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 NUCLEAR REGULATORY COMMISSION

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

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RELIABILITY AND PRA SUBCOMMITTEE

+ + + + +

MONDAY

OCTOBER 19, 2015

+ + + + +

ROCKVILLE, MARYLAND

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The Subcommittee met at the Nuclear
 Regulatory Commission, Two White Flint North, Room
 T2B1, 11545 Rockville Pike, at 1:00 p.m., John W.
 Stetkar, Meeting Chairman, presiding.

COMMITTEE MEMBERS:

JOHN W. STETKAR, Meeting Chairman

RONALD G. BALLINGER, Member

DENNIS C. BLEY, Member

JOY L. REMPE, Member

STEPHEN P. SCHULTZ, Member

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DESIGNATED FEDERAL OFFICIAL:

MICHAEL SNODDERLY

ALSO PRESENT:

VICTORIA K. ANDERSON, NEI

DENNIS DAMON, NMSS

STEPHEN C. DINSMORE, NRR

RICHARD DUDLEY, NRR

K. RAYMOND FINE, FirstEnergy

JOSEPH GIITTER, NRR

DONNIE HARRISON, NRO

NATREON J. JORDAN, NRR

STANLEY H. LEVINSON, AREVA

MARVIN LEWIS*

ROBERT RISHEL, Duke Energy

JOSEPH RIVERS, NSIR

STACEY ROSENBERG, NRR

MICHAEL TSCHILTZ, NEI

*Present via telephone

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P R O C E E D I N G S

1:04 p.m.

CHAIRMAN STETKAR: The meeting will now come to order. This is a meeting of the Advisory Committee on Reactor Safeguards Subcommittee on Reliability and Probabilistic Risk Assessment.

I'm John Stetkar, Chairman of the Subcommittee meeting. Members in attendance today are Steve Schultz, Dennis Bley, Ron Ballinger, and Joy Rempe.

The purpose of today's meeting is to review a draft of the SECY Paper on Recommendations on Issues Related to Implementation of a Risk Management Regulatory Framework. In 2011, the Risk Management Task Force led by Commissioner Apostolakis was created. The Risk Management Task Force published its report in April 2012 as NUREG-2150, a proposed Risk Management Regulatory Framework. "This report proposes a Risk Management Regulatory Framework for how the Agency should be regulating 10 to 15 years in the future," and that's a quote from the Task Force's report.

The Subcommittee has met previously on this matter in September of 2013, October of 2014, and in February and June of this year.

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1 This meeting is open to the public. The
2 meeting is being conducted in accordance with the
3 provisions of the Federal Advisory Committee Act.
4 Rules for the conduct of and participation in the
5 meeting have been published in the Federal Register
6 as part of the notice for this meeting.

7 The Subcommittee intends to gather
8 information, analyze relevant issues and facts, and
9 formulate proposed positions and actions, as
10 appropriate, for deliberation by the Full Committee.
11 Mr. Michael Snodderly is the Designated Federal
12 Official for this meeting.

13 A transcript of the meeting is being
14 kept and will be made available, as stated in the
15 Federal Register Notice. Therefore, it's requested
16 that all speakers first identify themselves and
17 speak with sufficient clarity and volume so that
18 they can be readily heard. I'll remind you all to
19 check and silence all of your little communications
20 devices.

21 Also, for those of us at the table;
22 Dick, I don't know if you've been here. When you
23 speak, turn on your microphone, when you're not
24 speaking turn it off. It helps with our transcript
25 and the people on the bridgeline.

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1 We've received no written comments or
2 requests for time to make oral statements from
3 members of the public regarding today's meeting. I
4 understand there may be individuals on the
5 bridgeline today who are listening in, and the
6 bridgeline will be closed on mute so that those
7 individuals can listen in. At the appropriate time
8 later in the meeting, we'll have an opportunity for
9 public comments from the bridgeline, and from
10 members of the public in attendance. And I'll make
11 sure to open the bridgeline at that time.

12 We'll now proceed with the meeting, and
13 I'll ask Joe Giitter, Director of Division of Risk
14 Assessment, Office of Nuclear Reactor Regulation to
15 open the presentations. Joe.

16 MR. GIITTER: Thank you, John. Good
17 afternoon. Appreciate the opportunity to discuss the
18 SECY Paper on the Risk Management Regulatory
19 Framework.

20 When we met with the Subcommittee on
21 February 20th of this year, we said that there may
22 be no better time for the Agency to move toward an
23 approach that would allow us to consistently
24 consider risk in our decisions. Afterwards, we
25 worked to outline at a high level a voluntary risk-

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1 informed licensing basis approach that would allow
2 power reactor licensees to make risk-informed
3 changes to their licensing basis without the need
4 for NRC to approve an exemption request under 10 CFR
5 50.12.

6 We discussed that approach in two public
7 meetings and requested written public comments on
8 two different occasions. However, it was apparent
9 based on the feedback we received from industry that
10 there was insufficient support for the voluntary
11 initiative without more detail and certainty on what
12 the voluntary rule would entail. Specifically, in
13 public meetings industry stakeholders explained that
14 they could not assess the costs and benefits of the
15 initiative and, thus, could not support the
16 conceptual approach.

17 Based on this feedback, the Staff
18 determined that the time and effort to more fully
19 develop this voluntary approach was needed, and that
20 any efforts to do this would be on a longer time
21 frame than the RMRF SECY.

22 Another risk-informed alternative we
23 evaluated was the approach recommended in NUREG-
24 2150. In essence, this approach would require all
25 licenses to have updated PRAs and use them to

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1 develop a licensing basis based on plant-specific
2 risk profiles. This approach was considered in SECY-
3 13-0132 on Near Term Task Force Recommendation 1. As
4 you can imagine, this approach received even less
5 support from industry stakeholders, and even NRC
6 Staff questioned whether this requirement to have
7 licensees update their PRAs would pass traditional
8 regulatory backfit analysis.

9 There was also broad concern about the
10 practicality of applying a universal Risk Management
11 Regulatory Framework across all classes of regulated
12 entities; so, today we will explain our
13 recommendation to continue using our current
14 regulatory framework and processes.

15 I want to make it clear that this is not
16 a do nothing option. In fact, as you will hear
17 today, the Staff has never been more involved in
18 reviewing risk-informed licensing applications. And
19 because some of these initiatives require licensees
20 to meet Reg Guide 1.200, Rev 2, PRA quality has
21 improved considerably across the operating reactor
22 fleet. More importantly, many licensees are
23 beginning to incorporate risk insights into the
24 daily operation of their plants in a way that hasn't
25 been done in the past.

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1 In NRR, we've started an initiative to
2 look at how we can use risk insights to more
3 efficiently and effectively make decisions on non-
4 compliance issues of low safety-significance. Thus,
5 the Staff's proposed option involves expanded, even
6 accelerated risk-informed regulation just without
7 changing the existing regulatory framework.

8 With that, I'm going to ask Dick Dudley
9 to go ahead with the Staff's presentation.

10 MR. DUDLEY: Thank you, Joe.

11 On Slide 2, I have an outline of what
12 I'll be presenting today. First, I'll give you a
13 little bit of background, then I'll discuss the four
14 different sections and the four different topics in
15 the RMRF SECY Paper. Section 1 on implementation
16 options for power reactor safety; Section 2, our re-
17 evaluation of two improvement activities from Near
18 Term Task Force Recommendation 1; Section 3 on the
19 Agency-wide Risk Management Policy Statement; and
20 then Section 4, Donnie Harrison will talk about the
21 interrelationships between the ongoing power reactor
22 risk-informed activities. And then my last slide
23 will be on the next steps with this SECY Paper.

24 CHAIRMAN STETKAR: Dick, for my benefit,
25 and it's something that will help me kind of better

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1 understand the Staff's recommendations and positions
2 on this whole topic.

3 One of the issues that I think the
4 Fukushima Near Term Task Force and the Risk
5 Management Task Force, at least in my opinion was
6 trying to address, is a regulatory framework that
7 uses risk assessment in a forward-looking approach
8 to identifying issues that could be of concern for a
9 particular operating plant site, or for a new
10 reactor design such that the Agency's regulatory
11 efforts are focused on those types of issues rather
12 than a strict deterministic compliance mode for
13 licensing, or I think has been somewhat of the
14 practice in the past, a reaction to events. So,
15 we've reacted to Three Mile Island, we've reacted to
16 now Fukushima, we react to issues that are
17 identified because of operating experience, but we
18 never seem to kind of look forward and examine those
19 events while we have the opportunity before they
20 happen. So, if you can keep that in mind and try to
21 give me, at least, a little bit for my own
22 perspective how the proposed path forward addresses
23 kind of that itch that I have, I'd appreciate it.

24 MR. DUDLEY: Joe, do you want me to start
25 with that, and then have Donnie talk about ---

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1 MR. GIITTER: I would go through your
2 presentation. I think ---

3 MR. DUDLEY: Okay.

4 MR. GIITTER: --- that will touch on it,
5 but I think we may want to have an expanded
6 discussion on the particular topic later ---

7 MR. DUDLEY: Okay.

8 MR. GIITTER: --- during the
9 presentation.

10 MR. DUDLEY: Would that be okay if we --
11 -

12 CHAIRMAN STETKAR: No, that would be
13 fine. I just wanted to kind of raise it now so that
14 as you're going through your presentations, if you
15 can sort of recollect that and say here's how we're
16 trying to address that, or how this particular issue
17 addresses it.

18 MR. DUDLEY: Thank you. Okay.

19 CHAIRMAN STETKAR: I'd appreciate that.
20 Thank you.

21 MR. DUDLEY: So, now on Slide 3, the
22 background. We released a White Paper in May that
23 gave our preliminary thinking on three of these four
24 issues. We had a public meeting on May 27th, and we
25 met with the Subcommittee on June the 8th. We had a

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1 public comment period on this White Paper that we
2 released that initially closed on June 11th. And
3 then we issued a meeting notice subsequently on July
4 14th where we put forth additional details on one of
5 the RMRF implementation options, Option 2, and we
6 reopened the public comment period on that RMRF
7 implementation option. We held that public meeting
8 on July 29th. The public comment period ended on
9 August 31st.

10 About a week and a half ago, the SECY
11 Paper, the draft SECY Paper was distributed
12 internally for office concurrence review, and office
13 concurrence comments will be due to me by this
14 Wednesday, so that's where we stand in the history,
15 and that's where we stand in the process.

16 On Slide 4, I'm going to talk about the
17 first section of the paper which are the RMRF
18 Implementation Options for Power Reactors. RMRF
19 stands for Risk Management Regulatory Framework.

20 In our evaluation, the Staff considered
21 three different options. Number one was to maintain
22 the current regulatory framework. Number two was to
23 implement a voluntary alternative risk-informed
24 licensing basis that would be done on a plant-
25 specific basis. And option three was the approach

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1 that was recommended by NUREG-2150, and Joe Giitter
2 has already described that approach to you in his
3 opening remarks.

4 So, we addressed three options, Option
5 1, Option 2, Option 3. You'll note that the SECY
6 Paper itself doesn't in the paper numerically
7 describe the options. We described them generally
8 within the text of the paper, but the White Paper
9 enumerated the options. The public comments
10 enumerated the options, and so for the purposes of
11 this presentation, I will talk about the numbered
12 options, even though they're not actually laid out
13 that way in the current draft SECY Paper. On Slide 5
14 ---

15 CHAIRMAN STETKAR: Dick, I'm assuming
16 that there was a lot of thought put into that, and
17 that was intentional omission of those three
18 options.

19 MR. DUDLEY: It was the result of
20 management discussions.

21 CHAIRMAN STETKAR: Okay.

22 MR. DUDLEY: The options are described in
23 the paper. If you go to the public comment section,
24 one of the enclosures, I think each of the three
25 options are laid out in a description, so it's --

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1 - that information is available. Of course, the
2 White Paper is available, also ---

3 CHAIRMAN STETKAR: Yes.

4 MR. DUDLEY: --- and referenced many
5 times within the SECY Paper.

6 So, on Slide 5, Power Reactor Option 1,
7 maintain the current framework; we would not be
8 making any extensive revisions to our current
9 regulatory framework. We believe that the current
10 framework meets the four general criteria that
11 NUREG-2150 laid out as what a Risk Management
12 Regulatory Framework should contain with respect to
13 a mission, objective, a goal, and a decision making
14 process.

15 Now, there are a spectrum of ways that
16 one could go about developing the mission,
17 objective, and goal, and certainly the one that we
18 are --- will recommend to maintain the existing
19 regulatory framework is on one end of the spectrum,
20 and the approach recommended by NUREG-2150 is pretty
21 much near the other end of the spectrum. And that is
22 the --- that's just the way it is.

23 Again, as Joe has mentioned, maintaining
24 our existing regulatory framework is --- well, maybe
25 it's not quite so far on the end of the spectrum

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1 because, you know, what we're doing is we're
2 constantly moving towards the middle with a number
3 of our ongoing and planned risk-informed improvement
4 activities. And we will continue under the existing
5 regulatory framework to make risk-informed
6 regulatory improvements based on risk insights or
7 other considerations whenever it's deemed necessary.
8 And we can certainly do that with our existing
9 regulatory processes.

10 On Slide 6, I'll be talking about power
11 reactor Option --- wait a minute, I skipped a slide
12 here. Hold on, let's go back. Yes, okay. On Slide 6,
13 the second power reactor option we looked at, as Joe
14 also briefly described for you, is a risk-informed
15 alternative licensing basis.

16 Under this approach, we would maintain
17 the existing generic regulatory structure. We'd
18 issue a rule that would allow licensees who choose
19 to upgrade their PRAs to apply for approval of a
20 risk-informed alternative licensing basis. Those
21 licensees would be allowed to select a number of
22 plant-specific design changes or compliance issues
23 that their PRAs demonstrated were of low risk-
24 significance. And then they would be allowed to
25 deviate from their current deterministic

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1 requirements with the condition that they also
2 mitigated all known plant-specific risk
3 vulnerabilities that met NRC-specified criteria. And
4 those would be --- the search for vulnerabilities
5 would be limited to the PRA that the licensee had to
6 do, or the expansion of the PRA that the licensee
7 did to support the design changes that they would
8 propose under this process.

9 If vulnerabilities were identified, then
10 information on the mitigation of these events that
11 met the NRC criteria, information on how the
12 licensee would mitigate these events would have to
13 be documented in the plant's updated FSAR. And, of
14 course, mandatory monitoring and feedback would be
15 required to insure that the changes in risk
16 associated with the design changes remained
17 acceptable throughout the lifetime of the facility.

18 CHAIRMAN STETKAR: Dick, before you leave
19 that, let me --- I've read some of the things, and I
20 think at least at the Subcommittee level, you know,
21 we discussed Option 2 to some extent in previous
22 meetings. You want to wait until --- I'm curious
23 about why this option has been summarily dismissed.
24 In fact, I was quite surprised why it was summarily
25 dismissed, so maybe in some of your follow-on slides

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1 you can expand on that.

2 MR. DUDLEY: We will talk about that.

3 CHAIRMAN STETKAR: Okay.

4 MR. DUDLEY: I believe industry has a
5 presentation, also.

6 CHAIRMAN STETKAR: Okay.

7 MR. GIITTER: Dick, if I might just add.
8 I wouldn't use the word "summarily dismissed." It
9 was carefully evaluated and like anything, because
10 it was a voluntary rule, or a voluntary approach, it
11 required support from industry.

12 CHAIRMAN STETKAR: That's true, and I'll
13 be interested, very interested in hearing industry's
14 response on that.

15 MR. GIITTER: Yes.

16 CHAIRMAN STETKAR: Because I read some of
17 the words and it says there seemed to be some
18 support by industry, maybe not NEI officially, but
19 some support, but that the industry required more
20 details of the guidance as if they wanted a
21 complete, you know, specification laid out
22 beforehand. I understand that on one end of the
23 spectrum.

24 MR. GIITTER: Yes.

25 CHAIRMAN STETKAR: I, quite honestly,

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1 understand concerns about this issue of search for
2 vulnerabilities, and identify those. I understand
3 that. It's not clear to me why those are
4 showstoppers in the sense of not going forward with
5 it; especially, if there was some indication that
6 specific licensees might be interested in it. And
7 I'll tell you why, and I might as well get this on
8 the record now.

9 Back in the 1980s when PRA was first
10 developed, it was an industry initiative, but it
11 wasn't the industry. It was a few plants who were
12 looking forward and saying we think that we can
13 actually use this tool to our benefit. Now, whatever
14 their rationale was at the time, whether it was
15 licensing, legal, self-desire to understand risks,
16 that doesn't make any difference. The point is that
17 it was a few specific power plants. It wasn't
18 supported very heavily at that time by the entire
19 industry. In fact, the industry didn't want to talk
20 that way, and it wasn't supported very heavily by
21 the NRC at that time because that was contrary to
22 the current status quo of licensing. And, yet, those
23 utilities went ahead and here we are where everybody
24 talks about PRA. Now we're arguing about well, you
25 know, different criteria, and how it shall be

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1 applied, but nobody seems to argue that PRA is not a
2 good thing. Were it not for those individual
3 utilities 30 years ago, we wouldn't be where we are
4 now. So, my point is that if there are individual
5 utilities who see that there might be a benefit in a
6 voluntary initiative, should the NRC Staff foreclose
7 on that initiative simply because of resource
8 requirements, or holistic industry feedback saying
9 that the industry, whoever that is, doesn't want to
10 do it?

11 MR. GIITTER: I understand your comments
12 and I tried to, in my opening remarks I tried to
13 leave the door open for the possibility that we
14 would go back and explore something like Option 2 in
15 the future. But right now in terms of the timing and
16 getting the paper up to the Commission, I felt it
17 would be a challenge, and we would run the risk of
18 sending something up that, ultimately, would --- you
19 know, we might get an answer that would permanently
20 foreclose that option. So, the thinking was at this
21 point let's --- we see some momentum right now with
22 the risk-informed tech specs, and the advancement of
23 PRA quality through things like 50.69 and 4b, and we
24 certainly would leave the door open to going back to
25 something like Option 2 in the future provided

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1 there's at least some support for it. And agree, it
2 wouldn't have to be all of industry but, you know,
3 you need at least one utility out there that would
4 be willing to pilot something like that.

5 CHAIRMAN STETKAR: Okay, thanks. That
6 helps me a little bit. Thank you.

7 MR. DUDLEY: Okay. Now, on Slide 7, power
8 reactor Option 2 had a number of implementation
9 uncertainties, and we have not developed the
10 implementation details for this approach. To do so
11 would require a lot of resources, and we're in the
12 situation where we don't think we're at liberty to
13 spend those resources without the Commission's prior
14 approval. So, that's why these uncertainties remain,
15 and we're at this situation as we present the RMRP
16 SECY Paper to the Commission.

17 Just to list some of the uncertainties
18 associated with this option, the Staff would have to
19 review all power reactor regulations and determine
20 what rules are amendable to risk-informing under
21 this voluntary Option 2. We'd have to look at the
22 minimum scope and technical accuracy of a suitable
23 PRA to enter into the approach. We'd have to figure
24 out if there would be a certification or some sort
25 of review of that PRA. We'd have to look at the

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1 selection and scope of the permissible design
2 changes under the approach, the process for Staff
3 review of design changes, reporting and
4 documentation requirements would need to be worked
5 out. And the whole process would have to be
6 structured in a way that it would insure
7 transparency of licensee design changes to the NRC,
8 and review where necessary, and also transparency to
9 the public of the basis --- of what's being done and
10 the basis for why that is safe. So, there are quite
11 a few implementation uncertainties with this option.

12 MEMBER SCHULTZ: But, Dick, isn't that a
13 given? If you look at the way that the Option 2 has
14 been structured, then by definition it has all these
15 hooks that need to be established, and then
16 addressed in order to move forward. So, it
17 predefines a huge level of effort both by the Staff
18 and by a licensee that would like to take advantage
19 of the process. So, in a way we're --- we've
20 predisposed the process to be an extremely
21 complicated one. Has the Staff figured out a better
22 way? You indicated on the last slide that the Staff
23 intends to examine --- intends to --- maybe I
24 misread; intends to review the power reactor
25 regulations and develop a list of rules which would

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1 be amendable to the ---

2 MR. DUDLEY: If we were truly ---

3 MEMBER SCHULTZ: Okay, so that's an if.

4 MR. DUDLEY: Yes.

5 MEMBER SCHULTZ: But it's kind of a
6 chicken and an egg situation that we've got
7 ourselves into with the way it's been posed.

8 MR. DUDLEY: I think --- you know, Joe
9 mentioned it already. This just may not be the time
10 to propose such a large effort to the Commission,
11 and there is some thought that if we, you know, put
12 this option on the table, we might get back
13 Commission direction that would preclude us from
14 pushing in this --- from working in this --- from
15 pursuing this sort of approach in the future. So,
16 we're trying to be very careful to keep moving
17 forward but not too quickly. And, especially, this
18 is --- budget-wise, this is a very awkward time. We
19 don't know our Fiscal '16 budget, both Congressional
20 and House levels are substantially lower than the
21 level we have right now under Continuing Resolution,
22 so I think timing has a great deal to do with our
23 recommendation for the meantime to, you know,
24 maintain the existing regulatory framework.

25 MR. GIITTER: Let me just add. Thank you,

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1 Dick. This is Joe Giitter.

2 One of the things we did do was we kind
3 of looked at what some of the fundamental, I'll call
4 regulatory impediments were to implementing
5 something like this. And we just had to go back and
6 look at the experience we had with NFPA-805. And I
7 think the peer review process, although it served us
8 well, it also presents some challenges. We saw
9 evidence of that with the NFPA-805 reviews. So, one
10 of the things we explored and we talked about at the
11 public meeting was the idea of, and I use the word
12 "certified." I know it makes people a little queasy,
13 but certified PRA concept, but the idea is that you
14 have a PRA that NRC has approved. So, once that PRA
15 has been approved it could be used for all
16 regulatory applications with minimal review by the
17 NRC. It requires more up front resources but, in
18 essence, what it would do would be to provide
19 greater regulatory certainty once you have a
20 certified PRA. So, the process you would go through
21 with something like Option 2 would be much less --
22 - much more certain, and much less intensive on the
23 part of the Staff to do the review. But something
24 like that, I think, is necessary to make --- because
25 there's still a lot of negative feelings, not

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1 feelings isn't probably the right word, but negative
2 feedback on NFPA-805, some of the challenges we have
3 with the peer review process with the new methods
4 that were used.

5 We would have to come up with something
6 to prevent that from happening again, so the PRA
7 certification concept was one way of doing that. But
8 like anything, it requires a commitment on the part
9 of industry to participate in that. We do have some
10 interest from licensees. And I think if we were to
11 pilot that concept and work out the bugs we would,
12 in essence, be setting ourselves up for something
13 like this in the future.

14 MEMBER SCHULTZ: Thank you, Joe.

15 MR. DUDLEY: So, now on Slide 8. At our
16 meeting on July 29th when we discussed in additional
17 detail our RMRF Option 2, the Staff presented the
18 additional details that it was able to develop
19 within about a two-week period of time, or maybe
20 three-week period of time. And we also discussed
21 thoughts and approach for a way to determine the
22 suitability or establish the suitability of a PRA.
23 And during this meeting, industry stakeholders were
24 still concerned about the lack of implementation
25 details.

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1 Again, we have to admit, we have a
2 process that's fleshed out, but there's still a lot
3 of decisions that would need to be made, and we did
4 not have enough information at the time. So, NEI
5 stated that without explicit details on how this
6 process would work, that they can't assess the
7 safety benefits and the costs of the approach. And
8 they also recommended that we not even present the
9 option to the Commission without having developed
10 more details regarding how this process would work.
11 And that puts us in a conundrum in that we really
12 need Commission authorization to expend the
13 resources to develop these details, so we're in a
14 bit of an awkward situation.

15 On Slide 9, this is the third option,
16 the NUREG-2150, plant-specific RMRF. Under this
17 approach, we'd issue a regulation requiring all
18 plants to have PRAs. They would then develop a
19 plant-specific licensing basis based on the plant-
20 specific risk profiles. The NRC would specify a risk
21 management objective, but we'd also -- in order to
22 prevent this from being a risk-based approach, we
23 would also have to specify enhanced criteria for
24 determining the adequacy of non-risk factors so that
25 we would have a risk-informed approach. And defense-

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1 in-depth is one of the key non-risk factors, but we
2 could give additional details on safety margins and
3 that sort of thing. So, there would be --- in
4 addition to the risk criteria, there would have to
5 be enhanced criteria for the other non-risk factors
6 that would need to be considered.

7 So, under this approach based on the
8 risk profile and adequacy of defense-in-depth and
9 other non-risk issues, licensees would implement the
10 plant-specific licensing basis by determining how to
11 meet the risk objective, insure that the necessary
12 protections were in place to meet the risk
13 management goal. They'd have to demonstrate the
14 adequacy of the non-risk factors, defense-in-depth
15 safety margins, the monitoring. They'd have to
16 establish a risk-informed decision making process,
17 and they'd have to establish a monitoring and
18 feedback, and a reporting process.

19 So, on Slide 10, I have a very brief
20 summary of the written public comments we received
21 on these three RMRF implementation options for power
22 reactor safety. Only four commenters specifically
23 addressed Option 1, maintain the existing regulatory
24 framework, and all of those four commenters were in
25 favor of maintaining the current regulatory

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1 framework.

2 On Option 2, three commenters
3 specifically addressed Option 2, and all three of
4 the commenters expressed some level of detail --
5 - some level of interest in Option 2, but they all
6 said that we had not developed sufficient
7 implementation details to enable possible users of
8 that approach to analyze potential costs and
9 benefits.

10 On Option 3, only two commenters
11 addressed specifically Option 3, but neither
12 commenter supported Option 3. One said the approach
13 was simply not viable, and the other commenter said
14 that, again, there was insufficient information
15 available to properly assess the costs and benefits
16 of Option 3, but in that commenter's judgment, it
17 was unlikely that it would be justifiable for the
18 current fleet of operating reactors. So, those are
19 the public comments we got.

20 MEMBER SCHULTZ: Dick, were these all
21 independent commenters? Did any --- as you present
22 this, did one commenter address all three options?

23 MR. DUDLEY: No. See, it's not really --
24 -

25 MEMBER SCHULTZ: It wasn't like that.

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1 MR. DUDLEY: It's not like --- each
2 commenter didn't necessarily comment on all of the
3 three options. So, the commenter that ---

4 MEMBER SCHULTZ: No, my question was
5 really on the numerics here.

6 MR. DUDLEY: Well, there were 10 total
7 commenters.

8 MEMBER SCHULTZ: All right. So, that's
9 enough then.

10 MR. DUDLEY: NEI submitted two comment
11 letters, but there were 10 total commenters.

12 CHAIRMAN STETKAR: And they're --- I
13 guess, you know, only because I think PRA is my
14 middle name, but I guess I was surprised when I
15 looked at the commenters, and they're listed in the
16 SECY Paper so they're not secret. That aside from
17 two individuals there did not seem to be input from
18 the public. These are --- the vast majority of ---

19 MR. DUDLEY: That's correct.

20 CHAIRMAN STETKAR: There was Organization
21 of Agreement States, Commonwealth of Virginia seemed
22 to be more concerned about extensions to beyond
23 power reactor licensing. NEI, you know, and other
24 licensees commented from the industry side, but I
25 was a bit surprised that apparently there's either

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1 not very much interest among the public on this
2 particular issue, which may be the case. I mean,
3 that may be the case.

4 Did you --- in your public meetings was
5 there participation by the public outside of the
6 industry?

7 MR. DUDLEY: I don't believe --- we've
8 had
9 the---

10 CHAIRMAN STETKAR: No, I want to name
11 particular groups or individuals, but have you had
12 much interaction with the public?

13 MR. DUDLEY: Well, I guess really the
14 only participation from the general public might be
15 would be the Union of Concerned Scientists, and they
16 participated in some previous meetings, but I don't
17 believe they ---

18 CHAIRMAN STETKAR: But they didn't submit
19 --- obviously, they didn't submit ---

20 MR. DUDLEY: They didn't attend, I don't
21 think, the ---

22 CHAIRMAN STETKAR: --- any formal
23 comments.

24 MR. DUDLEY: --- meeting on the 29th.
25 They were not there. I don't know if Dr. Lyman's on

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1 the phone today.

2 CHAIRMAN STETKAR: We'll find out.

3 MR. DUDLEY: Yes.

4 CHAIRMAN STETKAR: But I was just
5 curious.

6 MR. DUDLEY: They seem to have lost
7 interest.

8 CHAIRMAN STETKAR: Yes, yes.

9 MR. DUDLEY: Or they --- well, they
10 certainly haven't increased interest.

11 (Off microphone comment)

12 CHAIRMAN STETKAR: You have to come up to
13 the microphone and identify yourself, and speak with
14 sufficient clarity and volume to be readily heard I
15 think is what it says here.

16 MR. JORDAN: My name is Nate Jordan.
17 Early on in the process we did have some public
18 interaction, but most of the comments that we
19 received, some of which we tabulated as outside of
20 scope of what we were dealing with.

21 CHAIRMAN STETKAR: Oh, okay.

22 MR. JORDAN: Most of the individual
23 comments were general comments outside of the scope
24 of what we were ---

25 CHAIRMAN STETKAR: Okay, that's fair. I

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1 understand that.

2 MR. DUDLEY: And let me restate that.
3 Let's see, Prasad Kadambi, ex-NRC employee, but he
4 is a member of the public.

5 CHAIRMAN STETKAR: Yes.

6 MR. DUDLEY: And he did weigh in on many
7 of these issues.

8 CHAIRMAN STETKAR: Yes. As I've said,
9 I've seen two --- there are two individuals, Prasad
10 Kadambi and Dan Cronin.

11 MR. DUDLEY: Right, on the materials
12 issues.

13 CHAIRMAN STETKAR: Right, on the
14 materials issues.

15 MR. DUDLEY: No, I'm sorry, on non --- on
16 Research and Test Reactors.

17 CHAIRMAN STETKAR: Yes. I don't remember
18 what his comments ---

19 MR. DUDLEY: Right, Research and Test --
20 -

21 CHAIRMAN STETKAR: But, anyway, I was
22 looking more for larger public interest groups and
23 things like that.

24 MR. DUDLEY: Right. USC ---

25 CHAIRMAN STETKAR: USC, I could imagine,

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1 but you can name any number of other organizations.

2 MR. DUDLEY: Right.

3 CHAIRMAN STETKAR: Okay, thank you.

4 MR. DUDLEY: So, on Slide 11, this is how
5 the Staff --- this is the Staff's evaluation. We
6 rejected Option 2 because it's a voluntary approach,
7 and it's not supported by stakeholders. And to
8 invest substantial resources in putting together a
9 voluntary approach that people are not likely to use
10 doesn't seem to be a good use of resources,
11 especially when resources are scarce.

12 The Staff also rejected Option 3 because
13 it is too expensive. We evaluated its cost in SECY-
14 13-0132 on Near Term Task Force Recommendation 1,
15 and our assessment then was that the cost for the
16 entire fleet of operating reactors to upgrade their
17 PRAs and maintain them for the remaining lifetime of
18 the plants would be in excess of \$700 million. So,
19 we believe Option 3 is too expensive, and it was
20 also not supported by stakeholders.

21 Therefore, the Staff recommends Option
22 1, maintain the existing regulatory framework. Under
23 this approach, all ongoing and planned risk-informed
24 initiatives would continue, and the Staff would
25 continue to make incremental improvements, risk-

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1 informed regulatory improvements whenever necessary.

2 MEMBER BLEY: Just so I ---

3 MR. DUDLEY: That doesn't, necessarily,
4 preclude moving somewhere closer to Option 2, but in
5 an incremental piecewise fashion.

6 MEMBER BLEY: Lacking Option 2, there
7 isn't anything that we can't really do that you were
8 envisioning, except for an easier approval process,
9 or an initiative by licensees on their own under an
10 approved PRA. Right?

11 MR. DUDLEY: Maybe I'm ---

12 MEMBER BLEY: Never mind.

13 MR. DUDLEY: You know, Option 2 could
14 actually be implemented by a licensee now if the
15 licensee chose to submit an exemption request.

16 MEMBER BLEY: Yes.

17 MR. DUDLEY: That mechanism is available
18 under Reg Guide 1.174 and 50.12.

19 CHAIRMAN STETKAR: Well, but they --
20 - that's --- I'm trying to be very careful here
21 because I'm not an attorney, so I don't want to say
22 that's true or that's false. And I know we probably
23 have attorneys sitting over on the side.

24 Option 2, in my interpretation, expanded
25 the scope of thought beyond particular risk-informed

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1 applications like tech specs, like things like that,
2 and said do I want to risk-inform the entire
3 licensing basis of the plant?

4 MR. DUDLEY: Right.

5 CHAIRMAN STETKAR: And I don't know --- I
6 guess probably legally if you read the words in the
7 regulations, people are allowed to do that right
8 now, but probably not too awfully encouraged to do
9 it.

10 MR. DUDLEY: Yes. I mean, a licensee
11 probably would feel it was taking a significant risk
12 ---

13 CHAIRMAN STETKAR: Right.

14 MR. DUDLEY: --- if it were to invest a
15 lot of money in that approach.

16 CHAIRMAN STETKAR: Without some prior
17 condition ---

18 MR. DUDLEY: And it wouldn't ---

19 CHAIRMAN STETKAR: Without some prior
20 Commission endorsement ---

21 MR. DUDLEY: Exactly.

22 CHAIRMAN STETKAR: --- of that notion.

23 MR. DUDLEY: Yes. Yes.

24 CHAIRMAN STETKAR: Okay.

25 MR. DUDLEY: I mean, in a substantial

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1 application like that, the approval of that might
2 even go all the way to the Commission.

3 CHAIRMAN STETKAR: Yes.

4 MR. DUDLEY: You know, even if it was
5 just a license amendment, I would surmise.

6 CHAIRMAN STETKAR: Okay. By the way, I
7 have to say this because I was chastised for using
8 the term "summarily dismissed." I think --- I'm
9 going to have to look at the transcript to see
10 exactly what words I used. The term "rejected" seems
11 pretty doggoned strong to me, so when you're
12 presenting this material using words like "Staff
13 rejected" seems to me to be synonymous to summarily
14 dismissed.

15 MR. DUDLEY: The Staff did not select --
16 -

17 MR. GIITTER: I agree that's strong. I
18 didn't prepare the slide, so ---

19 MR. DUDLEY: We might ---

20 MEMBER BLEY: But summarily might imply
21 you didn't think about it.

22 CHAIRMAN STETKAR: Actually, that's true,
23 but these bullets and written presentation material
24 like this conveys somewhat different opinions than
25 we heard orally today. And sometimes that matters,

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1 so ---

2 MR. DUDLEY: That's a very good point,
3 and I need to go back and look at the SECY and ---

4 CHAIRMAN STETKAR: And the SECY Paper, I
5 don't recall because I didn't do a word search. I
6 doubt ---

7 (Off microphone comment)

8 CHAIRMAN STETKAR: Yes, I didn't recall
9 the word "rejected," but it certainly didn't present
10 the same ---

11 MR. GIITTER: Point's taken; got it.

12 CHAIRMAN STETKAR: --- thing we heard
13 orally today.

14 MR. DUDLEY: Right. Well, that's a good
15 comment. Are there any more questions on RMRP
16 implementation options? If not, the second section
17 of the SECY Paper is the reevaluation of power
18 reactor regulatory improvement activities that the
19 Commission told us to do in their May SRM on SECY-
20 13-0132 on Near Term Task Force Recommendation 1.

21 In that SRM, the Commission directed the
22 Staff to reevaluate the objectives of Improvement
23 Activity 1, which was to establish a new design
24 basis extension category, and Improvement Activity
25 2, to develop Commission expectations for defense-

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1 in-depth.

2 The Commission told us to reevaluate
3 those improvement activities within the context of
4 Commission direction on the Risk Management
5 Regulatory Framework, but because the Staff believes
6 that these improvement activities are very closely
7 related to the evaluation we were also directed to
8 do by the Chairman's Tasking Memo, our evaluation of
9 NUREG-2150, we decided to provide our reevaluations
10 of Improvement Activities 1 and 2 to the Commission
11 in the RMRF SECY Paper. So, the Commission will get
12 our thoughts on both RMRF and then Improvement
13 Activities 1 and 2 simultaneously.

14 Slide 14 is our reevaluation of the
15 Improvement Activity to establish the design basis
16 extension category of events and associated
17 regulatory requirements. The Staff determined that
18 creating this new category is not necessary. Really,
19 the main purpose of the new category was to insure
20 that when we write future new rules, that all these
21 new rules properly address the additional regulatory
22 attributes that you need to address when you're
23 regulating in the realm that exceeds the existing
24 design basis. So, instead of establishing the
25 category, the Staff has decided to write internal

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1 rulemaking guidance that this guidance will insure
2 consistent criteria, and specifying performance
3 goals, treatment requirements, documentation
4 requirements, change processes. The 50.59 change
5 process only applies to design basis activities. And
6 reporting requirements whenever new regulations,
7 especially beyond-design-basis regulations are being
8 developed. And as an example, the mitigating
9 systems, the mitigating strategies for beyond-
10 design-basis events, that rule is being implemented
11 with this information in mind, and they're
12 specifying change processes, and all of the criteria
13 here that we've specified are going to be addressed
14 in the mitigating strategies rule.

15 CHAIRMAN STETKAR: Okay. I hear words
16 that are said. I'm trying to recall the mitigating
17 strategies rule. I struggle with the notion of --- I
18 think I understand, but I probably don't -- the
19 process to justify rulemaking, and the analyses that
20 are done to do that. And for the post-Fukushima
21 things, exceptions were always made. Right? We have
22 the orders because you couldn't justify the orders
23 based on standard analyses that are done to say that
24 the improvements can be cost-justified. Can't
25 justify the rulemaking based on ---

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1 MR. GIITTER: There was an administrative
2 --- excuse me, this is Joe Giitter. There is
3 administrative exemption for the spent fuel pool
4 instrumentation.

5 MR. DUDLEY: Yes, we can implement rules
6 either as adequate protection rules ---

7 CHAIRMAN STETKAR: Right.

8 MR. DUDLEY: --- or as cost-justified
9 substantial safety improvements, but yet there was a
10 third category that was used on the spent fuel ---

11 CHAIRMAN STETKAR: On the spent fuel
12 pool, the --- I don't want to get into specifics of
13 the mitigating beyond-design-basis rulemaking that's
14 in play right now. Looking forward, going forward,
15 this design extension category of events would
16 ostensibly apply to things that you don't
17 necessarily --- don't necessarily meet the current
18 cost-benefit analyses, but show an improvement in
19 safety that is enough to justify some special
20 treatment without full regulatory treatment. That's
21 always been my interpretation of it. So, that it
22 would apply to things that don't necessarily meet
23 the quantitative safety goal criteria that are
24 applied as a screen for current rulemaking.

25 MR. DUDLEY: Let me --- I have a backup

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1 slide, if I can find my cursor.

2 CHAIRMAN STETKAR: What I'm concerned
3 about is, I hear you saying we're going to improve
4 the rulemaking process, the guidance for rulemaking,
5 the guidance for regulatory basis evaluations,
6 things like that, but until I sort of better
7 understand how that's being done, I don't see that
8 as a surrogate to the notion of this design
9 extension category, other than the practice that's
10 been used up until now, which has gone on kind of an
11 ad hoc episodic event-by-event basis. Yes, we're
12 going to consider station blackout as something
13 separate, so we have to throw that in the category.
14 And we're going to consider ATWS as something
15 separate, so we're going to throw that in the
16 category. Now, we're going to consider ELAP and
17 coincident loss of alternate heat sink, and we're
18 going to throw that in. What about an ELAP without
19 coincident loss of alternate heat sink, what about
20 the next one that comes up, how are we going to
21 consider that consistently?

22 MR. DUDLEY: I don't know how much time
23 you want to spend on this.

24 CHAIRMAN STETKAR: Yes, a little bit, not
25 a lot.

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1 MR. DUDLEY: But just --- this is a slide
2 from the Commission meeting on SECY-13-0132, and
3 that design basis extension category is shown at the
4 very bottom. I guess that's the blue box. And it is
5 where we put the additional requirements that exceed
6 the design basis. Now, some of those are adequate
7 protection requirements, some of them would be cost-
8 justified substantial safety increases, and some of
9 them when we would implement the administrative
10 exemption to get a rule into that category. But the
11 common thing about all the rules in that box is that
12 you need to establish additional criteria for the
13 regulatory attributes that are provided for you
14 automatically for design basis events, anticipated
15 operational occurrences, and normal operation
16 requirements. So, you know safety grade and all that
17 for those things, but when you're in that box below
18 you don't know that. So, when you write the rule,
19 you need to address those criteria within the rule
20 itself.

21 CHAIRMAN STETKAR: And if I can try to
22 understand. The slide that we transition from here
23 you're talking about better processes or inform ---

24 MR. DUDLEY: Sorry.

25 CHAIRMAN STETKAR: You can go back to --

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1 -

2 MR. DUDLEY: Let me ---

3 CHAIRMAN STETKAR: --- the simple one.

4 MR. DUDLEY: You want to go to 14?

5 CHAIRMAN STETKAR: No, I actually don't -
6 -- I want to stay on the one that had the simple
7 color-coded ---

8 MR. DUDLEY: Oh, I'm sorry.

9 CHAIRMAN STETKAR: --- boxes that you
10 were on, that backup slide. Here we go.

11 MR. DUDLEY: That one. I'm sorry. Okay.

12 CHAIRMAN STETKAR: What you're talking
13 about is better guidance for establishing the
14 criteria off to the left of that gray box?

15 MR. DUDLEY: Well, in Recommendation 1,
16 we had hoped to actually establish internal guidance
17 that would help one choose treatment requirements
18 and that sort of thing. That was what we had hoped
19 we would be able to do under that.

20 In our reevaluation, we backed off a
21 little bit, and we're not going to say that this
22 internal rulemaking guidance will specifically --
23 - it's not an algorithm that figures out what your
24 treatment is for a particular set of requirements,
25 but it just lets you know that that is something you

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1 need to include in the rule. And we would develop
2 the treatment requirements on a case-by-case basis
3 based on what was deemed appropriate by management
4 and the Commission at the time.

5 CHAIRMAN STETKAR: Okay, thanks. That
6 helps. Now we can go back to the ---

7 MR. DUDLEY: All right, let's see. Okay.
8 So, we determined that we didn't need the category.
9 We were going to write internal rulemaking guidance,
10 and we're going to use existing resources to do
11 that. Three public commenters specifically commented
12 on our recommendation on the design basis extension
13 category, and all three of the commenters agreed
14 that it isn't necessary to establish a new design
15 basis official category of events and associated
16 requirements.

17 So, the next slide, Slide 15, is our
18 reevaluation of the Improvement Activity 2 to
19 establish the Commission's expectations for defense-
20 in-depth. And the Recommendation 1 SECY Paper said
21 that the Commission --- excuse me, that the Staff
22 would develop a definition and then develop criteria
23 for determining --- objective criteria for
24 determining the adequacy of defense-in-depth.

25 And the Staff's reevaluation of this

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1 activity concluded that while this proposed effort
2 may very well be meritorious, I mean, it could
3 potentially succeed. And if it did, it would be
4 great, if we had predictable objective criteria for
5 determining the adequacy of defense-in-depth for
6 power reactor safety. And, I guess, we were
7 optimistic in the Recommendation 1 SECY that we
8 could do that, but the resources to do that were
9 estimated to be over 6 FTE over a period of three to
10 four years, and that's significant. And, also, if
11 you go back to the SECY Paper and you read the pros
12 and cons, one of the cons was that it's possible --
13 - this is very hard to do. And it's possible, you
14 know, we may not succeed in being able to establish
15 predictable objective criteria that the Commission
16 would find acceptable. So given that uncertainty,
17 and given the current resource limitations, the
18 Staff recommends in the SECY Paper that the NRC
19 should not undertake this activity at the present
20 time. All right? This is not a rejection, this is a
21 deferral until perhaps a more opportune time in the
22 future. And one of the reasons for that is that
23 there were three commenters that commented on this,
24 and all three commenters said yes, you should do
25 that. You know, you should establish these criteria.

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1 I think the paper mentions NEI has
2 suggested --- has offered to write a White Paper on
3 defense-in-depth, and I think the schedule for that
4 is uncertain, and was probably overtaken by events
5 associated with Fukushima. But if the industry took
6 a shot at that and then submitted it, you know,
7 there may be a better time in the future for us to
8 pursue this. But right now, I think everybody's
9 plate is pretty full with all the other activities
10 that we're undertaking. So, that's our evaluation of
11 defense-in-depth.

12 CHAIRMAN STETKAR: Dick, when you talk
13 about the defense-in-depth, again I focus on the
14 third sub-bullet under the public comments, that you
15 said three commenters addressed the issue of
16 defense-in-depth, and two of them apparently had a
17 condition that says well, you can't treat defense-
18 in-depth separately from risk information.

19 MR. DUDLEY: Well, I mean, they didn't
20 want two sets of criteria in other words.

21 CHAIRMAN STETKAR: Right.

22 MR. DUDLEY: Risk had to be X, and
23 defense-in-depth has to be Y.

24 CHAIRMAN STETKAR: Right.

25 MR. DUDLEY: They wanted interactive

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1 criteria, that they should be interactive and not
2 independent.

3 CHAIRMAN STETKAR: So, in your discussion
4 you said well, the Staff, because of all the reasons
5 that you noted, hasn't in the sense of the preceding
6 slides rejected the notion of going forward with
7 this issue of defense-in-depth, but you've postponed
8 it because of resource issues and things like that.

9 MR. DUDLEY: Yes.

10 CHAIRMAN STETKAR: Does that mean that if
11 it were to be taken up, you would also follow these
12 comments regarding the integration of risk with
13 criteria for defense-in-depth?

14 MR. DUDLEY: You mean meet the condition?

15 CHAIRMAN STETKAR: Meet the condition
16 there, because right now as they're presented ---

17 MR. DUDLEY: There's levels of meeting
18 that condition, too, you know. So, clearly, at some
19 point defense-in-depth --- some level of risk, the
20 criteria for defense-in-depth is very low, and
21 perhaps nonexistent. So, it's --- I don't want to
22 postulate ---

23 CHAIRMAN STETKAR: What I'm trying to --
24 -

25 MR. DUDLEY: This was ---

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1 CHAIRMAN STETKAR: Yes. What I'm trying
2 to get at here is, this is --- to me, it's a bit of
3 an example of parsing things up into you have
4 Improvement Activity 2, defense-in-depth. And you're
5 talking about what has been done in the area of
6 defense-in-depth and saying well, it might merit
7 further examination but not necessarily right now.

8 When I read the paper, I see those
9 comments, but I still see the Staff as looking at
10 defense-in-depth in isolation. I don't see it being
11 --- I don't see the Staff being responsive to 67
12 percent of the comments that says you should
13 consider defense-in-depth integrally with risk.

14 MR. GIITTER: Yes, this is Joe Giitter. I
15 would just comment on that quickly.

16 One of the things we are doing, we
17 started off to do prior to the Fukushima event was
18 to include a better definition of defense-in-depth
19 in Reg Guide 1.174. And that's precisely where you
20 want to do it.

21 CHAIRMAN STETKAR: Right.

22 MR. GIITTER: Because the purpose of Reg
23 Guide 1.174 is, of course, is to integrate decision
24 making process, integrate defense-in-depth safety
25 margin, and any quantitative risk insights you might

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1 have.

2 MEMBER BLEY: I'm wondering if you folks
3 would care to comment on this. This isn't new. Over
4 the years, several members of the Staff have put
5 together papers trying to address defense-in-depth.
6 Prasad who made comments here was one, Mirelick
7 Ravelas has done it. The Technology Neutral
8 Framework took a shot at it, and there was a NUREG
9 or a draft NUREG on defense-in-depth five years ago
10 or something like that. What's our stumbling point
11 on this issue? I mean, this is --- I mean, one more
12 time we said well, let's put it off for a while.
13 What's the stumbling point? Is it just too many
14 different opinions? I have no idea what you'll get
15 from the industry if they submit a paper to you, if
16 it will look anything like those previous ones.

17 MR. GIITTER: My perspective is that
18 there are a lot of different ideas and perspectives
19 on what defense-in-depth means. And I think if you
20 go back to even, you know, the early days of the
21 Atomic Energy Commission, defense-in-depth has
22 always been a concept that has been important. But
23 people --- you can define it, you can get a room of
24 six people together and you'll get six different
25 interpretations of what you mean by defense-in-

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1 depth, so I think that's precisely what the problem
2 is, is trying to define it in a way that maybe
3 wasn't intended given that it is kind of a high-
4 level philosophical concept. Sometimes trying to
5 implement that, or provide details or criteria to
6 how to implement that, I think can be challenging.

7 MEMBER BLEY: Okay. I guess if you go all
8 the way back, the first mention I recall of it
9 anywhere was back in the beginnings, nuclear power
10 with the fuel inside a clad, inside a reactor, so
11 reactor coolant system inside a containment, all of
12 that was defense-in-depth, and then it started
13 spinning into many other things ---

14 MR. GIITTER: That's right.

15 MEMBER BLEY: --- that have led to great
16 confusion along the way. And we have an ACRS paper
17 on it 20 years ago or something like that, too.

18 CHAIRMAN STETKAR: We do. And in some
19 sense we've evolved a bit, other cases maybe not,
20 from the early days in that in those days those are
21 excellent principles, design principles, engineering
22 principles. We didn't have the tools in those days
23 to be able to measure the effectiveness of the
24 actual designs, and to determine --- you know, it's
25 the old how safe is safe enough? How much defense-

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1 in-depth, is defense-in-depth enough? We have better
2 tools these days.

3 MEMBER BLEY: Well, now that we have the
4 tools, we've made some attempts, as well. And we
5 still run into the same ---

6 CHAIRMAN STETKAR: You still run into
7 some ---

8 MEMBER BLEY: That's not defense-in-
9 depth.

10 CHAIRMAN STETKAR: That's right. That's
11 right.

12 MR. DUDLEY: Yes, and when we get to the
13 interrelationships section of the SECY Paper, we're
14 going to mention an ongoing effort by the Office of
15 Research to put together the history and a NUREG
16 associated with that. And I think they recently even
17 held a public --- not a public, an interagency work
18 shop to see if there are other --- what other
19 agencies believe defense-in-depth should consist of,
20 or how they use the concept. Okay, so that's ---

21 CHAIRMAN STETKAR: We're good on time, by
22 the way.

23 MR. DUDLEY: Okay. I think we're going to
24 --- well, my slides really only run about half an
25 hour total, so okay. So, I guess there were no

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1 questions.

2 MR. GIITTER: I want to just add, this
3 might be a good opportunity to go back to a question
4 you asked earlier, John.

5 You talked about the risk --- absent
6 Option 2 or Option 3, what would the Staff be doing,
7 or what risk insights would we get that would
8 address plant-specific vulnerabilities? Maybe I --
9 - I think that was kind of your question. What would
10 be the process going forward to insure that plant-
11 specific vulnerabilities or plant-specific risk
12 would be addressed in our current regulatory
13 framework?

14 CHAIRMAN STETKAR: But it's two parts,
15 though, Joe. One part is plant-specific, the other
16 is looking forward to try to understand what those
17 vulnerabilities are before events actually occur --
18 -

19 MR. GIITTER: Right.

20 CHAIRMAN STETKAR: --- that prompt us to
21 go look for those vulnerabilities.

22 MR. GIITTER: Right.

23 CHAIRMAN STETKAR: So, it's both plant-
24 specific and sort of forward-looking.

25 MR. GIITTER: Okay.

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1 CHAIRMAN STETKAR: Rather than this, it's
2 a strong word but I'll call it reactionary approach
3 that when an event happens, it prompts us then to
4 think about the vulnerabilities either of the entire
5 industry, seismic events, or more focused on a
6 plant-by-plant basis.

7 MR. GIITTER: Okay.

8 CHAIRMAN STETKAR: Because the next one
9 that happens, the next event ---

10 MR. GIITTER: Yes.

11 CHAIRMAN STETKAR: --- that happens is
12 probably not going to be like any of the ones that
13 happened in the past. And, you know, we'll react to
14 that one as we've reacted to all of the other ones.

15 MR. GIITTER: So, to answer your
16 question, I think ideally if you had a complete full
17 PRA, I mean, you know, for example we don't have PRA
18 models for shutdown risk, and that's a blind spot
19 right now. You know, we don't know that there might
20 not be vulnerabilities out there related to shutdown
21 risk. But I can say because of the voluntary
22 initiatives like NFPA-805 and the fire PRAs that
23 were done, that there have been some vulnerabilities
24 that have been addressed, and I'll give you some
25 examples of that.

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1 Early in my career, I was sent out to
2 Davis-Besse following the 1985 loss of feedwater
3 event, and that was a very significant event. And as
4 a result of the fire PRA that First Energy did for
5 Davis-Besse, they determined they needed to add a
6 non-safety grade aux feedwater pump. And to me that
7 --- even though it's a fire risk, that addresses
8 risk much broader than fire. So, I think the
9 voluntary initiatives that are being done, and the
10 seismic PRAs that are being done for NTTF 2.3,
11 there's 20 plants I think that are going to be doing
12 seismic PRAs. I think some of those vulnerabilities
13 will be identified and addressed but it won't be
14 complete, it won't be as holistic as it would be if
15 you had a requirement that looked at everything. I
16 don't know if that answers your question or not.

17 CHAIRMAN STETKAR: Part way, thanks.

18 MR. DUDLEY: If there are no other
19 questions on defense-in-depth, I'll start on Slide
20 18, which is Section 3 of the paper on the Agency-
21 wide Risk Management Policy Statement.

22 CHAIRMAN STETKAR: Go back one and start
23 on 17.

24 MR. DUDLEY: Oh, thank you.

25 CHAIRMAN STETKAR: Just saying.

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1 MR. DUDLEY: I have my paper out of sync
2 with my --- with the audiovisual. Thank you.

3 Okay. So, on 17, the Staff believes that
4 an Agency-wide Risk Management Policy Statement
5 could potentially improve and make more consistent
6 the regulatory framework used by the NRC across all
7 the program areas. And the reasons for this is
8 although consideration of risk, and tailoring the
9 regulations and oversight inherent to manage risk,
10 it's inherent in all of the programs that we
11 regulate. The regulatory approaches for all these
12 different program areas evolved separately, and
13 based on their own individual attributes, so it is
14 possible that an Agency-wide Risk Management Policy
15 Statement could improve and make more consistent our
16 overall regulatory framework across programs.

17 In response to this recommendation which
18 was made in NUREG-2150, we requested public comments
19 on two draft example conceptual policy statements,
20 one that we wrote in November of 2013, and one in
21 May of 2015. The public comments on our first draft
22 policy statement example were mixed, some were
23 positive, a lot were negative, and I think a lot of
24 the negativity had to do with the fact that that
25 policy statement kind of tried to define defense-in-

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1 depth across all programs. And it was a little vague
2 in that, and a lot of people were very
3 uncomfortable, I think, with how we discussed
4 defense-in-depth in the initial draft policy
5 statement.

6 So, we took another shot at it, all
7 right, and we published in May 2015 a simplified
8 example policy statement. And it said, you know, it
9 would --- it was a risk management policy statement,
10 but it would still --- you would have to insure
11 adequate defense-in-depth. And we didn't get into
12 the criteria of what defense-in-depth meant, and how
13 it might apply across the different policy
14 statements. We just kind of moved that out. We
15 thought maybe that would simplify things if we did
16 that.

17 So, in response to the second policy
18 statement that we published, we got 10 commenters.
19 All 10 commenters addressed the Agency-wide Policy
20 Statement, and 9 of the 10 commenters recommended
21 against our issuing an Agency-wide Risk Management
22 Policy Statement. And, in general, the reason they
23 did that is they seem to --- they thought that it
24 was not needed because the existing programs in the
25 different program areas could be risk-informed, as

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1 appropriate, under current policy and guidance. You
2 don't --- you're not precluded from making
3 appropriate risk-informed changes in any of our
4 ongoing program areas by current policy, so public
5 comments were fairly negative, highly negative on
6 our proceeding with an Agency-wide Policy Statement.

7 So, our evaluation is on Slide 18, and
8 we agree with the public commenters that existing
9 NRC program areas can be appropriately risk-informed
10 without an Agency-wide Policy Statement. It might be
11 nice to have, but it's certainly not essential. And
12 because of that, we believe it wouldn't be
13 appropriate right now given our resource situation
14 to divert resources away from other activities that
15 are more safety-significant. Therefore, we will
16 recommend against developing an Agency-wide Risk
17 Management Policy Statement. Are there questions on
18 that activity?

19 CHAIRMAN STETKAR: Just a question. That
20 policy statement would replace the Commission PRA
21 Policy Statement from 1995?

22 MR. DUDLEY: That was one of the issues,
23 and it was really unresolved.

24 CHAIRMAN STETKAR: Because, you know, I
25 still go back --- there is a Commission policy from

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1 the 1995 Policy Statement, "The use of PRA
2 technology should be increased in all regulatory
3 matters to the extent supported by the state-of-the-
4 art in PRA methods and data, and in a manner that
5 complements the NRC deterministic approach and
6 supports NRC traditional defense-in-depth
7 philosophy." It doesn't say only for power reactors.
8 It says all regulatory.

9 MEMBER BLEY: But it says --- it reads to
10 me more like it's telling you to support risk
11 analysis but not a risk management process.

12 CHAIRMAN STETKAR: That --- it does not
13 talk about risk management. It says use PRA more --
14 -

15 MEMBER BLEY: Now, 1.174 does, although
16 it's not a policy statement.

17 CHAIRMAN STETKAR: Right, 1.174 is not
18 regulation from a policy statement. That's true. It
19 is a bit of ---

20 MEMBER BLEY: It's not restricted to
21 reactors either, is it, or is it?

22 MR. GIITTER: I think it's something just
23 used by reactors.

24 MEMBER BLEY: Is it? Okay, I was just
25 looking through the front and I don't see anything

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1 right there that pins it down.

2 MR. GIITTER: Yes. But, I mean, I would
3 just comment on that. I served about nine years in
4 NMSS and I could tell you that there's many aspects
5 of the regulations for the Materials licensees that
6 are also risk-informed. And a good example of that
7 would be Part 70 ---

8 MEMBER BLEY: Sure.

9 MR. GIITTER: --- which is risk-informed
10 performance-based.

11 MEMBER BLEY: Those folks come here, too.
12 I see one, at least one. Has there been any thought
13 of doing something like 1.174 for other issues
14 around the Agency, even though it's not linked to a
15 Commission Policy Statement?

16 MR. DUDLEY: Other program areas, or ---

17 MEMBER BLEY: Yes, like NMSS.

18 MR. DUDLEY: Well, you're going to hear,
19 I think ---

20 MEMBER BLEY: He can tell us about that
21 when he comes up, or she.

22 MR. DUDLEY: Yes.

23 MR. SNODDERLY: This is Mike Snodderly,
24 ACRS Staff. Yes, Dennis Damon was going to come up
25 with Joe Rivers from NSIR to update the Subcommittee

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1 on their risk-informed activities in light of the
2 Staff's new recommendation.

3 MEMBER BLEY: Thank you, Mike. They've
4 heard my first question.

5 MR. SNODDERLY: Yes, so we were going to
6 have them after --- right after Donnie talks about
7 interrelationships.

8 MR. DUDLEY: Okay. So, that I don't
9 interrupt Donnie's presentation, what I'm going --
10 - what I'd like to do is flip directly to Slide 22,
11 and I won't change the audiovisual one because
12 there's some animations coming up that I don't want
13 to spoil. I guess I've spoiled it by telling you you
14 have some animations, but nevertheless, if you just
15 go to Slide 22, the next steps on the RMRF SECY.

16 As I said, I'll receive office
17 concurrence comments and hopefully concurrences on
18 this Wednesday, and what we will do is we'll provide
19 the ACRS with a markup of any substantive changes
20 that we make as a result of office concurrence
21 comments. And you'll get that, hopefully, well
22 before your Full Committee meeting when we meet with
23 you again on November 4th. So, then we would expect
24 a letter from the ACRS somewhere around mid-
25 November. We'll respond to that letter, and we would

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1 --- our paper is due to the Commission by December
2 18th. Ideally, we'd like to have both your letter
3 and our response to that letter included as
4 enclosures to the SECY Paper, but depending on the
5 timing of those, that correspondence, that may or
6 may not happen.

7 So, that concludes my presentation on
8 the RMRF Secy Paper. I'd like to get Donnie Harrison
9 now to --- you want to come push the buttons? Donnie
10 will discuss the interrelationships, because he did
11 --- he had the lead on this work.

12 MR. HARRISON: Good afternoon. I'm Donnie
13 Harrison from the Office of New Reactors. And just
14 as kind of a quick reminder, in the SRM that was on
15 the SECY for the Near Term Task Force, they included
16 a direction to the Staff to provide a description of
17 any interrelationships of ongoing risk-informed
18 activities. And the intent of that was, it says, is
19 to insure the activities are well coordinated and
20 effectively planned and implemented, so it was kind
21 of with all these different activities going on, how
22 do we insure things mesh together, if you will, in
23 an effective way?

24 In doing that, and previously we had
25 presented at a Subcommittee meeting what's referred

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1 to here as an Influence Diagram to illustrate those
2 interrelationships between those activities. We're
3 doing it strictly for the power reactors. I mean,
4 there's also activities going on within the other
5 arenas. Even within the power reactors, you're going
6 to see it's not all-inclusive. It's some of the
7 major activities, but there's a number of other
8 risk-informed activities that are ongoing, as well.

9 So, we'll start with some of these
10 interrelationships, the Commission actually directed
11 us to address five specific topics. As we went
12 through, we found relationships with other
13 activities, and we also broke it out into two
14 general areas, that area of policy development, and
15 the area of implementation.

16 You'll see this umbrella. This is being
17 called the Umbrella Chart now. It is the Risk-
18 Informed Steering Committee, that's led by the
19 Office Director in NRR, there's Deputy Office
20 Directors from each of the other offices that are on
21 that Steering Committee. There's also an industry
22 steering committee which they interact with on a
23 periodic basis. Matter of fact, there's one this
24 afternoon, an internal meeting, and then there's a
25 joint meeting tomorrow afternoon between the

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1 industry and the NRC Steering Committee. And they
2 discuss various topics and issues that might be
3 fresh and active areas to pursue, and some of those
4 relate to what we're doing.

5 To address the intent of the Commission
6 direction, one of the things we did in Enclosure 2
7 to our draft SECY Paper is discuss that there is a
8 number of ways where we stay connected with each
9 other across offices. Some of this is through the
10 budget and planning process, some of it is --
11 - there's a --- Research has the responsibility to
12 provide an annual update called the "Risk-Informed
13 Activities Website." Through that, they talk about
14 some of the risk-informed activities.

15 There's supposed to be monthly or every
16 couple of weeks meetings of the Risk Management
17 Team. That's just a group that gets together, it's
18 within the Risk arenas within the different offices.
19 Primarily, Research, NRR, and NRO, but there are
20 representatives from NSIR and NMSS that can and do
21 participate. And that is a way to share technical
22 work that's going on between the offices, to see if
23 there's overlap. It also achieves direction from the
24 Commission previously to make sure we're coordinated
25 and consistent in our approaches. So, those are a

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1 few of the areas that are identified of how we kind
2 of stay in touch with each other.

3 I'll also mention there's --- Research,
4 if it's doing --- the Office of Research, if they're
5 doing research specifically for each of the offices,
6 they have periodic meetings where they discuss the
7 research and its goals. That's another opportunity
8 for us to interact on the activities to make sure
9 there's interaction from one office to another, that
10 that happens.

11 Some things, not everything is under the
12 Risk-Informed Steering Committee, and some of the
13 activities we are going aren't actually directed by
14 the Risk, but they're familiar to, and they can
15 elevate to that management, if desired.

16 Dick mentioned earlier, there's this
17 NUREG on defense-in-depth. It was --- the SRM also
18 directed us to enshrine the discussion that was in
19 the enclosure there. They had a public interagency
20 meeting, as Dick referred to, so that currently is
21 proceeding towards development of a NUREG to capture
22 those insights.

23 There's activities going on under the
24 Economic Consequences, and there was a 2014 SRM
25 related to Qualitative Factors, somewhat defense-in-

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1 depth, and those considerations, as well. There's
2 the Cumulative Effects of Regulation that is going
3 on. You'll see a number of SRMs related to that and
4 COMSECY. Those have interactions with other
5 activities. Again, the defense-in-depth NUREG that's
6 going on with Research also has the potential to
7 influence some of the discussion on defense-in-depth
8 of what's going on in this effort on RMRF for power
9 reactors. The Economic Consequences influencing the
10 regulatory analysis and backfit analysis depending
11 on how that comes out, as well as what we're doing
12 here would influence the regulatory analysis and
13 backfit analysis description, as well. So, you're
14 going to see a flow of defense-in-depth in a number
15 of these items. It is one of the key areas that's
16 interlinked among these activities. Those are all on
17 the policy development and how to change current
18 policy, or develop new policy.

19 I'll note the Risk Prioritization
20 Initiative was identified as an activity to perform.
21 They did tabletop exercises on that. In a recent SRM
22 from the Commission, their recommendation or
23 direction was to terminate that effort, and to
24 incorporate any of that into existing programs that
25 we use to prioritize or consider initiatives.

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1 Under the implementation side, there's
2 future rulemaking. There's currently activity going
3 on in 10 CFR 50.46c. That's coming to an end to SECY
4 Paper development right now. There's some other
5 related ones that have been awaiting attention
6 depending where things finish.

7 There's an update to Reg Guide 1.174,
8 and you heard I think Joe Giitter mention earlier,
9 there's a piece of that that's on defense-in-depth
10 that the Commission directed the Staff to improve
11 the understanding, if you will, the hierarchal
12 structure of that. That was done as part of an SRM
13 on CAP credit discussion.

14 The outcome of that Reg Guide and those
15 associated application risk-informed Reg Guides
16 would influence the risk-informed licensing actions,
17 like risk management tech specs, 10 CFR 50.69, risk-
18 informed surveillance frequencies and that type of
19 thing.

20 And then there's influences that come
21 out that have an influence on the implementation
22 side. There's a couple of working groups that were
23 formed under the Risk-Informed Steering Committee.
24 One was addressing methods in the peer review
25 process, another one was on uncertainty. And, again,

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1 we started on the far left with a discussion on
2 defense-in-depth. On the far right, there's a number
3 of items discussing uncertainty, influences
4 uncertainty both within the NRC under NUREG-1855, as
5 well as a number of EPRI documents. And then
6 aggregation in light of large uncertainties, and the
7 hazard is what you'll see is the relationship of the
8 bottom box with the two EPRI documents called up
9 there.

10 Those all interact with the Risk Working
11 Group, too, but they also have an influence on what
12 eventually becomes the update to Reg Guide 1.174. I
13 want to see if I actually have it. And then how that
14 translates between the policy side and the
15 implementation side is changes that we make here on
16 defense-in-depth, or on the Risk Management
17 Regulatory Framework would influence what can happen
18 in future rulemakings, as well as the Reg Guide
19 1.174. And the changes that ultimately get made to
20 the reg analysis or the backfit analysis effort will
21 then also influence any future rulemaking that would
22 have to come out and address that new guidance. So,
23 in a nutshell that's --- this activity is, again,
24 described in Enclosure 2.

25 CHAIRMAN STETKAR: Yes, I read that. I

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1 guess the Subcommittee, and I think to a lesser
2 extent even the Full ACRS isn't really familiar
3 what's going on with the Risk-Informed Steering
4 Committee. The Subcommittee had, I believe, one
5 briefing on the one box under RISC Working Group 2
6 Uncertainty, which is on this picture, a small box.

7 This picture leads me to believe that
8 the Steering Committee will become the curator for
9 any possible paths forward in the sense of a Risk
10 Management Regulatory Framework which we might not
11 call it that. But, for example, foregoing options to
12 proceed. Is that the case, and is --- have they done
13 anything? Are they doing anything? In other words,
14 all of the blue boxes there --- I see bits and
15 pieces of stuff that we're familiar with, but
16 they're bits and pieces of things that in terms of
17 policy development activities, the blue column
18 there, I haven't really heard much of the Steering
19 Committee doing anything in that area.

20 MR. HARRISON: And I don't want to give
21 the impression that the Steering Committee is
22 actually driving the work that's going on here.
23 There are suggestions that are brought up to the
24 Steering Committee ---

25 CHAIRMAN STETKAR: Yes.

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1 MR. HARRISON: --- on different
2 initiatives that might be pursued. That's one way.
3 If there ---

4 CHAIRMAN STETKAR: But that, again --
5 - see, in my whole sense back an hour and a half
6 ago, I said looking forward this --- the Steering
7 Committee is reacting to people saying well, we need
8 additional guidance on the quality of the PRA, this
9 Working Group 1. You know, so please Steering
10 Committee, put together an industry and a Staff side
11 of that and see if we can come to some consensus. We
12 need better guidance on treatment of uncertainties,
13 you know, so please do that. But those, again,
14 they're focused on particular issues. I don't see
15 the Steering Committee providing that guidance that
16 this picture would lead me to believe would come
17 under the blue column of the picture, but I don't
18 see it happening.

19 MR. HARRISON: Right. Within, a --
20 - specifically, the RMRF there were --- was that
21 part of the Steering Committee? I believe it was,
22 right?

23 MR. GIITTER: Yes. I understand your
24 comment. It's a good comment. In fact, I have to
25 leave here in about 20 minutes or so to go to the

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1 internal meeting we have, but what we typically --
2 - the reason the Risk-Informed Steering Committee
3 was developed, I think it started with some of the
4 concerns that came out of NFPA-805. And we made a
5 conscious effort to not make it about NFPA-805. We
6 wanted to address things broader than NFPA-805. So,
7 for example --- and we're also very careful that we
8 want the NRC Risk-Informed Steering Committee to be
9 independent and operate separately than the industry
10 one.

11 CHAIRMAN STETKAR: Sure.

12 MR. GIITTER: They come together and
13 meet, but I think we need to identify issues to take
14 on on our own. And so I can give you some examples
15 of some of the issues we're working right now that I
16 think are forward-looking, but ---

17 CHAIRMAN STETKAR: That would help, Joe,
18 because see, the problem is, if I'm --- if I pick up
19 this SECY Paper and I look at this drawing and say,
20 you know, you're answering the Commission's SRM in
21 terms of identifying the activities and the
22 relationships. Well, this picture has a lot of
23 arrows, and it has colors on it, and it has report
24 numbers and things like that. It, to me, doesn't
25 answer how that Steering Committee is guiding the

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1 Agency going forward from today. Again, in the sense
2 of NTTF Recommendation 1 and the Risk Management
3 Task Force, you know, how are we going forward
4 looking at where we're going to be 10 or 15 years in
5 the future, and using risk information there?

6 Now, if you want to call that policy
7 development, okay, call it that. But sort of this
8 overarching notion of using risk information not in
9 the piece parts of all of these little --- you know,
10 here's a problem. Please, Steering Committee, come
11 to us with a solution for it.

12 MR. GIITTER: In fact, when I go back at
13 the meeting, I'm going to be talking about RMRF, and
14 that's one of the messages I plan to deliver to the
15 Steering Committee is, you know, what --- I guess
16 challenge them to think, you know, more
17 strategically as to where we should be in 15 years
18 from now. But when I say "forward-looking," I'm not
19 talking 15 years, I'm talking, you know, some of the
20 current problems we have now; how to avoid those
21 problems.

22 CHAIRMAN STETKAR: But that's also, you
23 know --- my personal concern is that's also part of
24 the problem, is that ---

25 MR. GIITTER: Yes, I understand.

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1 CHAIRMAN STETKAR: --- too many people
2 are putting out too many brush fires in reaction to
3 whether it's an event like Fukushima, or whether
4 it's a particular problem that's come up like NFPA-
5 805 and thinking about how it might affect the next
6 issue that's being evaluated. Those are still kind
7 of piece part approaches.

8 MR. GIITTER: Yes. And I think there is a
9 lot of that, to be honest with you. I don't think
10 the Risk Informed Steering Committee it maybe
11 perhaps as strategic as what you're thinking, but
12 I'll give you an example. One issue that I think is
13 forward-looking that we're currently taking on, and
14 that is kind of the cultural impediment to risk-
15 informed decision making.

16 Okay, we have over the course of decades
17 Staff that have --- who believe that compliance
18 equals safety. And in some cases it does, but in
19 some cases we spend a lot of resources focusing on
20 compliance issues that have very little safety-
21 significance. And so one of the things we're looking
22 at is, in our regulatory decision making process,
23 when as a result of a CDBI inspection or whatever, a
24 compliance issue is identified, to immediately
25 evaluate or as soon as possible evaluate what is the

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1 risk-significance of this? Just simply asking that
2 question, getting the right people together so we
3 don't spin our wheels and turn, and spend a lot of
4 time on something that's of low safety-significance.
5 It still may be a compliance issue, but how we treat
6 that compliance issue can be measured based on the
7 risk-significance that we see. So, that's something
8 we're actively working on right now that I believe
9 is forward-looking. And in the spirit of trying to
10 do things more efficiently and effectively, I think
11 we have to start doing more of that sort of thing.

12 CHAIRMAN STETKAR: Okay, thanks. And that
13 example starts to help.

14 MR. GIITTER: I understand.

15 CHAIRMAN STETKAR: Okay.

16 MR. DUDLEY: Mr. Chairman?

17 CHAIRMAN STETKAR: Yes?

18 MS. ANDERSON: Victoria Anderson from
19 NEI. Just wanted to give a little context for what
20 those working groups are. That certainly is not the
21 only thing that the Risk-Informed Steering Committee
22 is working on. They're routinely getting information
23 about what we're doing on this effort on Risk
24 Management Regulatory Framework and what the Staff
25 is doing, and everything that's under that umbrella,

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1 but what the Risk-Informed Steering Committee does
2 is identifies work that needs to get done to support
3 the advancement of implementation of risk-informed
4 regulation that is not otherwise getting done. And
5 that's why those two working groups got formed, was
6 that those activities weren't taking place
7 elsewhere. They are providing some direction for the
8 other activities, as well.

9 CHAIRMAN STETKAR: Okay. I think it would
10 probably be useful for us, we have time constraints
11 this afternoon, but it might be useful for us at
12 some time in the near future, near being measured in
13 like early next year, to have at least our
14 Subcommittee have a meeting so we better understand
15 what's going on, you know, in the Industry Working
16 Group, and in the Staff's Working Group, because as
17 I said, if --- the way I view this is in the context
18 of the SECY Paper, a indication that a reader of the
19 SECY Paper would say well, look, we do have these
20 activities. We are considering policy, we are
21 looking forward somehow, which is encouraging, but I
22 know that, as I mentioned, our Subcommittee has only
23 been briefed on that one little box that says RISC
24 WG2 Uncertainty. And we don't really know what's
25 going on either on the industry side or, quite

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1 honestly, on the Staff side under the Staff's
2 Working Group. So, I think it would be useful for us
3 to hear about that.

4 MS. ANDERSON: We're going to be talking
5 today briefly about the other little box and Working
6 Group 1.

7 CHAIRMAN STETKAR: Yes, okay.

8 MS. ANDERSON: But that would certainly
9 be something we'd be happy to support early next
10 year.

11 CHAIRMAN STETKAR: But yes, I mean, in
12 the sense of how the industry is looking --- I'm
13 more interested at the top and how you're winnowing
14 down the things that actually get more focused on.
15 And similarly from the Staff's perspective, how do
16 you come to that agreement that we should place
17 effort in WG1, WG2, and not in some other areas.

18 MR. HARRISON: Yes. What I hear you
19 saying is it's more than just the working groups, as
20 much as the --- what are the issues that are --- or
21 what's the focus of the RISC groups?

22 CHAIRMAN STETKAR: How did we get to the
23 point that we have some statement of work for
24 Working Group 1, and some statement of work for
25 Working Group 2, and why don't we have Working Group

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1 3 on some other issue that I can't particularly
2 think about at the moment.

3 MR. HARRISON: Right. It's more --- it's
4 bigger than just those working groups.

5 CHAIRMAN STETKAR: It's bigger than just
6 those working groups and what their intent is. We're
7 interested in that, certainly, but how did we get to
8 those working groups, and what else is being done to
9 examine issues that affect the industry, affect the
10 entire risk-informed regulatory process?

11 MEMBER REMPE: I have a question, also,
12 about this diagram. What about emerging issues like
13 multi-unit risk with the small light water integral
14 reactors, or all the popular press stuff that we see
15 about the non-LWR designs, and how would that --
16 - would that affect something on this diagram?

17 MR. HARRISON: Well, yes, that's a level
18 below probably some of this. Within the New Reactor
19 arena, addressing the multi-module piece, there's
20 some guidance that was already developed for --
21 - it's in the Standard Review Plan, Chapter 19, to
22 address at least from the PRA risk perspective of
23 how we expect people to look at that. It's
24 qualitative. Within --- going forward there's a
25 number of activities. And, again, that's why I

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1 started by caveating, this is not all the work,
2 there's been efforts on defense-in-depth, and the
3 ROP program that could be influenced by these
4 things. That's Near Term Task Force 12.1. There's a
5 number of the Near Term Task Force activities on
6 seismic and flooding that obviously have risk
7 components to them.

8 So, this doesn't cover everything. There
9 are those activities they would be influenced.
10 Again, if we changed something about defense-in-
11 depth, that would tend to have a fairly dynamic
12 influence on a number of activities that might come
13 forward. I can think of defense-in-depth in multi-
14 module risk, how would you address that? That type
15 of thing. So, yes, there's spider webs that go
16 everywhere.

17 CHAIRMAN STETKAR: You folks are done, I
18 believe. Do any of the members have any other
19 questions for Dick or Donnie? If not, we have a
20 dynamic agenda this afternoon, and next up we're
21 going to hear from Joe Rivers and Dennis Damon of
22 NSIR and NMSS, which I can never pronounce. But the
23 first thing we're going to do is we're going to take
24 a break. So, let's recess until 3:00.

25 (Whereupon, the above-entitled matter

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1 went off the record at 2:46 p.m., and resumed at
2 3:01 p.m.)

3 CHAIRMAN STETKAR: We are back in
4 session, and as I mentioned we recessed, we're
5 shuffling around the agenda a bit this afternoon,
6 and we're going to hear from Joe Rivers and Dennis
7 Damon of NSIR and NMSS about I think how you're
8 using risk information, or whatever you want to talk
9 about. So Joe, I'll give you the floor.

10 MR. RIVERS: The last time I talked to
11 you was about back in February, I think, and so Dick
12 suggested that I give you sort of an update as to
13 how things have progressed and where we might be
14 going. So I won't cover the same things over again,
15 but if you have questions on anything I've talked
16 about in the past, I'd be happy to discuss that.

17 Basically in March, we had a workshop,
18 the INMM, Institute of Nuclear Materials Management,
19 Reducing Risk workshop, which I sort of co-opted
20 when it wasn't going anywhere and out of the few
21 sessions that were pertinent to what we were
22 interested in doing.

23 So I had a session on cybersecurity that
24 brought in folks from industry, as well as some of
25 the think tanks on cybersecurity. Had some

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1 interesting discussions there. We had a session on
2 perception of risk. We had Trish Milligan from my
3 office, as well as Maureen, I can't think of her
4 last name, from Public Affairs, and we also brought
5 in Ed Lyman from Union of Concerned Scientists to
6 give different perceptions of risk, and that led to
7 some very interesting discussions.

8 And then we had a session on insider
9 mitigation, where we had one of our people, Mark
10 Resner, talk about how we do it at NRC, and we had
11 some of the folks from some of the other
12 organizations around the world that looked at
13 insider risk. So it was a fairly interesting
14 discussion. I think people got some insights from
15 each other, so very useful.

16 MEMBER BLEY: I've been reminded by the
17 Chairman that I should probably note that I attended
18 two other INMM workshops on this.

19 MR. RIVERS: We'll get to those.

20 MEMBER BLEY: Okay. I just wanted to
21 get on the record that one of the members was at the
22 one in April and --

23 MR. RIVERS: One of your staff was at
24 the March workshop.

25 CHAIRMAN STETKAR: The only thing the

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1 Subcommittee, you know, separately from RMRF, we're
2 interested very much, the PRA Subcommittee, on risk
3 information in the security area --

4 MR. RIVERS: I've gotten those insights
5 from Dennis.

6 CHAIRMAN STETKAR: --and we're following
7 it.

8 MR. RIVERS: So anyway, and I'm
9 interested in it too, so I'm happy to share. Then
10 in April we had a very interesting workshop,
11 essentially one of the things that had come out in
12 earlier workshops was the need to bring safety and
13 security risk professionals together.

14 So I worked with Nathan Siu to identify
15 a forum to do that, and there was a PSA conference
16 that ANS was putting on in Sun Valley. So we
17 thought that if we could tack a one day workshop on
18 the front end of that, that we'd have the safety
19 risk professionals there, and then we just had to
20 convince enough of the security ones to come to make
21 it interesting.

22 So we ended up with about 35 people, to
23 include former Commissioner Apostolakis, who is one
24 of the more wildly participants in the workshop. A
25 lot of discussion on how each of the two disciplines

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1 could leverage off of each other when they looked
2 the risk at the plants.

3 We actually had four utility personnel
4 at the workshop too. Probably one of the areas I
5 know that former Commissioner Apostolakis really
6 pushed a lot was the likelihood of event. I think
7 there's always the -- you know, people talk about it
8 in different ways.

9 They say in security we assume the event
10 will happen. I try to be more, you know, take my
11 statistical training at heart and I say it's really
12 the conditional risk. If it were to happen, how
13 well would we perform.

14 I think there was some discussion as to
15 how we might try looking at that likelihood of event
16 and trying to get some bounds on that, and you know,
17 using some sensitivity analyses and things like that
18 might give us some insights.

19 So that was definitely a good workshop.
20 I know that a number of NRC staff participated in
21 that, and they've actually approached me about how
22 can we get both the safety and security risk
23 professionals to work together. I know there's
24 interest in having future workshops, but also some
25 internal interactions within NRC would be a good

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1 idea as well.

2 Then actually one of our most recent
3 workshops was the INMM workshop on vulnerability
4 assessment tools. VA tools are basically sort of
5 the security pro bono PRAs that are used in the
6 safety arena. It was held last month in Boston,
7 Massachusetts. I was fortunate enough to get
8 Commissioner Ostendorff to give the keynote address,
9 and he actually got the thing headed in the right
10 direction.

11 We had a discussion of VA tools, about
12 how you do VV&A for those tools. Had a lot of
13 discussions about modeling issues and data. We had
14 demonstrations by the vendors.

15 I actually was able to take the project
16 I shared in Vienna, the Nuclear Security Assessments
17 Methodology project that had a case study for
18 nuclear power plants, and got the three vendors that
19 actually participated to each independently model
20 that case study, so everybody could see how the
21 different tools did things probably a little bit
22 differently.

23 Then at the end, we had a discussion
24 about users and then also had a panel discussion,
25 where we talked about how the use of these tools fit

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1 into the regulatory framework. A very interesting
2 discussion and actually one of your current staff
3 was on the panel, Chris Lui. But definitely was a
4 very interesting thing.

5 A positive aspect of it is that we
6 actually had about a dozen of our licensees present
7 at that, along with about a dozen NRC staff and the
8 mix of the licensees was about ten from the
9 utilities and two from the fuel cycle facilities.
10 So there was definitely a lot of interest, and
11 overall I think it was pretty -- fairly successful
12 workshop.

13 CHAIRMAN STETKAR: Joe, I'll ask you a
14 leading question.

15 MR. RIVERS: Okay.

16 CHAIRMAN STETKAR: Do you see in this
17 particular area support among the licensees for
18 developing a more risk-informed approach to
19 security? I mean quite honestly I'll be critical
20 and Victoria will correct me later, that in the
21 power reactor licensing light, I tend to hear, this
22 is my own opinion, a lot of pushback saying it's too
23 expensive. We don't see the benefits, you know.

24 MR. RIVERS: I think that's -- I had to
25 take this, a little different approach than you

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1 would normally do in a regulatory environment. I
2 actually approached the vendors and told them they
3 had a market they weren't taking advantage of.

4 So the vendors actually approached the
5 industry through NEI, got two or three of them that
6 were interested with the whiz bang stuff that the
7 software can do for them, and then actually three of
8 them, Excelon, PSEG and Excel are in the process of
9 submitting 50.54(p) changes that are supported by
10 analysis from these modeling and simulation tools.

11 So we actually -- and there's at least
12 three or four of the utilities that are in the
13 process of getting up to speed on modeling their
14 facilities. So I think this is something that, you
15 know, if we're able to essentially address it well,
16 that -- and actually come up with a process that
17 essentially takes into consideration what they're
18 submitting and the analysis that they're using in
19 this -- the analysis of their facilities using these
20 tools, I think it will be a very successful thing.

21 You know, the tool can be expensive to
22 use, but if you look at how much these plants spend
23 on security, it's about ten or more percent of their
24 budget. So if they're going to offer up some
25 savings, help them do things more, you know, risk-

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1 informed, I think in the end it's a positive thing.
2 I think most of the utilities are starting to see
3 that.

4 MEMBER BLEY: I was at that September
5 workshop and I got an indication from a number of
6 utility people that they were waiting to see how
7 things went. But some of the ones who have actually
8 tried it have really interest and reports of things
9 they learned that make physical sense to them, that
10 they were not learning through force on force drills
11 or from other analysis tools they have used in the
12 past. So it was pretty interesting.

13 MR. RIVERS: Yes. I think in the end,
14 it's probably going to be something that they use.
15 One of the things I also have tried to do is try to
16 move the discussion sort of outside of the NRC
17 industry framework, put it into the professional
18 society environment.

19 I think they appreciate that a lot. It
20 also allows us to bring in folks from the national
21 laboratories, from the DOE facilities, and we had
22 actually some active participants from the IEA and
23 the United Kingdom in the workshop as well. So I
24 think although that adds a lot of value to the
25 process, I think right now I'm looking at how can we

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1 continue this effort.

2 I know we've looked at -- I think we got
3 approval to have a session at the RIC, to have some
4 open discussion at the RIC. I've got, working on
5 putting together a session at the INMM meeting that
6 will focus on this, allow industry the opportunity
7 to engage with other security professionals in the
8 nuclear community, and also trying to look at -- we
9 sort of gave a three day coverage of both these
10 model and simulation tools and other VA tools.

11 Now, maybe we need to have a little more
12 focused type workshops, to look at things like how
13 do I take things in data libraries and my plant-
14 specific data, and try to use a combination of that
15 to do a better job modeling my facility. So there
16 was a lot of possibilities. It's just trying to
17 figure, you know, what makes the most sense to start
18 with.

19 CHAIRMAN STETKAR: Joe, as you've
20 mentioned, the IAEA activity and I've seen it a
21 couple of times. Could you characterize the level
22 of international interest in this area at the IAE?

23 MR. RIVERS: Basically, the project I
24 share over there is called the Nuclear Security
25 Assessment Methodology project. So it's looking at

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1 actually developing approaches to conducting
2 security assessments for a wide range of facilities,
3 all the way down to even an irradiator facility up
4 to a nuclear power plant.

5 So some of them would require modeling
6 and simulation tools, but like at an irradiator
7 facility, it's probably not that necessary. In
8 fact, the gentlemen from the UK actually gave a
9 presentation that showed essentially that analysis
10 of an irradiated facility and, you know, essentially
11 what he was able to derive from table top analysis
12 to using modeling and simulation tools.

13 But that project I have about 25 to 30
14 people that participated in it from about 15
15 countries. So fairly extensive involvement. So
16 basically, I've already talked previously about the
17 material attractiveness cybersecurity NUSAM, but
18 probably the one that give you a little bit of
19 insight into sort of the ongoing type things is the
20 use of simulation modeling.

21 Essentially, industry has been using
22 these tools. We've got three 50.54(p) changes and
23 two in right now and one expected soon that use it
24 to support their submissions. I am in the process -
25 - in fact, on Thursday, I start training the

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1 Licensing staff on vulnerability assessment and it
2 will be about a series of three sessions just to try
3 to bring them up to speed, so that they're at least
4 familiar with what they're seeing.

5 I will also be trying to establish a
6 more formal process for training for NRC staff here
7 at headquarters and in the regions on what these
8 tools can do and how it fits into what they do in
9 their jobs.

10 MEMBER BLEY: Are you needing to -- I
11 guess it's two questions from me -- actually
12 learning how to use the tools or how to interpret
13 the results, and are you -- if you actually are
14 about to have some submittals coming in, are you
15 putting together any guidance for review?

16 MR. RIVERS: Well, we will be putting in
17 guidance, but I think part of it is we'll sort of
18 work our way through these first three, and as a
19 result of how we do those and experiences we gain
20 from that, Doug Huyck in our division will be
21 putting together interim staff guidance on how to
22 actually, you know, essentially evaluate it for a
23 submission supported by that type of analysis.

24 The staff training will sort of give
25 them the concepts, understanding the data, the

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1 modeling, understanding the approaches. They're
2 scenario-based approaches, they're pathway type
3 approaches, trying to help them understand how the
4 tools might use different approaches that are used
5 in VA tools.

6 We'll probably see if we can get copies
7 of software so they can at least play around with
8 the software, so they get familiar with it, also see
9 the types of reports. The one thing that we have to
10 be cautious about is that the industry is very leery
11 about NRC essentially digging into their actual
12 facilities and using it against them in force on
13 force and things like that.

14 So I'd rather not approach that until
15 some time off in the distant future, when
16 everybody's comfortable that these tools have a
17 benefit for everybody. So I think initially, any
18 access the staff would have to the modeling tools
19 would be more just to get experience and exposure to
20 them.

21 So we're essentially in the process of
22 assessing how do we process these. So I'll be
23 working with Licensing staff and what probably will
24 happen is they'll -- we'll get the submissions.
25 We'll develop questions that we want to pose to the

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1 utilities, probably pay a visit to the site to look
2 at the actual analysis and then go from there.

3 That's basically it. That's sort of the
4 big task right now, in addition to probably trying
5 to organize a couple of workshops in the near term.

6 CHAIRMAN STETKAR: Anything more for
7 Joe? If not, thank you. Personally to me, that's
8 really encouraging. Down at the base right in front
9 of you. There you go.

10 MR. DAMON: My name is Dennis Damon.
11 I'm in the Office of Nuclear Material Safety and
12 Safeguards, but I am not the director of that
13 office, and so anything I say, keep that in mind. I
14 cannot predict what the director will do.

15 MALE SPEAKER: Thanks Dennis.

16 MALE SPEAKER: If you're lucky, they'll
17 fire you and then you won't have to worry.

18 MR. DAMON: Well, I thought I'd first
19 off remind all of us, including myself, how diverse
20 NMSS is in terms of the things that it regulates.
21 Think about the risk profile, the things that I'm
22 mentioning, to realize there isn't one single story
23 about risk and how it's handled and used.

24 In other words, whether a given category
25 of things has a risk assessment and how they use it.

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1 We've got 70 or 80 different stories in NMSS,
2 because for example there's the industrial medical
3 area. They did a thing called byproduct risk study
4 many years ago.

5 To do that, it was -- it wasn't,
6 wouldn't be described as a fully quantitative PRA,
7 but it was an attempt to do what you can do. They
8 had, in order to do that risk assessment, they had
9 to divide up just the -- into categories the things
10 they regulate. They had 60 categories of facilities
11 that they -- and activities and devices they
12 regulate.

13 Then of course you have the Fuel Cycle
14 Division that I'm formally within is just the front
15 end of the fuel cycle. So you've got all the steps
16 in the front end. You've got the steps on the back
17 end. It's all the spent fuel management, ultimate
18 waste disposal, decommissioning, environment
19 analyses.

20 So there's -- that's what I'm saying.
21 It's 70 or 80 different stories. There is a
22 framework for what we do. We were tasked in 1999,
23 the office was, with developing a framework and
24 doing something analogous to reactor safety goals.

25 Christiana Lui over here was the last

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1 head of the risk task group that was set up to do
2 that, and the results of that work were published in
3 this document, "Risk-Informed Decision-Making for
4 Nuclear Material Waste Applications." This is
5 Revision 1, but this document was essentially
6 complete at the end of 2004, so it's 11 years old.

7 In the front of it, there's a list of
8 the people who participated in it. So you can get
9 some idea of who actually is aware of what's in
10 here. It's taught in a couple of courses that we
11 give, but it's not widely known. But it's well-
12 understood by us; like a subset of the people in
13 NMSS know what this is.

14 There's a framework in here and there
15 are what are called risk guidelines. We took the
16 name "goal" off of them because it was a -- there
17 was a constant miscommunication that a goal was
18 something you should be meeting, and that's not what
19 these risk guidelines are. They're a level of risk
20 to individual persons that is regarded as
21 negligible.

22 But they are the same numbers as the
23 reactor safety goals for the same things. For
24 example, acute fatality risk to a person offsite.
25 There's a number for that which is QH01 on the

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1 reactor side. We use the same number for the same
2 thing here, but we have six different things like
3 QH01.

4 So this framework exists, and it's been
5 farmed out. The application of it -- it basically
6 says you do risk informing as appropriate to
7 whatever your problem is, and you go through a
8 structured process of reasoning that out. Stacey
9 Rosenberg helped develop that, and so you reason out
10 how you're going to propose to risk inform
11 something, what risk information you need, what does
12 it cost, is it worth the cost.

13 So you make a conscious, go through a
14 conscious process of deciding how to risk inform.
15 Now the second -- so that's Subject No. 2. Subject
16 No. 3 is what are we actually doing in NMSS?
17 There's a thing that was called a risk-informed
18 performance-based plan.

19 Its original incarnation was the RERIP,
20 which was a paper plan actually for how to risk
21 inform, and it listed all the risk informing
22 activities in the entire agency. Its successor
23 still exists. It's implemented as a website, and I
24 sent in how you find this website. It's through the
25 public website under About NRC and how we regulate

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1 risk assessment. You can trace down, find this
2 plan.

3 It lists all the risk-informed
4 activities. NMSS had 11 activities in that plan.
5 They're not listed as a 11, you know, 1 through 11.
6 They're part of the longer list of the whole agency
7 that goes up into the 50's somewhat, and they're
8 grouped under what we call sub-arenas.

9 For example, the fuel cycle is a sub-
10 arena, and under there there's only two activities.
11 So you can go online on the website and find a
12 description of what these activities are, and each
13 of those activity descriptions has a link to a big
14 thicker document or other references that describe
15 what's going on or to products that past activities
16 that are produced related to that thing.

17 I'll just read some of the things that
18 are going on here. There's an activity that's
19 called Gap 5, related to developing a rule for a
20 reprocessing plant. You know, if an application
21 were to come in for a reprocessing plant, how would
22 we regulate it? Currently, it's under Part 50, but
23 there's no description of what a tech spec should be
24 or no general design criteria for a reprocessing
25 plant.

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1 So there's an effort to talk, develop a
2 reprocessing rule base. Part of that is how would
3 you do risk assessment of a reprocessing plant and
4 what are the impediments to it. So there's a whole
5 activity on that.

6 Another one in the area, I'm in Fuel
7 Cycle. There's a whole process going on to revise
8 the fuel cycle oversight process to be -- to make
9 more use of risk information like the reactor
10 oversight program.

11 Not exactly the same way, but in a
12 different way. Because for example, fuel cycle
13 facilities don't have PRAs. They have these ISA
14 things, which are not generally quantitative, so how
15 do you do that? But there's work ongoing on that.

16 Then there's several activities in the
17 spent fuel area that are ongoing, to extend and
18 develop a framework in risk metrics that might be
19 useful for them risk informing spent fuel.
20 Primarily, it's focused on the certification of
21 storage packages is where that's focusing on.

22 But another thing that happened recently
23 in that area of spent fuel is there's a study that
24 was done many years ago, but it's been just recently
25 updated, which is a risk analysis of spent fuel

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1 transportation. I mean it's a fuel blown PRA that
2 thick, fully quantitative. They've done -- this is
3 like the third iteration of this refinement of this
4 thing.

5 So as I say, in certain areas there are
6 full blown legitimate PRAs, and then in other areas
7 you've got something different. In other areas, you
8 don't -- you have something much less. I think that
9 gives a flavor of what's happening in NMSS. So if
10 there's any questions, I can discuss things further.

11 CHAIRMAN STETKAR: I'm familiar with
12 some of the things. I'm not familiar with some of
13 the other things you mentioned. So that's good
14 information. You did say that I think, and I want
15 to make sure I understand it, that risk assessment
16 in the sense of quantitative risk assessment is
17 applied, I think with some justification, to a
18 different extent, depending on the type of facility
19 that you're looking at.

20 Coming back to kind of the focus of
21 today's meeting, how are those decisions made? I
22 mean how do you decide that well a qualitative ISA
23 is okay for these types of facilities, and perhaps a
24 more quantitative analysis is needed for
25 transportation of spent fuel?

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1 MR. DAMON: Yes. Well I've been --

2 CHAIRMAN STETKAR: And that that's sort
3 of a reasonable balance of using risk information
4 across, you know, everything that you're responsible
5 for.

6 MR. DAMON: Yes. Well first off, I've
7 only been here since 1994. Decisions, a lot of the
8 decisions like that were made before I even got
9 here, right. The one I can talk about are some of
10 the things they've had subsequently. But you know,
11 those decisions about which things to do risk
12 assessment, full blown risk assessments for or to do
13 --

14 The ISA thing, I was here for. I'm a
15 guilty member of the rulemaking team that did that,
16 you know. But like the transportation risk study,
17 I'm fairly sure the first iterative of it was before
18 I got here. So they made -- decisions were made
19 that someone was, felt they wanted to understand the
20 risk in that area.

21 There was also, for example, a risk,
22 full blown risk analysis of dry cask spent fuel
23 storage that was done in large part by NRC staff,
24 with some assistance from outside. But you know,
25 choices were made to have some risk assessments

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1 done, I think, just to understand what the -- you
2 know, what universe are we in here, that kind of
3 approach.

4 The byproduct study was intentionally
5 augustly done to be comprehensive. That's why I say
6 it really isn't a full blown PRA. I mean it just
7 would have been too challenging to do it that way.
8 But then from another perspective, some of the
9 things --

10 Some of the risks that they controlled
11 in the industrial medical area, they get enough
12 events in a year to just use statistics to follow.
13 They don't need to do a PRA. They get statistics,
14 and so that shows you kind of the range of -- so to
15 answer the question, you know, how are these
16 decisions made, I'll give you an example from the
17 fuel cycle area.

18 Typically, well it's not required that
19 fuel cycle facility integrated safety analyses be
20 quantitative. However, there was a facility and it
21 actually was a facility not required to do
22 integrated safety analysis by regulation, but by
23 license commitment.

24 But the facility was on the New Madrid
25 fault, and as a result of Fukushima, a team of staff

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1 were sent around to many of fuel cycle facilities to
2 just take a look and see do we need to take a closer
3 look at any facilities. When they looked at that
4 one, they said oh yes, we do need to take. As a
5 result of that, a full blown quantitative, seismic
6 structural analysis and risk analysis was done for
7 that facility.

8 CHAIRMAN STETKAR: But only for the
9 seismic events?

10 MR. DAMON: Just for seismic.

11 CHAIRMAN STETKAR: Okay.

12 MR. DAMON: Well, seismic and wind.
13 They looked at high winds, because there are also --
14 the largest tornado that's ever crossed the United
15 States went right by that plant.

16 MR. JORDAN: Let me add, if I may add
17 something to it. Nate Jordan.

18 CHAIRMAN STETKAR: Sure.

19 MR. JORDAN: As far as spent fuel and
20 transportation casks, one of the PRAs that was done,
21 we actually looked at misloads in transportation
22 casks, and we looked at both theoretical and
23 empirical procedures. Actually, we looked at the
24 empirical methods based on, just like he said, we
25 had a number of events that allowed us to do so. So

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1 we did that on both cases.

2 CHAIRMAN STETKAR: Yeah. I mean in
3 that, you know, when I go over to the power reactor
4 side of the business, one can count up certain types
5 of events that have occurred and other types of
6 events haven't. So --

7 MEMBER BLEY: Dennis, in the beginning
8 of your talk, you held up a study that you of course
9 participated in and some others, and said there's a
10 set of those available through the public website.
11 I know we'll get the transcript in a bit, but what's
12 the path through the public website?

13 MR. DAMON: Oh. This is the list of the
14 risk informed activities.

15 MEMBER BLEY: Yeah.

16 MR. DAMON: If you go to the public
17 website --

18 MEMBER BLEY: Okay yeah, thank you.

19 CHAIRMAN STETKAR: Mike can get it for
20 us. Make sure we get it. Sometimes they're
21 torturous and the good Dr. Bley has been trying to
22 find it over here and apparently hasn't.

23 MR. DAMON: And he also has a ML number
24 for this document.

25 MEMBER BLEY: Yeah, an ML number for

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1 that one would help too.

2 CHAIRMAN STETKAR: So Mike will get
3 that. He could even send us the report, yeah.

4 MR. SNODDERLY: Yeah.

5 CHAIRMAN STETKAR: Thanks, Dennis.
6 Anything else for Dennis or Joe? If not, thanks.
7 That helps, because we kind of focus so much on the
8 power reactor side of the business, and indeed the
9 RMRF, the Risk Management Task Force and the NTTF
10 folks didn't necessarily restrict their
11 recommendations to only the power reactors.

12 So it's useful to hear what people are
13 doing elsewhere, in addition to the presentation
14 that we had earlier. So that helps. Thank you.

15 (Off mic comment.)

16 CHAIRMAN STETKAR: Joe, make sure your
17 mic is on, just so we get you on the transcript.

18 MR. RIVERS: If we organize another
19 workshop, we'll make sure you're all aware of it, so
20 that if you want to participate, you'll be able to
21 do that.

22 CHAIRMAN STETKAR: Yeah. We're -- as I
23 said, in the security area, we've been interested
24 for quite a while, and to me, it's encouraging to
25 see that there seems to be finally some movement

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1 afoot to get the safety and security people starting
2 I hope to speak the same language at least.

3 With that, if there's nothing more for
4 Dennis and Joe, we'll have the industry come up and
5 hear from whoever we're going to hear from. As I
6 said, this is --

7 (Off mic comments.)

8 CHAIRMAN STETKAR: And apparently we're
9 going to hear from the PRA and BWR Owners Group
10 first.

11 Yeah. Ray and Bob when -- the only
12 thing I'll alert you to, and you can instruct Bob
13 whenever he gets back, is when you speak, make sure
14 your little green light is on, and when you're not
15 speaking, turn it off so that we don't get the paper
16 rustling and stuff in the background. Now you're
17 the approved instructor on the front. With that,
18 Ray it's yours.

19 MR. FINE: All right. My name is Ray
20 Fine. I'm fleet supervisor, PRA at First Energy
21 and I'm also the Vice Chair of the Risk Management
22 Subcommittee, and I'm going to talk a little bit
23 about the SECY, draft SECY. So overview, I'm going
24 to talk about the current state and successful
25 applications, challenges and recommended path

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1 forward and conclusions.

2 Our current state is the NRC policy
3 statement, combined with industry and NRC
4 experience, have established a workable structure
5 for risk-informed applications. We have Reg Guide
6 1.174 through 1.178. We have Reg Guide 1.200 that
7 defines an acceptable way to assess PRA technical
8 adequacy using ASME, ANS PRA standards, and PRA peer
9 review process independently assessing the PRA
10 technical adequacy.

11 But in all things, there's always room
12 for improvement, and so we have many task forces
13 that we use in the industry. Particular to the peer
14 review process is the NEI peer review task force,
15 which is addressing enhancements for review of
16 qualification, PRA peer review consistency.

17 So you know, we address things like, you
18 know, what constitutes being a lead for a particular
19 technical element or for the peer review itself,
20 versus a reviewer, and then we've also implemented
21 processes like a working observer.

22 So before you can even be qualified to
23 do a peer review, you would have a working observer,
24 so that you participate in a peer review, and then
25 you get to actually be a reviewer in your next one.

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1 So it's like a training process, so that they
2 understand the overall process.

3 But that's the gist of what we do, and
4 like I said, it's a constantly improving and
5 developing thing, and we have many people involved
6 in these task forces.

7 Examples of successful applications. As
8 you know, the industry and the NRC have developed
9 successful applications under the current regulatory
10 framework, such as the surveillance frequency
11 control program, risk-informed completion times, 10
12 C.F.R. 50.69 maintenance rule and so forth. All
13 these have developed accordingly, and they're a
14 basically established goal post for us to meet.

15 Now it's just a matter of us working
16 with our management to get there. So it's important
17 to us that those goals remain constant and set,
18 because that's what we're working towards, because
19 it does take a lot of momentum to get a plant there
20 and their PRAs and the programs in place, and get
21 the -- not only the NRC staff but the utility staff
22 because, you know, in the case of, for example,
23 TSTF-425 and TSTF-505, it's not just PRA; it's
24 everybody. You have to get Operations and everybody
25 up to speed and moving in the right direction.

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1 So it takes a tremendous amount of
2 momentum for the PRA guys to push these applications
3 out, and so we really need the staff to stay firm
4 and not dance around when we get to those goals. As
5 long as we can do that, we can get forward motion.
6 If those goals move, forward motion is stopped.

7 So we have challenges, and these
8 challenges are being addressed by the NRC risk-
9 informed steering committees known as Risk, and here
10 are four particular, as you saw two earlier in the
11 presentation. But we have PRA technical adequacy,
12 which is acceptance of new methods, closure of peer
13 review findings, PRA peer reviewer qualifications.

14 Then we have treatment of uncertainty,
15 which is training for decision-makers and NUREG-1855
16 updates. We have incorporation of FLEX and risk-
17 informed decision-making, which is maximizing the
18 safety benefits of those plant changes, and then the
19 quantitative and qualitative assessments that can go
20 along with it.

21 Avoid unintended consequences as a
22 primary focus point, and enhance guidance and
23 pilots. So you know, one of the -- staff mentioned
24 earlier about Davis-Besse and us crediting the
25 emergency feedwater system. Well that is a FLEX

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1 system. It's also a fire system. It's also a
2 seismic system.

3 So you know, all of -- that system
4 applies in all facets of PRA, and that's not the
5 only FLEX system that we're looking to credit, to
6 add defense indepth, which is another cornerstone.

7 So FLEX truly is a defense indepth
8 addition that you can really see show up in PRA, and
9 it doesn't, you know, it in no way diminishes the
10 capabilities of the plant; it adds to the
11 capabilities of the plant, and we just want to take
12 advantage of that fact.

13 We also have risk metric aggregation,
14 which is, you know, everybody deals with aggregation
15 differently, and EPRI has put together a guidance
16 document and owners groups are working to pilot
17 that. But it has to do with understanding the
18 uncertainty. When you build these models, some
19 people build the models as independent entities;
20 some people build them as an integrated PRA.

21 But how do you deal with, you know, say
22 a fire model or a seismic model that has very large
23 uncertainties? When you compare it to internal
24 events problem it doesn't, and how do you weight the
25 solutionings and the importances coming from each of

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1 those, in a way that makes sense?

2 Because right now we just kind of add it
3 all up and say that's the answer, when we know
4 that's really not the right answer. It's a little
5 bit off kilter. So how do we balance that? So EPRI
6 came up with an approach to do that, and we're going
7 to start piloting it.

8 CHAIRMAN STETKAR: Ray?

9 MR. FINE: Yeah, go ahead.

10 CHAIRMAN STETKAR: You want to start
11 some questions before you leave this one. On the
12 staff slides and what I'm somewhat familiar with,
13 they noted that they have their Risk Steering
14 Committee, Working Groups 1 and 2, which address
15 clearly the first sub-bullet and the second sub-
16 bullet, and maybe or maybe not the fourth sub-
17 bullet, because I know they've addressed under the
18 uncertainty kind of a bit of the aggregation.

19 I haven't heard anything on the third
20 sub-bullet. Is the staff actively addressing that,
21 or is this only the --

22 MR. FINE: Yeah. We actually had a
23 meeting earlier last week on this. So I'm going to
24 let Mike, if he wanted to mention --

25 MR. TSCHILTZ: Mike Tschiltz, NEI. The

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1 industry has a task force on the use of risk-
2 informed decision-making for FLEX. Also, the
3 aggregation work is being bundled with the
4 uncertainty working group. So that work is going to
5 be combined --

6 CHAIRMAN STETKAR: Yeah, that's what I
7 understood. But this kind of broader notion of how
8 do you account for FLEX-type things I hadn't heard
9 about.

10 MR. FINE: Yeah. This is fairly new.

11 MR. TSCHILTZ: It was, I guess in the
12 Risk-Informed Steering Committee meeting just prior
13 to this one that's scheduled for tomorrow, it was
14 decided that that was one of the top two priorities
15 for 2015 and 2016, because it is -- we're facing
16 that issue right now, because utilities are using
17 FLEX equipment during outage periods to provide
18 defense indepth, and it's going to be used in SDPs.

19 There's a number of different
20 implications. So we want to make sure that we have
21 a consistent approach for simplification.

22 CHAIRMAN STETKAR: I'll keep on my theme
23 on looking forward, big picture stuff. When you say
24 FLEX, do you only mean FLEX in its sense of stuff
25 that prevents core damage, or do you mean all of

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1 that other stuff that you can bring in to not only
2 prevent core damage but possibly mitigate severe
3 accidents? What's the context of this?

4 MR. FINE: The context is yes. No, I'm
5 a bit serious, but that is the intent in every way,
6 yes.

7 CHAIRMAN STETKAR: Okay. That's good,
8 if that's the approach that's being taken, because
9 I'm trying to probe this notion of a single well-
10 defined perfectly square, perfectly black or white
11 box issue that gets addressed very narrowly, rather
12 than sort of broader issues.

13 MR. FINE: Right, and one of the things
14 that, at least on the utility side and we only just
15 recently presented to the staff last week, but we're
16 looking at it from an overall perspective, shut
17 down, at power. Even if it's qualitative and not
18 specifically in the PRA, but we know that it adds
19 defense indepth in a particular area.

20 So use of equipment in the shutdown
21 defense indepth process. But you could also think
22 of it, you know, from an A-4 perspective. I want to
23 do a 14 day AOT at one of my plants, but in order to
24 do that, I have to have a diesel to supply
25 compensatory action. I have that capability with

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1 FLEX.

2 So it permeates into every facet and
3 every direction, and now you accredit it is only
4 limited to how creative you want to be. But you
5 have to remember the intent of FLEX and its focus,
6 and it has to be able to be implemented the way it
7 was designed to be implemented.

8 So you can't prevent -- you have to, if
9 you're going to accredit it, how do you go about
10 accrediting it, to make sure that you didn't just
11 invalidate the intent of FLEX? So we're being very
12 careful in how we credit and what we want to do, and
13 that's those unintended consequences. We don't want
14 to create any of those.

15 But we also want to take full advantage
16 of the money that we've spent, and we realize, at
17 least in my models, because I'm way further ahead
18 than most, the benefits are huge. So we want to
19 take advantage of it.

20 MEMBER BLEY: I'm really -- go ahead --
21 this recent discussion. We heard things like this
22 from individual licensees, but some industry folk
23 and you've talked about your side. How about the
24 other reactors? Are the Owners Groups going after
25 this too, and it sounds like it's a larger --

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1 MR. RISHEL: I guess we're all -- we're
2 all in this together. So much of this is joint
3 efforts, either with EPRI or NEI. So the FLEX is a
4 joint effort. The Uncertainty Steering Committee;
5 the B's are a full participant of that, as the P's
6 are.

7 MEMBER BLEY: Okay. I'm really glad to
8 glad to hear this. I think it offers great
9 benefits. I'm glad you had the unintended
10 consequences side you're looking at. But I've been
11 hearing lots of resistance. I thought I'd been
12 hearing lots of resistance to this, and I'm really
13 pleased to see it going forward.

14 MR. RISHEL: And a lot of it came from
15 concerns with maintenance rule and some of the
16 others. But we think we can work through that.
17 It's for some people it may be a hard spot, but I
18 think when they see the benefits, a lot of those
19 hard spots are going to go away.

20 MEMBER BLEY: Right. I'm sure you can.
21 I think that's good.

22 MR. RISHEL: And the way we look at it
23 is by using this equipment the way we're planning on
24 using it, the staff operations and everyone else
25 would be much more familiar with the equipment, much

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1 more able to implement it. So when something does
2 happen, it's not a first time evolution, you know.
3 It will be something they just know how to do it.

4 MEMBER SCHULTZ: The resistance comes
5 from organizations that feel that the FLEX equipment
6 was intended for single purpose, and to apply it in
7 these other areas is additional effort.

8 MR. FINE: Additional burden, yes.

9 MEMBER SCHULTZ: And now you're working
10 to demonstrate that with that additional burden
11 comes some real benefits?

12 MR. RISHEL: Right. I would say it's
13 twofold. It's the burden and additional
14 consequences of monetary effort and intentionally
15 regulatory effort, and then there's others that just
16 say that equipment is for this purpose and this
17 purpose only, and you cannot, by some reading of the
18 Reg Guides, divert it something else.

19 MEMBER SCHULTZ: Are those people
20 industry people or NRC people?

21 MR. RISHEL: These are industry people.

22 MEMBER SCHULTZ: Okay. So they're
23 becoming regulators, if you will.

24 MR. RISHEL: Self-regulators.

25 MEMBER SCHULTZ: Yes, and you're working

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1 through that?

2 MR. FINE: We're working through that,
3 yes.

4 CHAIRMAN STETKAR: And you've just --
5 when you say this is recent, sounds like it's quite
6 recent.

7 MR. FINE: Well, it's recent as in I've
8 been working on this for almost two years, and I saw
9 what was going on because I was ahead. I was doing
10 seismic, I was doing --

11 CHAIRMAN STETKAR: Yeah, but it sounds
12 you personally may be out in the forefront, I mean
13 in terms of --

14 MR. FINE: I was -- everybody else was
15 starting to see what I was saying, and now there's
16 like light bulb, and they're moving in --

17 CHAIRMAN STETKAR: But in terms of
18 industry, if I can characterize industry as industry
19 --

20 (Simultaneous speaking.)

21 MR. FINE: Yeah, yeah, mostly.

22 CHAIRMAN STETKAR: Interaction with the
23 staff.

24 MR. FINE: That just started in the last
25 month.

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1 CHAIRMAN STETKAR: That's what I was
2 pointing to, to see what -- we've kind of probed a
3 little bit of coalescing, if that's too strong,
4 support within the utilities. It's probably
5 premature to ask, you know, what types of
6 interactions you've had with the staff so far.

7 (Simultaneous speaking.)

8 CHAIRMAN STETKAR: Was there resistance
9 or is there resistance?

10 MR. FINE: Yeah. Our first interaction
11 with the staff, I felt, and Mike can chime in, I
12 thought it went really well. I think we were pretty
13 much totally in line with each other. I didn't see
14 anything that was a surprise, and I was actually --
15 other than the fact that we were almost in lock
16 step, you know.

17 MR. TSCHILTZ: So this is Mike Tschiltz
18 again. I think our plan is to have another meeting
19 with the staff in the near term, I think some time
20 later this month, in that industry is developing two
21 white papers, one on a semi-qualitative approach or
22 semi-quantitative approach and a qualitative
23 approach for accrediting FLEX and risk assessments.

24 Our goal is to be able to share with
25 those with the staff to get their comments by the

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1 end of the year, and then figure out where we go
2 from there as far as whether those get incorporated
3 into some kind of guidance document that gets
4 endorsed through NSIG. But to promote some kind of
5 consistency and approach across the industry, that
6 both the NRC and the industry have agreed to.

7 CHAIRMAN STETKAR: That's really, and as
8 Dennis said, it's referred bits and pieces of this
9 with some encouragement and a lot of discouragement.
10 When you get to the point where you have those
11 papers prepared, I think our Subcommittee would be
12 really interested.

13 You know, I mentioned earlier that we'd
14 be interested in hearing more of what's going on on
15 both the industry side and the staff side, under the
16 auspices of this umbrella of the Risk-Informed
17 Steering Committee.

18 This in particular is an area that
19 sounds really interesting.

20 MR. FINE: Well, it's creative.

21 CHAIRMAN STETKAR: And creative, and
22 that's a bit -- if you listened to what I was saying
23 earlier about the creativity of the industry 35
24 years ago, sort of driving a lot of the use of risk
25 information and the regulatory acceptance of that.

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1 This might be an example of that.

2 MR. FINE: Uh-huh, yeah. I think so.

3 MR. RISHEL: I would just add that it's
4 possible the staff is going to see some license
5 amendments with FLEX in them, before any of these
6 white papers are approved.

7 MR. FINE: I can guarantee they will be
8 by the end of the year. Okay. So recommended path
9 forward. The PWR Owners Group agrees with the NRC
10 staff to continue the pursuit of the incremental
11 improvements in current regulatory framework. A
12 clear case has not been made that a new regulatory
13 framework would be cost beneficial.

14 Significant effort has been expended by
15 both industry and the NRC, and the current framework
16 is well understood and has been used successfully.
17 We understand it's an evolving process, and we'd
18 like to evolve that way.

19 We'd leverage existing lessons learned
20 and improve the efficiency of the NRC risk-informed
21 application review process; we improve consistency
22 in licensing submittals and NRC reviews; and we're
23 looking to finalize 10 C.F.R. 50.46 Alpha, Risk-
24 Informed Emergency Core Cooling System as continuing
25 that move forward.

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1 So conclusions. The PWR Owners Group
2 endorses the staff's recommendations in the draft
3 SECY paper. We maintain the NRC's current
4 regulatory framework. The NTTF Recommendation 1
5 improvement activities of a new category of events
6 should not be established, and defense indepth
7 policy statement is not needed because we already do
8 it, and then the development of an overarching
9 agency-wide policy statement is not needed, and
10 quite frankly you already have one. It just needs
11 to be implemented as an agency-wide statement.

12 Then the PWR Owners Group will continue
13 to work with the staff to ensure appropriate methods
14 are available to develop, implement and regulate
15 risk-informed applications and risk-informed
16 regulations. That's it.

17 MEMBER SCHULTZ: Ray, would you go as
18 far to say that the current approach, where the
19 requirement is for an individual licensee to come in
20 and have a singular submittal for a particular
21 application, and to have the responsibility to
22 demonstrate their capabilities to the staff and make
23 the case for their own facility, that that is in
24 fact better than having an approach that's more
25 generic?

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1 MR. FINE: Well, I'm going to have to
2 answer that as a personal answer, not as --

3 MEMBER SCHULTZ: A personal answer is
4 fine.

5 MR. FINE: Personally, I do not
6 understand why the staff reviews the way they do in
7 some cases. The standard is written, and when you
8 get a finding on the standard, you're getting a
9 finding to meet a capability category. It's not
10 relative to an application; it's relative to the
11 standard.

12 I'm answering -- if I get a finding or
13 observation on my model, I am correcting it to the
14 standard, and therefore it is correct for all
15 applications, okay, once I do that. So why does the
16 staff review me to that specific application? I
17 should be reviewed -- if it's good for that
18 application, it's good for all, right, because of
19 the way that it was answered.

20 And so therefore why are we being
21 reviewed that way? Now I understand the staff,
22 because I made it specific to that application,
23 that's the way they're reviewing it and I get that.
24 I understand that we can get our Reg Affairs guys to
25 let us say review it for all. But they think that

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1 opens a can of worms, okay.

2 I don't understand, but that's what they
3 say, all right. So we're kind in this situation.
4 We're also in the situation of closing F&Os and what
5 is defined as closed, and we're working through the
6 Risk Committee to come up with what is the
7 definition of closed. So that I'm not giving the
8 same finding in four different submittals to be
9 reviewed four different times by four different
10 people. That's just a tremendous waste of money and
11 effort.

12 I don't think by going through a
13 certified PRA you are going to stop that, okay. I
14 honestly don't, and you know, because everybody's
15 going to second-guess everybody else. So the -- and
16 the certified PRA then puts a lot more burden and
17 money on me. My peer reviews become way more
18 expensive, the process way more laid out.

19 It's just a huge burden on me compared
20 to what I'm doing now. So I think if we just could
21 fix, with a couple of small fleets, what we're doing
22 now, it's not going to be nearly as expensive as
23 going over to that full certified process that was
24 proposed.

25 Now the certified process was never

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1 fully fleshed out, but just the pieces that we're
2 seeing were troublesome. So the -- because, you
3 know, you're also talking about tossing out SPAR,
4 you're talking about tossing out -- and then me
5 getting my model over to the staff, and then the
6 staff, you know, we saw with Southern and them going
7 to the Level 3 with their model, all of the extra
8 help they got with maintaining and updating their
9 model.

10 There's just a lot of burden that we
11 just -- we can't handle. We just don't have the
12 staff to handle it. So everything would come to a
13 stop just to rebaseline everybody for the next five-
14 ten years. So redoing that just doesn't make any
15 sense, at least from my perspective.

16 Others liked it because it made things
17 easier for them, because they're at the very
18 beginning of the process. You know, I'm near the
19 end of the process. I don't want to have to review
20 everything. So it's a personal choice by an
21 individual utility. If they want to do it, let them
22 do it, you know.

23 But I would rather find a way to close
24 F&Os and find a way to do a submittal that I can
25 make an application and I'm done and I'm out, you

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1 know. But the big thing is if I could close my
2 findings, my submittals get really easy really fast.

3 So we just need to come with a consensus
4 way of this means closed and I'm out, and we're
5 good, because I would be done tomorrow.

6 CHAIRMAN STETKAR: Thank you.

7 MR. DINSMORE: Yeah, hi. This is Steve
8 Dinsmore on the staff, PRA Licensing Branch. I
9 guess I was a little confused. The FLEX stuff,
10 every plant got inspected to make sure you were
11 meeting the FLEX criteria or guidelines. Then you
12 switch all of the sudden to F&Os. I'm sorry if I'm
13 asking a question to you.

14 MR. FINE: Oh no. He asked a different
15 question. The FLEX was a different conversation
16 from this conversation, to my understanding.

17 MR. DINSMORE: Are you --

18 MEMBER SCHULTZ: Yes, it was a different
19 question, yeah. Ray answered the question I asked.

20 CHAIRMAN STETKAR: And for the record,
21 Ray answered the question I asked about the FLEX.
22 So I think Rick.

23 MR. FINE: I don't know how to bring up
24 your presentation.

25 MALE SPEAKER: Why don't we swap?

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1 MR. FINE: If you'd like, yeah we can
2 swap or I can drive for you and you can do --

3 MR. DUDLEY: Could I ask a quick
4 question right before you leave? On Slide 7, you
5 say a defense indepth policy statement is not
6 needed. Does that also mean that you don't believe
7 that the NRC should establish a definition of
8 defense indepth in criteria, more objective criteria
9 for determining its adequacy?

10 MR. FINE: In 1.174?

11 MR. DUDLEY: Yes.

12 MR. FINE: Yes, I think you should do
13 that.

14 MR. DUDLEY: We should do that?

15 MR. FINE: Yeah. That's where it should
16 be, yeah.

17 MR. RISHEL: I'm Bob Rishel. I'm the
18 Chairman of the BWR Owners Group IRIR Committee,
19 Integrated Informed Risk, Integrated Regulation, and
20 also from Duke Energy.

21 So I take a -- so I just take a little
22 different tact. We had a committee meeting not too
23 long ago, and had a very energetic discussion about
24 the Option 1, 2 and 3 and where's PRA going.

25 The owners, the BWR Owners Group is a

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1 bit schizophrenic, in that some utilities are going
2 one way up and the other utilities are maybe
3 actually retrenching, and a lot of it is due to
4 economics.

5 CHAIRMAN STETKAR: I suspect the same is
6 true for the PWRs, so you don't have the own the
7 whole thing.

8 MR. RISHEL: On the edge, yeah.

9 CHAIRMAN STETKAR: Yeah.

10 (Off mic comment.)

11 MR. RISHEL: So talk about the vision of
12 the Owners Group, BWR Owners Groups, where we're
13 going here in the near term, future applications, in
14 context of Option 1, 2 or 3. I will review a lot of
15 what Ray covered for the B's is also applicable to
16 the P's, technical adequacy question, and some
17 concerns our members brought up with Options 2 and
18 3.

19 So the PRA development has been and will
20 continue to be an evolution, incremental approaches.
21 Individual models are developed as plant sites
22 develop a need, and it's really been dependent upon
23 the business, the business need.

24 There's an application that I need a
25 model for. They will proceed of and get that or, in

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1 the case of like Fukushima requirements, seismic
2 PRAs are being developed to support that. Model
3 maintenance is continuing and, you know, Ray sort of
4 talked about it a little bit also.

5 We do model upgrades as needed,
6 consistent with the design of the plant. As we
7 modify the plant, we've got to change the PRA models
8 and update them. Frankly, all of these models are
9 becoming quite a burden and quite a cost, and in
10 fire alone, you know, you've seen those.

11 Those models are monster models and one
12 little mod can require, you know, six to nine months
13 of work for one little mod, when you start circling
14 out where the cables go and new cabinets and new
15 fire scenarios. But it is a burden we are
16 maintaining.

17 Really with the PRA and where we're
18 going, a lot of concern over the conservatism.
19 Fire PRA is one talked about here before. Similar
20 with seismic. We're a little concerned about where
21 seismic might end up, and how that artificially
22 inflates the risk, the numerical risk of the site
23 and how that impacts any risk-informed applications
24 and hence using of it.

25 So that's what we're working with the

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1 NRC and the staff and EPRI, to try and get as
2 realistic effort as we can out of this stuff. Part
3 of that is the development and hindrance of new
4 methods is slow, and that's providing a hindrance to
5 the BWR Owners Groups to like take on and build a
6 fire PRA.

7 They want to wait, wait, until they see
8 there's more reasonable methods out there that they
9 could use. I think that will also have an impact on
10 seismic.

11 Going forward, at 2016-2017. So for the
12 Risk-Informed Surveillance Initiative 5b submittal,
13 TSTF-425, we've got about six BWRs that expect to
14 submit here in the next two years. Some towards the
15 end of this year and others out into 2017. The tech
16 spec completion time. There's a lot of utilities
17 looking at that very closely, and making plans to
18 get their PRAs in the position where they can submit
19 those.

20 So there's about eight BWR licensees and
21 for 2015 to 2018, and the other one that's come up
22 has been very beneficial is the extended ILRTs and
23 most will apply as the need dates approach for
24 those. So the NRC should expect to see a continuing
25 trickle of those come in.

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1 Some of the items that we would like to
2 see out of continuing going forward would be
3 completion time for containment isolation bounds. I
4 think that's -- talk about defense indepth and low
5 risk. That's sort of a match made there.

6 SSC categorization 50.69. Again, part
7 of that's being held back by the perceived cost
8 versus benefit, and there is an initiative, I'm sure
9 you've heard discussions about licensees' PRA for
10 SPAR, for the SBP process. I was also going to say
11 other discussions were on operability also, which I
12 think the staff is -- has introduced as a potential
13 use for PRA.

14 CHAIRMAN STETKAR: Just I'll put you on
15 the spot and no is a perfectly good answer if you
16 don't want to answer. What does the industry, the
17 Owners Groups come in on that third sub-bullet
18 there, use of the licensee's PRAs as a replacement
19 for the SPAR models? You don't have to answer. I
20 mean that's -- I realize it's --

21 MR. RISHEL: You know, I'll speak for
22 myself, and so there's another double-edged sword
23 there, and most of the time we would prefer to use
24 our PRA for the SPAR model. I'd be interested to
25 see how the NRC staff would propose to make that

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1 work, whether -- I know we have given the region
2 most of our PRAs.

3 Whether they can -- if they want to run
4 them themselves or have us run them for them,
5 there's some of the mechanics that would need to be
6 worked out. So but we have actually given Region II
7 our CDs with our PRA on them. So I'm not totally
8 against it, but --

9 CHAIRMAN STETKAR: Thanks.

10 MR. TSCHILTZ: So this is Mike Tschiltz
11 again. I just would offer, we have a group -- NEI
12 has a group of industry people that is looking at
13 this issue. There's not a common position across
14 the industry about giving the NFC (phonetic). It's
15 been an issue for quite a while actually. I think
16 for over ten years it's been an issue, and there are
17 pluses and minuses on both sides.

18 I think the working group that's looking
19 at this is going to do some table tops and look at
20 different situations, where you could compare the
21 SPAR versus the licensee's PRA models, and come up
22 with some pluses and minuses for the approach before
23 we go much further with that. But that's where
24 we're at right now.

25 CHAIRMAN STETKAR: Thanks.

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1 MR. FINE: And my comments were
2 basically what he just said, that we're going to be
3 working with this new group and try to figure out
4 what's the best way to go forward. I don't know how
5 the NRC's going to handle all these spatial
6 interactions models, seismic, fire, flood, all that.
7 Their SPAR models can't do that, and that's 90
8 percent of the PRA results.

9 So clearly they're not getting the right
10 insight, and so -- and then because they're using
11 other methods and HRA and support, that just makes
12 it worse. So the -- I don't see -- we have to
13 figure out a path forward that's mutually agreeable,
14 and I think this group is going to do that.

15 CHAIRMAN STETKAR: Okay, thank you.
16 Before you leave, I'm curious if you've talked to
17 any plants over in Europe or other places that may
18 already be on this track, and gotten information
19 about it?

20 MR. RISHEL: Well actually that's very
21 interesting. I just came back from England with the
22 Horizon Group, and they're very interested and being
23 very aggressive use of PRA. Essentially, their
24 vision is a risk-informed tech spec and with the
25 completion times all driven from the PRA.

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1 CHAIRMAN STETKAR: Well but in England,
2 you don't have -- the regulator doesn't have
3 separate PRA models right now. The regulator
4 doesn't have SPAR models in the UK right now. So
5 the only thing they have is the licensees' models.

6 MR. RISHEL: That's of course everywhere
7 else in the planet except --

8 (Simultaneous speaking.)

9 CHAIRMAN STETKAR: I think Switzerland
10 at one time was developing -- the regulator was
11 developing separate models, and I know the Swiss,
12 only because I was working there, went through this
13 type of mutual angst among the utilities and the
14 regulator about --

15 MR. RISHEL: Who's right, yeah.

16 CHAIRMAN STETKAR: Well, it's an issue
17 of independence. It's an issue of the ability to
18 run the models. Who's going to run the models? Who
19 can make changes to the model, things like that?

20 MR. RISHEL: Right, right.

21 CHAIRMAN STETKAR: I'm not aware of
22 anybody else that's gone through that. But I know
23 the Swiss went through it.

24 MR. RISHEL: But you know, maybe a
25 little more, you know. Perhaps we could learn from

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1 -- this is not the BWR Owners Group speaking right
2 this minute. This is Bob Rishel speaking, could
3 from Spain or England, where their rate -- and even
4 Canada, where their regulator spends a lot more time
5 looking at the model, licensees' model.

6 But they're not so much into, you know,
7 it doesn't seem to me criticizing so much about, you
8 know, the method you use to get whatever the hazard
9 was. If it was a reasonable approach, they seem to
10 have -- at least my interaction, they seem to agree
11 to that. But so that's a different regulatory
12 model, so --

13 Ray talked about peer reviews and so
14 I'll just kind of highlight some of the differences.
15 So we are coordinating any feedback we get from the
16 staff and our peer reviews, to try and improve them.
17 We put a lot more emphasis on the peer review team,
18 and the team lead has been qualified.

19 When we've done that, we have a -- the
20 BWRs have a qual process for the team lead, with
21 training slides and there's no qual card. But
22 there's a -- there is a, I'd say pretty formal
23 training program for the peer review team leads that
24 we put them through. So far, we only have four so -
25 -

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1 MEMBER SCHULTZ: Bob, just a question.
2 How is the team considered in terms of the team's
3 qualification? I mean a good team performing the
4 review ought to be diverse and have a certain
5 element of depth, and is there specific requirements
6 for that -- for the team?

7 MR. RISHEL: There is requirements for
8 the team, and mostly it's laid in the NEI document.
9 But going beyond that, then the question of how much
10 experience does the individual really have in that
11 area he's going to review, or -- and so there's a
12 lot of, let's say, behind the scenes back and forth
13 about and you did what and when did you do that and
14 what exactly is it you did, and how long ago and how
15 many times.

16 You know, probing the resume, I guess,
17 or verifying the resume that the individual
18 provides. The peer review team leaders looks at all
19 the resumes that he's got for his team and goes how
20 does it fit with what I have, and then we pass it to
21 the licensee, the host utility, and they then do
22 another search on their end.

23 If need be, I as the Chairman I've
24 gotten involved and we've -- I'll just say recently
25 we took a member off the team, because too much

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1 angst about whether they were qualified or not and
2 replaced them actually with a contractor. So we're
3 trying to pay a lot of attention to the team. And
4 in the next slide I'll get into that and --

5 MR. DINSMORE: Excuse me. This is Steve
6 Dinsmore. Can you hear me? Is this working, okay.
7 One quick comment about the team. The licensee
8 selects the team and then ten years later, we might
9 get an application, and if we look at the peer
10 review team and decide, for example recently there
11 was somebody who was supposed to be an expert in
12 human error, just line one line in there about human
13 error.

14 It puts us in a difficult position,
15 because the review was done ten years ago. The
16 licensees come in for an application, and so we have
17 to somehow deal with that. So we often don't really
18 check the team qualifications, and we have to trust
19 the licensees and almost -- they do a good job.

20 It does give us some problems with this,
21 and I think that's why Joe keeps talking about this
22 certification, that if we set up this a little
23 better beforehand, we won't be faced with these type
24 of difficulties later.

25 CHAIRMAN STETKAR: Yeah, but Steve in

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1 practice, you know doggone well now matter how you
2 set up the certification process, ten years later
3 somebody's going to come and question a particular
4 area on a particular topic and say well, you didn't
5 think about it carefully enough anyway.

6 MR. DINSMORE: Yeah, but it would reduce
7 that. It would also --

8 CHAIRMAN STETKAR: It's not clear.

9 MR. DINSMORE: If it was done open
10 before, then it wouldn't be an NRC question. It
11 would be --

12 MR. LEVINSON: This is Stanley Levinson
13 from AREVA. In partial response to Steve's
14 question, I want to just remind everybody that the
15 peer review process is a consensus process. So
16 having one individual that may or may not have the
17 appropriate credentials, you know, looking back on
18 it.

19 You had a whole team of individuals that
20 were looking at all of the SRs; they were looking at
21 all of the assessments of the capability categories;
22 they were looking at all of the F&Os. So no peer
23 review report is the product of a single individual.
24 It is a consensus process from the whole team.

25 MR. DINSMORE: Yeah, but there's

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1 supposed to be at least two experts from each arena.

2 MR. LEVINSON: In making the teams yes,
3 there is an effort for enough variety in the
4 expertise, so that you know, one person doesn't
5 hijack the team, nor would one person, you know, be
6 responsible for creating, you know, bad results.

7 CHAIRMAN STETKAR: Steve. The big news
8 is for the ACR Subcommittee meeting is that the ACR
9 Subcommittee doesn't have to get involved in
10 populating the peer review teams. We understand the
11 problems, but let's get back on today's topic.

12 MR. RISHEL: And just the last bullet,
13 licensees have stepped up to the plate to
14 demonstrate that they are in fact right. This has
15 been a problem mostly in the fire realm, where there
16 are schedule-driven peer reviews, and that is a
17 thing of the past.

18 Just on the team make-up, so
19 expectations, you know. It is a team and they have
20 to have a lot of ground to cover, especially when
21 you start talking about the size of some of these
22 external hazards. So we're expecting them to have
23 40 percent of the requirements reviewed before they
24 get the site, and typically they'll have a laundry
25 list of questions to have.

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1 Some licensees have started using
2 follow-up peer reviews to resolve F&Os or specific
3 areas of weakness, and the industry peer review task
4 list has some guidance on what is technically
5 accepted for some supporting requirements, where
6 we've gone -- the peer review task force has gone.

7 So to meet this SR, this is what you
8 need to do. So that is trying to reduce some of the
9 subjectivity from the acceptance part.

10 So right now for the fire peer reviews,
11 we have a heavy reliance on industry contractors,
12 typically three to four out of a six to seven person
13 team. A lot of that's driven by the limited number
14 of licensees that are qualified and have, you know,
15 expert knowledge in that area.

16 Like Ray talked about, working
17 observers, and the other issue, of course, is heavy
18 workload at each licensee. They don't want to let
19 their best guys go off, you know, for what is
20 essentially a three to four week commitment of time,
21 to execute this. Just one week on site, but there's
22 preps and there's time afterwards.

23 We are getting into more of the
24 technically challenging ones, fire, seismic and high
25 wind, which have a high reliance on very specialized

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1 knowledge, and hence the contractors. Seismic,
2 we've had two to date, significant contractor
3 involvement. Again, very few licensees. We also
4 identified a gap between what the contractors
5 technically know and what the standard was trying to
6 have them look at.

7 So they know all there is to know about
8 ground motion response spectrum, but when you go to
9 okay, how does that translate into what the
10 standard's looking for, we found a little bit of a
11 gap there. So we have some training with the
12 vendors, the contractors on understanding what the
13 standard is trying to ask for.

14 CHAIRMAN STETKAR: Just to be clear, the
15 standard -- your experience is that the standard,
16 you feel, is requiring more indepth information than
17 what the contractors can supply or --

18 MR. RISHEL: No, I don't think so. I
19 think actually Ray you had one of the two.

20 MR. FINE: Yeah. It's actually kind of
21 the opposite. The state of the art and state of
22 knowledge in especially ground motion has been
23 moving really fast, with computers and simulations.
24 I mean these guys are learning at light speed right
25 now.

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1 And you know, when we froze the model
2 three years ago and started developing, versus what
3 he knows today, he's like well but we know now that
4 dah dah dah, you know. Like whoa, time out. We
5 started here. I developed under this understanding.
6 I can't go back and constantly keep up with you. So
7 you've got to draw the line, you know.

8 It's not like they're changing the
9 number by a lot. They're changing it by, you know,
10 very, very small amounts. But it's, you know, these
11 guys are very detail oriented people, and they --
12 when they get the state of knowledge constantly
13 moving and the standard says you have to use state
14 of the art or whatever --

15 CHAIRMAN STETKAR: I see. So that's the
16 issue, is the standard's saying you have to use the
17 state of the art, the state of the art at the
18 moment.

19 MR. FINE: And I'm the Vice Chairman of
20 that particular working group in the Standards
21 Committee. We're rewriting it to get rid of that
22 kind of wording and to be more specific as to what
23 it is we're after. Those particular individuals
24 that were kind of holding onto these words and
25 running with them, they're on the committee too.

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1 MR. RISHEL: So the end result, these
2 F&Os that look, you know, are hard to accurately
3 portray what the situation is.

4 MR. FINE: Right.

5 MR. RISHEL: So the responses will
6 reflect that. But they are going forward, and I
7 think we've covered -- I guess the last bullet is
8 just again, just because of the resources, we're not
9 going to be able to do that many a year, and I think
10 the staff has taken that into account as far as
11 going forward.

12 MEMBER SCHULTZ: The update of the
13 standards approach is a really good idea, and I like
14 the way that you're handling it, including the
15 contractors and the process.

16 MR. RISHEL: So just future looking
17 forward. We're looking to strengthen our process,
18 Owners Groups, increase the number of peers using
19 the working observer process, and we get feedback
20 from the staff, incorporate it and developing a list
21 of approved methods, which will help everybody.

22 Technical adequacy. So you're kind of
23 going into the discussion about Option 2 and 3, and
24 understanding of the gap between the current peer
25 review and what would be needed for Option 2 or 3.

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1 I don't think we understood, understand what that
2 gap looks like.

3 It is, as Ray indicated, it is a limited
4 resource, small group of individuals. The other
5 part is that, you know, objective criteria, saying
6 we have consistency, because we're making --
7 individuals are making judgment calls on
8 acceptability of things, and those judgments do
9 vary.

10 A little bit of concern with staff
11 making individual judgments of what the Reg Guide
12 and the PRA standard requires, and essentially
13 pushing harder on some technical attribute, which
14 you know, the issue there is cost. It's not whether
15 we get the right number or not, but things can
16 quickly escalate cost-wise.

17 Current process, as Stanley indicated,
18 is a consensus peer review, and that's what's
19 required. Concerns with Option 2 and 3 again is
20 projected benefits in the time line. If the time
21 line stretches out, we don't get the benefits. The
22 cost to achieve, what is the cost to achieve. PRA
23 models are already about a million -- I'd say we
24 budget about a million dollars for an update.

25 When I, you know, talk about Duke

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1 Energy, that's a pretty significant amount of
2 dollars. NRC and licensee interactions on specific
3 technical elements could drag out, and again sort of
4 sabotage the benefits. So the BWR Owners Group
5 wants to continue with sort of Option 1, the
6 incremental use, and the fire PRA has become a large
7 consumer of resources for our utilities.

8 It doesn't matter whether you're an 805
9 plan or not. It is a much more complicated monster
10 than anybody thought there would be. It's the
11 conservatism we've talked about. Technical adequacy
12 and make improvements in the peer review process and
13 again, we want to make sure that any option, the
14 cost benefits are well vetted. So any other
15 questions?

16 CHAIRMAN STETKAR: Any more questions
17 for Bob? If not, thank you. It's a useful
18 perspective. Now I guess we're going to hear from
19 Mike Tschiltz. Mike, I always mispronounce your
20 name.

21 MR. TSCHILTZ: No, Victoria.

22 CHAIRMAN STETKAR: No. We're going to
23 hear from Victoria. Okay. I can't keep the players
24 -- I don't have the score card that was given to the
25 umpires, so --

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1 MS. ANDERSON: I guess I'm going first.
2 No, that's fine. All right. So as promised earlier
3 this afternoon, I'm going to talk a little bit about
4 the Risk-Informed Steering Committee's efforts on
5 PRA technical adequacy, and based on some of the
6 feedback we got earlier, I'm also going to talk a
7 little bit about the RISC in general and sort of how
8 we've been conducting business.

9 So our two RISCs were reformed to foster
10 increased use of risk information in nuclear
11 operations and regulation, and one of the critical
12 components involved in moving the barriers to full
13 implementation of key risk-informed applications.
14 We've gone and developed all these risk-informed
15 applications, risk-informed tech specs, risk-
16 informed special treatment, and we're not really
17 getting full advantage out of them yet.

18 We went through -- as far as how the
19 process went and how we decided what we were going
20 to work on, each risk-informed steering committee
21 identified what they thought their top three
22 impediments to realizing the full benefit of risk-
23 informed regulation were.

24 The NRC identified PRA inequality,
25 aggregation of PRA results across hazards and

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1 cultural barriers. What the industry identified was
2 PRA realism, achieving integrated decision-making,
3 in other words, using all the components of risk-
4 informed decision-making, not just the numbers, and
5 seismic and other external events, and essentially
6 the aggregation question.

7 So we were relatively well aligned, and
8 we looked at well, you know, if we look at those top
9 three impediments that are common themes we can pull
10 out and some things that we can work on the near
11 term, that will help address those impediments. We
12 picked uncertainty, which you've received a briefing
13 on previously, and PRA technical adequacy. So that
14 was the other one we picked.

15 We formed our working groups in the
16 middle of last year to identify some key
17 improvements we could make to the regulatory
18 infrastructure associated with PRA technical
19 adequacy.

20 So just an overview of what our
21 objectives are. Our ultimate objective was to
22 bridge this gap between the existing guidance and
23 what the staff needed for their licensing
24 applications. We had Reg Guide 1.200, which talks
25 about the peer review process and the standard.

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1 For applications, the NRC staff was
2 really looking for assurance of PRA technical
3 adequacy to support the decision, and there was this
4 big gap between those two, between what Reg Guide
5 1.200 said and what the staff needed to make their
6 decision.

7 So while licensee were going off Reg
8 Guide 1.200, this became very much apparent during
9 the NFPA-805 submittal and review process. So we
10 were following Reg Guide 1.200 and turning
11 everything in, and the staff was coming back and
12 asking us questions that we believed went beyond the
13 scope of Reg Guide 1.200.

14 So what we identified was there is this
15 gap in guidance. How do you resolve peer review
16 findings? Are methods, tools and data suitable for
17 the way they've been applied? So we looked at that
18 gap and said well what can we do to improve things
19 for the future.

20 So our key objectives were to develop a
21 process for making new methods available for
22 regulatory application, to improve the process for
23 closing out peer review facts and observations, and
24 to identify any other open issues in the peer review
25 process.

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1 We've more or less wrapped up our work.
2 We're just waiting on the NRC staff memo endorsing
3 or commenting on our white paper to be finalized. I
4 think it should be out relatively soon. But the
5 conclusions of our work was that we have a proposal
6 to establish a methods vetting process, where we'll
7 have a panel of experts that will evaluate new
8 methods and determine what review level will be
9 necessary to support use and licensing applications.

10 So you may have a situation where
11 there's a method that's been in use internationally
12 for a while and maybe that doesn't need large review
13 panel effort. Or you may have something that a
14 contractor and licensee developed together, and that
15 may need EPRI and NRC research to do some joint
16 review. So there are a lot of review options.

17 Another conclusion was that we developed
18 a close out process for peer review facts and
19 observations, just to remove some of the burden
20 associated with constantly carrying facts and
21 observations forward until the next peer review. So
22 we've suggested that utilities would have a process
23 laid out.

24 We've written out the process that they
25 would use to close you those facts and observations,

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1 and it could be independent; it could be utility-
2 led, or it could be an NFC close out.

3 Once an F&O is closed out via that
4 process, it doesn't need to be carried forward to
5 the new licensing application. So that's a huge
6 burden reduction. It's essentially just a paper
7 work exercise and not --

8 CHAIRMAN STETKAR: But also Victoria,
9 those closeouts would be done in somewhat of a
10 timely manner from the initial peer -- related to
11 the initial peer review?

12 MS. ANDERSON: It would depend. It
13 would probably be done before a licensing
14 application went in. So for example if I have -- if
15 I did my peer review two years ago, I have a
16 licensing application I'm about to turn in, and I
17 need to make sure I have all those F&Os closed out.

18 You know, I go through one of those
19 processes, and maybe they're not able to close out
20 four of them. So then I have those four I need to
21 address in the licensing application. Then I turn
22 in another application a year later. Maybe I bring
23 somebody back in to close out those last four.

24 So I think we'll see it more tied to
25 when people need to turn in licensing applications.

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1 CHAIRMAN STETKAR: But then don't you
2 run the risk that Steve is talking about, that as
3 these things drag out in time, different sets of
4 eyes have different interpretations about what's
5 required to close it out?

6 MS. ANDERSON: It's possible that that
7 happens. I mean I think -- in all honesty, if
8 you're talking about like a long time scale, where
9 things would change drastically.

10 CHAIRMAN STETKAR: Yeah, that's --

11 MS. ANDERSON: If you're talking about a
12 long time scale, a licensee is probably going to run
13 into reaching the point where they have changed
14 their PRA, such that it constitutes an update. We
15 have enough to do new peer review anyway.

16 CHAIRMAN STETKAR: Okay.

17 MS. ANDERSON: So essentially -- I
18 understand the concern, but I think in most cases it
19 would be overcome by events.

20 CHAIRMAN STETKAR: Okay, because some of
21 the things I've been hearing kind of is that, you
22 know, an undercurrent, is the fact that by the time
23 you convene a group to come in and try to close out
24 something, the different people have different
25 interpretations of the original findings, or what's

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1 required to close it out. So then you get into this
2 iterative head butting.

3 MS. ANDERSON: Yep, and the way we've
4 written the process, we've tried to keep it simple.
5 We've in fact said you could have just one or two
6 individuals come in, depending on the scope of what
7 needs to be reviewed, and the scope of the review is
8 very much constrained to just closing out those
9 facts and observations. They're not supposed to go
10 digging into the rest of the model, unless they need
11 to do so to close out the facts and observation.

12 MR. DINSMORE: This is Steve Dinsmore.
13 Mr. Stetkar, if I could just make one quick comment.
14 The ASME standard, I believe says that if you're
15 going to have a focused scope peer review, they have
16 to review the full element. So what you are
17 proposing, we've always allowed you to do a focused
18 scope peer review, and based on that, close out the
19 F&Os.

20 We have not yet agreed to having
21 somebody just come in and look at the F&Os
22 themselves. So we haven't disagreed, but this is a
23 proposal which is on the table right now that we're
24 talking about.

25 MS. ANDERSON: Right. This is what's in

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1 our white paper and what we anticipate getting a
2 memo from the staff on shortly.

3 CHAIRMAN STETKAR: I got it, thanks.

4 MS. ANDERSON: And there were just a
5 couple of other miscellaneous updates to our peer
6 review guidance documents. I think Ray and Bob
7 talked about those. So as far as how the RISC PRA
8 technical adequacy work ties in with the risk
9 management regulatory framework, we've talked about
10 how that brought up the certified PRA process.

11 We looked through the discussion on the
12 certified PRA process and the specific peer review
13 and PRA technical adequacies that it brought up, and
14 we were pretty much able to map all of these to work
15 that was going on either through this effort or
16 though some other effort.

17 So what the industry concluded was that
18 most of the issues identified would be addressed by
19 this effort or some other.

20 CHAIRMAN STETKAR: So does that mean
21 that the industry is not opposed to the notion of a
22 certified PRA, because all of the initiatives that
23 are in progress can be somehow coalesced to satisfy
24 that objective? Or am I -- I'm obviously putting
25 words in your mouth. So you can put your own words

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1 in your mouth.

2 MS. ANDERSON: I think what the
3 objection is to is to the way that the certified PRA
4 process was described in the white paper we saw,
5 because it was described as another layer on top of
6 all of this. We saw that, we said well, I think you
7 can close all these gaps you've identified through
8 existing processes. There's really no need to put
9 another layer on top.

10 MR. TSCHILTZ: So if I could add to
11 that, I think in our comments under the certified
12 PRA, we looked at what was proposed at the meeting,
13 and I think one of the things that had been offered
14 was kind of a like a new type of process, where you
15 let an independent organization like an Underwriters
16 Lab, that would come in and independently review.

17 So we looked at all the time and effort
18 that had been put towards development of the
19 infrastructure for the standards for Reg Guide 1.200
20 for the peer review process, and said why do we want
21 to start all over and throw out all that 10 to 15
22 years of work that's been undertaken to develop all
23 that?

24 Why don't we look at the gaps that are
25 out there, where we think we need to enhance or

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1 improve the existing process and tackle those? It
2 seems like a much more doable effort in the time
3 frame when we actually need it, rather than trying
4 to start with this new undefined certified PRA
5 process.

6 CHAIRMAN STETKAR: Thanks. That helps
7 me.

8 MS. ANDERSON: And that is all I have on
9 the PRA technical adequacy.

10 CHAIRMAN STETKAR: Anything else among
11 the members for Victoria? If not, Mike I guess
12 you're up.

13 MR. TSCHILTZ: Thank you. So I will
14 just start out by saying that my presentation is
15 kind of pro forma, from the standpoint of it goes
16 through point by point on the staff's
17 recommendations, that basically says that the
18 industry agrees with the staff recommendations for -
19 - in the draft SECY paper, because they reflect the
20 industry's position that was submitted in the
21 comments.

22 So it may be of limited benefit to go
23 into my presentation, other than I wanted to be on
24 the record that the industry was supportive of what
25 was in the draft SECY paper.

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1 CHAIRMAN STETKAR: And that's important
2 to get on the record. So these slides -- these
3 slides will be in the record.

4 MR. TSCHILTZ: So I would like to
5 comment on a couple of things. If you want to do
6 the slides, if you even want me to do that. The
7 first comment, I think, reflect back on the comments
8 I made to the committee when we had the first
9 meeting about the RMRF, and I questioned the process
10 that was being used to go through and develop the
11 options here.

12 And what was laid out was a time frame
13 over the period of a year that we were halfway
14 through when we first met. The staff was going to
15 provide a white paper to the industry to comment on,
16 and then develop a SECY paper with options.

17 I think that process led us to the end
18 point we're at right now, I think, because it didn't
19 allow the time for industry interaction and input
20 into what a viable process would be, to give people
21 comfort that where we would end up would actually be
22 a viable alternative.

23 So in large part, I think we're here
24 because we didn't allow enough time to fully vet
25 this out and consider the Option 2 alternative,

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1 because I think I was questioning how can you
2 represent the industry, and what have you done other
3 than brought in the BWR and PWR Owners Group. But
4 there may be isolated utilities that are interested
5 in Option 2 approach.

6 But I think when you -- if you were to
7 ask some utilities, they probably would be if it was
8 better defined. So the problem was how do we go
9 forward without a better definition, and what it
10 would take, what the staff's review would consist
11 of, whether it would need to be industry guidance
12 documents developed, that the staff would need to
13 endorse.

14 If you go down all of these process time
15 lines, your savings from the existing process would
16 diminish. So without knowing, you know, what was
17 actually going to be required, it was hard for
18 people to make a judgment.

19 So I talked a little bit about the
20 certified PRA. One of the other aspects of the
21 certified PRA that was in question was, you know, if
22 you have this independent type of body that's
23 reviewing, you know, how would you handle updates?
24 How would you handle revisions to the PRA? Would
25 they need to be reviewed by this independent body?

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1 So there are a whole number of questions
2 that needed to be addressed, that weren't really
3 fully fleshed out in what was offered to the staff
4 for the public meeting.

5 CHAIRMAN STETKAR: Can I ask you a
6 little bit on the first issue that you raised? I
7 was making notes here, so what I heard you say and I
8 want to make sure I understand, is that you feel
9 that the time constraints that the staff was
10 operating under, based on the Commission's SRM,
11 didn't allow enough time for a full discussion of
12 certainly Options 2 and Options 3. Option 1 is
13 pretty clear. Is that, or am I putting words in
14 your mouth?

15 MR. TSCHILTZ: Well, I think Option 3
16 was not an option that the existing fleet of
17 reactors would want to consider basically, because
18 it would require complete rewrite of the SR and the
19 licensing basis of the plant, which I would -- I
20 want to say would be difficult to justify.

21 CHAIRMAN STETKAR: Under Option 2 then,
22 I heard, and I've heard you say that there wasn't
23 enough specificity in what the staff had proposed in
24 the white paper for the industry to be able to fully
25 understand what that option might entail.

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1 MR. TSCHILTZ: So if you look at the
2 examples that were in the paper, they're pretty much
3 examples of risk-informed activities that had
4 already taken place, that people could already take
5 advantage of under the existing system. That being
6 said, I think I know where you're going here.

7 I think where the industry needs to have
8 successes on the existing risk-informed applications
9 that are out there that they haven't been able to
10 take advantage of, that were talked about and raised
11 in Bob's presentations about tech spec 4b
12 initiative, 50.69, the industry's undertaking an
13 effort to kind of reinvigorate the interest in those
14 applications.

15 There was a lot of time and resources
16 put into the development of the guidance for all of
17 those applications. So I think it's kind of a
18 return on investment, and to make sure that people
19 can be successful with those applications, after
20 having what I think someone characterized as a
21 negative experience with NFPA-805 and what were some
22 of the issues that came out of that.

23 So I think the emphasis is -- I think
24 the industry's focus is on taking advantage of the
25 existing risk-informed applications and getting the

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1 benefits we can from that. There's a lot to
2 implement that. I think we heard from a station
3 standpoint of the education that needs to take place
4 across the different organizations at the plant to
5 fully implement those different initiatives. It's
6 not a small task.

7 CHAIRMAN STETKAR: I think I understand
8 that, but a little bit of the position I was trying
9 to come from is one, if one's going to start a
10 process, one needs to start somewhere. I mean we're
11 all aware of what happened on NFPA-805. You're now
12 saying well, we've gotten to a point where there is
13 some understanding, I think, between the industry
14 and the staff in that particular area.

15 My concern is a little bit that if the
16 industry says we need to have fully described
17 criteria, so that we can then -- you as the industry
18 can then evaluate those criteria and comment on
19 them, that's the other end of the spectrum, that
20 NFPA-805 would have come out better if the industry
21 and the staff had gotten together and worked through
22 those pilots that never got worked through, so that
23 a lot of the rough things got worked out in real
24 time, before -- before the time lines of the license
25 submittals, in a broader sense of something like an

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1 Option 2 on the RMRF.

2 You have to start some place, and you
3 can't say well, you know, the party of the second
4 part must bring to the party of the first part
5 everything fully defined a priori, so that then you
6 have the opportunity to criticize it. If there's a
7 desire on both of the parties to move forward, you
8 start to move forward.

9 You start to work out these things,
10 rather than an adversarial relationship of show me
11 the absolute requirements and then I'll comment on
12 them. That's the direction I was heading.

13 MR. RISHEL: This is Bob Rishel with
14 Duke Energy.

15 MALE SPEAKER: It's on now.

16 CHAIRMAN STETKAR: It's on now.

17 MR. RISHEL: It's on now, okay. So I
18 have one of those plants that may or may not be
19 considered for Option 2. The PRAs are getting
20 pretty far along and pretty well developed, and
21 maybe it could help us. But so I go back to -- so
22 in order to go to Option 2, I have to do a -- I have
23 to be able to sell it to the executives, and right
24 now what's in there is not -- is not going to fly.

25 So I think part of what NEI and industry

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1 were trying to say is in order to be able to sell it
2 as we're going to go invest money in this effort,
3 and the payback will be in Year X, that we need to
4 make sure that the payback is there in Year X, and
5 that the amount of money we say we're going to spend
6 is the amount of money, you know, that it doesn't --
7 you know 805, I love it to death. I say that every
8 day. But you know, it left a bad taste in
9 everybody's mouth.

10 MEMBER BLEY: Before you give up on
11 that, just following up on what John asked while
12 I've got you up here. We're kind of throwing back
13 at bring us another rock, and have you guys worked
14 out at all what it would need to look like to be
15 useful to you? I mean I don't know. You might have
16 lots of conversations with the staff about this that
17 we're not privy to.

18 MR. RISHEL: My sort of thought is what
19 we have right now is a line drawing of a concept
20 car, if you want to go to the Ford, the automotive
21 industry. What we probably need to see is a concept
22 car, not the line drawing.

23 MEMBER BLEY: Yeah, but you don't
24 necessarily need --

25 MR. RISHEL: We don't need the

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1 production model.

2 MEMBER BLEY: Yeah. You don't need to
3 know precisely how they're going to finish the top
4 coat on it.

5 MR. RISHEL: Yeah. We don't need
6 everything, but I think we need a little more than
7 what we have.

8 MEMBER BLEY: I think they probably, and
9 I shouldn't speak for them, they probably need to
10 know if you want a little car or a big car or, you
11 know, what the car looks like a little bit.
12 Somehow, we're at the point of that's not it and
13 it's not good enough, and well then we're done with
14 it.

15 MR. TSCHILTZ: So let me try to clarify,
16 because my comments weren't meant to breathe life
17 back into the RMRF.

18 CHAIRMAN STETKAR: We understand that.

19 (Laughter.)

20 MR. TSCHILTZ: Okay. My comments were
21 really a reflection on how we ended up where we are,
22 and it's more of a process, you know. I think we're
23 kind of from the outset destined to end up at this
24 place, based upon the way we conducted the activity.

25 So I think our best path forward is to

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1 follow the priorities that have been set forth by
2 the Risk-Informed Steering Committee, to focus on
3 those activities that we think are impediments and
4 to remove them, and those will take -- get some
5 near-term wins for risk applications that, you know,
6 we can then build on. So I think that's our
7 recommendation --

8 CHAIRMAN STETKAR: Thanks. That helps.

9 MR. TSCHILTZ: So I don't think I really
10 need to really go through these, because it repeats
11 what Dick Dudley did in his presentation, on each of
12 the points for each of the recommendations. It's
13 there for the record.

14 CHAIRMAN STETKAR: Yeah, and unless, you
15 know, unless you want to do that, as Dennis
16 mentioned, the slides are indeed in the record of
17 the meeting, unless any of the members had any
18 particular items as you skim through the slides that
19 you want to ask Mike about.

20 I did want to probe a little bit on the
21 Option 2, because that seemed to be a little less
22 black and white, at least as I read things, compared
23 to some of the other things. The other ones were
24 pretty clear and straightforward. Anything else for
25 Mike? You got off easy.

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1 MR. DUDLEY: Can I ask a question?

2 CHAIRMAN STETKAR: You may.

3 MR. DUDLEY: (off mic) On Slide 5, the
4 industry supports the revision guidance document
5 1.174, to ensure consistency -- consistent
6 application --

7 CHAIRMAN STETKAR: Dick, you turned it
8 off.

9 MR. DUDLEY: Slide -- can you hear me
10 now?

11 CHAIRMAN STETKAR: Yeah.

12 MR. DUDLEY: The industry supports
13 revisions of guidance documents Reg Guide 1.174, to
14 ensure consistent application of Defense Indepth and
15 Regulatory Act decisions. So that would include the
16 definition, the development of a definition of
17 defense indepth, and try to come up with more
18 objective criteria for adequacy of defense indepth?

19 MR. TSCHILTZ: So there was a whole work
20 session on definitions of defense indepth. I think
21 there are nine different definitions that are out
22 there for defense indepth, and I don't think any one
23 of them is any more right than another. So there's
24 a lot of different ways to go after that issue.

25 But I think where the benefit can be had

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1 with this is the increased use of examples in the
2 guidance documents. So I think that's where the
3 real benefit would be, and I know that on the
4 industry side, that's one of the things that we're
5 looking for. We've already got some work that's
6 been developed as part of EPRI's aggregation report
7 that addresses this issue. So that's where I think
8 we see the benefit.

9 MR. DUDLEY: Well, several years ago,
10 industry said they were planning to write a white
11 paper on defense indepth. Do you know if that's
12 still on your to do list or --

13 MR. TSCHILTZ: It is, but I think to a
14 large extent it may be already incorporated into the
15 -- what's been done for the EPRI report. We're
16 going to go back and look at that, where that
17 stands, whether we need to do anything more or
18 whether what's in the EPRI aggregation report
19 suffices.

20 MR. DUDLEY: EPRI aggregation report?
21 Okay.

22 MR. TSCHILTZ: Yeah. I can give you the
23 number.

24 MR. DUDLEY: Okay. Just yeah. If
25 you'll email it to me, thank you.

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1 MEMBER REMPE: Could we also get a copy
2 of it?

3 MS. ANDERSON: The EPRI aggregation
4 report?

5 MEMBER REMPE: Yes.

6 MS. ANDERSON: We should be able to --
7 actually, maybe if we do have this meeting to talk
8 about the Risk-Informed Steering Committee, because
9 that's one of the priorities is aggregation.

10 CHAIRMAN STETKAR: That is, yeah.

11 MS. ANDERSON: Maybe that would be the
12 time to discuss the report, and we could probably
13 get --

14 CHAIRMAN STETKAR: Yeah. I honestly, I
15 closed my file here. So I don't know whether we've
16 theoretically seen it or not. I've heard about it.

17 MS. ANDERSON: Right.

18 CHAIRMAN STETKAR: I just don't know,
19 because I don't know whether it's EPRI proprietary
20 or whether it's EPRI public.

21 MS. ANDERSON: I think it's public.

22 CHAIRMAN STETKAR: It may be. But I
23 agree with you.

24 MEMBER REMPE: I'll go up through Mike.

25 MEMBER SCHULTZ: Mike has made notes.

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1 CHAIRMAN STETKAR: Yeah. Mike has made
2 notes and Victoria, I agree with you, because I
3 think it probably would be -- not probably. It
4 would be useful for the PRA Subcommittee, regardless
5 of RMRF, to better understand what's going on with
6 the Risk-Informed Steering Committee, so that the
7 industry and the staff.

8 And it was my understanding that that
9 aggregation has been bundled in with the uncertainty
10 stuff. We didn't hear much about it under the
11 uncertainty, because the uncertainty focused mostly
12 on -- the uncertainty part of uncertainty, rather
13 than that aspect. We can go back and revisit --

14 (Simultaneous speaking.)

15 MS. ANDERSON: Right. We are working on
16 aggregation and actually piloting the guidance
17 that's in that report. So we'll have something to
18 share.

19 (Off mic comment.)

20 CHAIRMAN STETKAR: Good. Anything else
21 for Mike or Victoria? If not, then thanks again to
22 both of you from NEI and both of the Owners Groups.
23 It was really useful information.

24 What I'd like to do now is -- this is an
25 open meeting. So let's -- what I'd like to do now

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1 is ask if we have anybody in the room who'd like to
2 make a comment. Please come up and do that, and
3 while we're doing that, I'll try to get the phone
4 bridge line open, to see if we have anyone out on
5 the bridge line who'd like to make a comment.

6 So if there's anybody in the room who
7 would like to make a comment, come on up and
8 identify yourself and do so.

9 MALE SPEAKER: They've all talked.

10 CHAIRMAN STETKAR: Well, but sometimes
11 you have after-thoughts, you know. One final
12 parting shot that you'd like to get in, and I'll see
13 if we can get the bridge line open.

14 MALE SPEAKER: Mike's back.

15 CHAIRMAN STETKAR: Mike's back and it is
16 theoretically open.

17 MR. LEWIS: Marvin Lewis.

18 CHAIRMAN STETKAR: Hi Marvin. Good, and
19 thank you for confirming that it's open. So now, if
20 we have anyone on the bridge line who'd like to make
21 a comment, please do so.

22 MR. LEWIS: Yeah, sure. I'd love to
23 make a comment, and here's my problem with PRA and
24 that sort of approach. Recently over in California,
25 it was a hearing on transportation of spent fuel,

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1 and sure enough, the applicant came in with a
2 certification on his casks.

3 Not until after the meeting did they
4 find out that the certification had come through the
5 night before. There was no way to find out, to
6 present any objection to it. Now that was the same
7 tactic used at Three Mile Island No. 2 for fuel
8 loading.

9 The fuel loading was done on an
10 emergency order from a judge, written up at night
11 and the fuel loading was at night before the
12 opposition again could present any other questions
13 or raise any issue, or file for a temporary
14 restraining order or whatever.

15 This is my problem. My problem is yes,
16 PRAs sound wonderful. Yes, you do it by the
17 numbers. It's great, maybe. But I go back to WASH-
18 1400, and how WASH-1400 was kicked out because Dr.
19 Rasmussen on an open mic pretty much told how they
20 made up magic numbers, and this is what I'm afraid
21 of.

22 I'm afraid of oh, the rules made by NRC
23 what have you, they're wonderful. The question is
24 are they for real? Take a look at your past. Take
25 a look specifically at Fukushima of course. Lovely

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1 beach, Fukushima. Put it in English, Fukushima,
2 lovely beach. Okay. It's a lovely beach.

3 But there's three melted down and
4 continuously melting down nuclear reactors there.
5 We have all sorts of NTTF. We have all sorts of
6 Fukushima lessons learned. But I'm wondering if
7 anybody's gone over there and actually taken what's
8 going on over there and bringing it back in the
9 rules and regulations. I don't see it. Thank you
10 for allowing me to comment.

11 CHAIRMAN STETKAR: Thank you very much,
12 Marvin. We appreciate that. Any other members of
13 the public or anyone out on the bridge line who'd
14 like to make a comment, please identify yourself and
15 do so. We have this rule that says five minutes of
16 silence is about all you get.

17 So I'll assume that we don't have any
18 other public comments. We'll close the bridge line
19 from this direction, just so we don't get the pops
20 and crackles that we hear.

21 What I'd like to do now, as we usually
22 do at the close of the Subcommittee meeting, is go
23 around the table and see if any of the members have
24 any final comments. Dick Dudley's coming back up to
25 the front.

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1 He asked me as we do this, if anyone has
2 any specific recommendations for the staff for their
3 presentation to the full Committee meeting in
4 November, recognizing what they presented today in
5 terms of either additional material on certain
6 issues or less material, to see if we can give him
7 any feedback, so that we're a little bit more
8 focused if necessary at the full Committee.

9 Because we started with Steve this
10 morning, I'll start with Joy this afternoon.

11 MEMBER REMPE: Okay. Thank you. I
12 appreciated the staff as well as industry coming and
13 providing some details behind the SECY and the
14 reasons that they've made decisions that are
15 documented here, that I might not have gotten from
16 reading it on my own.

17 So I think definitely when you come to
18 the full Committee that you'll to be discussing
19 that. I like the umbrella graphic a lot that's in
20 the SECY, by the way too, and I appreciated the BWR
21 Owner Group and PWR Owners Group as well as NEI
22 coming in, giving their perspective too. Thanks.

23 CHAIRMAN STETKAR: Ron. Turn your mic
24 on.

25 MEMBER BALLINGER: It looks like things

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1 have come full circle, so to speak. But that was
2 very -- the presentation was very good, and like
3 Joy, the industry perspective is also added an awful
4 lot in reinforcing what you concluded. Thank you.

5 CHAIRMAN STETKAR: Dennis.

6 MEMBER BLEY: Nothing more to add, and
7 I'm kind of thinking about the full Committee
8 meeting and it's got to be -- I don't have a good
9 idea on that. I think maybe you have the right for
10 it. It needs to be an hour and a half, two hours I
11 suppose.

12 CHAIRMAN STETKAR: We've got, I think,
13 two and a half allocated.

14 MEMBER BLEY: We have two and a half
15 hours allocated, so you could almost do all of Rick
16 Dudley's stuff. I'm not sure.

17 MR. DUDLEY: You know, absent questions,
18 my talk is about half an hour. I think Donnie
19 Harrison spoke for maybe what, ten minutes? You
20 know, we don't typically have industry speak at
21 full Committee meetings or do we?

22 CHAIRMAN STETKAR: No, we do.

23 MEMBER BLEY: We do, and that's part of
24 the --

25 CHAIRMAN STETKAR: They'll be -- let me

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1 get through Steve, because Steve is being patient.
2 Steve.

3 MEMBER SCHULTZ: I don't have anything
4 specific, Dick. I think what you presented is good
5 content, and that you can simply summarize it for
6 the full Committee appropriately, and that would be
7 just fine. I would recommend that the industry come
8 for the meeting as well.

9 The examples that were provided by the
10 staff could be presented to the full Committee. I
11 think that could be advantageous. But I wouldn't --
12 those presentations, discussions, need to be
13 shortened a bit, just to hit the highlights, rather
14 than the whole industry and general discussions that
15 we had the opportunity to hear. We might think
16 about that some more. But I'd certainly recommend
17 that industry be part of the discussion.

18 CHAIRMAN STETKAR: Thanks Steve, and
19 I'll echo your comments. I would hope that industry
20 will come. I think that the -- again the owners
21 can't tell people what to present. The Owners
22 Groups perspectives I found very useful. As you
23 mentioned, I think they could be shortened a bit.
24 They would have to be.

25 So but you can work, you know, through

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1 Mike Snodderly to sort of organize things. For your
2 perspective Dick, the only -- and I think yours is --
3 - the material you presented today was probably at
4 the right level for the full Committee. If there's
5 -- this is my own, I keep coming back to this itch
6 that I have.

7 If there's any way that your discussion
8 of the ongoing activities, the umbrella cartoon,
9 could help the full Committee better understand
10 this notion of how the steering committee is
11 addressing that big blue box in the upper left-hand
12 corner that says "Policy Development Activities,"
13 which has this notion of using risk information
14 going forward, rather than just the specific
15 applications that are highlighted in the other
16 boxes, it might help.

17 MEMBER SCHULTZ: The other piece is the
18 orange side of the presentation, which is to
19 demonstrate the interaction between the staff and
20 the industry, to move forward with the key features
21 associated with the application, the applications
22 that are going to be coming forward.

23 CHAIRMAN STETKAR: Some of that may come
24 up. If you listen to what --

25 MEMBER SCHULTZ: It's not orange, it's

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1 green.

2 CHAIRMAN STETKAR: Oh, the green. Okay,
3 the green. Because the orange stuff --

4 MEMBER SCHULTZ: Yeah, yeah, yeah.

5 CHAIRMAN STETKAR: The orange stuff
6 Victoria sort of addressed.

7 MEMBER SCHULTZ: I misremembered. I
8 misremembered. It's those elements that are
9 associated with essentially working together to make
10 things move forward with the current approaches, to
11 reinforce that what we have is not only capable of
12 working, but it is working.

13 MR. DUDLEY: So how the staff is working
14 with industry to improve the areas and the
15 challenges? Is that what --

16 MEMBER SCHULTZ: Yeah, and to
17 demonstrate your fundamental concept, that the
18 regulatory framework that is currently in place is
19 just fine. But it needs to be -- we need to address
20 certain elements, and that's being done, now and
21 moving forward. There's a plan in place that's
22 working.

23 MR. DUDLEY: Okay.

24 CHAIRMAN STETKAR: Anything else from
25 the members? If not, Dick and whoever from the

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1 industry, if you can participate, I think you're
2 hearing us say that at least the Subcommittee
3 members feel that it would be very useful. As far
4 as coordinating times and stuff, do that through
5 Mike. Mike is more qualified than any of us to do
6 that. And if there's nothing else -- do you have
7 any more questions Dick?

8 MR. DUDLEY: No.

9 CHAIRMAN STETKAR: You're looking a bit
10 fuzzy.

11 MR. DUDLEY: I do not.

12 CHAIRMAN STETKAR: Okay, good. Then we
13 are adjourned.

14 (Whereupon, the above-entitled matter
15 went off the record at 5:08 p.m.)
16
17
18

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Staff Recommendations Regarding a Risk Management Regulatory Framework

ACRS Subcommittee Meeting

October 19, 2015

Outline of NRC Staff Presentation on Risk Management Regulatory Framework (RMRF)

- Background
- Discussion of RMRF SECY paper
 - I. RMRF Implementation Options for Power Reactors
 - II. Re-evaluation of Improvement Activities 1 and 2
 - III. Agency-wide risk management policy statement
 - IV. Interrelationships between risk-informed activities
- Next Steps

Background

- White paper (ML15107A402) released on May 6, 2015
- Public meeting on May 27, 2015
- ACRS subcommittee meeting on June 8, 2015
- Public comment period on white paper closed on June 11, 2015
- Meeting notice on July 14, 2015 contained additional details on RMRF implementation Option 2 and reopened public comment period
- Public meeting on July 29, 2015
- Public comment period on Option 2 closed on August 31, 2015
- SECY paper distributed internally for Office concurrence review on October 8, 2015; comments due on October 21, 2015

Section I. RMRF Implementation Options for Power Reactors

Staff Considered 3 options:

1. Maintain current regulatory framework
2. Voluntary alternative risk-informed plant-specific licensing basis
3. NUREG-2150 recommended approach

Power Reactor Option 1 – Maintain Current Framework

- No extensive revision of NRC's regulatory framework
- The current power reactor regulatory framework meets the RMRF criteria in NUREG-2150
 1. Mission – Public health and safety; common defense and security; protect the environment
 2. Objective – Manage the risks via current regulations, guidance, and oversight (including defense-in-depth, safety margins, single failure criterion, fail-safe design, reactor oversight program, etc.)
 3. Goal – Provide sufficient risk-informed and performance-based protections to ensure risks are acceptably low (utilizing Commission's Safety Goal Policy Statement and subsidiary risk metrics)
 4. Decisionmaking Process that includes monitoring and feedback (e.g., LIC-504, "Integrated Risk-Informed Decision-Making Process for Emergent Issues;" Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis;" Generic Issues Program; Operating Experience Program; Accident Sequence Precursor Program; Industry Trends Program, etc.)
- Not a "do nothing" option -- staff would continue its risk-informed approach and would make incremental regulatory improvements (based on risk insights or other considerations) whenever necessary using existing regulatory processes

Power Reactor Option 2 – Risk-Informed Alternative Licensing Basis

- Maintain existing generic regulatory structure
- Issue rule allowing licensees who upgrade PRAs to apply for approval of a risk-informed alternative licensing basis
 - Licensees allowed to select a plant-specific set of design changes/compliance issues of low risk-significance that would deviate from current deterministic requirements **and** must mitigate all known plant-specific risk vulnerabilities meeting NRC-specified criteria
 - New information on mitigation of risk-significant events and/or accident sequences (risk vulnerabilities) must be documented in the plant's updated Final Safety Analysis Report
 - Mandatory monitoring and feedback (as described in RG 1.174) to ensure changes in risk remain acceptable throughout the lifetime of the facility

Power Reactor Option 2 – Risk-Informed Alternative Licensing Basis (continued)

Implementation uncertainties:

- Staff has not developed implementation details for this approach
- Staff intends to review all power reactor regulations and develop list of rules amenable to risk-informing under Option 2
- Other implementation uncertainties include:
 - Minimum scope/technical accuracy of “suitable” PRA for entry into the alternative approach
 - Certification/review of PRA?
 - Selection and scope of permissible design changes
 - Process for staff review of design changes
 - Reporting and documentation requirements
 - Ensure transparency (NRC and public) of process

Public Meeting on RMRF Option 2

July 29, 2015

- Staff presentation
 - Additional details on Option 2
 - Thoughts/approach for “suitable” PRA
- Industry stakeholders still concerned about the lack of implementation details on Option 2
 - Nuclear Energy Institute (NEI) stated that without explicit details of how the Option 2 process would work, it is very difficult to assess safety benefits and costs
 - NEI said NRC should not present its recommendations to the Commission without having developed more details regarding how the processes would work

Power Reactor Option 3 – Plant-Specific RMRF from NUREG-2150

- Issue regulation requiring PRAs and plant-specific licensing basis based on:
 - Plant-specific risk profiles
 - NRC-specified risk management objective
 - Enhanced criteria for determining adequacy of non-risk factors (defense-in-depth, safety margins, etc.)
- Based on the risk profile, licensees would implement the plant-specific licensing basis by:
 - Determining how the risk objective is met
 - Ensuring that the necessary protections are in place to meet the risk management goal
 - Demonstrating the adequacy of non-risk factors (defense-in-depth, safety margins, etc.)
 - Establishing the risk-informed decision-making process
 - Establishing the monitoring/feedback and reporting process

Written Public Comments on RMRF Options for Power Reactors

Option 1 - Maintain Current Regulatory Framework

- Four commenters addressed Option 1. All four recommended maintaining the current regulatory framework.

Option 2 – Voluntary Alternative Risk-Informed Plant Licensing Basis

- Three commenters addressed Option 2. All three expressed some level of interest but said the NRC had not developed sufficient implementation details to enable commenters to analyze potential costs and benefits.

Option 3 – NUREG-2150 recommended approach

- Two commenters addressed Option 3. Neither supported Option 3 for currently operating reactors. One said the approach was not viable. The other said that although insufficient implementation details had been provided to allow an evaluation of its safety and cost benefits, Option 3 is unlikely to be justifiable for the current fleet of operating reactors.

Section I. RMRF Implementation Options for Power Reactors - Staff Recommendation

Staff Evaluation:

- Staff rejected Option 2 because it is not supported by stakeholders
- Staff rejected Option 3 because it is too expensive and is also not supported by stakeholders
- Staff recommends Option 1 – Maintain the existing regulatory framework
 - All ongoing and planned risk-informed initiatives would continue.
 - Staff would continue to make incremental risk-informed regulatory improvements whenever necessary.



Questions?

Section II. Re-evaluation of Power Reactor Regulatory Improvement Activities

- Commission's May 19, 2014 SRM on SECY-13-0132 on Fukushima Near-Term Task Force Recommendation 1
 - Directed staff to re-evaluate objectives of Improvement Activity 1 (new design-basis extension category) and Improvement Activity 2 (Commission expectations for defense in depth) within context of Commission direction on the Risk Management Regulatory Framework
- Because these improvement activities are closely related to the staff's evaluation of NUREG-2150, the staff is providing its re-evaluations of Improvement Activities 1 & 2 in RMRF SECY paper

Re-evaluation of Improvement Activity 1: Establish Design-Basis Extension Category

Staff Re-evaluation:

- Staff determined that creating new design-basis extension category is not necessary
- Main purpose of new category was to ensure that all new rules properly specify the additional regulatory attributes necessary for requirements that exceed the existing design basis
- Instead, the staff will develop clear internal rulemaking guidance to ensure consistent criteria for specifying performance goals, treatment requirements, documentation requirements, change processes, and reporting requirements whenever new regulations (especially beyond design-basis) are developed
 - Develop guidance using existing resources (routine, periodic guidance updates)

Public comments:

- Three commenters provided comments on establishing the design basis extension category.
- All three commenters agreed with the NRC staff's preliminary determination that it is not necessary to establish a new design basis extension category of events and associated requirements.

Re-evaluation of Improvement Activity 2: Establish Commission Expectations for Defense in Depth

Staff Re-evaluation:

- While this proposed effort could potentially succeed in establishing predictable, objective criteria for determining the adequacy of defense in depth for power reactor safety, the estimated resource requirements (6.3 FTE over a period of 3 to 4 years) are significant.
- It is also possible that after spending these resources, the staff would be unable to establish predictable, objective criteria acceptable to the Commission.
- Based on current resource limitations, the staff recommends that the NRC should not undertake this activity at the present time.

Public comments:

- Three commenters addressed defense in depth
- All supported the NRC staff's initial recommendation in SECY-13-0132 to develop additional criteria and guidance on defense in depth for power reactors
- Two comments with the condition that the criteria and guidance meaningfully integrates defense in depth with risk information (instead of treating the two approaches as separate decision criteria)



Questions?

Section III: Agency-wide Risk Management Policy Statement

- The staff believes that an agency-wide risk management policy statement could potentially improve and make more consistent the regulatory framework used for all program areas
 - Although consideration of risk and tailoring regulations and oversight to manage risk is inherent in current NRC programs, the regulatory approaches for different NRC program areas have evolved separately based on their own individual attributes and characteristics
- NRC requested public comments on two draft example policy statements (November 2013 and May 2015)
- Public comments on November 2013 draft were mixed
- In May 2015, staff published a simplified example policy statement
- Public Comments (May 2015):
 - 10 commenters addressed the agency-wide policy statement
 - 9 of 10 commenters recommended against an agency-wide risk management policy statement (not needed because programs can be appropriately risk-informed under the current policy and guidance)

Section III. Agency-wide Risk Management Policy Statement – Staff Recommendation

Staff Evaluation:

- The staff agrees with public commenters that NRC programs can be appropriately risk-informed without an agency-wide risk management policy statement
- The staff believes that it would not be appropriate to divert scarce NRC and licensee resources away from more safety-significant activities
- Staff recommends against developing an agency-wide policy statement

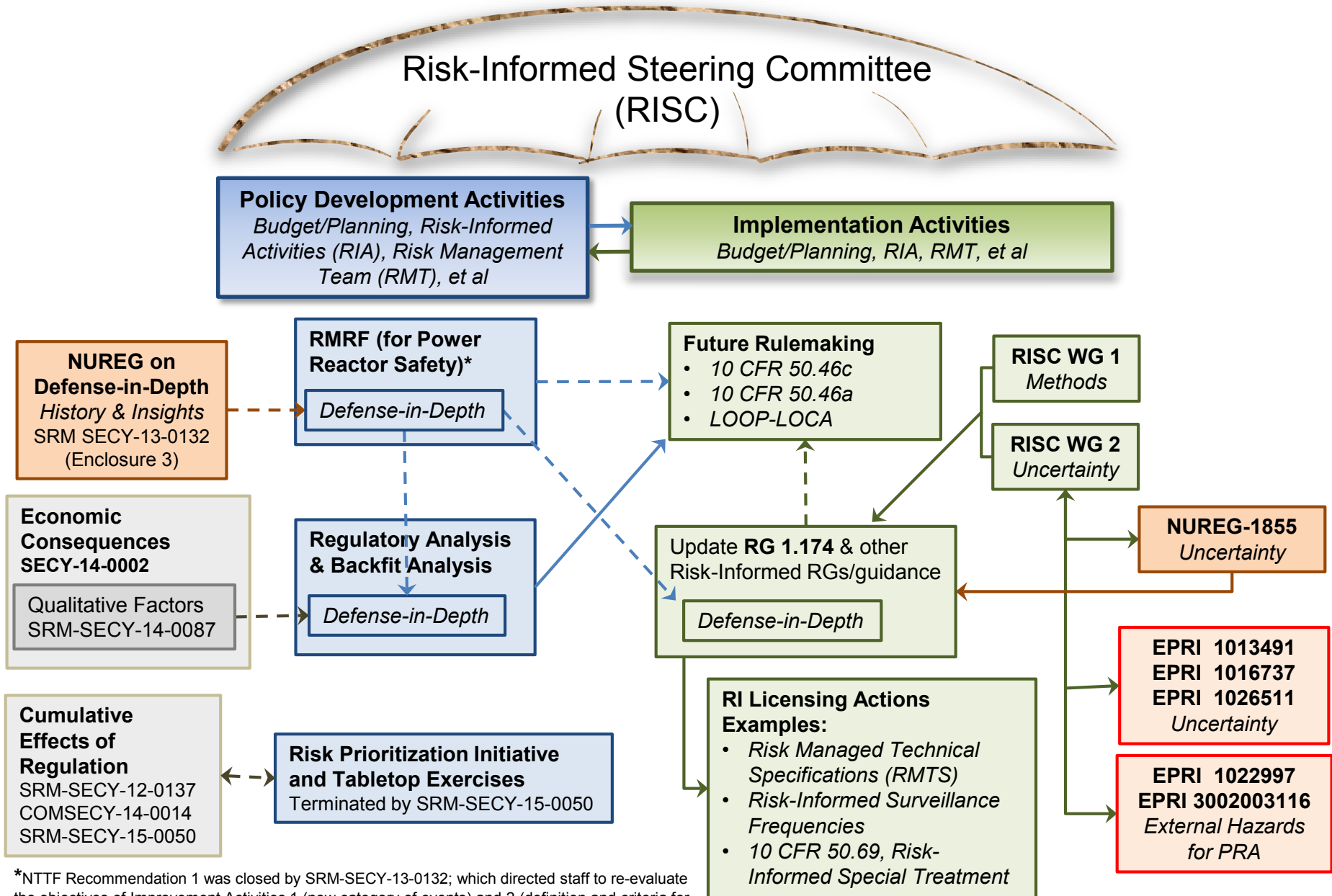


Questions?

Section IV. Interrelationships Between Ongoing Risk-Informed Initiatives

- In its SRM on SECY-13-0132 on Near-Term Task Force Recommendation 1, the Commission directed the staff to provide a “description of any interrelationships of ongoing risk-informed initiatives”
- The staff prepared a graphic “influence diagram” to illustrate the interrelationships between ongoing risk-informed power reactor safety initiatives

Inter-relationships Between Ongoing Risk-informed Activities



*NTTF Recommendation 1 was closed by SRM-SECY-13-0132; which directed staff to re-evaluate the objectives of Improvement Activities 1 (new category of events) and 2 (definition and criteria for defense-in-depth (DID)) as part of RMRF-related implementation activities.

Next Steps

- Staff will receive office concurrence comments on October 21, 2015; provide ACRS a markup showing changes made to SECY
- Full Committee meeting on November 4, 2015
- ACRS letter mid-November
- Staff response to ACRS letter mid-December
- RMRF SECY due to Commission by December 18, 2015

Backup Slides

Section I. RMRF Implementation Options for Power Reactors - Staff Recommendation

Generation IV reactor designs:

- The staff believes that the adoption of a risk-informed regulatory framework, similar in concept to an RMRF, would provide the greatest benefit for new reactor designs that employ non-traditional technologies (e.g., Generation IV designs). The staff will continue to engage stakeholders interested in pursuing such a risk-informed framework.

Agency-wide Risk Management Policy Statement

- Organization of Agreement States provided comments:
 - Policy statement would be a useful way to provide the Commission's expectations for a Risk Management Regulatory Framework
 - "We cannot state or endorse the concept that there is a general understanding [in the radioactive materials program] of the terms *risk-informed* and *defense-in-depth*."
 - "[A] risk management approach is already being performed with our current regulatory system and IMPEP [Integrated Materials Performance Evaluation Program] process" to ensure adequate protection of public health and safety
 - Policy statement should say to "review current [risks and practices] and provide recommendations for enhancement."

NUREG-2150 Hierarchy and Structured Decision-making Process

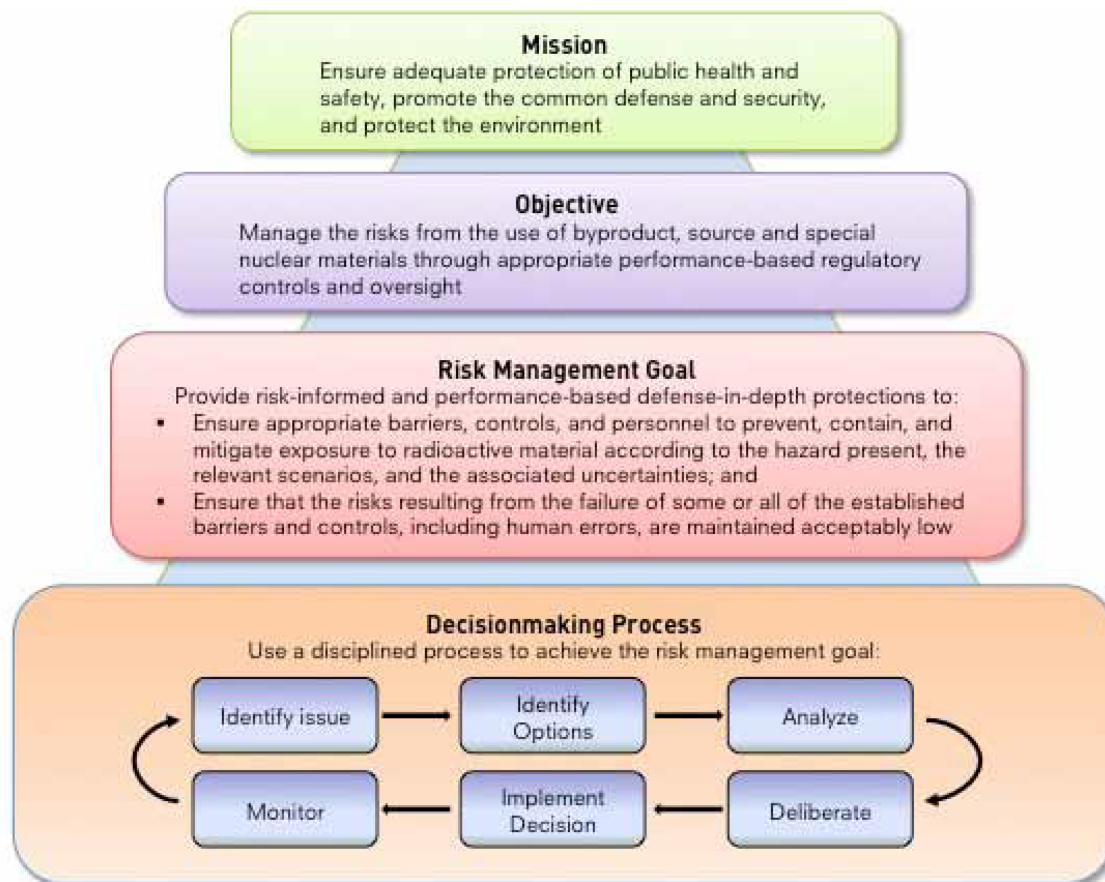
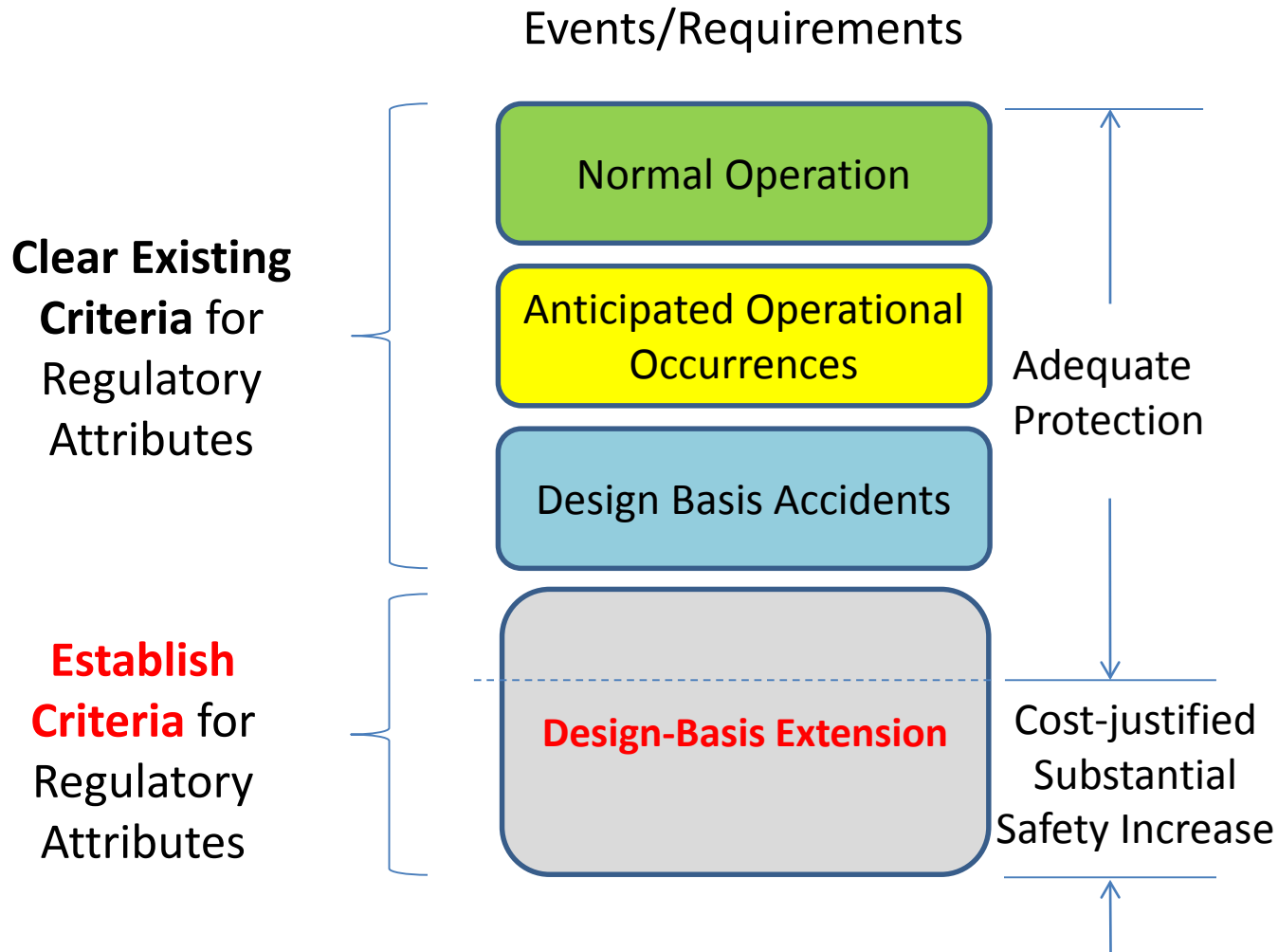


Figure ES-1 A Proposed Risk Management Regulatory Framework

Improvement Activity 1- Establish Design-Basis Extension Category





Risk Informing Security Update

Joe Rivers, NSIR
October 2015

INMM Reducing Risk Workshop

- March 2015 in Washington, DC
- Session on Cyber Security
- Perception of Risk
- Insider Mitigation

ANS/INMM Workshop on Safety/Security Risk

- April 2015 in Sun Valley, Idaho
- Engaged safety and security risk professionals in a discussion of risk applied to their discipline
- Safety/Security Interface
- Likelihood of Event

INMM Workshop on VA Tools

- September 2015 in Boston
- Discussion of VA Tools
- Discussion of VV&A
- Discussion of modelling issues
- Discussion of data
- Demonstration by Vendors
- Discussion by users
- Panel Discussion

Current Activities

- Use of Simulation Modelling
- Material Attractiveness
- Cyber Security
- NUSAM

Use of Simulation Modelling

- Industry initiative to incorporate vulnerability assessment modelling tools into regulatory process
- Industry pilot to model a number of NPPs
- Staff Training
- NRC staff assessing process to determine requirements for use in regulatory process

Questions ?



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Direction of Risk-Informed Regulatory Framework

K. Raymond Fine (FirstEnergy Nuclear Operating Co.)

Vice-Chair, Risk Management Committee

October 19, 2015

Overview

- Current State
- Successful Applications
- Challenges
- Recommended Path Forward/Conclusions

Current State

- Current NRC Policy Statements, combined with industry and NRC experience, have established a workable structure for risk-informed applications
 - RG 1.174
 - RG 1.175
 - RG 1.176
 - RG 1.177
 - RG 1.178
- RG 1.200 defines an acceptable way to assess PRA technical adequacy using the ASME/ANS PRA Standard
- PRA Peer Review process independently assesses PRA technical adequacy
 - NEI PRA Peer Review Task Force is addressing:
 - Enhancements for reviewer qualifications
 - PRA Peer Review consistency

Successful Applications

- Industry and NRC have developed successful applications under the current regulatory framework
 - Surveillance Frequency Control Program (TSTF-425)
 - Risk-Informed Completion Times (TSTF-505)
 - 10 CFR 50.69 Special Treatment Rule
 - Maintenance Rule
 - Mitigating Systems Performance Index (MSPI)
 - Integrated Containment Leak Rate Testing

Challenges

- Challenges being addressed by industry and NRC Risk-Informed Steering Committees (RISCs):
 - PRA Technical Adequacy
 - Acceptance of new methods
 - Closure of Peer Review findings
 - PRA Peer Reviewer qualifications
 - Treatment of Uncertainty
 - Training for decision-makers
 - NUREG-1855 update
 - Incorporation of FLEX in risk-informed decision-making
 - Maximize safety benefits
 - Quantitative and qualitative assessments
 - Avoid unintended consequences
 - Enhanced guidance and pilots
 - Risk Metric Aggregation
 - PWROG pilot of EPRI 3002003116 (*Risk Aggregation for Risk-Informed Decision-Making*) in 2016

Recommended Path Forward

- The PWROG agrees with the NRC staff to continue to pursue incremental improvements in current regulatory framework
 - A clear case has not been made that a new regulatory framework would be cost beneficial
 - Significant effort has been expended by both the industry and NRC
 - The current framework is well understood and has been used successfully
 - Leverage existing lessons-learned to improved the efficiency of the NRC risk-informed application review process
 - Improve consistency in licensee submittals and NRC reviews
 - Finalize 10 CFR 50.46a (Risk-Informed Emergency Core Cooling System)

Conclusions

- The PWROG endorses the staff's recommendations in the draft SECY paper:
 - Maintain the NRC's current regulatory framework
 - NTTF Recommendation 1 Improvement Activities
 - A new category of events should be not established
 - A defense-in-depth policy statement is not needed
 - Development of an over-arching agency-wide policy statement is not needed
- The PWROG will continue to work with the staff to ensure appropriate methods are available to develop, implement, and regulate risk-informed applications and risk-informed regulations



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BWROG IRIR

Future of PRA

October 19, 2015

Robert Rishel (Duke Energy)-
Director, Nuclear Engineering PRA



BWR Expertise – Proven Solutions

Topics – BWROG Integrated Risk Informed Regulation (IRIR)



- BWROG near term vision of PRA
- BWROG Planned submittals 2016-2017
- BWROG IRIR Future PRA Applications
- BWROG PRA Technical Adequacy Peer Reviews
- PRA Technical Adequacy Question
- BWROG Concerns With Option 2 or 3
- Conclusions

BWROG Near Term Vision of PRA



- PRA development is a continuing evolution
 - Incremental approach
 - Licensees continue develop new PRA hazard models
 - Dependent upon business need
- PRA model maintenance is a continuous process
 - Model upgrades as needed
 - Update PRA model consistent with plant design and operational changes
- PRA model development and maintenance costs have significantly increased

BWROG Near Term Vision of PRA



- Concerns with over conservatism
 - Fire PRA
 - Concern with similar impact of Seismic PRA results
 - Impact ability to use risk informed applications
- Development and acceptance of new methods is slow and hinders PRA hazard model development

Current plans are to continue with current approach (Option 1)

BWROG IRIR Planned Submittals 2016-2017



- Continue with Licensee Controlled Tech Spec Surveillance Frequency (Risk Informed Initiative 5b)
 - Approximately 6 BWR Licensees expect to submit 2015-2017
- Submit for Risk Informed Technical Specification Completion Time (Risk Informed Initiative 4b)
 - Approximately 8 BWR Licensees expect to submit 2015-2018
- Containment Extended ILRTs Appendix J
 - Expect most will apply as need dates approach

BWROG IRIR Future PRA Applications



- Extended Tech Spec Completion time for containment isolation valves
- Risk Informed SSC categorization
 - 10 CFR 50.69
- Use of Licensee PRA as a SPAR replacement

BWROG PRA Technical Adequacy Peer Reviews



Improvements made

- Incorporated NRC feedback on Peer Review process
- Greater emphasis on Peer Review team and team lead as being qualified
- Training of Peer Review team leaders is occurring
- Improved licensee ownership of “being ready”
 - Reschedule as needed to ensure Peer Review accomplishes goal

BWROG PRA Technical Adequacy Peer Reviews



Improvements made

- Peer Review team expectations
 - Review 40% of the Supporting Requirements before site visit
- Some licensee use of follow-up Peer Reviews has increased
 - Determine if F&Os resolved in some specific areas of weaknesses
- Industry Peer Review Task Force has provided some guidance on “what is technically acceptable” for limited number of Supporting Requirements

BWROG PRA Technical Adequacy Peer Reviews



- Fire PRA Peer Reviews provide most challenges
 - Heavy reliance on industry contractors
 - Typically 3-4 contractors (total team of 6 - 7)
 - Limited number of licensee peers available
 - Number of qualified peers is limited
 - BWROG using “working observers” to improve number of qualified peers
 - Heavy work load at each Licensee impacts availability of peers
 - Technically challenging to review external hazards PRAs (fire, seismic, high wind)

BWROG PRA Technical Adequacy Peer Reviews



Seismic PRA Peer Review Challenges

- Two BWROG Seismic PRA conducted to date
 - Significant contractor involvement
 - Very few licensee peer reviewers qualified
 - Identified resource gaps in industry Seismic PRA
- Seismic PRA Peer Review going forward are expected to similar
- Contractor knowledge of the Seismic PRA standard requirements is at times limited
- Knowledgeable resources will limit the number of Seismic PRA conducted per year

BWROG PRA Technical Adequacy Peer Reviews



Future of Peer Reviews

- Industry PRA Peer Review Task Force looking for opportunities to strengthen process
- Owners groups working to increase number of qualified utility peers
 - Working observer process
- Incorporate any additional NRC feed back on how to further improve the process
- Seismic PRA Peer Reviews will be a challenge
- List of “approved PRA methods” to be developed

PRA Technical Adequacy Question



Understanding the “Gap” between current PRA Peer Review and what would be needed for Option 2 or 3

- Limited resource issue
 - Same small group of individuals
- Use of objective criteria has same consistency issue
 - Individuals make determination of acceptability
- Concern with NRC staff members making individual judgments beyond ANS/ASME PRA Standard - R.G. 1.200 requirement
- Current process relies heavily upon “consensus” of Peer Review results

BWROG Concerns With Option 2 or 3



- Projected benefits are not realized or achievement timeline stretches out
- Concerns with costs to achieve a PRA model that NRC staff determines is adequate
- NRC and Licensee interactions on specific technical elements PRA elements

Conclusions



- Current Licensee staffing support the continued incremental increase in PRA
- Fire PRA has become a large consumer of resources limiting other work
- Continued concerns with conservatism in Fire PRA and the efforts required to remove the conservatism
- Licensee are continuously improving the technical adequacy of their PRAs models
- BWROG will continue to work with the industry (NEI/PWROG/EPRI/ANS-ASME) and NRC to make improvements in the PRA Peer Review process
- Cost / Benefit for Option 2 or 3 needs to be considered



QUESTIONS

Risk Informed Steering Committee (RISC) Work on PRA Technical Adequacy

Victoria Anderson, NEI
ACRS PRA Subcommittee Meeting
October 19, 2015



NUCLEAR ENERGY INSTITUTE

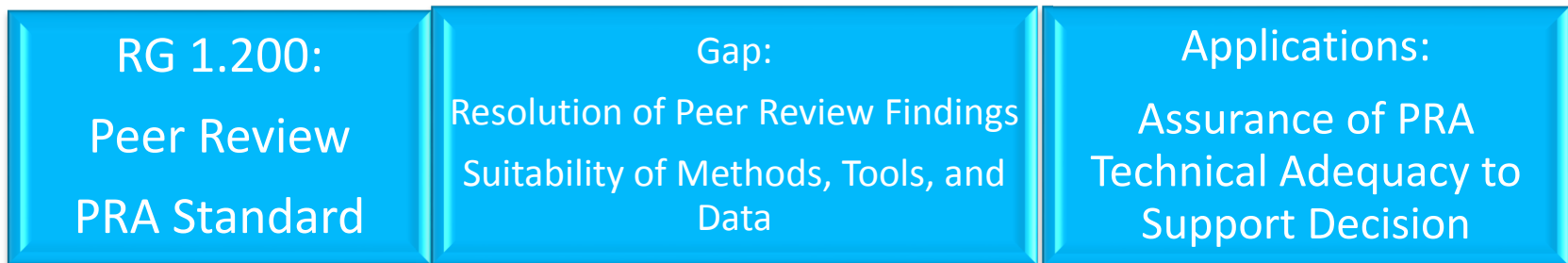
nuclear. clean air energy.

Objectives of RISC PRA Technical Adequacy Work

- RISC (industry and NRC) were formed to foster increased use of risk information in nuclear operations and regulation
 - Critical component involved removing barriers to full implementation of key risk-informed applications
 - Issues with PRA technical adequacy expectations was identified as a substantial impediment to implementation of risk-informed licensing applications
- Industry and NRC working groups formed in mid-2014 to identify key improvements to regulatory infrastructure associated with PRA technical adequacy

Objectives of RISC PRA Technical Adequacy Work

- Ultimate objective: Bridge gap between existing guidance and information needed to support risk-informed licensing applications



Objectives of PRA Technical Adequacy Working Group

- Develop a process for making new methods available for regulatory application
- Improve process for closing out peer review Facts and Observations (F&Os)
- Identify any other open issues associated with the peer review process

Conclusions of PRA Technical Adequacy Work

- Proposal to establish a methods vetting process
 - Panel of experts will evaluate new methods and determine review level necessary to support use in licensing applications
 - Review options include gap assessment by vetting panel, joint industry-NRC review, etc.
- Proposal to close out peer review F&Os
 - Utilities may use independent close out, utility-led close out, or NRC close out
 - Once an F&O is closed out via this process, it need not be carried forward into new licensing applications
- Miscellaneous updates to peer review documents
 - Documentation of reviewer qualification

Relationship to Risk Management Regulatory Framework

- RMRF papers identified opportunity to address perceived issues with peer review process
- Suggested using a new “Certified PRA” process to address
- Determined that identified issues addressed by efforts in progress and little value would be added by certified PRA process

INDUSTRY COMMENTS ON DRAFT SECY “RECOMMENDATIONS ON ISSUES RELATED TO IMPLEMENTATION OF A RISK MANAGEMENT REGULATORY FRAMEWORK”

Michael Tschiltz
Director of Risk Assessment, NEI

I. Path Forward for enhancing risk management approach

- NUREG 2150 findings and recommendations
 - Agency adopt the proposed Risk Management Regulatory Framework(RMRF) through a Commission Policy Statement
- Staff Evaluation and Recommendation in draft SECY
 - Existing policy statements on safety goals and use of PRA along with guidance and experience have established most key aspects of RMRF for nuclear power reactor safety program area.
 - Maintain current framework and continue to make improvements on incremental basis. Industry agrees with this recommendation.
 - Utilize Risk Informed Steering Committee (RISC) to expand the use of risk-informed decision making.

I. Path Forward for enhancing risk management approach

- Consideration of Alternatives
 - Plant Specific regulatory framework
 - The industry does not find this to be a viable option.
 - Significant resource concerns
 - redefine licensing basis using PRA
 - potential for need to spend resources on the PRA scope and technical adequacy
 - Regulatory Uncertainty
 - vagueness of PRA scope and technical adequacy requirements
 - cumulative effects - for some plants with limited projected lifetimes, the cost to upgrade the PRA may be so expensive as to result in early plant closures
 - **Staff agrees with public commenters that this approach should not be implemented for currently operating reactors.**

II. Re-evaluation of Improvement Activity 1 from Fukushima Near-Term Task Force Recommendation 1

- Improvement Activity 1: Establish Design-Basis Extension Category

An improved structure and set of criteria for identifying and categorizing hazards and events not previously recognized as significant that may require regulatory action (e.g., extended station blackout).

- Staff indicated, for the recommended option, the internal rulemaking guidance would make it unnecessary to apply resources to establish the formal “design-basis extension” category.
 - Rulemaking guidance provides consistency in specifying necessary regulatory “attributes” (performance goals, treatment requirements, documentation requirements, change processes, and reporting requirements) whenever new regulations (both design-basis and beyond design-basis) are developed.
- Staff recommends that a new category of events should not be established at this time. This is consistent with the industry’s comments.

II. Re-evaluation of Improvement Activity 2 from Fukushima Near-Term Task Force Recommendation 1

Improvement Activity 2: Establish Commission Expectations for Defense-in-Depth

Establish Commission expectations for defense-in-depth through the development of a policy statement that includes: the definition, objectives, and principles of defense-in-depth; associated implementation guidance containing decision criteria for ensuring adequacy of defense-in-depth; and conforming guidance to ensure integration of defense-in-depth with risk.

- Benefits from the development of defense-in-depth policy statement would not justify cost .
 - D-in-D philosophy is already well-established in regulations and existing policy statements
- **Staff recommends that a defense-in-depth policy statement is not needed. This is consistent with the industry's comments.**
- Staff intends to complete a previous effort to modify the guidance on defense-in-depth in RG 1.174.
 - The industry supports the revision of guidance documents (e.g., RG 1.174) to ensure consistent application of defense-in-depth in regulatory decisions.

III. Consideration of an overarching policy statement on using the Risk Management Approach

- **Industry Comment:**
Accomplishing this across the entire agency in a coordinated, consistent manner would appear to be an extremely challenging task for the NRC that will require a long period of time, inter-agency coordination, and perhaps a dilution of methodological approaches to satisfy all of the agency's desires.
- **NRC staff recommends maintaining current framework and not to develop an agency-wide policy statement. Industry agrees with the staff recommendation.**

Conclusions

- The industry agrees with the staff's recommendations in the draft SECY paper.
- Will continue to work with the staff to ensure appropriate methods and guidance are available to develop, and implement risk-informed applications.