have assumed, you know, the
10 probability. We may not have the best criteria or the
11 best information to defend what we think is the
12 frequency.

13 MEMBER STETKAR: Should we impose
14 stringent design requirements for things that are less
15 likely than that?

16 MS. DROUIN: Less likely than what?

17 MEMBER STETKAR: The things that you don't
18 know how unlikely they are but that we will accept as
19 being small enough that we don't need to design for.

20 MS. DROUIN: Yes, but the assumption that
21 goes in with that is that we do think that they are
22 less likely than what our threshold value is. If we
23 thought that they weren't, then we would be designing
24 against it. I'm just saying we may not have the best
25 data to justify our assumption.

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1 MEMBER RAY: Well, you know, also I think
2 it is a function of whether you can design against it
3 or not.

4 MEMBER STETKAR: That's a different issue.

5 MEMBER RAY: But it is related.

6 MEMBER STETKAR: It is related.

7 MEMBER RAY: It is.

8 MEMBER STETKAR: We think we can design
9 against a 10-7 wind because we think we can do that,
10 but we don't think we can design against a 10-6
11 earthquake. So we don't.

12 MEMBER RAY: Or a meteor.

13 MEMBER STETKAR: Or a meteor at 10- pick a
14 number. But in this more structure, the whole point
15 of this thing is because meteorites are a good
16 ludicrous example because nobody has really thought
17 about how likely they are, but everybody knows that
18 you can't design against them.

19 MEMBER ARMIJO: Well, up to its size.
20 There is a size which will bounce right off of the
21 containment.

22 MEMBER STETKAR: There is. It's pretty
23 darned small.

24 MEMBER ARMIJO: Well, you know, I remember
25 as a kid, John, since you keep bringing up meteorites,

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1 I remember as a kid seeing a picture of this lady who
2 had a rock about this size. It was a meteorite. It
3 came right through her house somewhere in
4 Pennsylvania, hit her on the hip, bruised her, and
5 they found it in the yard. Okay. I suspect that
6 would have bounced off of containment, but I can't
7 prove it.

8 MEMBER STETKAR: That's probably a size
9 that it will --

10 MEMBER ARMIJO: If it was that big, it was
11 stone or --

12 MEMBER STETKAR: That size, but one about
13 yea big will probably go through it. About a third of
14 a meteor will probably go through it. Anyway, I don't
15 want to get into it. The whole point here is that --

16 MEMBER BLEY: He doesn't want to get into
17 it because he knows the answer to that.

18 MEMBER STETKAR: If the whole purpose of
19 this is to develop a set of rational criteria, you
20 know, that's the notion that I am trying to challenge,
21 is how do you measure those criteria. How do you
22 measure the adequacy? Back to your previous slides,
23 you know, what tools do you use? You said, "Well, we
24 can use a mixture of deterministic and probabilistic
25 criteria."

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1 MS. DROUIN: Yes.

2 MEMBER STETKAR: And at this stage in the
3 game, it is certainly premature to try to divine what
4 the criteria might be or how you might actually do
5 those analyses.

6 MS. DROUIN: And that's my point because
7 we have not thought about it.

8 MEMBER STETKAR: But, again, here in this
9 case, you are dismissing PRAs out of hand. You are
10 saying that the benefits of having a PRA are not
11 justified by the costs. That's what the SECY paper
12 says for activity up to also.

13 MS. DROUIN: I'm dismissing -- I don't
14 like the word "dismissing." We are saying to --
15 because we are coming up with, the NRC, this criteria
16 -- and we're doing it generically. And that is not to
17 say that we aren't going to use insights from PRAs.
18 What we are saying is that once this is implemented,
19 it is not going to require a utility to develop a PRA.
20 However, you know, having a PRA will be extremely
21 useful.

22 Now I will jump ahead to the RMRF because
23 RMRF, you know, is looking at all of the various
24 risk-informed activities. So it is saying, "Okay.
25 Over time, you have to develop a plant-specific PRA if

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1 we're going to implement a risk management regulatory
2 framework because we are not holding it to a specific
3 activity." So that one is requiring a PRA over time
4 to be developed. This is just saying that, you know,
5 once we have the --

6 MEMBER STETKAR: What I hear you saying is
7 that it would be useful to have one, but you have
8 confidence that, even without a PRA, you can develop
9 sufficiently robust and consistent criteria that you
10 would have confidence in their --

11 MS. DROUIN: But, I mean, you know, it's
12 like the ROP. You know, the ROP does not require
13 licensees to develop a PRA. You know, we had the SPAR
14 models, and we have all of those same tools, which we
15 will use, you know, in developing the criteria of the
16 same thing here. So it is similar in that regard.

17 You know, and that's really all I had to
18 say, you know, on defense-in-depth. We weren't going
19 to go back and give you the whole presentation because
20 we had given it before. So we were just giving you,
21 you know, the latest of where we're at.

22 Now, if you want -- well, we can move on
23 to the relationship and come back to your first
24 question.

25 MEMBER STETKAR: Yes. If you can answer

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1 it quickly?

2 MS. DROUIN: I think the best thing is if,
3 Dan, you can put on the screen the SECY paper.

4 MR. DUDLEY: Just a second.

5 MS. DROUIN: Yes. Go to the one where
6 Mike Johnson changed the words.

7 MR. DUDLEY: It starts on page 7.

8 MS. DROUIN: On the relationship.

9 MR. DUDLEY: That's 7.

10 MEMBER STETKAR: Where the words were
11 changed.

12 MR. DUDLEY: Then it is on page 13, pages
13 7 and 13 of the marked-up copy. It will be a little
14 different.

15 MEMBER STETKAR: If it helps --

16 MS. DROUIN: If you look at the top of
17 page 6 here -- we're going to get to real heart in the
18 next part that was revised, but it says here, "The
19 Commission should it approve these may also direct
20 their implementation as an interim step before
21 completion."

22 MEMBER STETKAR: Yes.

23 MS. DROUIN: So this is really meant
24 across the whole SECY paper.

25 MEMBER STETKAR: What I was reading is in

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1 the version of the SECY paper on page 11.

2 MS. DROUIN: And that is the next one.
3 That is the real one.

4 MEMBER STETKAR: Okay. That's where
5 you're going. That's where it says, "Well, explain
6 the policy statement that is going to sort of be
7 informed by this somehow." I could read the quote.
8 We'll find it. It's right there.

9 MS. DROUIN: Yes. So I'll be honest. I
10 think you can interpret this many different ways. You
11 know, I mean, I'm not trying to point fingers, but,
12 you know, the working group -- you know, these are not
13 our words.

14 MEMBER STETKAR: The only reason I ask is
15 that I have no idea what the schedule for these
16 activities looks like. And it's not particularly
17 relevant.

18 MS. DROUIN: Well, it's very relevant.

19 MEMBER STETKAR: Well, it is for you but
20 not for my concern right at the moment. The concern I
21 have is that if this activity, improvement activity 2,
22 develops a defense-in-depth policy statement that is
23 very precisely targeted toward nuclear power reactors
24 and nothing else because that is the only thing we've
25 thought about and then, as a result of the RMRF

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1 activities at some later time because this implies
2 that they will be sequentially organized that way, you
3 start thinking about the issues of defense-in-depth in
4 a more holistic sense across all of the regulated
5 activities and issue a different policy statement or
6 one that is not particularly in line or because A is
7 issued before B, that B is unnecessarily constrained
8 because you say, "Well, we already issued this policy
9 statement. Perhaps we shouldn't have said that, but
10 we already said that. And we can't unsay it." That's
11 why I was a little bit confused because the --

12 MS. DROUIN: But you're not going to get
13 any argument from me that these are out of sync.

14 MEMBER STETKAR: Okay.

15 MS. DROUIN: We have felt they were out of
16 sync.

17 MEMBER STETKAR: Okay.

18 MS. DROUIN: I think that you can take,
19 which we have done -- we have taken a lot of the
20 thinking that we did for reactors and said, "Okay.
21 How can we use that thinking over here in RMRF?" And
22 we tweaked it a little bit. But I think at this
23 point, you know, for reactors, it should wait until
24 the RMRF is done because I'm not even sure that you
25 would even need a reactor policy statement."

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1 MEMBER STETKAR: A separate standalone
2 one, if you will.

3 MS. DROUIN: Right.

4 MEMBER STETKAR: That's what I mean. That
5 was my whole point, that --

6 MS. DROUIN: What you would need is the
7 implementation guidance.

8 MEMBER STETKAR: Yes, because the
9 implementation guidance, obviously, would be different
10 depending on each specific regulated activity, whether
11 it's medical isotopes or whether it is in nuclear
12 power reactors or ISFSIs or whatever it is.

13 MS. DROUIN: So I don't know how the
14 Commission is going to interpret these words. You
15 know, the Commission paper is due December the 9th.
16 We plan on doing a Commission TA briefing on RMRF
17 right after that.

18 MEMBER STETKAR: Okay.

19 MS. DROUIN: I don't know what more to --
20 I mean, I think you appreciate the quandary that we're
21 in here.

22 CHAIRMAN SCHULTZ: But staying with this
23 paragraph, do you at this point agree that that is a
24 good proposal as to how -- this is hard to move
25 forward, but is this a good approach to use to move

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1 the defense-in-depth process forward knowing that the
2 RMRF is going to happen later?

3 MS. DROUIN: I can just speak for myself
4 here.

5 CHAIRMAN SCHULTZ: And can we, in fact,
6 make a policy statement --

7 MS. DROUIN: Personally --

8 CHAIRMAN SCHULTZ: -- and make it useful?

9 MS. DROUIN: Personally I think that what
10 ought to be in here is to say that, you know, we
11 recommend that this be developed as part of RMRF, do
12 not make a recommendation to develop a reactor policy
13 statement.

14 I think that, you know -- but I am
15 speaking for myself. I think some of the members of
16 the working group agree with that. I don't know
17 that's the whole. But I think that once RMRF -- you
18 know, unfortunately, it came after NTTF. So once it
19 came up, then I think we should have put "Hey, wait a
20 second. There is an overlap. What makes more sense?"

21 I had no problem with NTTF going and doing
22 the thinking, but to make a recommendation so on the
23 surface it looks like we're recommending a separate
24 reactor defense policy statement and a separate RMRF,
25 personally I think that is a mistake.

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1 MEMBER STETKAR: It may not be, but the
2 only concern is that if the focused nuclear power
3 plant-specific statement came out first, the concern
4 would be that some nuances of the words in that
5 statement might unnecessarily constrain a broader
6 policy statement, one way or the other. And I just
7 find it to be not as inclusive or --

8 MS. DROUIN: The only thing I would add to
9 that --

10 MEMBER STETKAR: -- or make it more
11 implied inclusive than it needs to be.

12 MS. DROUIN: -- is that if you go to the
13 white paper and say, "Okay. We're going to write a
14 reactor defense-in-depth policy statement," it would
15 read very close to what is written there. We would
16 just remove the places where it, you know, gives it
17 the flexibility to be across the agency. So, you
18 know, in my mind, then, you are going to have two
19 policy statements that almost read identical, you
20 know, because, again, the details, you know, how you
21 do your decision criteria, how you make decisions, you
22 know, do not go in a policy statement. A policy
23 statement says, "I want you to develop. You know, we
24 are going to use decision criteria." But then those
25 decision criteria show up in implementation guidance.

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1 They don't show up.

2 And the other thing that -- I don't know
3 if you would do this for a reactor policy statement --
4 is that when you go and you read the white paper, we
5 have a sentence in there that says, "This has
6 overtaken the PRA policy statement."

7 MEMBER STETKAR: Yes.

8 MS. DROUIN: And the PRA policy statement
9 is -- I don't remember what the right words are, but
10 it basically says we withdraw it. And then the things
11 that were in the PRA policy statement now show up in
12 the RMRF white paper.

13 MEMBER STETKAR: Right.

14 MS. DROUIN: Now, the PRA policy statement
15 was written just for reactors. So would you do that
16 for a reactor defense-in-depth policy statement?

17 And then, again, we make the requirement
18 in the RMRF to have a PRA. So that I'll zip up.

19 MEMBER STETKAR: Thank you.

20 MR. DUDLEY: One comment I would like to
21 make is that I think the reason that we are in the
22 situation that we are doing the power reactor
23 defense-in-depth policy statement, in addition to the
24 overall agency-wide policy statement, is that there
25 was some concern by certain managers that the overall

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1 agency-wide policy statement might lag over time, but
2 because of the challenges in getting something that
3 could tie all of these different disparate program
4 offices together and the thought was that if you went
5 forward with the power reactor policy statement, that
6 was something that we had thought about already.

7 It is probably the thing that you need it
8 for the most. And it is possible that you can get it
9 implemented and in place much sooner if you go forward
10 with it and don't necessarily couple it to the
11 resolution of all of the agency-wide potential
12 contradictions trying to get an agency-wide policy
13 statement on defense-in-depth.

14 So I believe that was perhaps the basis
15 for a decision that we have where it looks like, you
16 know, there may be some -- not the best logical order,
17 but I think if you think about it, there were some
18 practical considerations that factored into that
19 decision.

20 MEMBER STETKAR: I just always have to say
21 this, that I recognize the pragmatism of that. On the
22 other hand, I also recognize some of the comments made
23 by both the NTTF and the risk management task force in
24 saying that perhaps in some cases we ought to not take
25 the most pragmatic approach because that can lead to

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1 fragmentation, that maybe sometimes it is better to
2 step back and take a more consistent, you know,
3 across-the-board approach, even though it is a little
4 more difficult.

5 CHAIRMAN SCHULTZ: We have heard both
6 opposing views.

7 MEMBER SKILLMAN: Dick and Mary, I would
8 like to ask a question here.

9 CHAIRMAN SCHULTZ: Sure.

10 MEMBER SKILLMAN: I am focusing on the
11 revised pages 25 and 26 of your enclosure 1. And the
12 question it has posed is, would the policy, the DID
13 policy, be applicable to new reactors only or also to
14 operating reactors? And the staff answers, "The staff
15 considered whether the new policy and any related
16 requirements would be applicable to currently
17 operating reactors, reactors licensed in the future,
18 or both. The staff believes that the new policy
19 should be applicable to all." So hold that thought.

20 In the next paragraph, I'm wondering if
21 there is an inconsistency. "A forward-looking
22 approach would not assess currently licensed plants
23 but would apply conditions, expectations for
24 defense-in-depth to new issues as they arise. This
25 could still lead to the imposition of backfits on

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1 plants, but these would be the result of the new
2 information. The staff believes that the
3 forward-looking approach will be more consistent with
4 the NRC's principles of good regulation given that
5 there is reasonable assurance of adequate protection
6 for currently licensed plants."

7 Here is my question. When I look at those
8 two statements, items 2 and 3 on pages 25 and 26 of
9 enclosure 1, I think of several examples. And I know
10 these because I have participated in these plants. I
11 think of an Oyster Creek and an Oconee. Those are
12 pre-GDC plants. And those plants have some unusual
13 features compared to today's requirements.

14 MS. DROUIN: Yes.

15 MEMBER SKILLMAN: I then think of a plant
16 like Cooper and a plant like Fort Calhoun, also old
17 plants and some with remarkable siting issues on the
18 Missouri River.

19 Now I think of your sketch of
20 defense-in-depth. How does one evaluate what you
21 would say are my plateaus for defense-in-depth given
22 these legacy plants that are so vastly different from
23 what we would design today?

24 MS. DROUIN: Okay. First, the one in
25 point number 2, that's just saying -- that's not

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1 looking at time-wise whether it's forward-looking or
2 backwards-looking. Two is just saying, should this be
3 restricted to new plants or can it also be applied to
4 operating plants independent of whether it's
5 forward-looking or retrospective? So, you know, that
6 is probably not the best way that this has been
7 written. So two is just saying this can be
8 applicable, you know, to both new plants and operating
9 plants.

10 Now, the second point says, okay. Given
11 it can be applicable to both, is it forward-looking or
12 is it retrospective? For operating plants, it is
13 saying it is only forward-looking. We are not going
14 to go back and reevaluate, you know, the design and
15 operation of that plant to see if it's adequate for
16 defense-in-depth because it already meets adequate
17 protection. It's licensed. So as new issues come up,
18 you know, we would evaluate those new issues for a
19 particular plant using this new defense-in-depth
20 model.

21 MEMBER SKILLMAN: Okay. Now just hold
22 that thought. How do you account, then, for a Fort
23 Calhoun event? You have to tell us, I mean --

24 MS. DROUIN: What's the event?

25 MEMBER SKILLMAN: What's the matter?

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1 What's the issue? And then you'd have to look at the
2 issue and determine significant flooding.

3 MS. DROUIN: But it hasn't happened yet.

4 MEMBER SKILLMAN: Well, it did happen.

5 MS. DROUIN: I mean, sorry. Sorry.
6 Sorry. I didn't say that right. It's --

7 MEMBER SKILLMAN: It didn't ruin the
8 plant, but, by golly, it could.

9 MS. DROUIN: It already happened. So it's
10 gotten grandfathered.

11 MEMBER SKILLMAN: So, to John's point, it
12 has now had its 1 in 10⁻⁷ event. So I don't have to
13 worry about it for the next ten million years?

14 MS. DROUIN: Basically, yes. So unless,
15 you know, flooding comes up as a new event or a new
16 issue to be looked at, if that issue has been
17 addressed and resolved, it has gotten grandfathered.

18 MR. DUDLEY: It's also being looked at
19 under NTTF recommendations. Is it 2.1 or whatever? I
20 mean, we're also looking at flooding activities under
21 other areas. So it's not necessarily --

22 MEMBER SKILLMAN: I appreciate that. It
23 just seems like when you're talking defense-in-depth,
24 I think this is intended to be a robust shield going
25 forward. And its robustness must be considered from

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1 the events of the past so one could say if that
2 robustness had been in existence, this event or this
3 threat would not have occurred. So I think there is a
4 threshold for your defense-in-depth that needs to meet
5 kind of a common sense criteria that says, by golly,
6 if we had been using a defense-in-depth-type
7 framework, these events either would not have happened
8 or their consequences would have been so low as to be
9 of no concern.

10 MS. DROUIN: I'm just telling you, you
11 know, we are not doing it retrospectively. It is only
12 looking at the future.

13 MR. DINSMORE: This is Steve Dinsmore from
14 the NFPA Licensing Branch. I guess I would like to
15 add just a little. I am not so familiar with all the
16 defense-in-depth work going on, but the Fort Calhoun,
17 a flying event. I don't think Mary meant that it's
18 grandfathered that we're going to accept that flooding
19 hides for the future, even though we know it can -- or
20 lower flooding hides for the future, even though we
21 know it can be exceeded. I think that comes to this
22 during the frequency. We probably didn't really know
23 all the different contributors to that flood.

24 And when we do that, if we come up with a
25 number which indicates it should be part of adequate

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1 protection or safety --

2 MS. DROUIN: Safety evaluation.

3 MR. DINSMORE: -- beneficial improvement,
4 I think we would go ahead and make them do those
5 changes. So I guess I was just reacting to the, well,
6 you know, you had this flood event and because it
7 happened and it's 10-7, you don't want to expect it to
8 happen again. That wouldn't be the way we would do
9 it.

10 MEMBER STETKAR: Let me try something else
11 that may not have the frequency involved in it but to
12 make sure I understand sort of this distinction.
13 Let's use the phrase "containment accident pressure,"
14 shall we. Many currently operating plants in their
15 licensing basis include credit for containment
16 accident pressure, meaning that if they don't have
17 that pressure, they jeopardize both core cooling and
18 containment integrity. They are jeopardizing two of
19 your defense-in-depth barriers and making life worse
20 for perhaps the folks who live outside who take credit
21 for the fourth one. People raised that concern in the
22 past.

23 The Commission has determined that that
24 issue doesn't challenge the notion of adequate
25 protection. And, therefore, no design changes are

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1 necessary.

2 Going forward, however, with a different
3 notion of defense-in-depth, there might be more
4 scrutiny put on that particular issue. Is that the
5 way to think about this or because it has been
6 accepted for operating reactors; therefore, by
7 definition, it's okay for new reactors?

8 MS. DROUIN: It would come into play if
9 there is a new issue --

10 MEMBER STETKAR: A new issue.

11 MS. DROUIN: -- that brings that as part
12 of the discussion. So we aren't going to go and
13 single out containment pressure as an issue and then
14 go back and look at it.

15 MEMBER STETKAR: Not retrospectively.

16 MS. DROUIN: Not retrospectively.

17 MEMBER STETKAR: Going forward, though?

18 MS. DROUIN: But going forward --

19 MEMBER STETKAR: I mean, it is something
20 that is on the plate the same as flooding would be on
21 the plate, as you name it would be on the plate going
22 forward. That would, in principle, be evaluated I
23 would think in the construct of this defense-in-depth
24 framework.

25 MR. DUDLEY: And I think only in the event

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1 that new information or new phenomena or other factors
2 caused us to redecide the issue.

3 MEMBER STETKAR: Okay.

4 MS. DROUIN: You know, all I'm just saying
5 is that let's just say that, you know, we had the
6 policy statement and it's published tomorrow and then
7 some implementation guidance is published tomorrow.
8 We aren't going to convene a working group and say,
9 "Oh, gosh. Go look at containment pressure."
10 Something has to cause us, you know, some new
11 information or some event or something has to cause us
12 to go look at something. And that involves looking at
13 containment pressure.

14 MS. HELTON: A tangible example. And
15 tomorrow, for example, we are having a public meeting
16 in the rulemaking dealing with filtering strategies.
17 And the SECY paper that led to the development of that
18 rulemaking activity had an argument hinging on
19 defense-in-depth if we had some sort of a policy
20 statement with implementing guidance in place when the
21 staff was first examining the filters issue for Mark I
22 and II containments. That would have really provided
23 some structure and guiding thought and probably
24 eliminated a lot of the controversy associated with
25 that issue. So, of course, we're continuing on with

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1 that rulemaking activity. And, you know, we need to
2 deal with defense-in-depth, as we have in the past.

3 You know, it's not like defense-in-depth
4 is a completely new concept for the NRC. It's been
5 part of our regulatory framework. It just hasn't been
6 handled in as structured of a manner as what
7 recommendation 1 is suggesting.

8 CHAIRMAN SCHULTZ: Other questions for
9 Mary? Other elements related to defense-in-depth?

10 (No response.)

11 MS. DROUIN: I think you need a sugar
12 infusion.

13 CHAIRMAN SCHULTZ: Do you want to give us
14 five minutes while we think?

15 Looking at the schedule, the next topic we
16 have is a discussion topic that Dick said he would
17 address with respect to the revisions in the document
18 since we saw it at the beginning of the month and what
19 happened in the intermediate time frame to promote
20 some changes. It's the relationship of the
21 recommendation 1 to NUREG-2150 and RMRF. And that is
22 going to be a discussion topic.

23 MR. DUDLEY: Well, we have essentially
24 done that.

25 MS. DROUIN: We did that.

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1 MR. DUDLEY: Mary took my presentation.

2 (Laughter.)

3 CHAIRMAN SCHULTZ: I know you focused on
4 defense-in-depth related to it, but I thought there
5 were also some considerations with regard to --

6 IX. RELATIONSHIP TO NUREG-2150 AND RMRF

7 MR. DUDLEY: Well, we can go over that. I
8 mean, basically --

9 MS. DROUIN: I mean, I can -- on this and
10 the only ones that I have that I thought were major
11 ones were those two.

12 MS. DROUIN: The one thing that I can add
13 is that the original -- the SECY paper we sent you on
14 September 30th said that "Improvement activity 1
15 addresses the recommendations of the NTTF and RMTF
16 with respect to establishing a category of beyond
17 design basis accident events and accidents. It used
18 to say -- this sentence used to be in there. It's
19 been removed, but it used to say, "For these
20 recommendations, the RMRF working group will adopt the
21 NTTF recommendation 1 staff proposal." Management has
22 stricken that sentence out of the document. And we
23 have added the sentence that we focused on before that
24 "The Commission direction on NTTF recommendation 1
25 will inform the staff's approach for implementation of

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1 an RMRF, which will build upon the approach" -- and
2 this will really be approaches outlined in
3 recommendation 1.

4 Also, on page 6 --

5 CHAIRMAN SCHULTZ: You're just on the
6 microphone there, Dick.

7 MR. DUDLEY: Sorry. I'm sorry. Yes.
8 Also, on page 6 or I believe it is, we have added the
9 statement, you know, "The Commission should it improve
10 these improvement activities may also direct their
11 implementation as an interim step before the
12 completion of any Commission-directed implementation
13 of the RMRF." And so that is a change. The
14 management review of this document has caused a change
15 in the way that recommendation 1 is now related to the
16 risk management regulatory framework. So that is
17 really about all I can say.

18 MEMBER STETKAR: Dick, remind me what's --
19 I hate to ask this, but what is the schedule for a
20 SECY paper on RMRF?

21 MR. DUDLEY: It's due six months after the
22 SRM on recommendation 1. And we don't know when that
23 is. So, to be conservative, we're --

24 MEMBER STETKAR: But it's not two or three
25 years. It's six months.

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1 MR. DUDLEY: It's due very soon, very
2 soon, after the SRM on recommendation 1.

3 MS. DROUIN: And because --

4 MEMBER STETKAR: So, in principle, the
5 Commission could say, "fully implement the
6 recommendations of the risk management task force as
7 follows," which could be at odds with NTTF, these
8 recommendations. And would that trump this, then? In
9 other words, this notion of you said earlier, "Well,
10 maybe we can try this for, you know, 4 or 5, 10, 20,
11 30 years" --

12 MS. DROUIN: It would trump it.

13 MEMBER STETKAR: -- and eventually get
14 around to deciding whether or not we're going to
15 implement the recommendations of the risk management
16 task force.

17 MR. DUDLEY: The Commission could say no
18 to our recommended category. And it could say
19 "determinant" as part of RMRF. Is that your question?

20 MEMBER STETKAR: Yes, that's my question.

21 MR. DUDLEY: Certainly, that could happen.

22 MEMBER STETKAR: And that could be fairly
23 short, within the next year or so, in principle.

24 MR. DUDLEY: They could say that in the
25 SRM.

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1 MEMBER STETKAR: I mean, yes, they could
2 say that, "We don't want to do this as an interim
3 basis wait" or --

4 MR. DUDLEY: Right.

5 MEMBER STETKAR: Okay.

6 MS. DROUIN: Now, if they came back in
7 their SRM and directed us to do something different
8 because the approach that we have taken in RMRF on
9 this design basis extension is that where -- I mean,
10 those words were stricken out, but we haven't changed
11 our approach. We are adopting what NTTF is doing.
12 Unless the Commission says something differently in
13 the SRM, we're not starting over and reevaluating.
14 You know, we are taking, you know, what NTTF
15 recommends and their basis for it.

16 And we'll pulling it over into RMRF. And
17 the paper does not say that. It just says it a little
18 bit differently. It says, you know, you will use that
19 to inform --

20 MEMBER ARMIJO: But what you just said
21 orally is a much different spin than what you get just
22 reading this paper and the solution.

23 MS. DROUIN: Well, it's a lot more
24 definitive.

25 MEMBER STETKAR: You said you're basically

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1 not going to endorse a notion, basic notion, that was
2 proposed in NUREG-2150 for the definition of the
3 design enhancement category or how do you populate
4 that category for the treatment from that category.

5 MS. DROUIN: Right. The paper used to say
6 that we're going to adopt, you know, what NTTF
7 recommendation 1 proposes. However, we may end up
8 having to modify what we do based on the Commission
9 SRM. So, you know, we were telling the Commission
10 here, you know, RMRF is not going to go rethink this.

11 The only reason we would redo something is because
12 you direct us to redo it.

13 MEMBER STETKAR: I mean, is that really
14 clear in this paper? I actually didn't get that
15 reading this paper. Maybe I missed it or maybe I
16 didn't -- it didn't seem that clear to me.

17 MS. DROUIN: I'm not sure I followed your
18 question.

19 MEMBER STETKAR: Well, as I understand it,
20 if I understand what you are saying, make sure that I
21 do, you are saying that if I read improvement activity
22 1 in the context of this SECY paper and take what it
23 says there, that will be the accepted approach to
24 implement the recommendations from the risk management
25 regulatory task force, right?

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1 MR. DUDLEY: That's what the paper used to
2 say. But it has been modified. It doesn't say that
3 any longer.

4 MS. DROUIN: It says that --

5 MEMBER STETKAR: It doesn't say that, but
6 Mary seemed to say orally that that is what will be
7 done.

8 CHAIRMAN SCHULTZ: With regard to activity
9 1.

10 MEMBER STETKAR: With activity 11.

11 MR. DUDLEY: Well, at this point, we
12 haven't been given any direction to

13 MEMBER STETKAR: What I'm concerned about
14 is do the commissioners --

15 MS. DROUIN: It says it right there. The
16 last sentence, "Commission direction on NTTF
17 recommendation 1 will inform the staff's approach for
18 implementation which will build upon the approach
19 outlined in recommendation 1."

20 MEMBER STETKAR: Those are nice buzz
21 words, like "facilitate" and "integrate." It doesn't
22 say, "If you would accept this the way we have laid it
23 out, that is what you are going to get under the risk
24 management."

25 MS. DROUIN: That's why I go back to when

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1 you first asked this question and I said, "It's
2 complicated" because you can interpret that sentence

3 MEMBER ARMIJO: Any way you want.

4 MEMBER STETKAR: Any way you want.

5 MS. DROUIN: The sentence after that I
6 don't remember.

7 MEMBER STETKAR: There is. It's got the
8 other interim. The next sentence is the interim,
9 isn't it?

10 MEMBER ARMIJO: That's the last one.

11 MS. HELTON: So if I could take a crack at
12 this one? You know, in the staff's paper, there is
13 the staff recommendation. And we're saying here that
14 if the Commission accepts the staff recommendation, it
15 is essentially going to lay the foundation for RMRF as
16 directed by the Commission. In the enclosures, we
17 talk about the wide variety of approaches that the
18 staff investigated as they were building up the
19 recommendation that is laid out in the SECY paper.

20 There is a diversity of views. I don't
21 think that's -- you know, I think it is pretty
22 well-known. There is a diversity of views about how
23 to approach especially activity 1, PRA, not a PRA,
24 generic, plant-specific. If the Commission picks
25 something else that is more aligned with one of the

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1 other views that is expressed in the enclosure but it
2 is not the staff recommendations, that will also
3 impact how we go forward with RMRF.

4 And the Commission is well-aware of the
5 connection between recommendation 1 and RMRF. Their
6 tasking for the staff on RMRF hinges on the due date
7 for recommendation 1. We have been doing several
8 briefings of senior management and individual
9 commissioners and have addressed this topic of the
10 interrelationship between the two activities. So it's
11 kind of a little vague by necessity, but --

12 MEMBER BLEY: If the Commission tells us
13 to do something different, we'll do it. And you don't
14 need to say that.

15 MS. HELTON: We don't need to say that.

16 MS. DROUIN: Personally I don't think that
17 this was helpful. I mean, I can tell you as the chair
18 of RMRF and, you know, as we have now had two
19 briefings to the DEDOs and we have had a public
20 briefing, we have briefed you guys, is that our intent
21 is to use the recommendation, NTTF recommendation 1,
22 as modified if necessary by the Commission SRM. We
23 are not going to go and rethink.

24 MEMBER ARMIJO: I think that is a
25 beautiful statement. Why didn't you put that in your

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1 text?

2 MS. DROUIN: That's what we had in there.

3 (Laughter.)

4 MR. DUDLEY: It used to say that before --

5 MS. DROUIN: I don't know that the
6 Commission, you know, really understands the
7 relationship of these two efforts. I like to think
8 they do. But I don't know that for a fact. And I
9 don't think that this clearly -- you know, you can
10 make that interpretation there because it does say,
11 you know, the Commission direction will inform the
12 staff's approach for implementation and that we're
13 building upon the approach outlined in recommendation
14 1. So that is not an untrue statement. It's just not
15 as sharp and crisp as the previous one.

16 MEMBER ARMIJO: What's wrong with sharp
17 and crisp? Somebody doesn't like it. And it can be
18 but not everybody reads it the same way, right? You
19 read a different way. And it's one of many things you
20 will consider on RMRF. You're really kind of drifting
21 along. And eventually you'll get to it.

22 MEMBER STETKAR: And this notion of, well,
23 maybe we can do it this way for an interim period
24 while we figure out perhaps a different way of doing
25 it under RMRF. It seems to me

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1 MEMBER BLEY: I know, but we're stewing
2 over something that --

3 MEMBER STETKAR: Yes, it's true.

4 MEMBER BLEY: If the Commission is going
5 to come back with some kind of direction, it's going
6 to be firm.

7 MS. DROUIN: Well, but I can tell you

8 MEMBER STETKAR: You make it

9 MS. DROUIN: -- you know, the reason that
10 the RMRF is working right now is because we have six
11 months.

12 MEMBER BLEY: On that.

13 MS. DROUIN: And after the SRM comes out.

14 Now

15 MEMBER ARMIJO: We don't know when it's
16 coming out.

17 MS. DROUIN: If we have to make any
18 changes. But in six months, you have to chop off
19 three months at the tail end for concurrence.

20 MEMBER STETKAR: Sure.

21 MS. DROUIN: That means all of your
22 technical work has to be done prior to that. So that
23 means we have three months to get all of the technical
24 work done, you know, go to the public in three months.

25 That means that we have to have all of our work done

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1 by the time the SRM comes out and praying, praying
2 real hard that the Commission is not going to make
3 drastic changes because that means we only have three
4 months to do it. And, you know, you don't do anything
5 anywhere in three months.

6 So the only thing I think is that if they
7 really tell us to make major changes, then we get
8 extra time to do that.

9 MEMBER BLEY: What you were trying to do
10 with the original statement was essentially to say
11 that, "Hey, Commission, if you really change this in a
12 big way, it is going to impact the schedule." And now
13 it is so fluffy it doesn't say anything.

14 MEMBER ARMIJO: Let me ask the question a
15 different way. You have an approach now. If you had
16 a lot more time, would you really want to change the
17 approach?

18 MS. DROUIN: No.

19 MEMBER ARMIJO: You think it is a good
20 approach.

21 MS. DROUIN: Why would I go and undo

22 MEMBER ARMIJO: Yes.

23 MS. DROUIN: -- two years of hard work by
24 some very intelligent people --

25 MEMBER ARMIJO: I agree with you.

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1 MS. DROUIN: -- who studied this for that?

2 MEMBER ARMIJO: Never mind. Never mind.
3 You have a good approach. You had a good sentence.
4 You have changed. You have muddled it up in this last
5 sentence, which can be read any way you want to. The
6 Commission, it just makes their job a little bit
7 difficult to find out what you really meant by that
8 sentence when you had a really -- you have a good
9 approach, and you should defend it.

10 MS. DROUIN: Yes. The only thing -- and
11 now I am speaking personally -- is that in the long
12 term, you know, for looking at the events of how we
13 would bring PRA into that is that maybe in the long
14 term, we phase in a requirement for plant-specific
15 PRAs on looking at your design extension events. That
16 could be done in the long term. And so, you know,
17 when the words got put in there about this being
18 interim, in my mind, that was saying, "Okay.

19 Maybe, you know, over the long term because RMRF was
20 supposed to be a ten-year thing, you know.

21 And I know that I have asked the JLD
22 Steering Committee, "Where do we want to be ten years
23 from now? You know, do we still want to be where we
24 are today, you know, without having PRAs required or
25 do we want in ten years that our vision is that

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1 licenses all have PRAs and they're maintaining them?
2 Is that where we want to be steering, you know, for
3 operating plants?" And if that is where we want to be
4 going, then we ought to put a structure in place that
5 will take us all there in ten years.

6 CHAIRMAN SCHULTZ: So you asked the
7 question.

8 MEMBER ARMIJO: What was the answer?

9 MS. DROUIN: You have to go ask them.

10 CHAIRMAN SCHULTZ: Okay.

11 MR. MIZUNO: This is Geary Mizuno.
12 Everything, building upon what Mary just said and
13 going back to what we talked about in the morning
14 session, my understanding as to why that language was
15 softened up was for two reasons. One is to ensure
16 that nothing that the staff says suggests that the
17 Commission doesn't ultimately have full control over
18 where this agency is going to go, both in the short
19 term for NTTF and for the long term over RMTF. That
20 is the first thing. They want to always ensure that
21 the Commission understands that, even though it should
22 be self-evident given the but they wanted.

23 The second thing is also to accommodate
24 the concept okay? -- which was not necessarily
25 embedded or reflected in the original wording. Okay?

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1 Just the Commission could say, "Look, for the interim
2 over the year term, we understand that this is as much
3 as we can do. And this is what we are going to do for
4 NTTF. But for the RMTF, we are going to direct you to
5 do something else differently because our vision, the
6 long-term vision, is different. And that's why you've
7 got that interim language in there." Okay?

8 So we can't do a PRA rule for reactors to
9 support categorization now. But our long-term vision
10 after we get through all of this stuff is that we want
11 -- and we have stated this before, the Commission has
12 stated before -- we want our agency across all of our
13 program activities to be risk-informed. We recognize
14 the current limitations, but we want the RMTF to
15 reflect that vision.

16 So given the fact you could have
17 interpreted the NTTF in that language, saying, "Well,
18 since we didn't recommend a PRA rule now, our NTTF
19 will never ever deal with doing a plant-specific
20 licensing basis determination based upon a PRA rule,"
21 we didn't want to convey that. We wanted to make sure
22 that the Commission had full flexibility to decide one
23 direction in the interim, something else if they chose
24 to go down that direction, but give them the full set
25 of flexibility available.

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1 CHAIRMAN SCHULTZ: I appreciate the
2 explanation. I think that is a meaningful perspective
3 with regard to this. I was trying to understand why
4 the last sentence wasn't just "motherhood," but that
5 explains it in a better way.

6 MS. DROUIN: I think it's complicated.

7 CHAIRMAN SCHULTZ: I mean, because the
8 other option would be to leave that sentence out
9 because the Commission can move forward in the way
10 they see fit, but this describes it for them a little
11 bit in a better way.

12 MEMBER YAN: Either that or maybe capture
13 some of what was just said in a paragraph at the
14 bottom, instead of saying, "The Commission direction
15 on NTT" in one sentence really doesn't capture what
16 you said.

17 MR. MIZUNO: Yes, but you have to
18 understand that, even within the staff, right now
19 there is no consensus as to whether a PRA rule is a
20 good idea generally for the long term, much less the
21 short term. Okay? I think that there is a diversity
22 of opinion. We can all agree in the short term that
23 for this very limited application, we cannot justify a
24 PRA rule given the benefits for a very specific
25 application and the cost. Okay? That's one thing

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1 that we can all agree on.

2 And we can also bring out that based on
3 the Commission direction, they are going to see all of
4 the issues there from a reactor standpoint there. And
5 when they give the direction on -- yes, we can infer
6 from that, even if they don't talk about it directly
7 what we are going to do or could possibly do in terms
8 of RMRF. And so --

9 CHAIRMAN SCHULTZ: I just think we should
10 make it clear to the folks who don't know that the
11 Commission hasn't given direction on that already.

12 MR. MIZUNO: Again, we don't want to write
13 that language to suggest or to tip, one way or the
14 other, the possibility that where the staff is too
15 vague, suggesting that the Commission should go
16 forward with a PRA generally because we are not
17 addressing that here. And so in order to ensure that
18 no one -- that the issue is left open to the
19 Commission and it is going to be addressed later, the
20 language, as I understand it, is written to ensure
21 that everyone is happy.

22 The Commission will ultimately have
23 control of this. They know the sequence between NTTF,
24 which is focused solely on reactors, versus RMRF,
25 which is a much broader perspective. And the

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1 Commission's directions with respect to NTTF are sort
2 of perceived by six months the ultimate staff product
3 on RMRF. And so once we get the NTTF SRM, that will
4 inform the development of the RMRF SECY paper.

5 And I think everyone, the working group,
6 the staff, our management, can all agree that that is,
7 in fact, what must happen. The Commission controls
8 everything.

9 MEMBER BROWN: You think they don't know
10 that? I have a hard time with that.

11 MR. MIZUNO: I just know that in briefings
12 with the individual commissioners, we had to answer
13 the same questions about sequencing and what that
14 means for the subsequent effort. So I guess my answer
15 -- without disparaging them -- okay? I think that is
16 that we need to reemphasize at every step of the way
17 that the Commission, even though we have this
18 sequencing thing, that they always are going to have
19 control, just because we tell them and recommend
20 something here that is still losing a lot of
21 flexibility down the line.

22 I know that we need to make that point
23 clear because we had to make it in individual --

24 MEMBER BROWN: All you had to do is say,
25 in the absence of every Commission direction, this is

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1 where we are going. That's all you had to say. And
2 that does the same thing that does.

3 MR. MIZUNO: No because, again --

4 MEMBER BROWN: In the absence of
5 Commission direction in the SRM, this is the
6 direction.

7 MR. MIZUNO: We don't have a staff
8 direction on the overall concept of PRA rule
9 generally. That is the clear thing. That is what we
10 are saying. We know what we want for NTTF and what we
11 can justify, but we are waiting to see from you,
12 Commission, what are you going to direct us with
13 respect to this key policy issue given the information
14 that we're presenting to you with respect to cost,
15 possible benefits, all of these kinds of things.
16 Okay?

17 MEMBER BROWN: But you said -- if I missed
18 it, in the SECY paper, I thought you said, "We do not
19 believe at this time that a PRA is justified for going
20 because of" -- forget whether --

21 MR. MIZUNO: For NTTF recommendation 1
22 categorization.

23 MEMBER BROWN: Right. "In the absence of
24 other direction, this is the direction we intend to go
25 for RMRF." And they can always change it because

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1 they're the boss.

2 MR. MIZUNO: The staff doesn't have a
3 recommendation on the --

4 MEMBER RAY: Why are we doing this?

5 MEMBER BROWN: I'm just trying to quit. I
6 just was you know, a boss is a boss. I just have a
7 hard time understanding why a boss doesn't know he is
8 the boss.

9 MR. MIZUNO: Because we don't have a staff
10 position today and we don't want to suggest to the
11 Commission that we also have a current position on the
12 long-term vision for a PRA rule if you want to call it
13 that or --

14 MS. DROUIN: We're in the midst of
15 formulating it. You know, the white paper should hit
16 the Federal Register notice any day now. We got up in
17 the furlough business. And that just really set us
18 back. But the white paper is in ADAMS, publicly
19 available, and it should hit the Federal Register
20 notice. And it is out for two months for public
21 review and comment. And in there, it is real clear,
22 you know, what -- it's not a formal staff position
23 because this is a work in progress, but you can see
24 the staff's thinking is that in the long term, a PRA
25 requirement should happen.

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1 MR. MIZUNO: Correct, but that is a
2 preliminary position; whereas, that is very different
3 from what we would tell the Commission in a SECY paper
4 today.

5 MS. DROUIN: Right.

6 MR. MIZUNO: We are not in the position
7 here to say that this is our vision and
8 recommendation, but we are in the position of saying
9 the preliminary staff position is that we should be
10 moving in that direction and hearing we're going to
11 start engaging with the public. That is what our RMRF
12 process is all about, is to put out these preliminary
13 positions, get the stakeholder input.

14 MS. HELTON: One thing I would like to
15 point out -- and Dick is I think going to cover the
16 next steps -- is with all of this discussion about
17 what the Commission does or doesn't understand, the
18 staff does have a Commission meeting scheduled, I
19 think on January 10th. So we'll have the opportunity
20 to put some of the conversation in front of them, in
21 addition to the SECY paper.

22 CHAIRMAN SCHULTZ: Okay. That gives us a
23 perspective on time frame for the different
24 activities.

25 Slide 25? Let's move forward to this.

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1 Yes? It is the last slide we have. Two days from
2 now, we will have the ACRS full Committee meeting,
3 November 7th. If at all possible, we would like to
4 see an ACRS letter somewhere around the 15th of
5 November. I know that may be a challenge to you and
6 we may not get to see it, but if you look at our
7 schedules, too, you will see why we would like to see
8 your letter as soon as possible.

9 We have another recommendation, one
10 steering committee meeting already scheduled for
11 November 26. At that meeting, we will discuss with
12 the steering committee the feedback that we have
13 received from you verbally. And we will receive your
14 letter by the 26th. So we will also give the steering
15 committee your feedback.

16 And then we will see what, if any,
17 adjustments the steering committee wants to make to
18 our paper. If they want to modify it, then they will
19 direct us to do that. And after modifying the paper,
20 we will provide it to the EDO. The due date is
21 December 3rd. And then the EDO is due to deliver the
22 paper to the Commission on December 9th. So that is
23 our schedule. It's very tight. And there are still
24 some things, as you see, that we have to resolve
25 amongst ourselves among management and with the staff.

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1 But you see these are our current positions.

2 And we are proceeding in that direction.

3 And we will await your feedback.

4 CHAIRMAN SCHULTZ: Sure. Mary, in your
5 section related to activity 2 of the SECY, in the
6 latest version, there are still some placeholders
7 associated with some elements to be developed. Maybe
8 you were waiting for the conferences that were going
9 to be happening. I'm not sure.

10 MS. DROUIN: In the actual SECY paper?

11 MEMBER STETKAR: No. It's the history.
12 It's in the enclosure. It's in the enclosure.

13 MS. DROUIN: Yes, there are some --

14 CHAIRMAN SCHULTZ: The simple question,
15 anything that you are thinking about incorporating
16 there that would affect what we might write in the
17 letter

18 MS. DROUIN: No.

19 CHAIRMAN SCHULTZ: based on what we heard
20 today in the meetings?

21 MS. DROUIN: This is just going to a
22 source, you know, that I had missed and writing down
23 what that source said on defense-in-depth. So it's
24 adding just factual historical information.

25 CHAIRMAN SCHULTZ: Okay.

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1 MS. DROUIN: But it's not going to change
2 anything that we have written on defense-in-depth.

3 CHAIRMAN SCHULTZ: Okay. Otherwise other
4 comments or other questions?

5 MEMBER BLEY: I'm a little surprised that
6 you didn't do something. And maybe you really did if
7 I go back and pull things off of individual slides,
8 but I am kind of surprised you didn't bring up table 2
9 from attachment 4, the enclosure, which is the
10 comparison, the final comparison, of recommendation 1
11 with your three improvement activities, a few of which
12 you don't do and some of which commercially is kind of
13 a summary of where you I won't say succeeded or
14 failed.

15 So maybe you could do that? Just kind of
16 walk us through that table just a little, especially
17 on the ones that you don't think you fulfill. That's
18 kind of the summary of the three tables that are

19 MR. DUDLEY: Yes. I have it. We're just
20 trying to locate it. Oh, shoot.

21 CHAIRMAN SCHULTZ: Sideways.

22 MR. DUDLEY: Rotate. Can we go through
23 it?

24 CHAIRMAN SCHULTZ: Can you under
25 "Document"? Up on the top, under "Document," there's

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1 a rotator.

2 MS. DROUIN: Yes.

3 CHAIRMAN SCHULTZ: Oh, you've got it.
4 There you go. It goes on for a couple of pages.

5 MR. DUDLEY: Okay. One of the parts of
6 recommendation 1 was that we have a logical,
7 consistent, coherent framework for adequate
8 protection. We believe all three of the improvement
9 activities we propose contribute to improving the
10 logic, consistency, coherency of our regulatory
11 framework. And we explain in the "Remarks" column how
12 activity 1 would do it, how activity 2 would formalize
13 the Commission policy statement and the guidance on
14 defense-in-depth, and activity 3 would reaffirm the
15 Commission policy on voluntary initiatives and it
16 would also provide us with some additional oversight
17 and infrastructure to ensure that type 2 initiatives
18 are maintained effective over time. So that is
19 recommendation 1 on its face.

20 The sub-recommendation, sub-recommendation
21 1.1 to issue a policy statement for risk-informed
22 defense-in-depth is for extended design basis category
23 of regulations. And the NTF wanted this new category
24 to be justified on the basis of adequate protection.

25 We support our recommendations under

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1 improvement activity 2, do support this policy
2 statement by, let's see, supporting the -- well, the
3 defense-in-depth criteria will support risk-informed
4 decisions, but we do not recommend, did not recommend
5 that this category be justified solely on the basis of
6 adequate protection. We recommend that we put both
7 adequate protection rules and cost-justified
8 significant safety enhancement rules into this new
9 category. So we are recommending to go forward a
10 little differently than the NTTF did under
11 sub-recommendation 1.1.

12 CHAIRMAN SCHULTZ: I have a question on
13 this one. The rationale that says, "Recommendation 1
14 request for a defense-in-depth framework" is limited
15 to reactors. When I read the report, that doesn't
16 jump out at me. Is that just because it came about
17 because of a reactor accident?

18 MR. DUDLEY: Are you talking about your
19 NTTF report?

20 CHAIRMAN SCHULTZ: Yes. I mean, they
21 talked about a I got the wrong word a hodgepodge of
22 regulation that has evolved over the years and that we
23 ought to pull it together. And I don't see anything
24 there that implies that they were thinking they ought
25 to do this just for reactors.

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1 MR. DUDLEY: Very early on in this
2 process, as soon as we could get the audience of the
3 JLD Steering Committee, we raised this issue as to the
4 scope of this activity and whether it should be
5 limited to power reactors. And we recommended that it
6 be limited. And ultimately the steering committee
7 agreed with that.

8 We considered trying to expand this
9 activity to other program areas and other offices, but
10 then later we got direction from the we got the
11 NUREG-2150 and the Chairman's tasking member on RMRF.

12 And so that kind of clarified to us, you know, that
13 this should be --

14 CHAIRMAN SCHULTZ: You interpreted that as
15 a separation?

16 MR. DUDLEY: Yes. Yes. I'm not exactly
17 sure of the timing, but we dealt on --

18 CHAIRMAN SCHULTZ: It doesn't jump out at
19 me when I read.

20 MR. DUDLEY: Right. It didn't. And
21 that's why we had to take that --

22 CHAIRMAN SCHULTZ: But, really, they're
23 separated.

24 MR. DUDLEY: Well, again, that's why that
25 decision had to be made early on by the steering

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1 committee before we got involved.

2 CHAIRMAN SCHULTZ: So this is essentially
3 a steering committee decision?

4 MR. DUDLEY: It was.

5 MS. DROUIN: It was.

6 CHAIRMAN SCHULTZ: That's what it looks
7 like to me it was. You know, when I look at this
8 table, if it were me writing it, I would have a note
9 over there that, you know, we didn't completely
10 fulfill

11 MS. DROUIN: No, but I will add that is
12 the direction we got from the steering committee. But
13 it was agreed to by members of the authors of NTTF.
14 So it was kind of a mutual decision, you know, to
15 limit us. And that was agreed upon by people who
16 wrote NTTF.

17 MR. DUDLEY: And the way we filled out
18 this table for item 1.2, we look at that middle
19 column. I think it says, "Relevant improvement
20 activities." They're not. So I think we're trying to
21 acknowledge that we did not satisfy that
22 sub-recommendation. We recommended

23 CHAIRMAN SCHULTZ: Okay.

24 MR. DUDLEY: -- a policy statement and
25 guidance that are different, although we recommended

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1 policy statement-implementing guidance.

2 MS. DROUIN: We did not believe we needed
3 rulemaking for defense-in-depth.

4 MR. DUDLEY: Okay. This is the
5 rulemaking. Why is rulemaking in

6 CHAIRMAN SCHULTZ: Well, we slipped from
7 1.1 to 1.2 here for a moment. Yes, 1.2 is --

8 MEMBER BLEY: 1.2 is the rulemaking.

9 CHAIRMAN SCHULTZ: -- asking for a
10 rulemaking. 1.1 is what we were discussing in terms
11 of

12 MS. DROUIN: The "None" is there because
13 none of our improvement activities 1, 2, or 3 apply to
14 that because we were not doing an improvement activity
15 that dealt with rulemaking. That's kind of a it's
16 not relevant to any of our activities.

17 MR. DUDLEY: The third of the
18 sub-recommendations is a sub-recommendation 1.3.

19 CHAIRMAN SCHULTZ: But what you are doing
20 with respect to rulemaking is the proposal that we
21 described under activity 1, which is to --

22 MR. DUDLEY: Rulemaking process.

23 CHAIRMAN SCHULTZ: -- develop by process,
24 which would promote --

25 MR. DUDLEY: We are developing guidance to

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1 do much better -- to do future rulemakings --

2 CHAIRMAN SCHULTZ: right.

3 MR. DUDLEY: -- in a much more
4 disciplined, controlled, and consistent fashion.

5 CHAIRMAN SCHULTZ: And that is certainly

6 MR. DUDLEY: Our internal guidance will
7 affect rulemaking activities.

8 CHAIRMAN SCHULTZ: Right.

9 MR. DUDLEY: But we are not --

10 CHAIRMAN SCHULTZ: It's not a rulemaking.

11 MR. DUDLEY: -- effecting rulemaking
12 itself --

13 CHAIRMAN SCHULTZ: Right. I understand

14 MR. DUDLEY: -- to cause that --

15 CHAIRMAN SCHULTZ: -- how it is
16 interpreted.

17 MR. DUDLEY: -- guidance to be --A

18 CHAIRMAN SCHULTZ: Again, you may have
19 missed an opportunity to wave the flag and say we are
20 doing something very important with regard to the NTTF
21 recommendation. And this is a going-forward
22 structural approach to make sure that rulemaking
23 activities are done in a proper fashion and avoid

24 MR. DUDLEY: If we didn't get that across
25 earlier, we failed.

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1 CHAIRMAN SCHULTZ: -- in the summary table
2 here. No. You got it across very nicely earlier.

3 MR. DUDLEY: Okay. Okay. So
4 sub-recommendation 1.3 is to modify the reg analysis
5 guidelines to more effectively implement
6 defense-in-depth in balance with risk-based
7 guidelines. Improvement activity 3 certainly will do
8 that because -- well, both improvement activities 2
9 and 3 address that.

10 Improvement activity 2 will directly
11 incorporate defense-in-depth criteria into the
12 regulatory analysis guidelines. And improvement
13 activity 3 would also result in some modification to
14 the reg analysis guidelines such that we would only
15 give credit to voluntary initiatives when we are doing
16 regulatory analyses if we are -- that when we are
17 considering whether to do a voluntary initiative or to
18 do a rulemaking, that we would only give credit in the
19 baseline case to the voluntary initiative if we were
20 sure that it was highly likely to be implemented and
21 maintained over time. So those are the two
22 improvement activities that address sub-recommendation
23 1.3.

24 Sub-recommendation 1.4 is to evaluate the
25 insights of the IPE and the IPEEE to mind them for

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1 generic and/or plant-specific requirements. And we
2 did not implement that sub-recommendation. We
3 considered it very thoroughly. And there is I think a
4 fairly long section, actually, in the SECY paper where
5 we lay out the basis for not doing that, but in
6 general, we thought that it was a low likelihood of
7 identifying plant-specific or operational safety
8 concerns if we were to go look through these insights.
9 So we did not recommend that activity.

10 MEMBER BLEY: Just because this is one
11 where somebody might come back and say, "Yeah. I
12 didn't" -- they could have done this, but the actual
13 recommendation doesn't really push to go through all
14 of those old IPE and IPEEEs but to look at essentially
15 two reports that summarize what came out of them. And
16 I think you have kind of done that. So go back and
17 think about this one. You might be able to say you've
18 done it from that review and discussion you have
19 already done. It specifically says to look at
20 NUREG-1560 and --

21 CHAIRMAN SCHULTZ: Right.

22 MEMBER BLEY: -- 1742, rather than saying,
23 you know, rummage through all of those old IP and
24 IPEEEs individually. I think you may have actually
25 done this.

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1 CHAIRMAN SCHULTZ: Okay.

2 MR. DINSMORE: It might be worth taking a
3 look.

4 CHAIRMAN SCHULTZ: Steve Dinsmore again.
5 I guess you're right. We have already done that kind
6 of generic look. So we interpreted this to be more
7 rummaging through the individual --

8 MEMBER BLEY: I'm sorry. If you read the
9 recommendation itself, it carries it right to those
10 two things. It's not on that picture. I would go
11 back to the document.

12 MR. MIZUNO: We had the benefit of two of
13 the authors. And what we proposed was -- I mean,
14 regardless of what the words actually said, that was
15 not their vision of what would be accomplished. And
16 so I think it's fair to say that --

17 MEMBER BLEY: Well, they blew it, then.

18 CHAIRMAN SCHULTZ: That's not what they
19 wrote.

20 MR. MIZUNO: But I think we wanted to be
21 fair and say, "Okay. We did something. And we did
22 describe what we did. But we don't think that we
23 actually met what -- we were not adopting or
24 recommending something that fully addressed that, that
25 item." And I think that is probably -- I think we can

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1 defend that. What we did was certainly defensible and
2 provided a lot of good, I think.

3 MR. DUDLEY: We didn't stop at the
4 recommendation 1 and the four sub-recommendations. We
5 also pulled out a little nugget on voluntary safety
6 initiatives by licensee should not take the place of
7 needed regulatory requirements. That is in the
8 report. And we implemented.

9 We are recommending improvement activity 3
10 that would address that particular finding that was
11 buried in the text of the report that we thought was
12 important.

13 CHAIRMAN SCHULTZ: It wasn't really
14 buried, but --

15 MR. DUDLEY: Well, it was --

16 CHAIRMAN SCHULTZ: It was in the
17 recommendations.

18 MR. DUDLEY: It existed throughout the
19 text.

20 CHAIRMAN SCHULTZ: Right.

21 MR. DUDLEY: But it was not called out as

22 CHAIRMAN SCHULTZ: That's right.

23 MR. DUDLEY: -- the staff's
24 recommendation. I don't know why. So we thought it
25 probably should be.

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1 CHAIRMAN SCHULTZ: Fair enough.

2 MEMBER STETKAR: I think the first
3 recommendation that says, "Risk-informed," sorry, the
4 overall arching -- the coherent, "logical, systematic,
5 coherent regulatory framework" I think basically
6 addresses that whole notion.

7 MR. DUDLEY: And the last one was the
8 observation that our current regulatory approach,
9 where we have requirements for design basis events but
10 beyond design basis events are addressed by certain
11 requirements and voluntary initiatives, has resulted
12 in a patchwork of regulatory requirements, we also
13 called that out. And we believe that improvement
14 activities 1 and 3 go towards reducing that patchwork,
15 activity 1 by establishing this new category and
16 making sure that these new rules, which would go into
17 that category will be much less patchwork-oriented.

18 They will be more consistent, complete,
19 and coherent. And improvement activity 3 on voluntary
20 initiatives to get better control over voluntary
21 initiatives such that if we accept one, we're
22 confident that it will be implemented and maintained
23 by licensees over time.

24 So activities 1 and 3 were to, we believe,
25 contribute to reducing, maybe not eliminating but

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1 certainly reducing the patchwork aspects of our
2 regulatory framework.

3 MR. MIZUNO: Right. Just to add onto
4 that, we never claimed that this was going to make
5 patchwork or reduce entirely or eliminate the
6 consistency and comprehensiveness and all of that
7 cohesiveness issue. What we are trying to do here is,
8 what can we do, most bang for the buck, given that we
9 are in a very unique situation here where we have a
10 lot of other activities going on, which result in real
11 safety, substantial safety, concerns being addressed?

12 CHAIRMAN SCHULTZ: Any other questions,
13 comments for this segment?

14 (No response.)

15 CHAIRMAN SCHULTZ: Very good. I'm going
16 to call, then, for a break. We are back on schedule
17 with regard to all presentations. And we'll begin the
18 next session, which is an opportunity for interested
19 parties to comment and public comment. And that will
20 start at 3:45 by this clock, so 20 minutes.

21 (Whereupon, the foregoing matter went off the record
22 at 3:20 p.m. and went back on the record at 3:41 p.m.)

23 CHAIRMAN SCHULTZ: We'll come back in
24 session. The next portion of the meeting is going to
25 provide opportunity for interested parties to comment.

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1 And we have two members, two parties, members of the
2 public who are going to be presenting today; first,
3 Biff Bradley from NEI and then Edwin Lyman from UCS.

4 So, Biff, as you know on schedule we have
5 got about 15 minutes associated with your discussion
6 points. So, welcome and please begin.

7 MR. BRADLEY: Thank you. I will note I am
8 a little outside of the dress protocol today but when
9 I am not doing this, I like to ride a bicycle and one
10 of your members has done some amazing things on a
11 bike. So, this is in recognition of what I find to be
12 an amazing feat. So, in case you were wondering.

13 CHAIRMAN SCHULTZ: I really appreciate
14 that, honestly.

15 MR. BRADLEY: All right. I appreciate the
16 opportunity to provide the industry perspective here.

17 I would just like to note that the staff has done a
18 great job on this. I know it has been a lot of work
19 on top of everything else that they are tasked with
20 right now and they have put a lot of effort in. And I
21 think to a great extent, we are in line with the
22 staff's thinking but let me go through and give you
23 the industry's thoughts on this.

24 I put a slightly different spin on this.
25 I know this is viewed as a long-term strategic

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1 objective for NRC to have a fundamentally improved
2 regulatory framework. And that is great. I think
3 from the industry's perspective we perceive it more as
4 a near-term need that there are elements of this
5 activity that are really not things that need to put
6 off, we need to come to grips right now in the face of
7 what we are facing post-Fukushima. So, I want to
8 maybe give a slightly different perspective in that
9 regard.

10 So, this background is pretty much self-
11 evident. It was fundamentally a design-basis issue at
12 Fukushima. As a result of that, we are certainly put
13 a lot more emphasis and concentration on our current
14 design and licensing basis and what might lie beyond
15 it that we hadn't given enough thought to.

16 Recommendation 1 made that note that these
17 things needed to be rationalized and there needed to
18 be a better framework for dealing with these types of
19 regulations that are beyond the current design or
20 licensing basis. And as I mentioned, there are some
21 reasons to do this, to make some progress on this now.

22 From our perspective, we are dealing with
23 a fairly large number of new design, beyond design
24 basis or regulations, some of which even extend into
25 severe accident space. These are relatively new

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1 activities for the U.S. industry. We have a lot of
2 experience with a design basis, licensing basis, the
3 classical way we handle safety. I think what the
4 industry is looking for, and basically I am talking
5 about these activities that are currently underway,
6 all of which, as you can see, extend into either
7 beyond design basis or even into severe accident
8 space. So, we have actual regulatory activities and
9 ultimately requirements that are going to emerge into
10 these areas, where previously there hasn't been a lot
11 of regulation.

12 I think it is important from the industry
13 perspective. This is a big deal dealing with all
14 these new requirements at the same time in concert
15 with each other and their synergies and everything.
16 It is a pretty big deal for the industry to try to
17 make sure we do this right. We want to make sure that
18 these new requirements are consistent to the extent
19 possible that there is some structure to how beyond
20 design basis regulation is conducted. We don't
21 believe that you can just take the design basis
22 approach and extend it off into BDB or severe accident
23 space in a different framework there from
24 phenomenology, uncertainties, probability, a number of
25 things that lead you to need to treat it differently.

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1 These are the three elements that the
2 staff went over today. I just want to note the 157-
3 page paper that came out yesterday; we haven't really
4 had time to fully digest that. So most of this was
5 written off of their previous work. I can speak to
6 what I heard today. These are the three things we
7 have been talking about all day.

8 And basically to get the industry
9 perspective on this, on the issue of beyond design
10 basis, we agree that there is a need for a Commission
11 policy statement and associated guidance. I think a
12 policy statement is going to be too high level. We
13 need guidance down at a more granular level on how the
14 regulatory framework for beyond design basis would
15 look.

16 We are trying to be proactive on this. We
17 did provide a paper to NRC as part of our response to
18 their last paper on Recommendation 1. We actually
19 laid out our thinking on what this would look like.
20 And I am going to come back to that in a minute. This
21 is sort of a summary.

22 Relative to defense-in-depth, again, I
23 think the industry believes that we do need better
24 guidance. I'm not so sure here there is a policy
25 statement or that there needs to be a fundamental

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1 shift in the way DID has been done, from the way it
2 has historically been done going forward. It is not
3 clear to us that some kind of quantum change is
4 required. However, we agree there is value in having
5 more structure and more definition, I think
6 conceptually in agreement with some of the things Mary
7 said in that regard.

8 So let me go back now to the design basis.

9 This is our fundamental statement of our philosophy
10 on how we believe these things differ from the current
11 design basis which provides a high level of assurance
12 of capability to address and define set of conditions.

13 And beyond design basis, it becomes harder to define
14 those conditions or to bound the conditions that you
15 are trying to deal with. And we believe, and I think
16 FLEX is sort of a poster child for how we have tried
17 to approach this, that we are looking for a flexible
18 operational capability but we can't necessarily define
19 every scenario that is going to put us into the place
20 where we need this capability but we want to have the
21 capability and the ability to use it in place. And it
22 is a different philosophy than the design basis.

23 This just sort of breaks down, if you look
24 at our paper, we speak to these things how we would
25 view some of these things differing. I know I have

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1 limited time so I will not try to go through all
2 these. But I think the basic message here is you
3 can't just take the way design basis regulation is
4 applied and just stick it on a severe accident or a
5 beyond design basis. It is going to generate all
6 kinds of problems.

7 Again, these are the things we addressed,
8 design, organizational/human performance, quality
9 assurance, programmatic controls, configuration, all
10 those kinds of things. What would the oversight look
11 like? Should it be more performance-based or swifted
12 kind of thing? And what do you do with new
13 information? For instance, new seismic or flood
14 information that is going to continually keep coming
15 up for the life of these plants and it is obvious I
16 think we need to deal with now post-Fukushima.

17 So that is what we all have to say about
18 the BDB part. I would, if you have a chance,
19 recommend that you read our paper. We want to engage
20 the staff more. I think their general approach on
21 their improvement item one, while we are not that far
22 apart, again on a lot of these things, it is the devil
23 in the details.

24 We also see a need to do this soon, sooner
25 rather than later. A lot of these rulemakings and

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1 post-Fukushima exercises are on a relatively short
2 time fuse compared to some strategic effort here. So,
3 we think we need to have more immediate action.

4 CHAIRMAN SCHULTZ: If I see some of the
5 new members looking for -- or one new member looking
6 for the paper, this was the paper that you issued, if
7 I recalled in the spring, late spring?

8 MR. BRADLEY: Who, what date did we put
9 this in? I am thinking, I will have to check the
10 date.

11 MEMBER BLEY: It was before our last
12 meeting, at least.

13 CHAIRMAN SCHULTZ: It was.

14 MR. BRADLEY: In response to the staff's
15 last paper, not the one that just came out.

16 CHAIRMAN SCHULTZ: The white paper in the
17 summer.

18 MR. BRADLEY: Yes, but our comments on
19 that attached and included this paper.

20 CHAIRMAN SCHULTZ: All right, we will make
21 sure the committee has that.

22 MR. BRADLEY: All right. If there is any
23 problem getting it, let me know.

24 CHAIRMAN SCHULTZ: Sure will.

25 MR. BRADLEY: Defense-in-depth. Again, we

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1 recognize that DID is important. We believe it has
2 served the industry well. Again, it is a philosophy.

3 I think, as a general rule, what we are laying out
4 here in our perspective is more of a rationalist
5 approach than a structuralist approach. I got the
6 impression the staff was proposing at least
7 essentially more of a structuralist approach to DID.

8 We believe that there needs to be, really
9 as an integrated process, that DID and risk insights
10 can't be separated. And if you try to do these things
11 in silos, that you are going to -- you can achieve the
12 wrong result.

13 So referencing here Recommendation 1,
14 appropriately balance defense-in-depth and risk. I
15 think that is important. Also, NUREG-2150, guidance
16 on how much defense-in-depth is sufficient. I think
17 that is an issue, too. We don't really have criteria
18 to say where does this stop.

19 We do, as I mentioned, implement DID right
20 now in everything, many things we do in the plants,
21 design, operation, programmatic. It has worked. And
22 going forward, we don't perceive the need to
23 drastically change that or to impose some new layer of
24 structuralist DID on top of every decision. I think
25 it is more of an evolutionary versus revolutionary

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1 kind of change we would propose. As I mentioned, I
2 think we are concerned that how do you determine
3 whether your DID is sufficient, if you don't have some
4 way to measure that.

5 Mary used the example of the SALT process
6 in the transition to the risk-informed ROP. I thought
7 that was interesting. I think I would note there,
8 though that SALT wasn't a subjective process but we
9 did have this tool sitting there, which was a risk
10 tool, which provided a rational alternative. For DID,
11 I think the question is a little more difficult
12 because the risk pool is there but it is not a direct
13 application of it and you are trying to deal with
14 things that the risk tool may or may not inform.

15 So, while I think it is an interesting
16 analogy, I think this is a more challenging problem.

17 And again, I will go ahead and say here we
18 are going to provide a paper on this, too. Because I
19 know it is easy to sit here and make these statements
20 but we are going to actually give you a paper on our
21 philosophy and approach for how we believe DID could
22 be considered to Recommendation 1.

23 MEMBER BLEY: Probably not coming before
24 our full committee meeting.

25 MR. BRADLEY: It's not going to be here

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1 before Wednesday. I would say hopefully by the end of
2 this year we will have it.

3 And again, I mentioned we do believe this
4 is an integrated decision process. It is really
5 nearly like a Reg Guide 1.174 process, where you need
6 to look at all these things in context with regard to
7 the decision.

8 As we all know, we are in more difficult
9 territory now than we have been historically. We are
10 dealing with large uncertainties in the inputs to the
11 models. Looking, for instance at seismic, we are
12 seeing you can have four orders of magnitude from the
13 15th to the 85th percentile on the frequency of the
14 initiator. So, you are dealing with difficult issues
15 in that regard. We don't want to ignore -- we can't
16 just simply quantify these things and ignore the
17 uncertainties. But we don't want to put the risk
18 tools away and say the uncertainties are just too
19 large so we can't do that.

20 So, this is a challenging thing to do. I
21 won't claim this is simple but I think 1.174 provides
22 the general idea that we are looking for here that we
23 need to integrate these processes and have an
24 integrated decision.

25 CHAIRMAN SCHULTZ: Could you just come

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1 back to that for a moment?

2 MR. BRADLEY: Sure.

3 CHAIRMAN SCHULTZ: Because what I was
4 thinking of as you first started this part of the
5 presentation was your earlier comment about at least a
6 sense of urgency, that we can't just be talking about
7 the development of these concepts and approaches but
8 we really need to get it done --

9 MR. BRADLEY: Yes.

10 CHAIRMAN SCHULTZ: -- from the industry's
11 perspective to solidify what we are doing.

12 MR. BRADLEY: That is predominately true
13 with respect to Improvement Activity 1. But even this
14 activity has impacts on the existing work. I mean
15 there was some allusion to the filter and strategies
16 rulemaking and to the regulatory analysis that used a
17 DID approach to justify that. So yes, I think there
18 is a need to do this sooner rather than later,
19 although I will be the first to admit it is a very
20 difficult problem. I have been around long enough to
21 know that this isn't a simple task.

22 We continue to believe, this is sort of
23 our mantra here, we really want to try to keep PRA as
24 a realistic tool for addressing risk and assessing the
25 realistic risk and that any margin or conservatism

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1 needs to be built into other parts of the decision,
2 not into the PRA itself. We would really like to
3 maintain the PRA as a realistic risk assessment tool.

4 That doesn't mean that we will want to
5 make number-based decisions or make decisions, risk-
6 based decisions. We have got to recognize the
7 limitations. As I mentioned, seismic is a good
8 example of the large uncertainties we are dealing
9 with.

10 We believe that you can use risk insights,
11 if we have good models. And as I mentioned earlier,
12 industry really wants to proceed to develop fuller
13 scope PRAs. We would like to develop a better
14 understanding of our risk profiles. In post-Fukushima
15 that is the right thing to do and also helps make sure
16 the regulations are smarter in how they approach that
17 on a plant-specific basis. But in order to do that,
18 we have got to get back to the foundation of a
19 realistic model. And do think you can use safety
20 margins and defense-in-depth. If you look at the PRA
21 insights and at least with regard to maybe not the
22 unknown unknowns but with regard to the known
23 unknowns, you can at least get some sense of the
24 degree of uncertainty and where you need to be more
25 concerned with DID or where there is probably enough

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1 DID already.

2 CHAIRMAN SCHULTZ: But then are you
3 talking about the willingness of an industry program
4 with plant-specific PRA? Because I mean when you way
5 realistic, that is how I interpret it to be plant-
6 specific.

7 MR. BRADLEY: Yes, I think there is -- we
8 actually have a vision and a plan in a paper we have
9 prepared for our chief nuclear officers to try to move
10 things in that direction. It does require some
11 lessons learned and I think adjustments of some of the
12 things that are going on now. But I think we view
13 that as the right place to go in the long-term.

14 So, to conclude, we do believe there is a
15 need for a timely policy statement and guidance,
16 especially on the -- it is like a regulatory
17 treatment. It is a little like if anybody remembers
18 50.69 and Risk 3 and all those categories where you
19 didn't necessarily apply the stringent rules of the
20 regulations but you had more performance-based type
21 approach, higher level requirements. I think that is
22 what we are looking for here.

23 We are going to give you a proposal on
24 defense-in-depth. I know that will be a starting
25 point for discussion. Again, we are of a little

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1 different mind than what staff has presented. I
2 noticed there were some allusions to some of the
3 European approaches to DID and I am not sure we are
4 fully -- I am not personally fully up to speed on
5 those but I need to learn more about that.

6 CHAIRMAN SCHULTZ: But the staff proposal
7 here is to move forward with the development of this
8 approach and definition.

9 MR. BRADLEY: I don't disagree with that.
10 This is clearly a devil in the details kind of issue.

11 CHAIRMAN SCHULTZ: It will be.

12 MR. BRADLEY: It is much easier to put
13 these kind of high level PowerPoints together than it
14 is to make this work out there in the field.

15 I then want to briefly speak to the
16 initiatives. I know you had a long discussion on that
17 this morning. Just a couple of perspectives I would
18 give on that is many of the initiatives that were
19 listed on NRC's list already are codified in one way
20 or another and are inspected right now. There are
21 inspections and all of the regulatory things are in
22 place. And just to give you a couple of examples, one
23 would be low power shutdown. Those elements were
24 codified. If you remember the maintenance rule was
25 changed to explicitly include shutdown conditions.

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1 Our guidance was modified accordingly. We took all
2 the 9106 elements, put them in the maintenance rule
3 guidance, endorsed in the Reg Guide. Inspectable
4 heavy loads, the same thing. Those are now an
5 inspectable part of (a)(4) of the maintenance rule. I
6 think it is a little bit misleading to characterize
7 all those things as purely voluntary.

8 In many cases, I think the industry was
9 approached with NRC with respect to NRC's concerns
10 with being able to do a regulatory analysis, to do a
11 timely analysis or to get a result that would justify
12 regulation. And they suggested industry can take some
13 action here that will help solve our concern. It is
14 rare for one of these initiatives to take the place of
15 or be credited in lieu of a regulatory action. That
16 is fairly rare. I don't think that is a typical thing
17 that happens.

18 And to basically just cut to a simple
19 bottom line, we believe that if something meets the
20 threshold for regulation, whether it is adequate
21 protection or cost-justified regulation under the
22 regulatory analysis, by all means proceed and regulate
23 it.

24 If it doesn't, then the industry is there
25 and we can provide initiatives to address those

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1 things. Things like groundwater protection, you know
2 you get into areas where there is no safety nets but
3 there may still be a need to do something and the
4 current regulatory framework just doesn't have the
5 ability to do that.

6 So, I think that whole issue has been
7 maybe slightly over complexified but from our
8 perspective, we will continue to have initiatives as
9 we see fit. But if something meets the thresholds, we
10 are fully supportive of having a regulatory approach
11 to that.

12 So, I think that ends my comments. I
13 would be happy to have any questions.

14 CHAIRMAN SCHULTZ: If you want to get
15 credit, if you want to take credit for an initiative
16 that has been put in place in the next issue that
17 comes up and you say well, I have got a program that I
18 voluntarily put in place, don't you feel that it is
19 valid to have an expectation that it is being
20 maintained and it is inspectable and it can be easily
21 verified to be in place and doing the job that the
22 industry volunteered they would do?

23 MR. BRADLEY: I think if an initiative is
24 explicitly credited as part of a regulatory analysis
25 to justify not doing some regulatory action, then I

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1 would have a hard time disagreeing with your
2 statement. I think that is a relatively rare event,
3 based on my history of these initiatives. I have seen
4 most of these things how they got born and grew.

5 But yes, I think that is a reasonable
6 expectation. I mean I am thinking of others like
7 SAMGs. A lot of these things are headed straight
8 toward codification now. So a lot of these things are
9 moot points, I think, with regard to the more safety
10 significant ones.

11 But yes, I mean if it is a explicitly
12 credited in a reg analysis, maybe that is fair game or
13 becomes a condition on the licensee. But it is a
14 little difficult to inspect when there is no
15 regulatory basis or there is no regulation to issue a
16 finding against. But I am sure the staff can come up
17 with a way to do that, if they need to.

18 But I think that is the one exception. I
19 think other than that, we would say an initiative is
20 an initiative and a regulation is a regulation.

21 CHAIRMAN SCHULTZ: Other questions?

22 MEMBER RAY: Biff, your first bullet
23 greatly says Fukushima fundamentally was a result of a
24 failure of the Japanese design basis for tsunami but
25 one might observe that there was a failure of the

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1 mitigating actions for beyond design basis condition
2 as well.

3 What implications do you think that has
4 for, as Steve just said, crediting mitigating action?

5 MR. BRADLEY: Crediting them in a
6 regulatory analysis?

7 MEMBER RAY: Well, I guess crediting them
8 primarily on the basis of not changing the design
9 basis because there are mitigating actions that are
10 available to be taken. In other words, what does
11 Fukushima say to us about relying on these mitigating
12 actions to be implemented correctly?

13 MR. BRADLEY: Well, that is an excellent
14 question. I think we are relying on -- I mean FLEX
15 being the example and there will be a regulatory
16 structure built around that. And the level of that, I
17 guess, provides that sufficient confidence that some
18 enhanced mitigation capability will be there when you
19 need it.

20 MEMBER RAY: You have answered the
21 question by what you have said already. So, that's
22 fine.

23 MR. BRADLEY: Okay.

24 CHAIRMAN SCHULTZ: Other questions? Thank
25 you very much, Biff.

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1 MR. BRADLEY: Thanks a lot.

2 CHAIRMAN SCHULTZ: The next presenter is
3 Dr. Edwin Lyman from the Union of Concerned
4 Scientists.

5 DR. LYMAN: Thank you and on behalf of
6 UCS, I appreciate the opportunity to present our views
7 on this issue to the subcommittee.

8 I would like to first describe our view on
9 severe accidents. And here I am referring to severe
10 accidents and beyond design basis interchangeably,
11 although I recognize there are some differences.

12 We think that vulnerability of the U.S.
13 Fleet to severe accidents remains unacceptably high
14 and that flawed risk and regulatory analyses have been
15 used to paper over a number of these problems. Yet,
16 the NRC has squandered multiple opportunities to
17 address this problem over the decades, starting with
18 post-TMI reforms. They did not go as far as they
19 should have, leading to the Severe Accident Policy
20 Statement, which also fell short of what was needed.
21 The IPE/IPEEE program, which decidedly was too timid
22 to really address in an comprehensive and a consistent
23 way, the set of severe accident vulnerabilities that
24 needed to be addressed.

25 The opportunity at the license renewal

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1 stage to reexamine the adequacy of the design basis
2 and how information has changed over time and the use
3 of the SAMA analysis, which because of its legal
4 requirements is more paper studying than anything
5 else.

6 So all these opportunities existed for
7 taking a serious look at whether the spectrum of
8 design basis accidents that was initially postulated
9 was adequate and whether there were vulnerabilities
10 that were outliers, risk outliers that needed to be
11 addressed.

12 Now we have after Fukushima again we are
13 also at this precipice and we are wondering if the NRC
14 is once again going to avoid taking the full set of
15 steps needed to actually protect public health and
16 safety.

17 I would just like to comment on this
18 point, since it just came up. Was Fukushima failure
19 the Japanese design basis for tsunamis? Well, it may
20 well have been but that doesn't mean that the U.S. is
21 not vulnerable to those same failures.

22 We have looked at the regulatory history
23 of tsunami regulation and it doesn't look like
24 Japanese did anything different than the NRC industry
25 response here would have been. You had multiple

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1 competing technical assessments, uncertainties, the
2 desire to delay and to understand these uncertainties
3 better and then the tsunami settled the matter. But
4 you can point to any number of processes here where
5 generic issues have been unresolved for decades, in
6 some cases having risk outliers which are comparable
7 to that of a tsunami risk.

8 So, as far as the NTTF Recommendation 1,
9 we have supported from the beginning an expansive
10 interpretation of this recommendation, its
11 implementation and that would mean a comprehensive
12 overhaul of what we see as a flawed regulatory
13 patchwork, which the NTTF highlighted.

14 In our perfect world, this is what we see
15 implementation of that requirement would entail. It
16 would mean revising the risk and regulatory guidance
17 to give more weight in regulatory decisions to
18 uncertainties. Stop pretending you know more
19 precisely than you already do. And that could mean
20 regulating severe accidents more tightly, either let's
21 say an example, take 95th percentile results, rather
22 than the mean in regulatory analyses. That the
23 geographical extent of accident consequences should be
24 increased when appropriate. The terminating
25 regulatory analysis of 50 miles, in some cases, does

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1 not give a complete picture of the extent of the
2 consequences of severe accident.

3 The qualitative aspects like land
4 contamination need to be given greater weight. That
5 defense-in-depth considerations should be given more
6 weight, as has been proposed. And that risk analysis
7 needs to be limited to only where it is technically
8 justifiable and where uncertainties are given
9 appropriate treatment. I think I heard Biff Bradley
10 say something very similar in his presentation. So, I
11 appreciate that.

12 So, how could this be implemented? Well,
13 we would see a new attempt to do what the IPE and
14 IPEEE tried to do that was on a voluntary basis. We
15 would see a comprehensive program to examine across
16 the fleet to look for cliff edges and other
17 vulnerabilities, perhaps using a stress test method as
18 has been employed in other countries. And there is a
19 ready-made menu at each reactor that has already had a
20 license renewal. They have a SAMA analysis. Whether
21 or not a particular SAMA is found to be cost
22 beneficial is one issue, even if they are, there is no
23 requirement that they be implemented. We would say
24 start with the SAMA analyses, apply the revised
25 regulatory analysis, and see what severe accident

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1 mitigation alternatives might actually be appropriate
2 for implementation under this revised guidance and
3 then you implement. That seems to be a logical
4 framework.

5 So, given that, we don't support the
6 staff's rejection of the comprehensive reforms that we
7 think were the intent of the NTTF recommendation. We
8 think that the limitations are too timid, that the
9 Commission should at least be given the option to have
10 a more comprehensive, broader scope implementation of
11 Recommendation 1 as one of the options they should
12 consider. That is simply not in the paper.

13 We think that the staff has undermined its
14 own proposal by saying in numerous places that
15 maintaining existing framework is viable and
16 acceptable. And we think that that does not comport
17 with the NTTF's conclusion that the safety approach is
18 incomplete without a strong program for dealing with
19 the unexpected, including severe accidents. And we
20 think it is going to make it easy for the Commission
21 to just preserve the status quo.

22 And so as the status quo really served us
23 well? Well, we haven't had Fukushima here but is that
24 luck or is it skill?

25 Has resolution of generic issues such as

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1 GI-204 risk of upstream dam failure, has that been
2 well served by the current process? Look at the core
3 damage frequency for dam failure at Oconee and the
4 period of time and the effort it has taken to resolve
5 that issue. And I would say that the answer to that
6 question is no.

7 So, we support a retrospective, site-
8 specific application of these regulatory reforms, as I
9 described in my previous slide. And we think that
10 risk-informing this process as the Risk Management
11 Task Force has proposed really needs to be restricted
12 to where it is technically justifiable, and that means
13 plants that have full-scope PRAs with the full
14 treatment of uncertainty. You know, try to apply it
15 partially and ignore risk outliers if you can't
16 calculate which is, I think, the case in many
17 instances.

18 So going over the improvement activities,
19 we do think that number one, as proposed by the staff,
20 is not comprehensive enough to really repair the
21 regulatory patchwork that has been advocated by --
22 that has been pointed out by the NTTF. And we don't
23 think that the post-Fukushima actions that are taking
24 place are going to fill in this patchwork. In fact,
25 we think that it is actually, the process is being

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1 exacerbated.

2 The NTTF made this Recommendation 1
3 because it thought that this is the logical place to
4 start before you address some of the other Fukushima
5 reforms. That didn't happen. And we think what is
6 happening now is the patchwork is only developing more
7 holes.

8 The staff claims in its paper that site-
9 specific vulnerabilities related to seismic and
10 flooding events are being addressed by the post-
11 Fukushima actions. But looking at the current
12 developments, you can pick any ongoing post-Fukushima
13 action and find areas where the lack of addressing
14 Recommendation 1 first is impairing that activity.

15 Just taking the NRC meeting on August 22nd
16 on available physical margins for flooding. The
17 audits of the licensee walk downs have revealed
18 inconsistencies from site to site with respect to
19 evaluation of available physical margin and
20 consideration of potentially significant safety
21 consequences.

22 The exact issue that was of concern is not
23 a comprehensive guidance that is good enough to
24 maintain consistent evaluations. From site-to-site,
25 it seems that we don't have that kind of guidance and

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1 it is leading to inconsistencies and delays in
2 resolving the flooding concerns.

3 Look at the mitigating strategies
4 integrated plans. There are current points of
5 contention between the staff and the licensees,
6 including how FLEX can be implemented in shutdown and
7 refueling modes. We just heard that is only being
8 implemented in a very haphazard way in the current
9 licensing basis and it is unclear how it is going to
10 be implemented under FLEX.

11 The identification of maintenance and
12 testing programs for related equipment and procedures,
13 there is the issue of the quality and reliability of
14 FLEX equipment. That has been dealt with in
15 Recommendation 1. This is a current issue that
16 holding up approval of the mitigating strategies plan.

17 So, we think that we are seeing complications in
18 implementing post-Fukushima actions by the lack of a
19 comprehensive framework.

20 With regard to 2, we believe that the
21 balance has shifted too far toward reliance on faulty
22 risk calculations and insufficient use of defense-in-
23 depth. So, we do support the activity to revise the
24 regulatory analysis to give greater weight to defense-
25 in-depth. And we do think it would help to make

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1 better decisions, not only with regard to filtered
2 vents but hydrogen control and mitigation. Expedited
3 spent fuel transfer is another issue where we think
4 defense-in-depth should play a role in making that
5 decision. And also whether emergency planning current
6 guidance is adequate or whether let's say EPZs need to
7 be expanded. It was a classic defense-in-depth issue.

8 In regard to Improvement Activity 3, we
9 also think the issue is clear like NEI does. And we
10 would support not giving any credit for voluntary
11 industry initiatives to meet the requirements for
12 protecting against any requirement that is mandated
13 through an extended design basis accident approach.

14 So again, in a perfect world, where we
15 have a new, a comprehensive extended design basis
16 accident framework, voluntary industry initiatives
17 should not be given credit to comply with those.

18 In a situation like what occurred in the
19 so-called resolution of GI-189, should never be
20 allowed to happen again. This was a case where a
21 cost-justified significant safety enhancement was not
22 implemented, despite the staff recommendation that it
23 be because the industry said we are going to do
24 something voluntarily. The staff redid the backfit
25 analysis and said well, if we assume that the activity

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1 is actually -- that the voluntary action is taken,
2 that is no longer cost-beneficial to develop a rule.
3 And then that led to the situation where activities
4 that were used to justify not implementing a
5 requirement could not be inspected or enforcement
6 actions could be leveled against them for lack of
7 compliance.

8 So, although we think that the staff's
9 proposals have merit as single pieces, they only
10 address certain pieces of the fundamental problem and
11 are going to exacerbate the patchwork of the
12 regulations that was identified as a problem. And so,
13 we believe that it is appropriate and warranted for a
14 more comprehensive approach at this time. And so, we
15 are disappointed with the staff's lack of vision at
16 this juncture.

17 Thank you.

18 CHAIRMAN SCHULTZ: Questions from the
19 committee?

20 MEMBER STETKAR: If you go back to your
21 slide on Improvement Activity 2, I didn't quite
22 appreciate that first bullet. Could you expand a
23 little bit on that, especially in relationship to this
24 particular, you know the defense-in-depth? Are you
25 saying that well, --

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1 DR. LYMAN: Well, we think that the
2 reliance on risk calculations with sensitivity
3 analysis that are used to make certain decisions
4 without a full-blown uncertainty analysis, that
5 defense-in-depth features are not taking place at the
6 appropriate level to compensate for that uncertainty.

7 MEMBER STETKAR: So, the primary concern
8 is the lack of a comprehensive treating of
9 uncertainty. I just want to understand that context.

10 DR. LYMAN: Yes, which is one aspect of
11 defense-in-depth.

12 MEMBER STETKAR: Yes.

13 DR. LYMAN: So, if you have a reactor and
14 you are not sure that your emergency core cooling
15 system is going to work, you have a containment.

16 So, just going back to one example of GI-
17 189, so this is a defense-in-depth measure,
18 essentially because in a station blackout, a hydrogen
19 explosion ice condenser would be unmitigated. So, the
20 question is, do you need to impose or to require
21 additional backup of power to the hydrogen igniters.

22 So, the argument in that case, well, it
23 was resolved, that there is a voluntary initiative.
24 But is that really, does that give sufficient
25 assurance to compensate for what we consider a very

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1 significant uncertainty?

2 MEMBER STETKAR: Okay, thank you.

3 CHAIRMAN SCHULTZ: Other questions by the
4 Committee?

5 So, thank you very much, Ed. We really
6 appreciate it.

7 I would like to turn to public comments
8 now. Mike, could you ask for the phone line to be
9 opened? And in the meanwhile --

10 MR. KADAMBI: I guess I just have a
11 comment.

12 CHAIRMAN SCHULTZ: Please come to the
13 microphone. Prasad Kadambi would like to make a
14 comment and he has asked to begin first cut here.

15 MR. KADAMBI: Thank you, Mr. Chairman. I
16 just have a brief comment.

17 I believe that it would be very helpful if
18 the work on Recommendation 1 by the NRC staff was
19 guided by some kind of a high level outcome objective
20 that is reasonably well-defined. And the objective
21 for an outcome should be something like to reduce
22 regulatory uncertainty, moving forward.

23 CHAIRMAN SCHULTZ: We have the bridge line
24 open and an individual is speaking. So, please hold
25 your comments until asked.

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1 It wasn't a call to us, I presume. Go
2 ahead, Prasad. Sorry for the interruption.

3 MR. KADAMBI: Anyway, the idea is that
4 unless there is some kind of an overarching objective
5 to which the activities can be subjected, basically
6 ask the question is this going to reduce regulatory
7 uncertainty if it is moved to some kind of a
8 successful conclusion. And that is the kind of, I
9 think, confidence we need in a lot of these activities
10 moving forward, whether it is taken individually or
11 collectively. Otherwise, it just seems like a lot of
12 spinning of the wheels to me.

13 And my reading of the work on
14 Recommendation 1 indicates that really that was the
15 concern expressed is that there is so much uncertainty
16 in so much of our regulatory framework, it just makes
17 it very hard to do things rationally.

18 That is my comment.

19 CHAIRMAN SCHULTZ: Thank you very much.
20 Other members of the public that would like to make a
21 comment at this time, this is your opportunity to do
22 so. This is right now within the meeting room.

23 Seeing none stepping to the microphone, I
24 would like to ask if there is anyone on the bridge
25 line now remaining, if you would like to just indicate

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1 that you are there. It is open. And now I would like
2 to --

3 MR. LAUER: Steve Lauer on the bridge
4 line. No comment.

5 CHAIRMAN SCHULTZ: Thank you, Steve. Are
6 there any participants on the bridge line that would
7 like to make a comment? If so, please introduce
8 yourself.

9 MR. LEWIS: My name is Marvin Lewis.

10 CHAIRMAN SCHULTZ: Marvin.

11 MR. LEWIS: Yes, I have been listening to
12 this one. I don't know if I should be elevated by the
13 speeches or if I should be worried by them.

14 I hear some people who really understand
15 that there is a reality. That Fukushima had an
16 accident. That Three Mile Island had an accident.
17 That people are hurt. That people are dead. But at
18 the same time, I hear a lot of people who are talking
19 and all I hear in them is we have got to get the
20 paperwork right. We have got to get the paperwork
21 right. There is no reality for them. This worries
22 me. And I wonder how much I should be worried.

23 Thank you. Bye.

24 CHAIRMAN SCHULTZ: Thank you for your
25 comment.

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1 Are there others on the bridge line who
2 would like to make a comment? This was your time for
3 public comment.

4 Hearing none at this time, then I will ask
5 the bridge line be closed so we can finish the meeting
6 today with a discussion by the committee.

7 Come ahead, Dick. Why don't you sit up
8 front? One of the things we would like to do for
9 Dick's benefit or for the presenters' benefit is to
10 discuss what we, as a subcommittee feel should be
11 brought to the full committee on Thursday. At that
12 time on Thursday, we have two hours on the agenda,
13 versus a full day, to make the presentations. As we
14 talked about this at the break, Dick, it did appear
15 that you probably have the right number of slides to
16 present but in terms of the overall presentation, it
17 will have to be shortened up.

18 One of my comments would be that the
19 discussion that you presented at Dennis Bley's request
20 regarding the implementation and the summary table in
21 Attachment 4 was very helpful and I think would be
22 helpful to frame where the committee -- how the group
23 has addressed the elements within the recommendation
24 of those that are called out in Recommendation 1 in
25 the bullets, as well as, as you said, additional

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1 approaches that you considered within the text of
2 Recommendation 1 and how they have been addressed.

3 MR. DUDLEY: We can do that.

4 CHAIRMAN SCHULTZ: So, I think that is one
5 good piece that ought to be presented at the full
6 committee.

7 The summaries of the slides that we
8 discussed today should certainly be presented. The
9 full committee will want to hear discussions on each
10 of the activities in summary form. The full committee
11 has the document and has had it since you have
12 delivered it to us.

13 Other comments by committee members in
14 terms of a focus point or questions that we have that
15 really deserve an answer before we start the letter
16 writing process?

17 MEMBER BLEY: I would just, your thought
18 that they had about the right number of slides. We
19 are going to have two hours?

20 CHAIRMAN SCHULTZ: We have two hours.

21 MEMBER BLEY: I think they have too many
22 slides and I think they could cut down some of the
23 detail.

24 CHAIRMAN SCHULTZ: I just meant the number
25 of slides, but yes.

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1 MEMBER BLEY: Well, 25 I think is a lot
2 for two hours.

3 CHAIRMAN SCHULTZ: That's correct.

4 MEMBER BLEY: A whole lot. I think it
5 should be more like 15. But I think you have to cut
6 some of the details down and keep the key points. I
7 don't think you will get through it.

8 CHAIRMAN SCHULTZ: I agree.

9 MEMBER BLEY: You know most of us are
10 here.

11 MEMBER ARMIJO: Yes, ten of the fourteen
12 are here but we tend to repeat ourselves, so make it
13 shorter.

14 CHAIRMAN SCHULTZ: Are there questions
15 that came up today that we would like the staff to
16 consider and bring us back responses on Thursday?

17 Charlie?

18 MEMBER BROWN: Just a clarification for my
19 part and maybe this is something to be put in. I
20 didn't walk away from any of the discussion, either
21 our last meeting or this one, relative to a balance
22 between the defense-in-depth -- I went back and read
23 the 1999 paper that the committee sent to Chairman
24 Jackson. That's pretty good. It was kind of crisp
25 and even I could understand that.

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1 And they talked about their structuralist
2 versus rationalist approach and the difference between
3 the two, which was very, very helpful. And I didn't
4 get a feel from either the last meeting or this one in
5 the defense-in-depth versus risk-informed how the
6 structuralist part is getting fitted in with the
7 rationalist part or the rationalist part is going to
8 take the primary with the structuralist as a subpart.

9 I am just reversing it if you took the structural
10 approach but balance with risk, then there is a
11 different thought process. I don't see which way or
12 if they are, which way they are tending to go in this
13 circumstance.

14 And then I listened to NEI, Mr. Bradley,
15 who made the comment that they thought that they ought
16 to go more rationalist. And yet, I heard Mr. Lyman
17 relative to his comments that he agreed -- he made a
18 comment that they had too much -- I'm just looking for
19 the note in here -- defense-in-depth should be given
20 more weight; risk analysis should only be used when --
21 he kind of agreed with the NEI thing.

22 I'm not sure I heard that right but it
23 seems to me there is a little bit of fuzziness as to
24 how they intend to go.

25 MR. DUDLEY: I think that is correct. We

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1 don't know that yet.

2 MEMBER BROWN: Well, that is an answer.

3 MR. DUDLEY: We are just asking --

4 MEMBER BLEY: They haven't done that
5 detail yet.

6 MR. DUDLEY: The purpose of the paper is
7 to authorize the staff to put in the time and effort
8 and resources to give you a better answer because we
9 don't have it right now.

10 I don't think I will be able to really
11 shed much light on that by Thursday.

12 CHAIRMAN SCHULTZ: I think it would be
13 useful to frame it in that context. And perhaps
14 spending time on that introduction for framing the
15 context of the SECY, you are really asking for a go
16 ahead for Activities 1, 2, and 3, --

17 MR. DUDLEY: Right.

18 CHAIRMAN SCHULTZ: -- which are not fully
19 define.

20 MR. DUDLEY: Absolutely.

21 CHAIRMAN SCHULTZ: That was not the
22 intent. You are not bringing forward the clear
23 recommendations of how the activities are going to be
24 modified for Commission approval. You are asking for
25 Commission approval to move forward with this as a

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1 disposition of Recommendation 1.

2 MR. DUDLEY: Okay, I can certainly do
3 that.

4 MEMBER BROWN: Well, I thought when they
5 talked about Activity 2, I think that is the one --

6 CHAIRMAN SCHULTZ: Yes.

7 MEMBER BROWN: -- I thought they should
8 try to be -- pardon?

9 MEMBER BLEY: That's strictly defensible.
10 Strictly.

11 MEMBER BROWN: Let me finish, okay, just
12 briefly. I thought they should try or at least make
13 the statement they are going to be trying to develop
14 that balance as part of that discussion, whatever they
15 do. You know what approach do they take? And they
16 haven't got it yet but they are trying to look for
17 which way and what the balance should be.

18 That is a more definitive statement,
19 instead of just some general kind of words. That's
20 all. That is just a suggestion.

21 MEMBER RYAN: To that end, I took away the
22 conversation that it is very much a work in progress.

23 And there are some milestones that you have hit now
24 and there is going to be some other significant
25 milestones coming down the line.

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1 If you could maybe somewhere near the
2 beginning of your talk give us that sort of broad
3 outline in a few minutes and just say here is where we
4 have been, here is our current business and what we
5 have accomplished and where is where we think we are
6 going to go. Not a summary but as kind of a roadmap
7 of where you are going to go during a couple hours,
8 that would be helpful.

9 MEMBER BLEY: And I think you have come,
10 I'm thinking back to the first meeting we had with
11 you, when we had the giant catalogue of things that
12 seemed to me unrelated. And I brought the catalogue
13 down to three things. I think the thing Charlie was
14 talking about here and Steve was, a little front end
15 to put these three in perspective would be really
16 helpful, a lot more helpful than going through the
17 chronology of all the meetings. I don't think we need
18 that for the full committee.

19 MEMBER STETKAR: Or some of that gray area
20 between what you are trying to address in the SECY
21 paper and speculation on how the implementation of
22 that might or might not go forward. There is a little
23 bit, especially in Activity 2, some of the slides get
24 more in the implementation area.

25 CHAIRMAN SCHULTZ: Well, let me clarify

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1 one thing, Dick. From what you have described with
2 regard to that relationship, the --

3 MR. DUDLEY: Between Recommendation 1 and
4 the RFW?

5 CHAIRMAN SCHULTZ: Yes, and the regulatory
6 framework. It is defined because you have a six-month
7 time frame. Let's leave the time off of that.

8 MR. DUDLEY: Okay.

9 CHAIRMAN SCHULTZ: But what I understood
10 from the original direction of setting up
11 Recommendation 1 in this fashion to come to the point
12 of dispositioning the recommendation and then
13 immediately, I presume, the Commission is going to say
14 moving forward or not with Activities 1, 2, and 3, or
15 some subset. And that should move forward, from what
16 I understood the staff is recommending.

17 MR. DUDLEY: Right.

18 CHAIRMAN SCHULTZ: And then whatever gets
19 picked up with regard to the regulatory framework
20 later, that is another step.

21 But the purpose is to, we have heard from
22 I think you and the committee and public comments, is
23 we need to move forward with these activities and
24 would expect that the Commission would say either
25 don't do anything or do 1, 2 and/or 3. Isn't that

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1 what is being proposed by the staff in terms of
2 process?

3 MR. DUDLEY: Yes, we are proposing and we
4 recommend moving forward with each and all of the
5 three recommended activities.

6 CHAIRMAN SCHULTZ: Right.

7 MR. DUDLEY: We think there is a synergism
8 there.

9 CHAIRMAN SCHULTZ: I agree. I agree with
10 what you have said.

11 MR. DUDLEY: We want to get started, too,
12 because industry has indicated an urgent need for the
13 treatment guidance, in particular.

14 CHAIRMAN SCHULTZ: Okay. Again, I just
15 think that in terms of framing this for the full
16 committee, making those statements is important.

17 MR. DUDLEY: Okay.

18 CHAIRMAN SCHULTZ: We should walk away
19 from the full committee presentation with a clear
20 understanding that these are the steps that are
21 happening. Because I think Charlie has pointed out a
22 good point for clarification.

23 Other comments?

24 MEMBER SKILLMAN: Yes, I would like to
25 make this comment. We have talked an awful lot, we

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1 listened a lot today about an idea, an implementation
2 idea, a plan for approaching this or a structure to
3 approach a broader, more integrated focus on
4 regulation. And I think it is easy to consider that
5 just a bunch of words that will get set on a piece of
6 paper and that may or may not yield safety improvement
7 because it has got to wait for somebody to make a
8 decision, or someone to write a letter, or somebody to
9 have a vote, or that type of thing. And what seems to
10 be absent, at least in my mind, is a way to connect
11 the plan that you are conceiving to a concrete result.

12 I'll give you an example. In the past 30
13 or so years, 35 years, we have had a dozen or 15
14 events that alarmed all of us who have been in the
15 industry for that long. TMI2 was just one of them.
16 Fort Calhoun is just one of them. The Browns Ferry is
17 just one of them. The Davis-Besse event in 2002 with
18 the head cracking, there with the CRDM cracking. The
19 Robinson fire.

20 We have had a couple of people events that
21 are equally as alarming. I'm wondering if it wouldn't
22 be valuable to identify these white knuckle events
23 that have occurred in our country, recognize that
24 Fukushima was a cliff-edge that is driving this
25 discussion, and identify how the plan that you are

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1 conceiving may have prevented those eight or ten or 15
2 major events, so that one can say if we had had this
3 more robust, more thorough structure, we likely would
4 not have had this event because we would have caught
5 it with defense-in-depth. We would have caught this
6 one because of an industry initiative that wasn't
7 present at the time but presently. For instance,
8 instrument error at Davis-Besse, which was another
9 event at Davis-Besse which was equally alarming.

10 What I am suggesting is, is there a way to
11 add some practical gravity to this, so one could say
12 here is the plan but if this plan had been
13 implemented, these events which were alarming to all
14 of us, either would not have been as severe or may not
15 have happened at all, so that there is a connection
16 between the words and what we are practically going to
17 accomplish.

18 In other words, give it some foundation so
19 one can say this is just not ether we are talking
20 about. There is some practical benefit to this and if
21 we had had this in place, these are the kinds of
22 things that may have prevented those events from
23 occurring.

24 MR. DUDLEY: I think we can take a look at
25 that. What we do have in the paper, what we didn't

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1 emphasize is we do have examples of each of the
2 improvement activities and how we believe had this
3 activity been implemented a particular outcome or a
4 particular Commission decision might have been made
5 differently or might have been made more easily or
6 something like that, we have those sorts of examples
7 that I could present.

8 I haven't thought about linking the
9 improvement activities to a series of events but we
10 could think about that.

11 MEMBER SKILLMAN: Thank you. That's my
12 comment. Thank you, Steve.

13 CHAIRMAN SCHULTZ: Other general comments
14 before we go around the table just to be sure?

15 MEMBER REMPE: Well, if you are looking
16 for things to reduce the size and although we asked
17 you to do this, the examples on the slides that you
18 have like for the industry trends program and the
19 reactor operator, those slides, I mean the first slide
20 that talks about those is probably adequate.

21 MR. DUDLEY: Right.

22 MEMBER REMPE: The other thing, and maybe
23 I am the only one who missed a few details but I spent
24 more time on the earlier versions, instead of the ones
25 that we got from Mike on 10/31. And just a clear

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1 slide on each of the activities that said these are
2 the products we are going to have. There will be a
3 new reg with guidance. I think something like that
4 would be helpful for the full committee meeting, to
5 emphasize what we are going to give you at the end of
6 this, if we are authorized to go forward.

7 MR. DUDLEY: Okay.

8 MEMBER REMPE: And what we will and what
9 we won't have.

10 MR. DUDLEY: Products, maybe time frames,
11 resources for each of the three.

12 MEMBER REMPE: Yes, and what you won't
13 have. You won't have a cutoff frequency necessarily
14 or different things like that. I don't know, that is
15 something else that you know with the pros and the
16 cons are in the paper, I think are the kinds of things
17 that might just cut to the chase of what you are going
18 to do and not do.

19 CHAIRMAN SCHULTZ: The general term, Dick,
20 would be outcomes from each of the activities and then
21 products, whatever would fall underneath that. But
22 outcomes would be probably the right terminology for
23 Activity 2.

24 MR. DUDLEY: Right. Okay.

25 CHAIRMAN SCHULTZ: Activity 1 has got some

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1 product.

2 MR. DUDLEY: Right.

3 MEMBER RYAN: I would say no so much on
4 the resources expended and those kind of things but on
5 the results part.

6 MR. DUDLEY: Okay.

7 MEMBER REMPE: Because Activity 3 did talk
8 about you doing a review in addition to the guidance
9 as being a tied to activity. So those kind of things,
10 just to highlight these are the things we would do if
11 we go forward.

12 MR. DUDLEY: Okay.

13 CHAIRMAN SCHULTZ: Hearing no general
14 comments, then Joy, any other comments at this point,
15 away from the presentation on Thursday?

16 MEMBER REMPE: The usual I really do
17 appreciate the opportunity to discuss this in a whole
18 day with the staff as well as industry's perspective
19 and the Union of Concerned Scientists.

20 There were some nuances that I had missed
21 in the last version that became more obvious as things
22 went forward and actually it seemed more reasonable
23 when I heard it verbally. So, I appreciate the times
24 you guys spent with it.

25 CHAIRMAN SCHULTZ: Charlie?

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1 MEMBER BROWN: I would make the same
2 observation. I got something out of all of the
3 various comments, as well as the staff presentation.

4 So, other than that, I don't have
5 additional.

6 CHAIRMAN SCHULTZ: Ron?

7 MEMBER BALLINGER: Yes, I thought they did
8 a great job.

9 We used this word patchwork has been
10 tossed around here. And almost always it is given a
11 sort of pejorative connotation. I don't think that is
12 true here. I think the patchwork, if you want to call
13 it that, the evolution of the processes over the years
14 has resulted in pieces that are put together and okay,
15 call it a patchwork if you want, but that doesn't mean
16 that it has been bad.

17 And so I think using the word patchwork, I
18 think it is work that people have done a pretty damn
19 good job. And so I don't think that we should use
20 that word in the pejorative sense or let it be used or
21 let it be taken and used as a pejorative.

22 CHAIRMAN SCHULTZ: Mike?

23 MEMBER RYAN: I would like to thank
24 everybody for their very thorough briefings,
25 particularly the historical parts of the work that you

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1 have done and what is ahead.

2 I would say that any enterprise that goes
3 over decades and decades, there is always something
4 you do that you learn from that is good and there is
5 always something that goes wrong. So I think the idea
6 that I wouldn't pick on the fact that things have gone
7 wrong often teach you more than things that go right.

8 So, I am looking to see how it can
9 integrate all the views and all the facts and figures
10 of the whole thing and come up with a really
11 thoroughly thought through plan forward where we can
12 learn and implement to make plans run better and be
13 better.

14 Thank you.

15 CHAIRMAN SCHULTZ: John?

16 MEMBER STETKAR: I don't think I can add
17 anything more, thanks.

18 CHAIRMAN SCHULTZ: Rick?

19 MEMBER SKILLMAN: No, thank you.

20 CHAIRMAN SCHULTZ: Harold?

21 MEMBER RAY: Well, I am just, like Steve,
22 I think that at some point we are going to want to
23 make sure the discussion that I think was pretty well
24 emphasized by Biff Bradley's presentation to the
25 effect that those things that are going to be

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1 inspected need to be recognized and incorporated in a
2 way that is consistent with the past inspection
3 program and we shouldn't be relying on something other
4 than that that we don't really understand. I think
5 that needs to be captured in our final comments
6 somehow.

7 Because I get the feeling that it is much
8 more up in the air as far as the stamp is concerned at
9 this point.

10 CHAIRMAN SCHULTZ: Okay, Dennis?

11 MEMBER BLEY: Yes, I appreciated
12 everything today from the staff and from both NEI and
13 UCS. I kind of liked Lyman's comment that one way to
14 go ahead is with a new IPE/IPEEE program, juxtaposed
15 with more emphasis on defense-in-depth. It's
16 something to think about.

17 I remain disappointed a bit by what seems
18 to be a flight from PRA, Activity 1. I don't quite
19 get it and I don't think the case has been well made,
20 but I said that earlier.

21 CHAIRMAN SCHULTZ: Thank you. Sam?

22 MEMBER ARMIJO: Yes, I thought, first of
23 all, the discussion was very good. It cleared up a
24 lot of questions that I had. So, I understand the
25 staff's approach. I think it is a very practical

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1 systematic way of dealing with this.

2 I really can't suggest shortening the
3 presentation any better than what has already been
4 suggested. But overall, I think you are ready for
5 this meeting.

6 CHAIRMAN SCHULTZ: Okay. And I would like
7 to add my comment and thanks to the staff for very
8 comprehensive presentations today. And it is
9 certainly very reflective of a lot of work that has
10 gone on for the last 18 months. The committee has
11 appreciated the opportunity to work with you on this
12 topic during that time. And we know where you started
13 and we appreciate where you have come to as a result
14 of a lot of work and effort, not only within the
15 Agency but through the public comment period,
16 briefing, white papers, all different types of
17 approaches that you have used in order to gather the
18 approach that you have come to here. So, I appreciate
19 that.

20 With regard to the meeting today,
21 certainly I appreciated the staff's efforts, the
22 presentations, and also the comments that have been
23 provided by NEI, Biff and UCS by Ed, and also the
24 public comments that we heard to provide input to the
25 committee.

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1 With that, not hearing further comments --

2 MR. DUDLEY: Let me just --

3 CHAIRMAN SCHULTZ: Go ahead, Dick.

4 MR. DUDLEY: Let me just reiterate Shana's
5 comments from earlier today that we greatly appreciate
6 the time and attention that you guys are spending with
7 us on this activity to help us get it right. So,
8 thank you for that.

9 CHAIRMAN SCHULTZ: We appreciate that.

10 With that, I will close this meeting and
11 welcome you back on Thursday.

12 (Whereupon, at 4:51 p.m., the foregoing
13 meeting was concluded.)

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A stylized graphic of an atomic symbol, consisting of a central nucleus and three elliptical orbits, is positioned on the left side of the slide. The graphic is rendered in a light blue color that matches the background.

Fukushima Near Term Task Force (NTTF) Recommendation 1: Improved Regulatory Framework

**NRC Staff Presentation to the Fukushima Subcommittee
of the Advisory Committee on Reactor Safeguards**

November 5, 2013

Outline of Presentation

- Brief chronology of past activities
- Recommended improvement activities
 - Improvement Activity 1 - Establish a design extension category of events and associated regulatory requirements
 - Improvement Activity 2 - Establish Commission expectations for defense-in-depth
 - Improvement Activity 3 - Clarify the role of voluntary industry initiatives in the NRC regulatory process
 - Respond to questions from Sept. 4 ACRS meeting and discuss changes made to proposed approach
- Status and next steps

Chronology

July 12, 2011 – NTTF report provided to Commission

Aug. 19, 2011 – Commission SRM directed staff to provide recommendations to disposition Rec. 1

October 2011 – JLD Steering Committee resource limitations deferred staff review of Rec. 1

February 2012 – Staff effort on Rec. 1 resumed

June 20, 2012 – 1st public meeting

Aug. 15, 2012 – 1st ACRS subcommittee meeting

Nov. 2, 2012 – Released 1st White Paper; opened 1st public comment period

Nov. 8, 2012 – 2nd public meeting

Dec. 4, 2012 – 2nd ACRS subcommittee meeting

Dec. 14, 2012 – 1st public comment period ended

Feb. 26, 2013 – Released 2nd White Paper

Chronology (cont.)

May 15, 2013 – Released 3rd White paper; opened 2nd public comment period

May 23, 2013 – 3rd ACRS subcommittee meeting

June 5, 2013 – 3rd public meeting

Aug. 15, 2013 – 2nd public comment period ended


Sept. 4, 2013 – 4th ACRS subcommittee meeting

Sept. 30, 2013 – Completed draft SECY paper provided to ACRS

Oct. 10 – 16, 2013 – Government shutdown

Oct. 25, 2013 – Rec. 1 Steering Committee completed initial concurrence review of SECY paper and enclosures

Oct. 31, 2013 – Provided updated SECY paper to ACRS incorporating Steering Committee changes



Improvement Activity 1:

Establish a Design-Basis Extension Category of Events and Associated Regulatory Requirements

Summary of Proposed Approach for Design-Basis Extension Category

Design-basis extension category which:

- Is generic (does not require a plant-specific PRA)
- Include requirements needed for adequate protection and those justified as a cost-effective substantial safety enhancements
- Document details of approach for issuing new design-basis extension rules in publicly-available document (e.g., NUREG) [new position]
 - Treatment criteria, change process, FSAR update, training, analysis methods, etc.
- Implement process by amending internal staff guidance
- Applicable to current and future licensees and applicants
- Existing beyond design-basis requirements “grandfathered” without change
- Applies only to new/additional design-basis extension requirements
- Can be implemented on ongoing Fukushima rulemakings
- Low cost for NRC and licensees

The Commission may also direct implementation of this activity as an “interim” step before the completion of any Commission-directed implementation of the RMRF. [new position]

Identification of Design-Basis Extension Requirements (Looking Backward)

- “Grandfather” SBO, ATWS, 50.44, 50.54(hh), aircraft impact assessment as design-basis extension requirements
- Working Group recommends not searching retroactively for additional design-basis extension events because:
 - Ongoing rulemakings (mitigating strategies rule) and NTF Recommendations 2 – 11 are addressing and evaluating a wide range of safety concerns for needed safety improvements
 - NRC already has robust set of existing processes that generically identify and address new issues as they arise (generic issues program, ROP, operating experience program, public petition processes, etc.)
 - Existing plants have searched for plant-specific vulnerabilities with the IPE and IPEEE studies
 - New reactors are required to have plant-specific PRAs
- Add ongoing design-basis extension rulemakings
 - 50.46a, risk-informed GSI-191 rule, Fukushima rules

Identification of Design-Basis Extension Requirements (Looking Forward)

Go forward using existing processes/criteria:

1. Identify issues/concerns as candidates for rulemaking

- Generic issues program, ROP, reactor operating experience program, accident sequence precursor program, industry trends program, Agency Action review meeting, public petition processes, etc.

2. Evaluate issues to determine need for rulemaking

- Adequate protection (determination not affected by new category)
- Safety enhancement – Use existing criteria in Reg. Analysis guidelines
 - Cost-justified significant safety improvements (backfits) – criteria in NUREG/BR-0058, Figure 3.2 (Δ CDF, CCFP), & cost-effectiveness; updated as approved by Commission
 - Ongoing updates for \$/person-rem, and replacement energy costs
 - Proposed update to incorporate defense-in-depth criteria (Improvement Activity 2)
 - Forward-looking rulemakings (not backfits) – cost-effectiveness criterion

Improvement Activity 1 – Description of Processes to Identify Potential Rulemaking Issues/Concerns

At the Sept. 4 meeting, staff proposed relying on existing processes to identify candidates for rulemaking:

- Generic issue evaluation process
 - Management Directive 6.4 – Generic Issues Program (Nov. 17, 2009)
- Reactor Oversight Process
 - Task Interface Agreements
- Reactor Operating Experience Program
 - MD 8.7 and LIC-401/REG-112 - NRR-NRO Reactor Operating Experience Program (Rev. June 3, 2013)
 - Collect – Screen – Evaluate – Apply
- Public petition processes (2.802 – Rulemaking; 2.206 Enforcement)

ACRS asked that staff describe the periodic evaluation processes that are used to verify effectiveness of these processes

Periodic Effectiveness Reviews of Existing NRC Processes Relied on to Identify New Safety Issues

Generic Issues Program (GIP)

- No formal requirement for periodic effectiveness reviews
- Program is revised on as needed basis as determined by management
- March 2012 – RES/NRR Office Directors established Tiger Team to evaluate GIP
 - Identify and propose further refinements to processes for GIs
 - Business process improvement approach included staff from six program offices & Region 1
 - Evaluation completed; recommendations now being documented and forwarded to management for review and implementation

Periodic Effectiveness Reviews of Existing NRC Processes Relied on to Identify New Safety Issues

Reactor Oversight Program (ROP)

- ROP annual self-assessment program defined in Inspection Manual Chapter (IMC) 0307
 - Staff evaluates the overall effectiveness of the ROP through its success in meeting its pre-established goals and intended outcomes
 - Goals include being objective, risk-informed, understandable, and predictable (ROP-specific) and ensuring safety, effectiveness, and openness (agency-level)
 - Staff develops recommended improvements and focus areas based on feedback and lessons learned
- External reviews of ROP (GAO, OMB, OIG, ACRS, etc.)
 - See examples at:
<http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/program-evaluations.html>

Periodic Effectiveness Reviews of Existing NRC Processes Relied on to Identify New Safety Issues

- Industry Trends Program (ITP) defined in IMC 0313
 - Assess the safety performance of nuclear industry using performance indicators measured across all operating reactors
 - Assess the safety significance and cause of any statistically significant adverse industry trends, and respond to any safety issues that may be identified
 - Assess Accident Sequence Precursor program results
 - Monitors Baseline Risk Index for Initiating Events (BRIIE) to ensure low frequency of IEs most likely to cause core damage
 - Provide feedback to the reactor inspection program (ROP) and licensing programs (generic communication or potential rulemaking)
- Agency Action Review Meeting (MD 8.14)
 - Review results of the staff's assessment of ROP effectiveness, including a review of approved deviations from the Action Matrix
 - Ensure that trends in industry and licensee performance are recognized and appropriately addressed

Periodic Effectiveness Reviews of Existing NRC Processes Relied on to Identify New Safety Issues

- Reactor Operating Experience program (OpE)
 - NRR LIC-401/NRO REG-112 - Section 4, Attribute 7 requires periodic assessments of the Center of Expertise (COE) for operating experience (OpE & ConE) to determine the effectiveness of these programs and to identify needed improvements.
 - This activity resulted from the 2003 Davis-Besse Lessons Learned OpE Task Force
 - Past assessments have included a review of the efficacy of OpE contracts and a self-assessment of the Operating Experience Smart Sample (OpESS) program.
 - Audits by external groups are also conducted
 - General Accounting Office (GAO) in 2006 & 2013
 - NRC Office of the Inspector General (OIG) in 2013

Periodic Effectiveness Reviews of Existing NRC Processes Relied on to Identify New Safety Issues

- 2.206 Petition for enforcement action process (MD 8.11)
 - No formal requirement for periodic effectiveness reviews
 - Management Directives are revised on as needed basis determined by management
 - MD 8.11 last revised in Oct. 2000; revision of MD 8.11 to update/streamline process is ongoing; expected completion in 2014
- 2.802 Petition for rulemaking (PRM) process
 - PRM status report provided to OEDO twice annually, but no formal process periodic effectiveness reviews
 - All denials of PRMs raising significant policy issues must be approved by the Commission
 - Process (and implementing Office Instructions) are reviewed and revised as needed per management direction
 - Revision of 2.802 – 2.803 is ongoing; proposed rule published on May 3, 2013; staff now evaluating public comments

Reactor Operating Experience (OpE) and Construction Experience (ConE) Programs

At the Sept. 4 meeting, staff was asked to explain NRO's role in the reactor operating experience program

- NRO and NRR jointly maintain a Center of Expertise within the Operating Experience and Construction Experience programs.
- The Offices share knowledge and coordinate with one another in the collection, screening, evaluation and communication of international and domestic reactor operating and construction experience.
- NRO incorporates lessons learned into the licensing, inspections, and construction of new reactors in accordance with the requirements of 10 CFR Part 52.



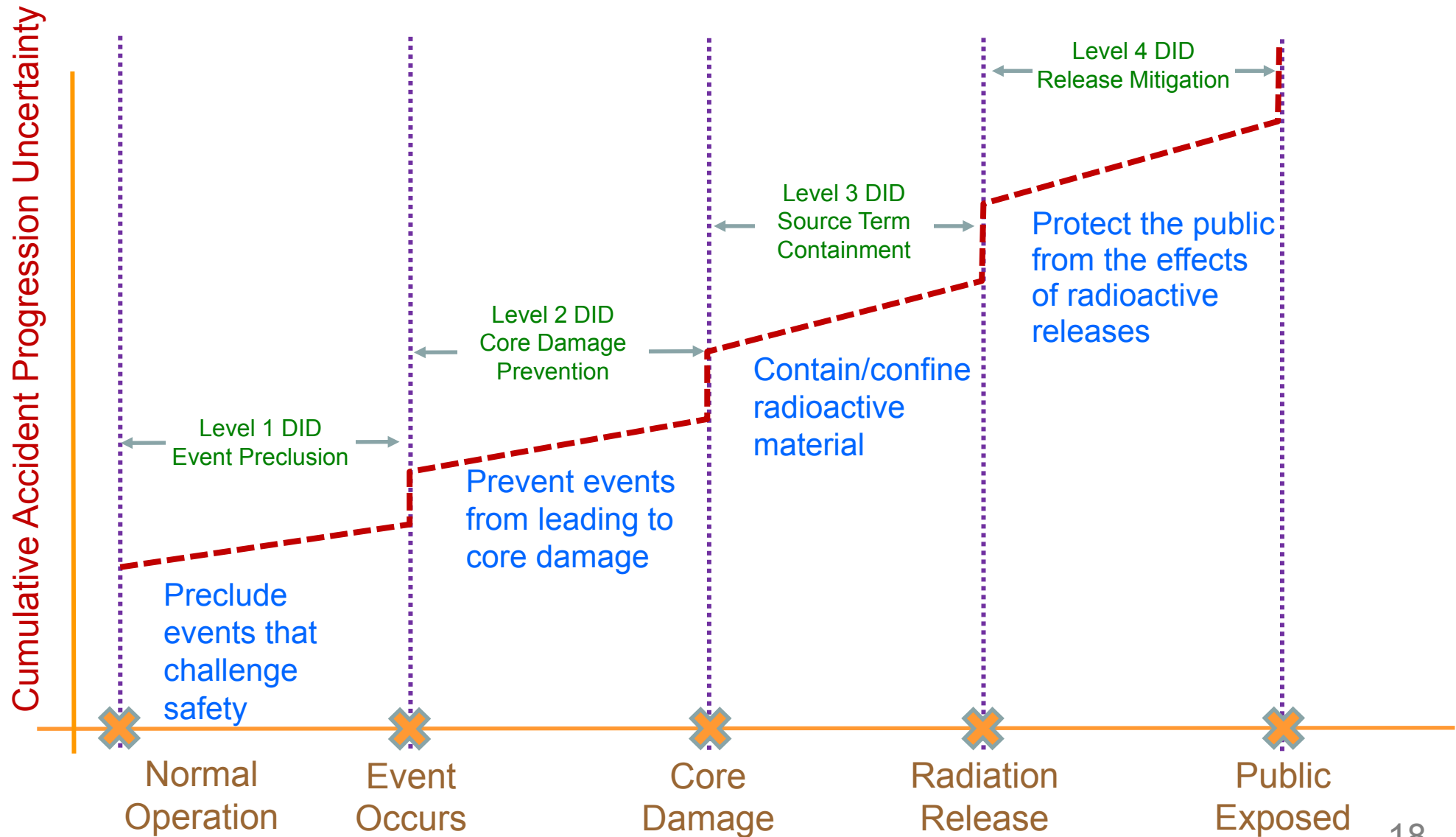
Improvement Activity 2

Establish Commission Expectations for Defense In Depth

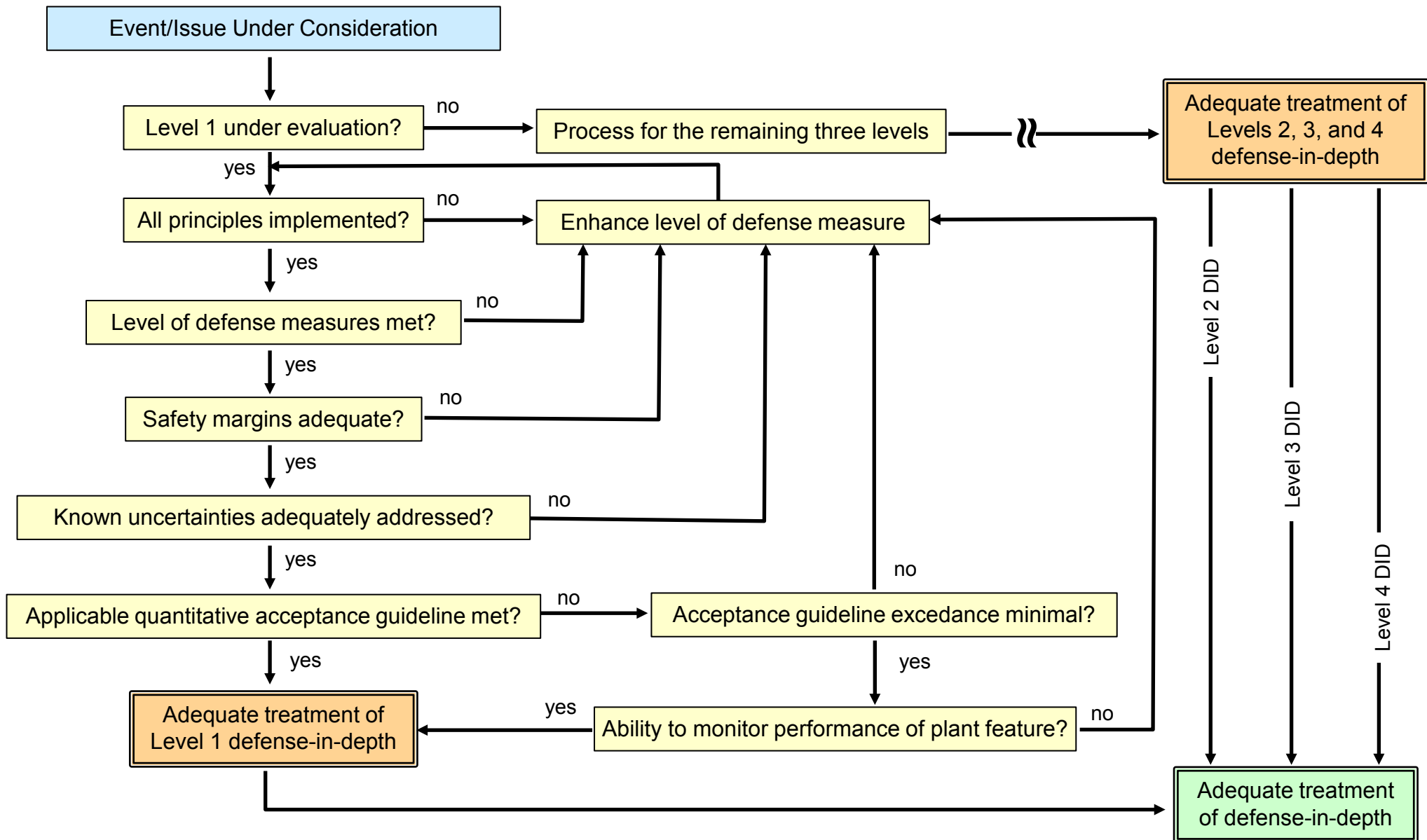
SECY Paper on Defense-in-Depth

- SECY paper recommends Commission approve development of reactor policy statement on DID
- Paper provides examples what may be, for reactors
 - A DID structure
 - A DID definition
 - A set of DID principles
 - A set of levels of defense
 - A DID decision process
 - A set of DID decision criteria
- NRC staff will not develop the above until the Commission approves moving ahead with a DID policy statement
 - Stakeholder input will be sought
 - ACRS will be consulted

Nuclear Power Reactor Defense-in-Depth May Consist of Four Levels



Draft Example Decision Process



Criteria for Determining Adequacy of DID

- **Examples:**

- Significance of uncertainties
 - Quantitative acceptance guidelines; e.g.,
 - goals on component, system, human reliability, accident or damage prevention, and risk of exposure of workers or the public
 - Overall risk
 - Performance monitoring desired to monitor degradations in performance
 - Hazards which must be considered in the design (man-made and natural)
 - Design standards
 - Consequence criteria
 - Response capability
- PRA may be used but only in conjunction with deterministic criteria

Criteria for Determining Adequacy of DID

At the Sept. 4 meeting, staff was asked to address in the SECY paper how to determine adequacy of DID associated with a postulated meteorite striking a nuclear power plant

- The purpose of this activity is to develop DID criteria for events and conditions within NRC's regulatory purview.
- This activity is not intended to identify events and conditions, such as meteorite strikes, which are outside the NRC's regulatory purview, and therefore do not require DID consideration.

A stylized graphic of an atomic symbol, featuring a light blue circle on the left and three intersecting elliptical orbits in a slightly darker shade of blue, extending across the top and bottom of the slide.

Improvement Activity 3

**Clarify the role of
voluntary industry
initiatives in the NRC
regulatory process**

Improvement Activity 3

Summary

- Activity 3 would:
 - Re-affirm the Commission's expectation that industry initiatives may not be used in lieu of NRC regulatory action on adequate protection issues
 - Specify that industry initiatives may only be credited in the baseline case for regulatory analyses when there is a high likelihood that the industry will effectively implement and maintain the initiative over time
 - Provide guidance and revise oversight processes (inspections, audits) to verify the implementation and effectiveness of *future* Type 2 initiatives which the NRC believes are important from both a safety and regulatory perspective
 - Review *existing* Type 2 initiatives and verify implementation of the most safety significant initiative(s) at 6 – 9 facilities
 - This activity would not change NRC's existing policy regarding Type 1 and Type 3 initiatives


Improvement Activity 3

Voluntary Initiatives

- Infrastructure and guidance to be developed for oversight of the Type 2 voluntary initiatives includes:
 - Update relevant internal staff guidance to implement policy that the NRC will consider oversight of future Type 2 voluntary initiatives
 - Management Directive 6.3, “The Rulemaking Process”
 - Inspection program guidance (TI) or Office-level instruction describing options for oversight of a particular initiative
 - Staff no longer proposes to issue a Commission Policy Statement [new position]
 - SECY paper now states that the infrastructure for oversight of future safety significant Type 2 voluntary initiatives may include a documentation and reporting requirement [new position]

Status and Next Steps

- Nov. 7, 2013 – ACRS full committee meeting
- Nov. 15, 2013 – Receive ACRS letter (if possible)
- Nov. 26, 2013 – Final Rec. 1 Steering Committee briefing
 - Discuss ACRS feedback and recommendations in ACRS letter
- Dec. 3, 2013 – Modify SECY as appropriate and provide to EDO
- Dec. 9, 2013 – SECY paper due to Commission



Back-up Slides

Reactor OpE Overview

Inputs → **OpE Program** → **Products**

Domestic OpE: Industry

Daily Event Reports *
Plant Status Reports *
Licensee Event Reports *
Part 21 Reports *
INPO Reports

Domestic OpE: NRC

Inspection Findings *
Preliminary Notifications *
Regional Project Calls
Construction Experience
Studies/Trends

International OpE

Incident Reporting System (IRS)
International Nuclear Event Scale (INES)
Bilateral Exchanges

OpE Clearinghouse

Screening
Evaluation
Application
Communicate

Storage

Influencing Agency programs

Inspection *
Licensing *

Informing Stakeholders

Generic Communications *
OpE Briefings
COMMunications
Periodic OpE Newsletter
OpE Notes
Notable OpE
Tech Review Group Report

Taking Regulatory Actions

Rulemaking *
Information Request *

* Available on the public NRC Web Page

Existing Type 2 initiatives

- Low power/shutdown risk
- Severe Accident Management Guidelines
- Hydrogen igniter backup power for BWRs and ice condensers
- Industry Initiative on Underground Piping and Tanks Integrity
- Heavy load lifts
- Motor Operated valves
- Substandard Non-Safety-Related Molded Case Circuit Breakers
- Piping Erosion/Corrosion
- Station Blackout (Diesel Reliability portion)
- Oil Loss in Rosemount Transmitters
- design-basis Programs
- Fraudulent Flanges
- Comprehensive Procurement Initiative
- Managing Regulatory Commitments
- Safety culture initiative

NTTF Recommendation 1

Industry Perspective

ACRS Fukushima SC
November 5, 2013



NUCLEAR ENERGY INSTITUTE

nuclear. clean air energy.



Background

- Fukushima fundamentally a result of a failure of the Japanese design basis for tsunami
- NRC's response has included many changes that extend beyond the current licensing basis
- NTTF Recommendation 1 called for a rationalization of such requirements
- There are compelling reasons to provide near term guidance in this regard

Challenges for Post Fukushima Regulation

- There is no uniform or consistent regulatory structure for beyond design basis (BDB)
- There is no current regulatory structure for Severe Accident (SA)
- Presents concerns with
 - Consistency among current rulemaking activities
 - Attempted application of “design basis” like requirements
 - Absence of clear boundary for regulatory compliance (i.e., no defined event scenario)
 - Addressing uncertainty and difficult phenomenology

BDB and Severe Accident Regulatory Activities

- Extended loss of AC power rulemaking (BDB)
- Filtering strategies rulemaking (SA)
- SAMG rulemaking (BDB-SA)
- Severe accident capable BWR vent order (SA)
- Reliable hardened BWR vents (BDB)
- SRM on economic consequences, reg analysis guidelines (SA)
- Recommendation 1

NRC Draft Recommendation 1 Paper

Commission Policy Statements Proposed to:

1. Establish a Design Extension Category of Events and Associated Regulatory Treatment Approach (no Rulemaking)
2. Establish Commission Expectations for Defense-In-Depth and include in Regulatory Analysis Guidelines
3. Clarify the Role of Voluntary Industry Initiatives in the NRC Regulatory Process

NRC Proposal and NEI Comments

- Commission Policy Statement to address regulatory treatment of BDB
 - Agree, need timely policy statement and associated guidance
 - Industry provided paper on beyond design basis regulatory considerations
- Expanded definition and use of defense in depth
 - Policy statement is not needed – better guidance is appropriate
 - Risk-informed, integrated approach to DID is needed

Industry Paper on Beyond Design Basis

Current Design Basis Requirements:

- Provide a high level of assurance of design capability to address a defined set of event conditions

Beyond Design Basis Requirements:

- Provide reasonable confidence in a flexible operational capability for responding to a, by definition, unbounded class of event conditions

Consistent with Past BDB Regulatory Actions

Differences in Design Basis and Beyond

Design Basis

- Qualified Hardware
- Qualified / Licensed Personnel
- Rule Based Procedures
- Compliance Based Oversight
- Validated by Test & Calculation
- Success is Defined by No Core Damage

Beyond Design Basis

- Diverse Hardware
- Knowledgeable Personnel
- Strategic Based Guidelines
- Audit Based Oversight
- Validated By Reasonable Judgment
- Success is defined by Robust, Coordinated Set of Capabilities

BDB Principles Addressed in Paper

- Design
- Organizational/Human Performance
- Quality
- Programmatic Controls
- Regulatory Oversight
- Treatment of New Information

Defense in Depth

- The defense-in-depth (DID) philosophy imbedded in nuclear safety has served the industry well
 - Major factor in current high levels of safety
- Consideration of additional defense-in-depth measures must be considered from a risk-informed perspective
 - NTTF Rec. 1 called for an approach that “appropriately balances defense-in-depth and risk considerations.”
 - NUREG-2150 identified the lack of “guidance on how much defense-in-depth is sufficient.”

Consideration of DID

- Current (and planned) plants implement the DID philosophy in design, operation, and programmatic
 - Provides solid foundation for moving forward
- Strictly deterministic views of DID lack a basis for deciding whether implementation is sufficient to achieve the goals
 - Judgments required
 - Potential for arbitrariness

Consideration of DID (Cont.)

- Risk insights can inform this process and provide an improved context for decision-making
 - Risk insights \neq Precise Risk numerics
- Consideration of DID, risk insights, and safety margins best addressed in a truly integrated decision-making process
 - Should not be parsed out as separate, independent elements

Integrated Decision-making

- Consideration of hazards beyond internal events (e.g., fire, seismic, external flooding, etc.) introduces much larger uncertainties into the quantitative results and challenges decision-makers
- Cannot ignore these uncertainties, nor can we allow them to prevent use of risk insights
- Need for a truly integrated decision-making process
 - Reg. Guide 1.174 provides elements
 - NUREG-2150 provides additional recommendations
- Decision should not be divided into risk/non-risk

Industry Needs for Success

- Improved guidance needed on a truly integrated risk-informed decision-making process:
 - That uses PRA model that are as realistic as possible consistent with current technology
 - Recognizes the limitations of the technology and the sources of uncertainty
 - Uses risk insights to delineate areas where implementation of DID and SM are relatively strong and weak to support a better integration of considerations
 - Provides a basis for implementing additional means of establishing DID and SM based on an understanding of uncertainties.

Conclusions

- Industry supports timely policy statement and guidance on BDB principles
- Industry supports more risk-informed, integrated approach to DID, and will provide a proposal in this regard
- Industry does not support regulatory treatment of voluntary industry initiatives
 - By definition, they do not meet threshold for regulation

UCS View on NTTF Recommendation 1 and the NRC Staff Proposal

Edwin Lyman
Senior Scientist, Global Security Program
Union of Concerned Scientists

Presentation to the ACRS Fukushima Subcommittee
November 5, 2013

UCS View on Severe Accidents

- Vulnerability of the fleet to severe accidents remains unacceptably high
- Flawed risk and regulatory analyses have been used to paper over these problems
- The NRC has squandered multiple opportunities to address this problem over the decades
 - Post-TMI reforms
 - Severe Accident Policy Statement
 - IPE/IPEEE
 - License renewal
- After Fukushima, will the NRC once again avoid doing what needs to be done to protect public health and safety?

NTTF Recommendation 1

- UCS supports a comprehensive overhaul of the flawed regulatory patchwork highlighted in NTTF Recommendation 1
- Revised risk and regulatory guidance
 - Given uncertainties, severe accidents should be regulated more tightly – e.g. at the 95th percentile, not the mean
 - Geographical extent of accident consequences should be increased when appropriate
 - Qualitative aspects (e.g. land contamination) should be considered
 - Defense-in-depth should be given more weight
 - Risk analysis should only be used only where technically justifiable and with appropriate consideration of uncertainty
- New IPE/IPEEE program
 - Consistent methodology across the fleet
 - New SAMA analyses using revised guidance
 - “Stress tests” to identify cliff-edges and other vulnerabilities

Staff proposal

- UCS does not support staff's rejection of the comprehensive reforms proposed by the NTTF
- Staff's statement that maintaining the existing regulatory framework is a "viable and acceptable alternative" undermines the NTTF's correct conclusion that "the NRC's safety approach is incomplete without a strong program for dealing with the unexpected, including severe accidents" and will make it easy for the Commission to preserve the status quo
 - Has resolution of generic issues such as the risk of upstream dam failures been well-served by the current process?
- UCS supports retrospective, site-specific application of regulatory framework reforms
 - Risk-informed approach restricted to plants with full-scope PRAs and appropriate consideration of uncertainty

Improvement Activity #1

- UCS disagrees with staff that the more comprehensive reform to fix the regulatory “patchwork” advocated by the NTTF is not necessary, in part, given other post-Fukushima actions
- Staff claims that “site-specific vulnerabilities related to seismic and flooding events are being addressed by the post-Fukushima actions” are not supported by current developments
 - From NRC meeting slides on flooding “available physical margin” (APM), Aug 22, 2013:
 - “Audits ... revealed inconsistencies from site-to-site with respect to ... evaluation of APM” and “consideration of potentially significant safety consequences”
 - Current points of contention between staff and licensees on mitigating strategies integrated plans include
 - Capability to implement FLEX procedures in shutdown and refueling modes
 - Identification of maintenance and testing programs for related equipment and procedures

Improvement Activity #2

- UCS believes the balance has shifted too far toward reliance on faulty risk calculations
- UCS supports revising regulatory analyses to give greater weight to and allow more systematic consideration of defense-in-depth
- Would help in making better decisions with regard to issues including
 - Hydrogen control/mitigation
 - Filtered vents
 - Expedited spent fuel transfer
 - Emergency planning (e.g. expanded EPZs)

Improvement Activity #3

- UCS supports elimination of credit for voluntary industry initiatives to meet fundamental requirements for protection against extended design-basis accidents in a revised framework
- Situations like the so-called resolution of GI-189 should never be allowed to happen again

CONCLUSIONS

- Although the staff's proposals have merit, they address only certain pieces of the fundamental problem outlined by the NTTF and as such, likely will exacerbate the patchwork nature of NRC regulations
- UCS believes that a more comprehensive approach is needed to adequately address severe accident risks post-Fukushima