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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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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

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THURSDAY

AUGUST 24, 2017

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

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

COMMITTEE MEMBERS:

JOHN W. STETKAR, Chairman

RONALD G. BALLINGER, Member

DENNIS C. BLEY, Member

CHARLES H. BROWN, JR., Member

WALTER L. KIRCHNER, Member

JOSE MARCH-LEUBA, Member

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DANA A. POWERS, Member

JOY REMPE, Member

PETER RICCARDELLA, Member*

GORDON R. SKILLMAN, Member

MATTHEW W. SUNSERI, Member

DESIGNATED FEDERAL OFFICIAL:

QUYNH NGUYEN

ALSO PRESENT:

MICHAEL CHEOK, RES

MARY DROUIN, RES

JOSEPH GIITTER, NRR

DONNIE HARRISON, NMSS

GREG KRIEGER, NEI

JOHN NAKOSKI, RES

HOUMAN RASOULI, RES

MARK THAGGARD, RES

ANDREA D. VEIL, Executive Director, ACRS

*Present via telephone

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CONTENTS

Opening Remarks.....4

Introductory Remarks.....7

RG 1.174, Rev. 3.....10

Item III, continued.....71

Public Comment.....103

Subcommittee Discussion.....103

Adjourn.....105

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

(8:32 a.m.)

CHAIRMAN STETKAR: The meeting will come to order.

This is a continuation of the Reliability and PRA Subcommittee of the Advisory Committee on Reactor Safeguards.

I am John Stetkar, Chairman of the subcommittee meeting.

ACRS members in attendance are Ron Ballinger, Matt Sunseri, Dick Skillman, Dana Powers, Dennis Bley, Jose March-Leuba, Walt Kirchner, and Joy Rempe. I believe that we also have Pete Riccardella on the phone line, and I'm not sure whether we'll be joined by Mike Corradini. They are joining us by phone.

Quynh Nguyen of the ACRS staff is the designated federal official for this meeting.

The subcommittee will hear the staff's presentation on the planned update to Regulatory Guide 1.174. The subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the full committee.

The ACRS was established by state and is

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1 governed by the Federal Advisory Committee Act.
2 This means that the committee can only speak through
3 its published letter reports. We hold meetings to
4 gather information to support our deliberations.
5 Interested parties who wish to provide comments can
6 contact our offices requesting time after the
7 meeting announcement is published in the Federal
8 Register.

9 That said, we also set aside some time
10 for spur-of-the-moment comments from members of the
11 public attending or listening to our meetings.
12 Written comments are also welcome.

13 The ACRS section of the U.S. NRC public
14 website provides our charter, bylaws, letter
15 reports, and full transcripts of all full committee
16 and subcommittee meetings, including slides
17 presented at the meetings. The rules for
18 participation in today's meeting were previously
19 announced in the Federal Register. We have received
20 no written comments or requests for time to make
21 oral statements from members of the public regarding
22 today's meeting.

23 We have a bridge line established for
24 interested members of the public to listen in. To
25 preclude interruption of the meeting, the phone

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1 bridge line will be replaced -- I was trying to do
2 two things at once here, and it just doesn't work.
3 To preclude interruption of the meeting, the phone
4 bridge line will be placed in a listen-in mode
5 during the presentations and the committee
6 discussions. We will unmute the bridge line at the
7 end of the meeting to afford the public an
8 opportunity to make a statement or to provide
9 comments.

10 At this time, I request that the meeting
11 attendees and participants silence your cell phones
12 and any other electronic devices that may make
13 little sounds and disturb us.

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

23 Make sure that the green light on the
24 microphone is on when you're speaking up front
25 there, and please turn it off when you're not

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1 speaking because the extraneous noise makes it
2 difficult for both our transcript and also folks on
3 the bridge line.

4 We will now call -- proceed with the
5 meeting, and I call upon Mike Cheok. Mike, do you
6 want to make some introductory statements?

7 MR. CHEOK: Well, good morning, and
8 thank you for the opportunity to come brief you all
9 on the staff progress in revising Reg Guide 1.174.

10 I am Mike Cheok, and I'm the director
11 for the Division of Risk Analysis in the Office of
12 Research.

13 Our presenters today will be Mary Drouin
14 from Research and Donnie Harrison from NMSS. Also,
15 Joe Giitter, my counterpart from NRR, is sitting
16 right beside me, and Marty Stutzke from NRO is
17 somewhere in the audience.

18 The presence of all the staff from all
19 of these offices reflects that the task to revise
20 Reg Guide 1.174 is indeed an interoffice effort.

21 I will spend a couple of minutes to
22 provide some context for our discussions today.
23 First, the scope for the revision of -- for Revision
24 3 to Reg Guide 1.174 is focused on revising the
25 defense-in-depth guidance, so that it is implemented

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1 consistently. This is in accordance to Commission
2 guidance which initiated this effort to begin with.

3 We have been sensitive to any expansion
4 to the scope of the reg guide. However, based on
5 public and ACRS comments, we have made some
6 clarifications to the guidance on items not related
7 to defense-in-depth. For example, we revised the
8 acceptance guidance figures, and we added language
9 on risk aggregation and uncertainties and dealing
10 with uncertainties. I will note that these
11 clarifications and additions were on issues that do
12 not involve changes to the NRC policy or positions.

13 Second, in 2016, we had a deferring
14 professional opinion, or DPO, on the use of the
15 terms that describe PRA acceptability. The DPO
16 documented the inconsistent use of terms such as PRA
17 technical adequacy, PRA quality, and PRA
18 applicability. This DPO was resolved in October
19 2016, and consistent with the resolution, will
20 revise Reg Guide 1.174 to use the term PRA
21 acceptability rather than a term such as PRA quality
22 and technical adequately.

23 We are developing a regulatory
24 information summary, or RIS, to communicate to NRC
25 staff and to the public the meaning and intent of

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1 the terminology changes. We plan to make this RIS
2 available for public comment in the near future.

3 Third, as I mentioned, we had an
4 interoffice working group formed for this effort.
5 In 2016 alone, the working group held multiple
6 public interactions, including three public
7 meetings, two briefings of this subcommittee, and
8 two public meetings of the risk-informed steering
9 committee.

10 We then published Revision 3, the draft
11 of Revision 3, for Reg Guide 1.174 for public
12 comment earlier this year. We have incorporated the
13 majority of stakeholder comments into the revised
14 reg guide. However, not all comments were
15 implemented. In some cases, we determined that the
16 suggested change was outside the intended scope of
17 the reg guide.

18 In a few cases, we thought that the
19 comments were not inconsistent with the agency's
20 position. In some of the cases, although we
21 supported the intent of the comment, we did not
22 implement the comment into the reg guide. For
23 example, there was a suggestion to revise Branch
24 Technical Position 8-8, so that it is consistent
25 with Reg Guide 1.174.

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1 NRC agrees with the comment that the BTP
2 8-8 needs clarity, and we are in the process of
3 revising the BTP. However, we do not believe that
4 the reg guide itself needs to contain the
5 prescriptive language recommended by the commenter.

6 Mary and Donnie will discuss the
7 resolution of comments in more detail during the
8 presentation, but first I will turn the mic over to
9 Joe Giitter.

10 MR. GIITTER: Thank you, Mike. As one
11 of the customers of the revised reg guide, I would
12 like to first express my appreciation for the work
13 that has been done by the staff, as well as the
14 thoughtful comments that we received from industry.
15 In NRR, we are on the cusp of meaningful change in
16 how we use risk insights on a day-to-day basis. As
17 you will hear from Mary and Donnie, this reg guide
18 has a number of improvements that will help the
19 guide -- that will help guide the industry and the
20 staff as they attempt to apply risk insights on a
21 regular basis.

22 For example, the draft guide places
23 greater emphasis on how risk insights can be used to
24 better understand how the defense-in-depth
25 philosophy may be considered. Defense-in-depth is

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1 one of the issues at the forefront of the decision
2 to allow the Palo Verde plant to operate for an
3 extended period of time with one emergency diesel
4 generator unavailable.

5 The NRC Branch Technical Position 8-8
6 states that an alternate AC source can be brought in
7 as a defense-in-depth measure to extend the allowed
8 outage time up to 14 days with some compensatory
9 measures.

10 Palo Verde pre-states three flux diesels
11 that were capable of handling the loads associated
12 with the dominant accident sequences, such as
13 station blackout, purely as a defense-in-depth
14 measure. So while these diesels may not be
15 effective for design base of a loss of coolant
16 accident coincident with the loss of offsite power,
17 they could provide protection against accidents that
18 were much more likely to occur. The balancing of
19 risk insights with the defense-in-depth philosophy
20 facilitated this decision-making process.

21 So, with that, I'm going to ask Mary and
22 Donnie to go ahead and start with their
23 presentation.

24 MEMBER SKILLMAN: Joe, before we do
25 that, may I ask you a question, please?

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1 MR. GIITTER: Yes.

2 MEMBER SKILLMAN: I'm Dick Skillman.

3 MR. GIITTER: Yes.

4 MEMBER SKILLMAN: You said NRR is on the
5 cusp. That suggests to me a change --

6 MR. GIITTER: Yes.

7 MEMBER SKILLMAN: -- that something is
8 laying just ahead where there is going to be either
9 a change in cadence, a change in thinking, a change
10 in rulemaking, a change in enforcement. What is it
11 that you referred to when you say, "We're on the
12 cusp of change of change"?

13 MR. GIITTER: I would like -- and maybe
14 I'm optimistic on that -- but I would like to say
15 that we're on the cusp of change in terms of our
16 thinking and risk-informed decision-making. And,
17 you know, maybe at some future point in time we can
18 come and talk to the subcommittee about some of the
19 things that we're working on.

20 But we're starting to -- to just give
21 you an example, in our licensing reviews that are
22 risk-informed, or have any risk whatsoever, we are --
23 -- instead of in the past we would have individual
24 technical members of the different divisions work on
25 their input, send it over to the Division of

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1 Operating Reactors, and then the project manager
2 would have to integrate that. We're not doing that
3 anymore.

4 We're working on -- in team
5 environments, so that the PRA practitioners are
6 working alongside with the electrical engineers or
7 system engineers, so that when the safety evaluation
8 report is complete it's one product that goes to --
9 and it -- you have the benefit of learning on both
10 sides. And we believe that that is essential for
11 the risk-informed thinking to migrate from -- from
12 one particular organization across the entire
13 organization.

14 MEMBER SKILLMAN: Thank you, Joe. Thank
15 you.

16 CHAIRMAN STETKAR: Anything more for
17 Mike or Joe? If not, Mary, it's yours.

18 MS. DROUIN: Okay. As you can see, I'm
19 not Anders Gilbertson. He is the chair of the
20 working group and could not be here today. He was
21 off looking at the solar eclipse where I'm sure a
22 lot of us would have loved to have seen.

23 But before we get started, I certainly
24 would like to acknowledge, you know, the members of
25 the working group because they're all here. You

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1 know, there's myself and Donnie, and we've got
2 Matty, Don, Marty, and CJ, and the whole working
3 group, as you know, it has been a very concerted
4 effort, very congenial group, and everybody has
5 worked hard, and so I wanted to make sure they got
6 acknowledgement for it.

7 Okay. So for today, we are going to not
8 spend a whole lot of time, but just, you know, the
9 background and the process that we used in modifying
10 the reg guide, what our recent accomplishments have
11 been, the actual modifications we have made to the
12 reg guide, and go through two sets of public
13 comments, because we had a set of public comments
14 back in 2012, and then the recent set of comments
15 that we got several months ago, and then what our
16 path forward is from all of that.

17 So, on Slide 3, you know, we had an SRM
18 that came out in 2011 that did ask us to revise the
19 defense-in-depth part of the reg guide. And if you
20 remember, if you go back to Rev. 2, you know, it
21 tells you that you want to maintain the principle of
22 defense-in-depth, and it just lists seven bullets,
23 and that's all there is.

24 And so not that that has been a major
25 impediment to Reg Guide 1.174, but it did cause some

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1 confusion and different interpretations of what we
2 meant by each one of these bullets. So we did have
3 a draft that was published in 2012, but at that same
4 time we had -- NTTF occurred, and we had RMRF, and
5 both of those two efforts were dealing also with
6 defense-in-depth.

7 CHAIRMAN STETKAR: Mary, just for the
8 benefit of -- because it's a public transcript,
9 could you define those acronyms?

10 MS. DROUIN: Oh, sorry. Near-Term Task
11 Force for NTTF. Sometimes you get so used to
12 acronyms you forget what they stand for.

13 CHAIRMAN STETKAR: That's right. And
14 RMTF?

15 MS. DROUIN: And RMTF is Risk Management
16 Task Force.

17 CHAIRMAN STETKAR: Thank you.

18 MS. DROUIN: So those were -- NTTF had a
19 bunch of recommendations, and they dealt with -- not
20 all of them, but it did deal with defense-in-depth;
21 and RMRF, that was one of the biggest
22 recommendations was what to do with defense-in-
23 depth.

24 So we felt that it was important to wait
25 and hear what the Commission was going to tell us to

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1 do in response to those efforts on defense-in-depth
2 and then that would help us on Reg Guide 1.174. We
3 thought if we moved forward we would be putting the
4 cart before the horse. So, you know, it was
5 delayed, and so at that point in time we did not
6 respond to the public comments that we received in
7 2012.

8 Then we had the SECY that went up, and
9 we got the SRM back in 2016, which told us to very
10 expeditiously move forward with Reg Guide 1.174, and
11 they were very explicit that we were just to keep
12 our focus and the scope of this effort on defense-
13 in-depth, which is, you know, what we attempted to
14 do.

15 So, and moving forward, now I'm on
16 Slide 4, you know, an interoffice working group was
17 formed from RES, NRR, NRO, and OGC. Clark Sheldon
18 was our person on the working group from OGC, so I
19 apologize I forgot to give him recognition.

20 And then we had people from NMSS and
21 NSIR who came to observe, because even though this
22 was really reactor focused, you know, if -- you
23 know, we wanted to make sure that what we're doing,
24 particularly in defense-in-depth, you know, wasn't
25 going to create a ripple -- negative ripple effect

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1 across the agency.

2 We were overseen by an interoffice
3 division level steering committee that was Mike
4 Cheok and Joe Giitter and John Moninger, and we met
5 with them quite frequently and got a lot of very
6 good guidance from them.

7 We also had very frequent public
8 meetings. We tried to do this effort in a very
9 open, transparent manner, so we were very frequently
10 having public meetings. We have had several public
11 -- we have had several meetings with the ACRS, and
12 we have also -- there is the risk-informed steering
13 committee, which is the committee comprised of
14 deputy office directors, and we have briefed them
15 quite frequently. And we have had, I don't know,
16 one or two Commission TA briefings.

17 So on April 7th of this year, we issued
18 the reg guide for public review and comment. We
19 sent it out for a 45-day public review and comment,
20 and I believe we extended it or we accepted people
21 after that date. We briefed the Commission on May
22 11th on this, and then in July we completed our
23 revision based on the public review and comment
24 period, which -- and that closed, I believe, at the
25 end of June.

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1 So, you know, we very quickly, you know,
2 got -- started going through very diligently all the
3 public comments. And we also addressed the ones
4 from 2012.

5 Okay. So what were the modifications we
6 did? Well, one of the things that is -- we went
7 through, and when we had issued 1285 back in 2012,
8 we had reordered those seven considerations. You
9 know, they were called factors, but we're now
10 calling them considerations because "factors" just
11 gave the wrong -- people were misinterpreting the
12 word "factor." So we now call them
13 "considerations."

14 But, anyway, we had reorganized them and
15 put them in this kind of what we thought was a
16 hierarchical structure. Well, that was one of the
17 biggest public comments that we got. They didn't
18 like the hierarchical structure that we did.

19 So we just went back to the seven
20 things, and we provided guidance. Well, we did two
21 things. We went through and tried to describe what
22 each one of those factors meant, and then we tried
23 to write guidance that if you followed this you had
24 a very good chance of making sure that you had met
25 that principle.

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1 One of the things we did is we removed
2 the defense-in-depth examples. We had created
3 examples in the original DG, but that was another
4 significant comment we got from the public is they
5 hated the examples. And they wanted more of a
6 checklist, and they wanted more of an in integrated
7 example. What I mean by that is we had examples for
8 each factor individually, and we had very distinct
9 specific language in there that said these are
10 examples, you know, you cannot -- you know, if you
11 follow this precisely, it doesn't mean, you know, it
12 will be acceptable. These are examples to
13 illustrate only.

14 But they really wanted more of an
15 example that kind of stood back and went across all
16 seven factors, and we understood that and NEI did
17 offer to come up with examples for us to consider in
18 the DG.

19 The other thing was on risk aggregation.
20 At this same timeframe, we had published NUREG-1855,
21 and we got very good feedback on 1855 from the
22 public. They particularly liked our discussion on
23 risk aggregation. So they were asking for a closer
24 tie in Reg Guide 1.174 that, if they used the
25 guidance in 1855, that was an acceptable way to deal

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1 with uncertainties. So we did that.

2 The other thing was on the guideline
3 boundaries, if you go back to the very first
4 publication of Reg Guide 1.174 and looked at the
5 figure, believe it or not, it was the graphics
6 capability that prevented us from showing some of
7 those lines more as a transition, whereas the figure
8 showed it as a bright line. And that really was a
9 graphic problem.

10 Well, we've gone way past that, so we
11 fixed that, and I believe we did add some language
12 to make that even clearer. Then, also, one of the
13 public -- I believe this came from the public
14 comment -- is that they liked some of the language
15 on particularly defense-in-depth that showed up in
16 the standard review plan. So we went back and
17 looked at the standard review plan, and where we
18 thought that was appropriate, we moved it over to
19 the reg guide.

20 These last two, you know, we have
21 briefed you on these before, so I won't go into any
22 kind of details. This came out of some FSRMs. I
23 don't know if, Donnie, you want to add anything to
24 these, on developing the language to transition from
25 the large release frequency and conditional

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1 containment to the large early release frequency and
2 the language on containment performance
3 expectations.

4 MR. HARRISON: Yeah. I'll just add
5 that, again, these were -- just like the other scope
6 issues, these were driven by SRMs, and so we felt
7 like this would be the time to implement and capture
8 those SRM requirements. So you see in the slides
9 there the two -- the three references to SRMs.
10 That's what drove some revisions related
11 specifically for new reactors on containment
12 performance. That's it.

13 MS. DROUIN: Okay. Then the last one on
14 the modifications, and Mike talked about this a
15 little bit, was the use of the terms PRA
16 acceptability, PRA technical adequacy, and quality.
17 We were -- we have been aware that these terms are
18 used interchangeably. We were in the midst of
19 trying to fix this in a more slow manner. What I
20 mean, as documents, you know, would come up for
21 revision, we would fix it.

22 But now, because of the DPO, we're going
23 to be much more proactive on fixing this language.
24 And it is just -- it doesn't change anything in
25 terms of what we mean by policy, anything we mean

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1 technically. It is just a tech edit change, and I
2 really want to communicate that. And so the term,
3 you know, we will be using is PRA acceptability.

4 CHAIRMAN STETKAR: And I don't want to
5 dwell on this. You know, we had a separate meeting
6 last September, I believe --

7 MS. DROUIN: Right.

8 CHAIRMAN STETKAR: -- on this particular
9 issue. I personally think you did a really good job
10 of weaving that in here. I think it's -- I thought
11 it was clear before, but I think it's really clear
12 now. I hope you do continue that because in
13 September I think we did highlight a couple of other
14 guidance documents that I know I had stumbled across
15 that did have ambiguity in terms of expectation.

16 So as you do future updates to the reg
17 guides, just --

18 MS. DROUIN: Right. We --

19 CHAIRMAN STETKAR: -- don't forget this.
20 It's not just a 1.174 issue.

21 MS. DROUIN: No, no, no. We are --

22 MR. HARRISON: It's --

23 MS. DROUIN: -- already starting to
24 start the wheels on updating Reg Guide 1.200. So
25 we'll be making, you know, conforming changes in

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1 that document to be consistent here.

2 MEMBER REMPE: So I had a question,
3 though, just a curiosity question, because I can
4 remember the last meeting we had on this topic and
5 how I was -- thought I heard, I think actually from
6 you, Mary, that industry had supported the use of
7 the word PRA acceptability. And then I saw the
8 comments that --

9 MS. DROUIN: No.

10 MEMBER REMPE: -- seemed like that they
11 -- well, I thought you had said the standards folks
12 liked the approach --

13 MS. DROUIN: No.

14 MEMBER REMPE: -- that you took.

15 MS. DROUIN: No. No, no, no. I never
16 would have said that.

17 MEMBER REMPE: Okay.

18 MS. DROUIN: The industry has always
19 liked the term PRA technical adequacy. That's the
20 term that they would prefer.

21 MEMBER REMPE: Okay. So I guess I
22 misunderstood, but then I saw in your last slide
23 that there was a comment about -- later today about
24 reversing. And so it sounded to me like reversing
25 the terminology changes the public -- oh, so you're

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1 just trying to say that they wanted you to reverse
2 it back. But I -- yeah, I thought -- I actually
3 checked even the transcript, and I thought I had
4 heard differently. But anyway, the bottom line is
5 is that --

6 MS. DROUIN: If I said it, then I did
7 not mean that because I have always known the public
8 does not like -- they have always, always, always
9 loved the term technical adequacy.

10 MEMBER REMPE: Okay. So that clarifies
11 it in my mind. Thank you. Okay.

12 MS. DROUIN: You're welcome. And we are
13 -- we do have a draft RIS that is getting ready to
14 go into concurrence that explains all of this, that
15 Mike, you know, talked about that will go out for
16 public comment.

17 CHAIRMAN STETKAR: I think, you know,
18 you get hung up on these -- this terminology. I
19 think that the reg guide, as it's written, does a
20 really good job. It highlights the four elements
21 that you're looking for -- the scope, level of
22 detail, now I've forgotten the other -- conformance
23 to the standard, and plant representation. Thank
24 you. And it's clear. It says that's, you know --
25 and you could call it Joe. Sorry, Joe. You could

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1 call it Ralph.

2 MS. DROUIN: I think what happened is
3 that when we cleaned up -- and I use that term
4 loosely -- the first version of 1285, and we have to
5 take, you know, responsibility -- we did not do a
6 thorough checking of the terms. So we cleaned up
7 this one little part, and then other parts we had,
8 you know, used the wrong term. So we were using two
9 different terms to say the same thing, and -- but,
10 anyway, it's behind us. We're moving forward. We
11 already -- also, when you look at 1855, we were able
12 to catch that right before it went to the printer,
13 and --

14 (Laughter.)

15 MS. DROUIN: -- not before --

16 (Laughter.)

17 MS. DROUIN: So, yeah, we cleaned it up
18 in 1855, and we have now cleaned it up in 1.174.
19 And as, you know, we'll start cleaning up in the
20 other documents.

21 Okay. Donnie is going to walk us
22 through the public comments.

23 MR. HARRISON: Didn't mean to cut you
24 off early.

25 MS. DROUIN: No, that's okay.

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1 MR. HARRISON: Okay. I'm trying to shut
2 her down. So --

3 CHAIRMAN STETKAR: We've been trying to
4 do that for longer than I've been on the committee.
5 It hasn't worked so --

6 (Laughter.)

7 MS. DROUIN: Be nice. Be nice, because
8 Dana will beat you up if you're not nice to me.

9 (Laughter.)

10 MR. HARRISON: All right. So I've got a
11 few slides here that just summarize kind of the
12 scope of the public comments and the areas where we
13 implemented changes and the areas where we didn't
14 implement changes. Some of this is going to be
15 repetitive.

16 We received a number from the 2017
17 public period -- review period. Numerous editorial
18 changes, so, as appropriate, we implemented those.
19 There were a number of places where there was
20 language that we got public comments about needing
21 to clarify certain aspects of what we did. And this
22 is just a list of kind of five bullets of examples.
23 There were small impacts. The question was raised,
24 if you have small impacts and individual
25 considerations, what does that mean? Can you have,

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1 if you will, almost like a synergistic effect that
2 makes the defense-in-depth weaken sufficiently to be
3 a problem? So that would be a significant impact,
4 even though individual factors or considerations
5 were only affected slightly. So we clarified that
6 guidance.

7 There was the issue of -- there was a
8 mentioning of compensatory measures, and there was a
9 couple sentences that talked about the need to model
10 those, and it depends on the context. And so we
11 clarified the couple of paragraphs that talked about
12 compensatory measures and under what conditions you
13 need to model those versus just having them as extra
14 things.

15 Much like the Palo Verde where they had
16 the FLEX equipment, does it need to be modeled, yes
17 or no? And the question is, is it really
18 significant to the decision? If it's telling you
19 that it passes or fails based upon this thing, you'd
20 want a little more precision in knowing, well, what
21 is the credit you get from this, as opposed to just,
22 hey, you know, we're going to install something; and
23 trust us, it makes things better. So we clarified
24 that language to make it --

25 MEMBER SKILLMAN: Donnie?

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1 MR. HARRISON: -- a bit more explicit.
2 Yes.

3 MEMBER SKILLMAN: Just on that specific
4 issue, let me ask this question. I put myself in
5 the position of the decision-maker at Palo Verde,
6 and I realize I'm out of -- either I'm out of tech
7 specs or I'm going to be. I know I've got a
8 timeclock, and I know the clock is going to shut me
9 down.

10 So I come to the region and I ask for
11 enforcement discretion. My experience is that
12 interaction is accompanied by two major issues. The
13 corporate risk people have already done a fairly
14 thorough sort of what that decision might mean in
15 terms of risk. And at least my experience in Region
16 I was we would have engaged the Region I risk
17 specialist for our plant, and that individual would
18 have been fully up to speed, so that the regional
19 administrator was not surprised by the request. At
20 least that is the world that I lived in for a long
21 time.

22 What is changing here with the change in
23 -- the proposed change in 1.174? I can imagine a
24 requirement to include the FLEX equipment because to
25 not do that would not give a clear reflection of

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1 what the incremental risk would be for the use of
2 that equipment. So could you walk us through --

3 MR. HARRISON: In that context, within a
4 NOED structure, this guidance isn't changing that
5 interaction. This is getting you more into if
6 someone comes in with a license amendment and says,
7 "I want to extend this outage or extend this
8 period," even if it is a diesel and you're going
9 from a three-day completion time to, say, a 14-day
10 completion time, if -- oftentimes you will hear a
11 licensee say, "We will reduce the initiating
12 frequency by not doing maintenance in the
13 switchyard. We'll establish a fire watch."

14 And those are good things to do. The
15 question becomes, if I'm -- the risk is high enough
16 such that I'm making a decision that's right on the
17 line of acceptable or not acceptable, or very close,
18 I need more precision to understand what, really,
19 benefit am I getting from that equipment that you're
20 crediting. So it's only in those kind of situations
21 where this becomes important.

22 MEMBER SKILLMAN: So it is or is not in
23 the NOED?

24 MR. HARRISON: It's not in the NOED
25 structure.

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1 MEMBER SKILLMAN: Not in NOED.

2 MR. HARRISON: And I'll look at Joe to
3 make sure I don't overstep that.

4 MR. GIITTER: Yeah. I think the point
5 here is that they submitted two emergency license
6 amendments. And I'm not going to get into all of
7 the details, but you have somebody here; if you
8 want, we can talk about it. But I think what Donnie
9 is saying is that the guidance we have now tells you
10 -- because in the case of Palo Verde, they weren't
11 crediting the FLEX diesels numerically in their PRA
12 model. They were relying on those as defense-in-
13 depth measures.

14 So I think what Donnie is saying is, in
15 this case, we know because those diesels were
16 capable of providing the emergency power for the
17 dominant accident sequences that you were getting
18 substantial safety benefit from them.

19 But I think the point is, if you have
20 maybe another example where you're using
21 compensatory measures, how do those actually reduce
22 the risk? And that's what -- I believe that's what
23 Donnie is saying.

24 MR. HARRISON: Yeah. And, again, it's
25 all -- if you're orders of magnitude from the

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1 acceptance guideline, it becomes less of an issue.
2 It's when you're trying to make a decision and it's
3 close to a decision-making line. And so there is
4 fuzziness in that line, and so the question becomes,
5 how much confidence do I have that this will
6 actually move me away from that fuzzy line, right?
7 So -- and, again, it's in the license application,
8 license amendment process.

9 MEMBER SKILLMAN: Okay. Thank you.
10 That was helpful. Thank you.

11 MR. HARRISON: One of the other comments
12 that we implemented changes on had to do with
13 submission of the peer review facts and
14 observations. So the industry, when analysis of PRA
15 is completed, gets a peer review by the industry.
16 They end up getting findings; facts and observations
17 is what they call those.

18 Licensees then can go through a process
19 of addressing those findings and want to close them
20 out. In the past, there has been a process where
21 you have to basically have a focused scope peer
22 review to close out those findings, to actually get
23 them off the books. The industry has worked on an
24 initiative to provide another means of being able to
25 close out findings that doesn't invoke a full scope

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1 or a focused scope peer review.

2 So we got a comment that asked us to put
3 that in. That's still in kind of a piloting
4 process. So we added some language in a footnote
5 that recognizes this process is going on.

6 MS. DROUIN: We are past the pilots, and
7 we have -- I think we have been in here and briefed
8 you all on this. And so the pilots and a letter
9 approving the process was issued back in April or
10 May timeframe. We will be ultimately, as we update
11 Reg Guide 1.200, we will be endorsing this -- this
12 process is an appendix to the three peer review
13 guidance documents that NEI has issued. And under
14 this process, if they close an F&O, they do not have
15 to submit that F&O as part of their submittal.

16 So that was kind of the key to this, and
17 we did some pilots. And we're past the pilots;
18 we've approved the process. So I don't know if you
19 want to add anything, Joe, to that.

20 MR. GIITTER: No. I think what you said
21 is accurate. In addition, to ensure that we have
22 confidence in this process, we are continuing to do
23 some observations. We have had a recent observation
24 a couple of weeks ago, and we have somebody onsite
25 right now at Grand Gulf doing an observation.

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1 In addition, as these are used as part
2 of licensing actions, we plan to do audits on a
3 sampling basis to make sure that the process is
4 being carried out appropriately.

5 MR. HARRISON: And I will just add, the
6 footnote that we added referenced the letter that
7 accepted this process, so -- for use.

8 The fourth bullet there, sub-bullet, is
9 the risk insights can be used to help inform
10 defense-in-depth. We got a number of comments that
11 said, "Can't you get insights from the risk analysis
12 to help you determine if you actually are consistent
13 with addressing common cause failure or human
14 reliability within the defense-in-depth
15 considerations?" And so we have added language that
16 brings that concept in.

17 Really, the human errors -- again,
18 defenses against -- we had some clarifications that
19 were requested to address defenses against human
20 errors. We have incorporated some language to
21 address that as well.

22 Things we didn't change -- and at this
23 point, I want to say, when we got to an issue where
24 we didn't change something, sometimes it was
25 because, like the first one here, which is related

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1 to the PRA acceptability language, we had a DPO. It
2 got resolved. We implemented the resolution.
3 That's fairly clear-cut.

4 So when we got a comment saying, "We
5 want you to go back to PRA technical adequacy," the
6 answer is going to be, "No, we're not doing that.
7 We're going to move forward, not backwards."

8 There are other ones here where we got a
9 comment, would say, you know, we propose this. And
10 even though we may even agree with the comment, it's
11 not as simple as just change one sentence. So it
12 was going to take more work. It may affect other
13 reg guides. We need to step back and think about
14 that. So we created a parking lot, and we've
15 started collecting these things in the parking lot.

16 So the next time we revise Reg Guide
17 1.174, and as we go through the other reg guides,
18 that becomes a bigger issue, to make sure we
19 consistently address all of these issues.

20 MS. DROUIN: There were, however, some
21 where we just didn't agree with them, you know, and
22 that second one kind of is one of the ones where we
23 didn't agree. And if you remember, of the seven
24 bullets, the seven considerations, you know, the
25 last one is that you maintain the intent of the

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1 plant design criteria.

2 And the public comment was essentially
3 they wanted us to completely remove that from the
4 reg guide. They felt that it was already addressed
5 under one of the principles of your risk-informed
6 decision-making process, and we disagreed with that
7 one.

8 MEMBER BLEY: Did that just come from
9 one place? I don't remember.

10 MR. HARRISON: That may have had a
11 couple comments. In the public meetings we had, it
12 came from more than one source.

13 MEMBER BLEY: Okay.

14 MR. HARRISON: So it is a topic that
15 came up, and then it was a discussion topic as well
16 within the comments.

17 MEMBER REMPE: So before you leave this
18 slide, even in the DPO case, I can quote a statement
19 from the panel report that says, "There is a clear
20 preference in the industry to discontinue the use of
21 the term PRA quality in this context." And so when
22 I read the way the comments were dispositioned, they
23 said, "Well, the decision was made."

24 And the industry brought this up again
25 and said, "We'd like to go back to quality." The

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1 disposition was, "Well, the decision was made that,
2 based on this report, how the DPO case was settled,
3 we're not going to use quality." So did industry
4 change their mind, was what I wanted to ask earlier,
5 or -- and that's -- when I saw that reversing, it
6 sounded like, oh, did industry change their mind?

7 Someone at some point at the staff
8 believed industry didn't want to use the word
9 "quality," and they made a decision based on that
10 information. And that's what I was trying to get
11 to.

12 MS. DROUIN: All I can tell you is that
13 I have a lot of discussions through my standards
14 work with a lot of people in industry. And I will
15 have to say, I have never heard anyone say, "We'd
16 like to use PRA quality." All I personally have
17 ever heard is that, "We want to stay with PRA
18 technical adequacy."

19 MEMBER REMPE: Okay. So if that is
20 true, then didn't I see some comments come in from
21 industry that said, "We'd like to go back and use
22 quality in this last time and" --

23 MR. HARRISON: I think they were saying
24 they wanted to go back to technical adequacy.

25 MEMBER REMPE: Okay. Okay.

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1 MR. HARRISON: And I think our comment
2 disposition maybe was confusing because the comment
3 disposition then referred to quality technical
4 adequacy in everything.

5 MEMBER REMPE: Okay.

6 MR. HARRISON: But, yeah, the industry
7 has surely been consistent against quality -- not
8 against quality. They are consistent against using
9 the term PRA technical adequacy.

10 MEMBER REMPE: Okay.

11 MS. DROUIN: Well, I don't know if Greg
12 --

13 MR. HARRISON: Or quality --

14 MS. DROUIN: -- wants to, you know, say
15 --

16 MEMBER REMPE: I think I got what you
17 meant. Okay.

18 MR. KRIEGER: Hi. Greg -- is this on?
19 Greg Krieger. Yeah. With regard to technical
20 adequacy, as Mary characterized it, that is correct.
21 Everybody within the standards community, within the
22 utility community, is really focused on technical
23 adequacy. The real issue with acceptability is,
24 technical adequacy talks to the model or the -- you
25 know, the object, where acceptability is really

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1 something that is personal. It takes away from the
2 model and says, "Is it acceptable to somebody?"

3 So that really was the issue here. You
4 know, in the end, we all mean the same thing. Make
5 the PRA good, such that it can be used for decision-
6 making. So in the end, you're talking semantics,
7 but that change is why people were a little
8 resistant, is that you're really taking away from
9 that model to something that feels a little
10 different.

11 MEMBER REMPE: Okay. Thank you.

12 MR. HARRISON: And I'll just close with
13 that. So at meetings with you all, don't be
14 surprised if people say quality, technical adequacy.
15 They are still going to use those. And the key I
16 always have started using is, what's the context of
17 why you're using that phrase?

18 CHAIRMAN STETKAR: When I did my
19 homework for last September's meeting, I went back
20 through. There actually are old ACRS letters that
21 address this issue. I mean, old ACRS letters about
22 what you should -- what should you call it, and what
23 are the implications of each word, and all that kind
24 of stuff. It's not going to end. As long as -- but
25 as long as the guidance is consistent, and you call,

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1 you know, the thing what it is, then going forward
2 that's what it is. You know, it's well defined.

3 MS. DROUIN: I will tell you, you know,
4 just a side note, at the May 11th Commission
5 briefing, all three words were used. All three
6 words. Some people used the word PRA quality, some
7 people said technical adequacy, and some said
8 acceptability. So, you know, it's not going to go
9 away in terms of when people start talking.

10 MR. HARRISON: And so on this slide,
11 just to close, the last item here is an example of
12 something that went into the parking lot. We had a
13 paragraph that talked about considering past changes
14 and what you'd need to do if you wanted to credit
15 past changes, and if they were in the model already
16 related to risk-informed applications.

17 When we got the comment, we thought that
18 that might have tentacles elsewhere within the reg
19 guide, or it could influence how we write things.
20 So we took that as a parking lot issue to address in
21 a greater scope. So it's related to just one
22 paragraph. You weren't sure what the unintended
23 consequences of revising that paragraph would be.

24 So going back to 2012, these are a
25 number of items we have already kind of touched on,

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1 this hierarchical framework that was created in the
2 draft guide back in 2011. The comments came in.
3 That created, actually, I think more confusion
4 because then the question was, am I addressing just
5 the two high-level requirements, or am I addressing
6 all seven? Do I only do the five? If I do the
7 five, does that meet the two?

8 And so that framework, we got a lot of
9 comments that said, you know, this creates
10 confusion. And, again, the working group decided
11 the easier solution was to revert back to the seven
12 considerations and just address them.

13 We also get a number of comments trying
14 to nail down what we mean when we use terms like
15 significant, reasonable. We have tried to be more
16 consistent I think in the reg guide by using
17 consistent terms. But when you get into defense-in-
18 depth, and you're not trying to define the term, but
19 you're trying to give insights into what the term
20 means, these qualitative kinds of terms will always
21 kind of show up. And so that's one where we've
22 tried to clarify the terms to be consistent, but
23 they are still there. There are still some --
24 "significant" is a phrase that shows up.

25 MS. DROUIN: But I do think, you know,

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1 we did add additional text to try and communicate
2 what we meant by those terms. So, you know, we do
3 use the terms consistently, but we did add text to
4 try and explain what we meant by those terms.

5 MR. HARRISON: The types of licensing
6 basis changes was a thing that came up within the
7 comments back in 2012, what does this apply to? So
8 we've tried to clarify that.

9 Again, this is a comment Mary had
10 already addressed where we got a number of comments
11 that said that there was language within the
12 standard review plan that addressed defense-in-depth
13 that was -- the industry liked that terminology and
14 the discussion, but it wasn't in the reg guide, so
15 we've changed it to bring some of that guidance over
16 into the reg guide.

17 And then the removal of the examples.
18 They raised more questions than they solved, and
19 they were non-committal. So, again, it's the -- if
20 you follow the example, didn't mean that that on an
21 application would always be acceptable. So, in that
22 sense, it didn't help. It may have helped define
23 the individual consideration, but it didn't help you
24 have a path to understand, if you would actually do
25 that, would you get approved? So that was more

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1 confusing.

2 Some things we didn't change as a result
3 of those comments. There was this discussion --
4 and, again, I think this is another parking lot item
5 of, how do the five principles of risk-informed
6 decision-making -- how do they relate to each other?
7 I've seen this actually in applications where there
8 is -- you rely on performance monitoring to help
9 confirm some of the analysis you're doing, and how
10 do those all interact with each other. That's a
11 thing that we need to spend some time on, to think
12 about how we would address that.

13 MS. DROUIN: Also, it's our
14 understanding that industry is underway in terms of
15 developing guidance for this. So, you know, we're
16 more I think in a wait-and-see mode and see what
17 comes out of the industry guidance, and that's why
18 this is in -- I mean, it was in a parking lot
19 because it was out of scope, but also industry is
20 doing something in this area.

21 MR. HARRISON: And then the last bullet
22 here on this slide is just we had a couple of
23 comments that talked about needing to describe the
24 limitations on the considerations of defense-in-
25 depth. Are there places where you don't need to

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1 consider defense-in-depth effectively? And so
2 that's an item where we actually disagreed, and I
3 don't think that's in a parking lot. I think that's
4 a direct disagreement by the staff, that we believe
5 you need to address these considerations for all
6 risk-informed applications.

7 And then I will turn it back to Mary.

8 CHAIRMAN STETKAR: And before we do
9 that, because the next slide is the path forward,
10 but I want to interject here. I've been quiet.

11 We had a meeting a year ago that focused
12 entirely on what is now Section 2.1 of the guidance,
13 the defense-in-depth stuff, and I see how that has
14 evolved into the current version of the guidance.

15 To prepare for this meeting, I decided
16 to look through the draft Rev. 3 in its entirety,
17 beginning to end. And whenever you read something
18 in its entirety, or at least whenever I read
19 something in its entirety, things catch my attention
20 that maybe should, maybe shouldn't. And I have
21 several of those that I'd like to discuss here.

22 So I'll just start marching through
23 them, if you'll allow me to do that. And to orient
24 you, I'll give you kind of page numbers or paragraph
25 numbers, so you can pull up the guidance in front of

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1 you to see what I'm babbling about.

2 The first one is on page 10, or it's
3 just before the paragraph that talks about the first
4 element of the process. It's in Section C, the last
5 paragraph in the introduction. And it's a long
6 paragraph. It says, basically, the expectation is
7 that for plants licensed under 10 CFR Part 52, the
8 deterministic containment performance metric should
9 also be maintained.

10 And it goes on to cite all types of
11 things, but basically containment maintains its role
12 as a reliable, leak-tight barrier for approximately
13 24 hours following the onset of core damage under
14 the more likely severe accident challenges. And
15 following this 24-hour period, the containment
16 should continue to provide a barrier against the
17 uncontrolled release of fission products.

18 As I read this in the context of this
19 guidance, this tells me that I cannot use risk
20 information to make any changes to that. This seems
21 to be telling me, no, no, the guidance says that you
22 must maintain that. So what am I reading wrong? Or
23 if I'm reading that, why, in this guidance about
24 using risk information in a regulatory decision-
25 making process, am I specifying very, very distinct,

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1 precise numerical criteria for one class of
2 containments? I don't understand why that paragraph
3 is in here. So can you explain to me why that
4 paragraph is in here?

5 MR. HARRISON: Do you want me to start,
6 Mary, or --

7 CHAIRMAN STETKAR: I understand that
8 it's in the conditions for licensees under -- who
9 get their license under Part 52. But once I got my
10 license, it would seem that if I wanted to address
11 this issue in a risk-informed basis, the guidance in
12 1.174 should give me the framework to do that. This
13 seems to exclude me from doing that.

14 MR. HARRISON: Yes.

15 CHAIRMAN STETKAR: Well, why are we
16 doing it?

17 MR. HARRISON: This is -- the section
18 that you referred to I believe was actually in Rev.
19 2 in a different --

20 CHAIRMAN STETKAR: No, it wasn't.

21 MR. HARRISON: -- in a different place.
22 In a different place, and we ended up moving it here
23 when we added the paragraph -- I think -- I remember
24 a discussion about containment performance in the
25 prior revision that was added --

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1 CHAIRMAN STETKAR: I'm not sure about
2 that.

3 MR. HARRISON: -- for new reactors.

4 CHAIRMAN STETKAR: I think I looked for
5 that. I don't have it in my note, but I did check
6 Rev. 2 to this. I checked what went out for public
7 comments to the -- it was in what went out for
8 public comments in a different position.

9 MR. HARRISON: Okay. Then maybe I'm --

10 CHAIRMAN STETKAR: I don't think it was
11 in Rev. 2.

12 MR. HARRISON: Okay. I'll go back and -
13 -

14 CHAIRMAN STETKAR: Only because Rev. 2
15 was issued before a lot of the Part 52 licensing
16 stuff came out.

17 MS. DROUIN: I think at this point we're
18 just going to have to take your comments under --

19 CHAIRMAN STETKAR: That's --

20 MS. DROUIN: -- you know, and look and
21 see --

22 CHAIRMAN STETKAR: What I -- basically,
23 you know, we had an informal meeting last week, and
24 what I wanted to do is to bring up these comments
25 that I have, see if any of the other members had any

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1 reflection on them, see if you had any reaction to
2 them, and then we can figure out, you know, what
3 we're going to do going forward.

4 MEMBER BLEY: Is this something you are
5 not prepared to talk about, you know, why it's here?

6 MR. HARRISON: I can give you the
7 context of part of this is, again, it dates back to
8 those SECYS and SRMs from the 1990s. And this was
9 considered the deterministic containment performance
10 requirement.

11 CHAIRMAN STETKAR: Donnie, I get that,
12 and in each of the design certifications and
13 combined license applications that we have looked
14 at, this issue is addressed in there as part of the
15 licensing basis or the certification. And that's
16 fine; the same as the -- I hate to call it --
17 deterministic licensing basis for any currently
18 operating plant.

19 This guidance, my interpretation of this
20 regulatory guide, provides a framework for using
21 risk information to make changes to the licensing
22 basis for any licensed facility. And it seems to me
23 excluding one, if you want to call it, deterministic
24 containment performance requirement for a specific
25 class of plants, if that's the intent -- and that's

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1 certainly the way I read it in here -- seems
2 contrary to the basic principles of what we're
3 trying to do under Reg Guide 1.174.

4 MEMBER BLEY: I agree with John pretty
5 strongly on this one. And also, it is already
6 codified as part of Part 52. Doesn't need to be in
7 here unless this guidance, in particular, wants to
8 exclude Part 52 containments from risk-informed
9 consideration. And that seems wholly inconsistent
10 and illogical to me.

11 MS. DROUIN: I think, you know, you all
12 have raised a very good point. You know, I think we
13 just have to go back and look at it. I think we
14 need to go back and look -- this was a result of an
15 SRM, so I think we just have to go back and revisit
16 this. I don't think we have an answer for you
17 today.

18 MEMBER BLEY: Okay. And, well, some of
19 us anyway, would be pretty strong on this. It seems
20 like everything else. It's in the regulation,
21 you've got to meet that, unless you have a reason to
22 get around it, and you argue it and you win. And to
23 exclude that possibility in the guidance just seems
24 inappropriate.

25 MS. DROUIN: Fair comment.

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1 MEMBER BLEY: Okay.

2 CHAIRMAN STETKAR: I don't want to dwell
3 on them too much. As I said, the whole reason that
4 I wanted to have this discussion is to see if other
5 members had comments and to see, you know, if you
6 had any immediate feedback, like this is really
7 stupid, and, no, we're not going to consider it.

8 MS. DROUIN: But I might still think
9 that is --

10 CHAIRMAN STETKAR: No, no, that's fine.
11 And you can say that.

12 MS. DROUIN: No. We will look at this.

13 CHAIRMAN STETKAR: The next one that I
14 had is in -- and you'll have to excuse me as I page
15 down through things here. It's in 2.1.1.2.

16 MS. DROUIN: Do you have a page number?

17 CHAIRMAN STETKAR: Yeah. I'm --

18 MR. HARRISON: Page 14.

19 CHAIRMAN STETKAR: Page 14. But, in
20 particular -- yeah, it's page -- well, no, let me
21 get to the exact point because I've got to find
22 this. It's on a transition from page 15 to page 16
23 where there's bullets on what's called common cause
24 coupling factors.

25 MEMBER BLEY: The inadequate design

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1 bullet, and so on?

2 CHAIRMAN STETKAR: Right. So it's right
3 at the bottom of -- depending on which -- we've got
4 a PDF version.

5 MEMBER BLEY: It's under Number 4, the
6 first bullet.

7 CHAIRMAN STETKAR: It's under Number 4.
8 And in a PDF version, it's on page 16. I was
9 looking at a Word file. So are you where we are?

10 MS. DROUIN: We're there. Yes.

11 CHAIRMAN STETKAR: Okay. When I read
12 this, I thought that the -- at least -- well, let me
13 cut to the chase here. I'm really hung up on these
14 coupling factors, because it wasn't clear to me why
15 they are discussed here. The previous version of
16 the guidance had -- when I say "previous," Rev. 2
17 had a fairly succinct, simple paragraph that just
18 says, "You need to ensure defense-in-depth against
19 common cause failures." And I won't quote it.

20 It seemed to me that that previous
21 paragraph was adequate to raise the issue without
22 being as specific as these bullets. And what got me
23 even further confused is, as you page down in the
24 same section, there is -- at the bottom of page 16,
25 or in the middle of the paragraph that follows those

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1 bullets, it talks about defenses against these
2 coupling factors, and it says an example of this
3 type of defense might be fire or flood barriers that
4 limit component failures.

5 Those are not defenses against these
6 types of common cause failures. In fact, they are
7 defenses against physical hazards. So I got really
8 confused about why we're being so specific on these
9 coupling factors here.

10 Now, later in 2.1.1.3, when we discuss
11 this consideration, there may be -- when you talk
12 about how people may address common cause failures,
13 you know, the guidance on how you might address it,
14 highlighting this information there might seem
15 appropriate, but it is highlighted there but less
16 specific than what's up front.

17 So I'm curious about why the need for
18 specificity here, and especially when the example
19 that is provided is not consistent with what we're
20 talking about.

21 MS. DROUIN: Okay. First, I have a
22 question. You said that in the earlier version we
23 had a more simple paragraph. Are you talking about
24 the earlier version of 1285?

25 CHAIRMAN STETKAR: No. It's the July --

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1 yeah. Well, all I highlighted here is July 2016
2 version, which is what we reviewed a year ago. So
3 it was the draft of the defense-in-depth principles.

4 MS. DROUIN: Okay. I just want to go
5 back and look at what --

6 CHAIRMAN STETKAR: And I can read on the
7 record, if you want, the paragraph that I
8 highlighted from that which says, "An important
9 aspect of ensuring defense-in-depth is to guard
10 against common cause failure. Failure of several
11 devices or components to function may occur as a
12 result of a single specific event or cause. Such
13 failures may simultaneously affect several different
14 items important to risk. The event or cause may be
15 a design deficiency, a manufacturing deficiency, an
16 operating or a maintenance error, a natural
17 phenomenon, a human-induced event, or an unintended
18 cascading effect from any other operation or failure
19 within the plant."

20 That, to me, kind of captured the notion
21 of what we're talking about without elaborating on
22 specific --

23 MEMBER BLEY: I kind of read through
24 this without noticing that, but thinking about it,
25 there is a level of methodological precision here

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1 that isn't anywhere else in 1.174. It just seems
2 kind of unique.

3 CHAIRMAN STETKAR: And here, if you read
4 the other considerations, it's also different from
5 the other considerations. Even in the current
6 version of 1.174, it's got, especially up front
7 here, in this particular section where I view this
8 part of the guidance as identifying the issues that
9 need to be addressed, there is later guidance on how
10 they might be addressed.

11 Now, how they might be addressed might
12 say, well, you need to address coupling factors.
13 And, indeed, the guidance later does say that, but
14 even then, without this level of bullet, bullet,
15 bullet specificity.

16 MS. DROUIN: You know, without going
17 back and relooking at our history within the working
18 group, you know, because there is a lot of versions,
19 of course, you didn't see, you know, it's hard for
20 me to answer this question. And we could have just
21 been maybe on this one a little bit overeager,
22 because I know we did -- we did have a mind-set of
23 erring on trying to provide more information than
24 less.

25 MEMBER BLEY: It almost reads like

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1 somebody came up with this layout and was kind of
2 proud of it, wanted to get it all in there.

3 CHAIRMAN STETKAR: Well, no, what --

4 MS. DROUIN: I can't say that that
5 didn't happen, because when we write, our writings
6 are our children.

7 CHAIRMAN STETKAR: I tell you, other
8 than the fact that it seemed out of place, because
9 when I got to this, my God, this is -- it reads
10 differently in terms of, if I can call it the
11 philosophical flow of this part of -- the front part
12 of the guidance, if I can call it that.

13 And the concern that I have is, since
14 there are four distinct, crisp bullets, it might
15 very well be interpreted as a prescriptive type of
16 issue, that I have to address this, and only this,
17 four bullets. And if I check off those boxes,
18 somehow I have adequately addressed the intent of
19 the guidance, and it's maybe --

20 MS. DROUIN: And that certainly isn't
21 our intention, so --

22 CHAIRMAN STETKAR: And if that's not
23 your intention, I'll tell you, people will read it
24 that way.

25 MS. DROUIN: Okay.

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1 MR. HARRISON: And in the next -- in
2 that last paragraph, it's like --

3 CHAIRMAN STETKAR: Oh, yeah.

4 MR. HARRISON: -- we had a list of six
5 bullets --

6 CHAIRMAN STETKAR: I know --

7 MR. HARRISON: -- four bullets, and we
8 didn't catch that.

9 CHAIRMAN STETKAR: Right. And you took
10 those out because somebody recognized that the two
11 you took out -- you deleted were not consistent with
12 the intent of what you're calling common cause
13 failures.

14 MR. HARRISON: So that's a lingering
15 issue.

16 CHAIRMAN STETKAR: So we read that in
17 the context of the flow --

18 MS. DROUIN: Good comment.

19 CHAIRMAN STETKAR: -- and if you want to
20 elaborate on it more -- and I'm not -- personally,
21 I'm not proposing to do that -- in the how you might
22 address it, that consideration guidance, may be
23 okay. But when I read the later section on how you
24 might address it, that also seemed -- as it's
25 written currently, seemed to be adequate in terms of

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1 a balance between specificity and things in general
2 you might consider.

3 MS. DROUIN: Yes. Okay.

4 CHAIRMAN STETKAR: Okay. What is the
5 next one? Now, Donnie brought this up, and I
6 struggled with this. Where are we now? We're down
7 on page -- my problem is I take things out of
8 context, and then I have to go find them again.
9 Bear with me for a moment. I have to do a word
10 search here.

11 I'm on the top of page 18, and it's the
12 first paragraph under 2.1.1.3, kind of the end of
13 that paragraph where we're talking about -- now it's
14 something Donnie raised in his discussion of the
15 public comments. I'll read what I highlighted.

16 It says, "Although guidance is presented
17 separately for each consideration, the evaluation of
18 the proposed licensing basis change should be
19 performed in an integrated fashion. The proposed
20 licensing basis change is considered to maintain
21 consistency with the defense-in-depth philosophy if
22 the integrated assessment demonstrates no
23 significant impact on a single consideration, i.e.,
24 the intent of each defense-in-depth consideration is
25 met, or there is not a significant impact

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1 collectively across all seven considerations."

2 If I go down now to C.2.1.1.4 --

3 MS. DROUIN: And I would --

4 CHAIRMAN STETKAR: So hold that thought,
5 because I want to see whether I'm interpreting
6 things correctly. C.2.1.1.4 now, and I'm on page
7 24, the main paragraph there says, "The licensee
8 should be able to conclude whether the change
9 maintains consistency of the plant design with the
10 defense-in-depth philosophy by showing that the
11 intent of each consideration is still met following
12 the implementation of the proposed licensing basis
13 change."

14 Now what I'm hung up on is implementing
15 this thing. Do I need to individually meet the
16 intent of one, two, three, four, five, six, seven,
17 individually, or can I fail to meet the intent of,
18 let's say, number three completely, provided that
19 the integrated defense-in-depth is still considered
20 adequate?

21 MS. DROUIN: Okay.

22 CHAIRMAN STETKAR: My interpretation of
23 the first thing that I read was that, that I could
24 have an adverse impact on one of the defense-in-
25 depth considerations, provided that the proposed

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1 change does not have a significant adverse
2 collective impact on plant-level defense-in-depth.

3 MS. DROUIN: Okay.

4 CHAIRMAN STETKAR: Against whatever
5 issue. That was my reading of the first one. The
6 second one doesn't tell me that. The interesting
7 thing about the second one is that section is called
8 Integrated Evaluation.

9 (Laughter.)

10 MS. DROUIN: Okay. I think what has
11 happened here is that what you read under 2.1.1.3,
12 that one particular sentence was changed as a result
13 of a public comment. So when we changed the
14 sentence here, we unfortunately did not look at
15 1.1.4 to make a comparable change. So we --

16 MEMBER BLEY: Your intent would be to
17 make them like 1.1.3.

18 MS. DROUIN: Yes.

19 CHAIRMAN STETKAR: So the intent -- I
20 just want to make sure because the words are --
21 obviously can be interpreted differently, but the
22 intent is what I wanted to get to. The intent is
23 that I can have an adverse effect on one or more,
24 I'll call it that way, of the individual seven
25 elements, provided that I can demonstrate that

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1 collectively I still maintain an adequate level of
2 defense-in-depth at the plant level.

3 MR. HARRISON: If I can caveat, the
4 adverse effect is not significant.

5 CHAIRMAN STETKAR: Yeah, yeah. Okay.
6 Yes. I mean, it's up to me to --

7 MR. HARRISON: Argue why it's not
8 significant.

9 CHAIRMAN STETKAR: -- reach agreement on
10 how much significant and how much adverse, but
11 indeed the intent is --

12 MR. HARRISON: Small hits on a number of
13 the defense-in-depth might be okay, if you can show
14 overall you still have defense-in-depth.

15 CHAIRMAN STETKAR: Right. Or,
16 principle, relatively large hit on one provided that
17 you might have improvements in other areas to
18 mitigate. I don't know. I'm not trying to get
19 specific in it.

20 MR. HARRISON: A licensee would have to
21 give --

22 CHAIRMAN STETKAR: A licensee has to
23 come in with a proposed application and present a
24 convincing argument. Obviously, if they can
25 demonstrate that there is either no effect or

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1 perhaps an improvement, you know, on each of the
2 seven, so be it. But if they can't, I just wanted
3 to make sure I -- I wanted to understand that point.

4 MS. DROUIN: But that is -- I mean, I
5 know that we specifically changed this in 2.2.1.3 as
6 a result of a public comment.

7 CHAIRMAN STETKAR: Okay. I didn't know
8 that --

9 MS. DROUIN: And we didn't even think
10 about 2.1.1.4.

11 CHAIRMAN STETKAR: Okay.

12 MS. DROUIN: So good catch.

13 MEMBER BLEY: Despite -- I'm glad you're
14 changing it. But just based on irony, 2.1.1.4
15 wouldn't have a reason to exist because it's about
16 integrated, and there is not a hit of integrated in
17 the words that are there.

18 MR. HARRISON: Right. If we fix it, it
19 would give you the concept of integrated.

20 CHAIRMAN STETKAR: Let me just make a
21 note here, because I'm a slow writer and my memory
22 is -- I don't remember what I did this morning.

23 The next one is under 2.1.1.3,
24 consideration 6. And Donnie also mentioned it.
25 It's page 22. This is -- I don't know whether it's

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1 negotiated language or what. The first sentence
2 there under 6 says, and I believe this was, by the
3 way, carried over from Rev. 2, "Proposed licensing
4 basis change should not significantly increase the
5 potential for or create new human errors that might
6 adversely impact one or more layers of defense-in-
7 depth." And I quoted the wrong one.

8 The next sentence is actually the one.
9 "The evaluation of the proposed licensing basis
10 change should demonstrate that the change does not
11 adversely affect the ability of the plant staff to
12 perform actions." Does not adversely affect the
13 ability of the plant staff.

14 So does that mean, if I do a human
15 reliability analysis as part of my risk-informed
16 licensing submittal, and I find out that I've
17 increased the human error probability for a
18 particular action by a factor of two, will it not be
19 considered? Because it obviously adversely affects
20 the performance of those personnel. But that factor
21 of two might not have any impact whatsoever on the
22 risk-informed decision.

23 If I read this literally in terms of an
24 attorney, it says I cannot have an adverse impact on
25 any action. That sounds really prescriptive.

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1 MR. HARRISON: Yeah. I think it's --

2 MS. DROUIN: That's not meant to say --

3 CHAIRMAN STETKAR: Okay.

4 MR. HARRISON: Yeah. I think we're
5 missing the concept of significant impact.

6 CHAIRMAN STETKAR: Either significant or
7 -- maybe another sentence --

8 MR. HARRISON: Because when you get down
9 to the bullet, it --

10 CHAIRMAN STETKAR: See, the first one
11 that I read, I read it intentionally. It says,
12 "Does not significantly increase the potential for
13 or create new human errors that might adversely
14 impact one or more layers of defense." Okay. I
15 kind of got that. I don't know why the second
16 sentence is there.

17 MEMBER BLEY: We don't write for you.
18 But if you didn't have that second sentence, the
19 meaning would be more clear.

20 MS. DROUIN: I'll tell you why that
21 second sentence is there, is that if you look across
22 all of the seven factors, you know, the first
23 sentence tends to say, you know, at high level, and
24 then every single one of these has a comparable
25 second sentence that says should demonstrate.

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1 MEMBER BLEY: Oh, okay. I didn't catch
2 that.

3 CHAIRMAN STETKAR: Yeah. The second one
4 was --

5 MEMBER BLEY: Okay. That I didn't
6 catch.

7 MR. HARRISON: Yeah. The first intro
8 line is always the -- what it should do. The second
9 one is what it should -- or vice versa.

10 MS. DROUIN: What you need to
11 demonstrate.

12 MEMBER BLEY: So that you have the
13 "significant" in that one, too.

14 MS. DROUIN: yes.

15 CHAIRMAN STETKAR: That might help, just
16 the word "significant" then. And as Dennis said, we
17 don't -- we wouldn't --

18 MEMBER BLEY: I read the word
19 "significant" into it as I read it, so I should know
20 you're right.

21 CHAIRMAN STETKAR: Which is probably why
22 I have a hard time reading what you write, because
23 what you write probably has 12 times as many words
24 in it as what you actually put on paper. Sorry.

25 MEMBER BLEY: And you never leave one

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1 out.

2 CHAIRMAN STETKAR: I would never leave a
3 word out, because I'd put six words in rather than
4 one.

5 MEMBER SUNSERI: Maybe this will be like
6 an ACRS letter-writing, and the closer we get to
7 noon, the faster things will move.

8 (Laughter.)

9 CHAIRMAN STETKAR: They will, and we're
10 not going to get to noon.

11 I have two more, and this is -- I'll
12 skip one. Oh. Well, the one, as I'm going here --
13 because I think this might be an editorial change.
14 Section C.2(3) on -- well, it's 2.3. On it's page
15 26, it's the next-to-last paragraph. This is a
16 carryover from Rev. 2. It says, "Reg Guide 1.200
17 endorses ASME/ASN standard," and so forth. Other
18 standards for low power and shutdown modes of
19 operation in Level 2 PRAs, for example, are under
20 development.

21 Do we need that "under development"
22 anymore? I know that --

23 MS. DROUIN: Unfortunately, we're out of
24 time sync because the low power shutdown in the
25 Level 2, they are out for trial use.

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1 CHAIRMAN STETKAR: They are.

2 MS. DROUIN: But they won't be issued as
3 an ANSI standard for probably at least another year
4 to maybe two years.

5 CHAIRMAN STETKAR: So you think it's
6 appropriate to leave in there now, given --

7 MS. DROUIN: Because this is going to be
8 out within, you know, early 2018. We aren't going
9 to see these standards probably until 2019.

10 CHAIRMAN STETKAR: Okay. Okay. I just
11 wanted to make sure that we're not getting too far
12 out of sync in terms of timing.

13 MS. DROUIN: Yeah.

14 CHAIRMAN STETKAR: But I'm okay with
15 that, actually. 2.3.2, the last paragraph -- and
16 this was also mentioned previously. It's on the
17 next page, 27. This was added. It's the discussion
18 -- "It should be noted ASME and ANS Joint Committee
19 on Nuclear Risk Management has successfully balloted
20 to remove capability category 3 and retain
21 capability Categories 1 and 2 in the next addition
22 of the ASME/ANS PRA standard."

23 Why do we need that in a regulatory
24 guide? To me it sounds speculative. It also could
25 be interpreted by some applicants or reviewers that

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1 say, "Well, I can completely ignore capability
2 category 3 guidance in the current version of the
3 standard," that the standards committee might decide
4 to fold in or impart or in total into capability
5 category 2 in the future.

6 And to me, this is -- I don't know why
7 we need that statement in a regulatory guide that
8 may live now for who knows how many years.

9 MS. DROUIN: I think, again, we were
10 trying to acknowledge is that the new edition of the
11 standard is due out in 2018, the latter part of
12 2018, and capability category 3 will not be in it.

13 CHAIRMAN STETKAR: It won't, but do we
14 know -- and I certainly don't -- do we know whether
15 some elements of what is currently capability
16 category 3 will be rolled into what is currently
17 capability --

18 MS. DROUIN: Probably I would say 99
19 percent of the time the answer to that is no.

20 CHAIRMAN STETKAR: Okay.

21 MS. DROUIN: I wouldn't say equivocally,
22 across the board, that there might be some aspects.
23 But capability category 3 was always a capability
24 category that no one ever expected anyone to ever
25 have their PRA meet that.

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1 CHAIRMAN STETKAR: I understand that.
2 But my whole -- what I'm hanging up here is not so
3 much on which column is going to disappear or which
4 column -- which parts of column 3 are going to be
5 rolled into column 2; is this paragraph basically
6 sets the expectation to look at Reg Guide 1.200 and
7 refers you back to the ASME/ANS Standard. That's
8 good.

9 It also says that capability category 1
10 may be sufficient for some requirements, whereas for
11 other applications it may be necessary to achieve
12 capability category 3 for specific requirements.
13 That's also, you know, in terms of a philosophy of -
14 - to me, a good philosophy. Why can't we just stop
15 there? And if the standard later comes out without
16 a capability category 3 --

17 MEMBER BLEY: I'm not sure even that far
18 is appropriate here. You will have Reg Guide 1.200,
19 and that tells people how to use the standard. I
20 don't see why you need this other stuff in here
21 because it will end up with things not matching up
22 in a couple of years.

23 MR. HARRISON: I think in --

24 MEMBER BLEY: And maybe for many years.

25 MR. HARRISON: Yeah. I think for a

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1 prior version we stated that for most applications
2 capability category 2 is sufficient. However -- and
3 that's why you get this "however" statement.
4 However, there are a handful of risk-informed in-
5 service inspection, if you follow the ASME Code --
6 well, you can use 1 for something, but there is a
7 couple of capability category 3 items you need to
8 meet -- that is part of piping segmentation --
9 within that standard, if you're using your internal
10 flooding --

11 CHAIRMAN STETKAR: One would hope that
12 whatever those are they get rolled into what is now
13 called probability category 2, or that Reg Guide
14 1.200 will take an exception if it's not -- you
15 know, it's -- I just don't know why -- anyway, I
16 made the comment.

17 MR. HARRISON: Yes.

18 CHAIRMAN STETKAR: Now, here is,
19 actually, the one of all of the stuff that bothered
20 me the most, and we're now on Section 2.5. And it
21 is on the second paragraph in 2.5 on page 32. Okay?

22 This is a new paragraph, and I'll read
23 it. "However, licensees are not granted the same
24 discretion when incorporating these guidelines by
25 reference into other programs." And there is a list

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1 of them.

2 "In this context, the licensee needs to
3 treat the guidelines as hard criteria and is not
4 allowed to consider the acceptance guidelines as met
5 when the values are even slightly exceeded." That,
6 to me, that paragraph is completely contrary,
7 orthogonal to the whole concept of Reg Guide 1.174.

8 It says here in written guidance that
9 for some applications, those gray lines that Mary
10 said was originally a problem because of the
11 graphics capabilities aren't gray. They are
12 precisely black lines, so that if I have something
13 that is 9.9975×10^{-6} , I pass; and if it's 1.0025
14 $\times 10^{-5}$, I fail. Why is that paragraph in Reg
15 Guide 1.174, in particular when we are talking about
16 how to interpret those figures.

17 MR. HARRISON: And the reason that
18 paragraph got added was there -- in some of the more
19 recent risk-informed applications, the fire PRA of
20 NFPA-805 and 50.69 were granting what I'll call
21 self-approval. So once they get through the license
22 amendment process, they can make changes at the
23 plant on their own, and they can use the guidance to
24 help inform that.

25 So when you get towards those fuzzy

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1 lines, a licensee can make an argument to the staff
2 in a license amendment, and we can judge if that's
3 acceptable or not, and we can ask questions. The
4 concern was, do we want to turn that discretion of
5 determining something may come out numerically above
6 a line, but we know that there's enough support that
7 would say it's really considered below the line, you
8 want to give that discretion to the licensee to make
9 on their own without any regulatory review.

10 So that's, fundamentally, where this
11 paragraph is coming into, is there is a handful of
12 applications that turns over decision-making to the
13 licensee after we have approved the application.

14 MEMBER BLEY: It strikes me that if
15 that's the concern, it would be better to say it
16 that way. And I'd even go further to say, if you're
17 close, then you shouldn't have discretion and you
18 ought to come talk to the staff. What you're kind
19 of encouraging is for people to -- in those areas to
20 fudge a little bit and game the system.

21 I mean, if it's that close and it's one
22 of these things where you think you ought to be
23 involved, say so. But putting it this way just
24 doesn't -- I agree with John. It's not appropriate
25 for 1.174, but it also isn't effective.

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1 CHAIRMAN STETKAR: Let me try something,
2 though. I think it's completely inappropriate for
3 1.174 even to try to mention this notion of a hard
4 pass-fail criterion.

5 MEMBER BLEY: No. I'm agreeing with
6 that.

7 MEMBER REMPE: Did you say inappropriate
8 or appropriate?

9 CHAIRMAN STETKAR: Inappropriate.

10 MEMBER REMPE: Okay.

11 CHAIRMAN STETKAR: Not appropriate.
12 Bad. My thought was if there -- there are
13 regulatory guides out there for particular risk-
14 informed applications -- 1.175, 1.177, 1.178, 1.201,
15 1.205 is NFPA-805.

16 So if the intent for particular risk-
17 informed applications, particular risk-informed
18 applications, that give -- as part of the licensing
19 decision that give a licensee the latitude to make
20 changes without making a submittal, if the staff has
21 a desire to highlight a bright line pass-fail
22 criterion within the context of those particular
23 applications, why -- and I'm not saying I
24 necessarily agree with that, but it would seem more
25 appropriate to put that refinement of the guidance

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1 in only those particular -- the guidance for those
2 particular applications, rather than placing it here
3 in what is generally interpreted by both the NRC and
4 the industry as an umbrella document for how to
5 think about making risk-informed decisions, and how
6 to think about it is -- there's gray.

7 MR. HARRISON: I do want to clarify that
8 if a licensee is making a change and it goes above a
9 threshold, it doesn't say they can't do it. What it
10 says is they need to come back with a license
11 amendment to the staff to evaluate that.

12 So it's not a bright line as you can't
13 make the change; it's just that you need to go
14 through a license amendment. But I take your point.
15 It may be more appropriate for this to go over into
16 the guidance associated with those applications that
17 provide that flexibility.

18 So that would be Reg Guide 1.201 or --

19 CHAIRMAN STETKAR: 1.201, 1.205,
20 whatever. And there, you know, one can argue back
21 and forth in the context of that. At least it's
22 extracted from 1.174 where -- I hate to use the term
23 "philosophy," but I'll use it. The philosophy, as
24 it's displayed in those figures, and well described
25 in this guidance, about why there are not bright,

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1 hard and fast lines, why there is gray, why you
2 consider uncertainty, why you have an integrated
3 decision-making process that considers multi-
4 attributes of a decision, not just, you know, a
5 numerical pass-fail criterion

6 MS. DROUIN: Well, I think you've brought
7 up a really good point. I think we also need to go
8 back and see, why did we add this in here, because
9 this is an issue that's out of the defense-in-depth
10 part.

11 CHAIRMAN STETKAR: Is it?

12 MS. DROUIN: So there had to have been
13 some --

14 CHAIRMAN STETKAR: Yes, I have no idea.

15 MS. DROUIN: So I can't answer, I've got
16 to go back and look at our previous versions and
17 everything and why did we do this.

18 CHAIRMAN STETKAR: As I said, it wasn't in
19 Rev 2, obviously. Well, I mean maybe not obviously,
20 but I'll tell you it wasn't in Rev 2.

21 MS. DROUIN: And I just looked at Rev 2,
22 it's not in Rev 2.

23 CHAIRMAN STETKAR: No. No. And it
24 appeared in Rev 3. Now, when it appeared, it was in
25 the version of Rev 3 that went out for public

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1 comments. But anyway, go back and, you've heard our
2 comments.

3 MEMBER REMPE: So I'm curious as to the
4 process, and this is for my education. If you've
5 got a thing where you're saying you can't do
6 something, is the Reg Guide where that should be?

7 I mean, it's guidance and so how could
8 you, this isn't enforceable, so how would that keep
9 someone from doing something?

10 MR. HARRISON: The idea, and again, the
11 applications themselves have license conditions --

12 MEMBER REMPE: So there would be a
13 condition, right.

14 MR. HARRISON: Right. And so this was, I
15 think, trying to be, we've had all discussion about
16 the fuzzy lines and stuff and it was just trying,
17 maybe naively, provide this point that there are
18 some applications where licensees are doing things
19 on their own, they can't use this fuzzy argument.

20 MEMBER REMPE: Yes.

21 MR. HARRISON: But, it's a worthwhile
22 point that that would be better captured in other
23 places that apply to those applications, but not
24 here.

25 MEMBER REMPE: Right.

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1 MR. HARRISON: So we should take that
2 back, that's a sure thing.

3 MS. DROUIN: Now, you brought --

4 MR. CHEOK: Hey, Donnie, I think I agree
5 with that comment. So, you know, something like
6 this probably should not be in the reg guide. And
7 you make a very good point, it should be probably in
8 the license condition or something when we issue
9 those --

10 CHAIRMAN STETKAR: Or in the guidance for
11 those, as Donnie said, for particular applications.
12 If the Staff wants to elaborate on how to consider
13 the greyness, but --

14 MR. CHEOK: But then we still go back to
15 the point that this is a guidance document --

16 CHAIRMAN STETKAR: Yes.

17 MR. CHEOK: -- and I'm not sure that we
18 can specify requirements in the guidance document.

19 CHAIRMAN STETKAR: Oh, you can't. You
20 can't.

21 MR. CHEOK: Yes.

22 CHAIRMAN STETKAR: I mean, but one could
23 anyway.

24 MR. HARRISON: And the way we did that in
25 Reg Guide 1.201, and in another area, is we stated

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1 in the Reg Guide that there was an expectation, a
2 license condition would be established to control,
3 dah-dah, dah-dah.

4 So, you would write this the same way. A
5 license condition on this topic. And that's what
6 we've done on the fire applications.

7 CHAIRMAN STETKAR: Okay. I had two or
8 three comments, as long as we're talking about, I
9 don't have a lot more, so don't worry too much about
10 time.

11 Concept of uncertainty. And a lot of this
12 stuff I think is editorial, but we've had, we've
13 learned -- let me start over again.

14 We collectively, I think, have become, at
15 the NRC, much more mature in our understanding of
16 how to treat uncertainty Reg Guide, or NUREG-1855,
17 1855. It's a very mature, very well presented way
18 to think about uncertainty and address uncertainty.

19 And Reg Guide 1.174 now refers,
20 appropriately, to 1855. Does it very well.

21 There were a few places that I stumbled
22 over though that may benefit from reconsideration.
23 And they're primarily holdovers from Rev 2. And
24 I'll just throw them out for consideration, if
25 you're making editorial changes.

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1 And the first one is, in 2.5.1, it's Page
2 33, the first paragraph. Where you're talking about
3 aleatory and epistemic uncertainty, just setting the
4 case for what those things are.

5 Things I hang-up on. In other words,
6 they've recently been termed aleatory, well
7 recently, more than a decade ago, that's just a
8 word.

9 More of a philosophical aspect though, is
10 later in the paragraph, when we talk about aleatory
11 uncertainty as being a measure of the random or
12 stochastic measure, it then says, it is this aspect
13 of uncertainty that gives PRA the probabilistic part
14 of its name. Well, I take issue with that.

15 PRA is probabilistic and it ought to
16 account for both aleatory and epistemic. This
17 infers that PRA is PRA simply because it accounts
18 for aleatory uncertainty. But I don't know why we
19 need to say that anymore.

20 Reg guide, I always call it reg guide,
21 NUREG-1855, I'm sorry. NUREG-1855 certainly doesn't
22 say that. And it also, right at the end of that
23 paragraph it says, this section discusses epistemic
24 uncertainty, the aleatory uncertainty is built into
25 the structure of the PRA model itself.

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1 Well, yes, kind of. But many PRA models
2 also build in elements of epistemic uncertainty. In
3 particular, Level 2 models.

4 And people have even addressed things like
5 reactor coolant pump seal modeling, which is, has an
6 element of epistemic uncertainty in terms of
7 probabilistic treatment of seal LOCA flow rates.

8 So look at that paragraph again. It's
9 editorial, but it's --

10 MS. DROUIN: Yes. And you're looking at a
11 paragraph that's been there approximately --

12 CHAIRMAN STETKAR: Yes, yes.

13 MS. DROUIN: -- from Rev 0.

14 CHAIRMAN STETKAR: That's true, but this
15 Rev 3 in 2017.

16 MS. DROUIN: No, no, I understand.

17 CHAIRMAN STETKAR: And as I said, this has
18 been my first opportunity to read the whole thing
19 again, end to end, and think about, what changes are
20 we making from what was before to what is now.

21 MS. DROUIN: Now I will tell you, in 1855,
22 we had a lot of discussion on the term aleatory and
23 epistemic.

24 CHAIRMAN STETKAR: Oh yes.

25 MS. DROUIN: And the decision we came to,

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1 we weren't going to use either one of those terms.

2 CHAIRMAN STETKAR: Yes.

3 MS. DROUIN: And --

4 CHAIRMAN STETKAR: Well, I mean there were
5 discussions at one time about the fact that you
6 could call it aleatory, you could call it epistemic,
7 but there is some things that have elements of both
8 in it and trying to pigeonhole it into one of those
9 boxes doesn't make a heck of a lot of sense.

10 MS. DROUIN: Exactly. And we just though
11 going down that slippery slope, and so we just, yes.

12 CHAIRMAN STETKAR: Yes. And this whole
13 notion of, the way you run your two loops to
14 quantify --

15 MS. DROUIN: Exactly.

16 CHAIRMAN STETKAR: -- aleatory versus
17 epistemic is, anyway, think about that paragraph if
18 you would. It's editorial, but it will start to
19 reinforce this notion of how we think about
20 uncertainty these days.

21 Now, when we talk about, again, Section
22 2.6, when we talk about integrated decision making,
23 and this is not a real specific comment, as I read
24 through this thing I made a note to myself that huh,
25 the word uncertainty does not appear in this

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1 discussion of integrated decision making. Through
2 the word search it doesn't appear.

3 To me that's somewhat remarkable. And at
4 the end of this section there are a list of bullets
5 in terms of the expectation of the information that
6 should be provided to support that integrated
7 decision making. None of those says that I need to
8 tell you what my uncertainty is.

9 So, should we address the notion of an
10 expectation, that the submittal ought to address
11 uncertainty?

12 There is a good discussion of the fact
13 that it should be treated in the analyses that you
14 do. So this is kind of a grey area. But this sort
15 of rolls everything together. And it's just notable
16 to me that it doesn't even mention uncertainty.
17 Think about it.

18 And along the same lines with that, in
19 6.3.1, this was kind of a follow on from my previous
20 comment so I won't whine as much, but it lists,
21 again, the expectation of what information should be
22 submitted. And there's a list of bullets there,
23 event trees, fault trees, operator actions.

24 It doesn't say that, it says description
25 of the process, documentation, risk assessment

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1 methods, it doesn't say anything about, it says key
2 modeling assumptions that are necessary, but it
3 doesn't say anything about, saying that I should
4 submit uncertainty.

5 Again, that's a little less, it does, down
6 below say, the last bullet in that section says,
7 results of sensitivity analyses. Again, think about
8 that. That's primarily editorial in nature.

9 MS. DROUIN: Well, let me ask you a
10 philosophical question. When you use this term
11 uncertainty and it doesn't talk about submitting
12 anything, I mean, Reg Guide 1.174 goes on the
13 premise that you deal with it, I mean, if we're
14 talking now, more your parameter uncertainties, you
15 deal with it by supplying the mean values.

16 So, we don't look at the uncertainty
17 intervals, we don't look at the 95th or the 5th,
18 everything is done around the mean.

19 CHAIRMAN STETKAR: Yes. Well, see, my
20 point is, if I'm making a decision, I'd kind of like
21 to know if I'm fairly close to the mean, reasonably
22 close to that grey fuzzy area.

23 It would be useful, for me as a decision
24 maker, and other decision makers might think
25 differently, to know is there a 40 percent

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1 probability that I might exceed it or is there a two
2 percent probability that I might exceed it or a
3 essentially infinitesimal probability that I might
4 exceed it. That might affect my decision.

5 So I use that uncertainty as a measure of
6 confidence in my margin. And without that
7 information I'm only left with that mean value.

8 MEMBER BLEY: The earlier part of the
9 document talks about uncertainty a lot.

10 CHAIRMAN STETKAR: It does.

11 MEMBER BLEY: Those people to integrate it
12 into what they're doing. So I kind of looked at it,
13 I read modeling assumptions as including it, now
14 Mary makes it kind of clear that they weren't
15 thinking you needed to show that in the final
16 result.

17 And of course, you're doing it, and that
18 lets you get the right mean. But with her decision
19 making, having an idea of how likely you are to be
20 beyond that grey area, is the thing that defines the
21 grey area.

22 MS. DROUIN: And that concept was, is
23 introduced in 1855. We've got the four regimes and
24 you look at which regime you are and how the
25 uncertainty falls in that regime. So it does --

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1 MEMBER BLEY: And here you refer to 1855
2 quite a bit. It's just leaving it out right at the
3 end, isn't it?

4 MS. DROUIN: So, I mean this, in my mind,
5 if we're going to bring that in, it would be a major
6 scope change to here.

7 CHAIRMAN STETKAR: See, I don't see why
8 you think it's a major scope change. I need to, as
9 Dennis said, if I follow the guidance in here in
10 need to quantify uncertainty, I need to address
11 uncertainty that I can quantify and I need to
12 somehow address uncertainties that I can't quantify.
13 Either through a sensitivity analysis or by some
14 sort of qualitative assessment.

15 As long as I'm quantifying the
16 uncertainty, why isn't there a clear expectation, by
17 the NRC, for me to report that uncertainty as part
18 of my submittal, such that when a decision maker is
19 presented this information, part of which is
20 qualitative, part of which is quantitative, the
21 decision maker can say, ah, from a quantitative
22 perspective, at least, here's what the uncertainty
23 is telling me.

24 On a mean value basis, I might even exceed
25 the guidance, but low and behold, the uncertainty is

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1 so broad that the mean value is like the 90th
2 percentile of my uncertainty. There's a 90 percent
3 probability that I'm better.

4 MS. DROUIN: I understand.

5 CHAIRMAN STETKAR: And that to me, as a
6 decision maker, gives me a heck of a lot more
7 confidence than saying, the mean value is ten
8 percent higher than the guidance, and I addressed
9 uncertainty somewhere.

10 MR. HARRISON: The --

11 (Simultaneously speaking)

12 MR. CHEOK: -- quickly, I think, we are
13 trying to provide some guidance, both for the staff
14 and for the licensees. And I think the licensees
15 would like to have some clarity as to what the Staff
16 look at.

17 So, when we talked about uncertainties, we
18 talked about the parameter of the model and the
19 completeness uncertainties. I believe that the
20 submittal, in the submittal, we expect the licensees
21 to address model uncertainties by, you know, in the
22 qualitative sense, this is why we think it's
23 adequate enough. Completeness the same way.

24 Why the scope of the PRA is not, it's not
25 all inclusive, but we think it's good enough

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1 because. And so that should be addressed.

2 But in terms of parameter uncertainty, we,
3 I think the guidelines would imply that you are now
4 submitting the mean values. But if you are now
5 asking people to address the uncertainty by
6 submitting the distribution, you may be introducing
7 some variable in there where you are saying, what
8 the staff now expect, how we would make our
9 decisions based on the distribution, which is based
10 on a mean value that we can look at in comparison to
11 the guidelines.

12 CHAIRMAN STETKAR: All right, I'll come
13 back to my example. If you're a decision maker,
14 you're faced with making a decision on a submittal.

15 And I need to be careful here because
16 you're supposed to be making your decision on the
17 totality of information that you have available to
18 you. Qualitative and quantitative.

19 The quantitative part of that information
20 says that, well, I did an analysis and my mean value
21 comes out to be ten percent higher than this fuzzy
22 line. And again, I won't make it a hard line
23 because I don't want to make it a hard line.

24 But it's ten percent and I did a mean
25 value, the mean value is the result of my

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1 uncertainty analysis. I present that to you and you
2 say, oh gee, the quantitative analysis says that
3 your kind of in, a little bit over but in the not so
4 good side of that grey line.

5 If I then tell you that there is a 48
6 percent chance that I will be even higher than that,
7 you think about, I would anyway, think about it one
8 way.

9 If I tell you there's only a three percent
10 chance that I'm higher than that, you might think
11 about it differently.

12 Now, without that uncertainty
13 distribution, you don't know whether there's a 48
14 percent chance or a three percent chance or a seven
15 percent chance or a whatever chance that I'm above
16 it, and you don't know how much above it you might
17 be. Or conversely, if I'm looking on the good side,
18 how much below it you might be.

19 MR. CHEOK: And --

20 CHAIRMAN STETKAR: There might be an 80
21 percent chance that you're an order of magnitude
22 below it.

23 MR. CHEOK: And so these are actually all
24 good points, but when we looked at the acceptance
25 criteria, the fuzzy line, we are actually thinking

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1 about your comparing two fuzzy lines. You're
2 looking at the uncertainty. You are basically, the
3 distribution for the answer you're submitting, which
4 is the fuzziness of the acceptance guideline.

5 So if you're talking about 40 percent over
6 a bright line, then I think it also could be, they
7 can do a count. But if they are talking about 40
8 percent over which part of the fuzzy guideline, I
9 think that it gets a little bit complicated.

10 I think we can be a little simpler by
11 saying that the fuzzy acceptance criteria should
12 take into account the mean values that is being
13 calculated for us. I think it's all in the sake of
14 being more simple or more understandable.

15 MR. HARRISON: I think we have the comment
16 and so we need to take it back.

17 CHAIRMAN STETKAR: I'm not going to say
18 anymore.

19 MR. HARRISON: Yes.

20 CHAIRMAN STETKAR: This is --

21 MR. HARRISON: We'll take it back and
22 discuss it internally.

23 CHAIRMAN STETKAR: Yes. The last one that
24 I have, and this is the last one, is it comes back
25 to the, Donnie mentioned it, the peer review. And

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1 it's in Section 6.3.

2 And it's the footnote on Page 44 that
3 discusses that letter that you were talking about.
4 This is another example of something that I think is
5 extraneous and is speculative about what might
6 happen in the future.

7 If there are going to be changes made to
8 Reg Guide 1.200, to incorporate this, the guidance
9 here already says that you should use 1.200. I
10 don't know why we need that footnote.

11 MS. DROUIN: Well again, it's because
12 1.200, we're not seeing a change to that. I mean,
13 we're starting it by, but by the time we get out the
14 next revision of 1.200, we'll be in 2019. So right
15 now, Reg Guide 1.200 does not talk about the
16 resolution of these F&Os. It will in the next
17 version.

18 CHAIRMAN STETKAR: Let me try something.
19 Because I don't know in, again, we don't propose
20 writing, but given the fact that I'm not going to
21 propose writing, I'm looking for the paragraph.
22 Yes, it's the paragraph right there at the end.

23 The footnote comes out of a paragraph that
24 says, the licensee's resolution of the findings of
25 the peer review should also be submitted, for

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1 example, yada-yada, yada-yada, and you come to the
2 footnote.

3 To me it's not clear to me why that first
4 sentence was ever in Reg Guide 1.174. Discussing
5 the need, in a risk informed application, to provide
6 the resolution of peer review findings.

7 It was in Rev 2, I know it was in Rev 2.
8 That sentence is a carryover for Rev 2.

9 Given the fact that sentence is in there,
10 then prompts the need for the footnote saying, well
11 yes, but there's going to be a different way to
12 treat the resolution. Do we need at all to address
13 that issue in 1.174, obviating perhaps the need for
14 the footnote and throwing it over into whatever
15 comes out of 1.200 and whenever it comes out?

16 MR. HARRISON: The sentence is there
17 because, again, this is kind of on the submittal
18 information of, you're doing a peer review, the
19 purpose of the industry peer review. So this is
20 bringing in, that's the technical --

21 CHAIRMAN STETKAR: But we've already --

22 MR. HARRISON: -- piece of it.

23 CHAIRMAN STETKAR: But we've already
24 established, well I think, throughout this guidance,
25 the technical acceptability of the PRA. One element

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1 of that is meeting 1.200. However it's met. 1.200
2 says you ought to have a peer review.

3 MR. HARRISON: And the question is, is for
4 some applications, you don't necessarily have to
5 meet a supporting requirement and you're still okay.
6 So there's that flexibility of, on an application,
7 not conforming to all the elements of a standard and
8 yet still being okay.

9 In other cases that wouldn't be acceptable
10 for some other applications. So this is --

11 CHAIRMAN STETKAR: But that's an
12 application specific. It still doesn't tell me
13 anything about why I, I had a peer review, the peer
14 review said I'm perfect in all of the elements that
15 I need to support my application. Or it may have
16 said, during the initial peer review said, no, I had
17 a deficiency under one of those elements and I went
18 back and I fixed it. Or I negotiated a partial fix.

19 I don't know why I have to submit that
20 whole peer review resolution, as part of the
21 guidance in 1.174. I might have to submit that to
22 convince you, for my application, that I adequately
23 satisfied technical acceptability for the elements
24 that I need to meet, for my application. Whether
25 it's a tech spec change or whatever.

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1 You follow my rationale that --

2 MS. DROUIN: I think personally we might -

3 -

4 CHAIRMAN STETKAR: I don't know why it's
5 in 1.174. Because that sentence is in 1.174 has
6 prompted this footnote and I think we're rolling
7 down a slope that we might not need to have started
8 to roll down in the beginning.

9 Especially now that we have better clarity
10 on the expectations for technical acceptability.
11 We'll call it that.

12 MS. DROUIN: In the past, when they submit
13 their application, they submit the results of the
14 peer review.

15 CHAIRMAN STETKAR: And there has been some
16 push back on the desire to do that.

17 MS. DROUIN: There has been push back.
18 And where the push back, and Joe, please correct me
19 if I'm going to say this incorrectly, the push back
20 is that on one application they answer the question
21 on some of these F&Os and then they have to re-
22 answer them again on other applications.

23 So this F&O closure process does two
24 things. It allows them, we as an agency, don't have
25 to look at how they were dispositioned for those

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1 that were dispositioned properly. And they don't
2 have to submit them.

3 CHAIRMAN STETKAR: It's basically a once
4 and done process.

5 MS. DROUIN: Right. So now they still
6 have to submit the open F&Os.

7 CHAIRMAN STETKAR: That's right.

8 MS. DROUIN: So this is talking, Reg Guide
9 1.174, is talking across all your applications.
10 Because your peer review is not done per a specific
11 application, it's done to the base PRA. And here
12 are the findings.

13 And so now they've come in and done this
14 F&O and have corrected some of those deficiencies.
15 We've approved that process, so we don't need to
16 look at it. We just want to look at those
17 deficiencies that have not been resolved.

18 CHAIRMAN STETKAR: But, and I get that.

19 MS. DROUIN: Okay.

20 CHAIRMAN STETKAR: To me that sentence
21 doesn't say that though. It says the resolution to
22 the findings in the peer review. That says
23 everything that is open, closed, halfway in between
24 there.

25 MS. DROUIN: Well --

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1 CHAIRMAN STETKAR: That's the way I read
2 that. And that's why I think the industry --

3 MS. DROUIN: And again, maybe we weren't,
4 we didn't do the best job, we just fixed the problem
5 by adding a footnote.

6 CHAIRMAN STETKAR: Yes, yes.

7 MS. DROUIN: Where --

8 CHAIRMAN STETKAR: But my problem is that
9 --

10 MS. DROUIN: -- maybe in hindsight we
11 should have rewritten maybe, maybe tweaked the
12 paragraph a little bit more.

13 CHAIRMAN STETKAR: And it's a comment,
14 yes.

15 MS. DROUIN: But we were trying to keep
16 our changes to a minimum. So good comment, we can
17 go look at the paragraph and see how we want to
18 perhaps revise it.

19 MR. HARRISON: Yes, we can, elsewhere we
20 refer to Reg Guide 1.200, so if that's where this
21 guidance went, I don't think you'd be having a
22 comment on Reg Guide 1.200 if we said that.

23 CHAIRMAN STETKAR: No, no. No.

24 MR. HARRISON: So the question becomes,
25 what's the appropriate words to have here or --

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1 CHAIRMAN STETKAR: I have no problem with
2 this pointing to 1.200 if 1.200 is the place where
3 this all gets worked out.

4 MR. HARRISON: Yes. And the question is,
5 do you need a footnote or some kind of linkage that
6 says, currently, this is not in Reg Guide 1.200.
7 Right?

8 Because it's right now, you know, a means
9 of addressing it through this process. So --

10 CHAIRMAN STETKAR: Well, but, Donnie, part
11 of my problem is that I don't know when, the reason
12 I intercepted this before this slide is, I don't
13 know when Rev 4 of Reg Guide 1.174 is planned. And
14 this document might be out here ten years from now,
15 with this footnote still sitting here. And some
16 final decision might be to create some other
17 document. You know, I don't --

18 MS. DROUIN: I understand your problem.
19 The problem is, is that we've got two documents that
20 work together and they're out of sync.

21 CHAIRMAN STETKAR: Yes.

22 MEMBER BLEY: And this kind of will
23 perpetuate that. What we've seen other people do is
24 either have a branch technical position, or an ISG,
25 that lives until you fix one of these and then it

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1 goes away. Although some of those have lasted for
2 20 years or longer.

3 MR. HARRISON: Yes. It's a good comment,
4 I think we should take it back and look at it and
5 see if we can simplify that.

6 MS. DROUIN: Dually noted. And we will
7 have internal discussion on this one also.

8 We're going to have discussions on all
9 your comments, John.

10 CHAIRMAN STETKAR: I'm sure you will.

11 (Laughter)

12 CHAIRMAN STETKAR: Now, before we get to
13 path forward, any of the other Members have any
14 comments on the Rev 3? The text. The philosophical
15 editorial.

16 MEMBER REMPE: I had a curiosity question.
17 How often do you get submittals? Historically. Is
18 it one year, two year, one every four years?

19 MS. DROUIN: Joe, do you want to answer
20 that?

21 MR. GIITTER: Yes. Yes, it's a lot more
22 than that. We're actually seeing a pretty
23 significant increase in submittals that rely on Reg
24 Guide 1.174.

25 I would say at the baseline we had 40 per

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1 year, but we're expecting to get 5069 applications
2 from every operating reactor. In fact, it's one of
3 the NEI bulletins under the, delivering the nuclear
4 promise.

5 We've got a bunch of 4b applications a
6 house. We've approved 5b for about three quarters
7 of the plants, we've approved risk informed ISI for
8 pretty much all the plants, I think, except for
9 Oyster creek, risk informed ILRTs. So we see a lot
10 of these.

11 MEMBER REMPE: Okay, thank you.

12 MEMBER KIRCHNER: Has that included a
13 power uprate?

14 MR. HARRISON: Power uprates are not
15 risked informed applications, per say. But we do
16 look at them.

17 MEMBER SKILLMAN: Joe, if I could ask,
18 please. Are those applications, and the interaction
19 between the staff and the licensee, contentious or
20 are those generally fairly smooth?

21 MR. HARRISON: That's a great question.
22 So we had, with NFPA 805, the history there was, I
23 would characterize it as more on the contentious
24 side. But I think there were a number of factors
25 that contributed to that. Both on the part of the

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1 staff and on the part of the industry.

2 In fact, I mean, I can talk about that
3 forever. I gave a presentation down at the utility
4 working conference on some of the lessons learned
5 from NFPA 805.

6 But there were a number of factors that
7 went into it. I think the bottom line is, as an
8 industry we were quite ready for it, in a number of
9 ways.

10 We are working hard to prevent those type
11 of contentious applications in the future. We had
12 experienced some differences on the risk informed
13 tech spec 4b and we worked through those. It was a
14 difficult process.

15 I think we now have a process moving
16 forward where those, where the staff and industry
17 are in agreement on how to do that. Still some
18 remaining issues, one remaining issue in particular,
19 but I think getting the Vogtle safety evaluation
20 issued I think was a major accomplishment.

21 And I think with 5069 we reviewed the
22 pilot within a reasonable time frame. I think the
23 guidance is in place. It's not perfect, but it's
24 good. And I think we're in pretty good shape for
25 the 5069 reviews.

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1 MEMBER SKILLMAN: Okay, thank you, Joe.
2 Thank you.

3 CHAIRMAN STETKAR: I know Pete Riccardella
4 was, at one time, on the bridge line. I have no
5 idea whether Pete's still there. Pete, are you
6 there? All righty then.

7 Quynh, do we know whether we ever got Pete
8 back?

9 MR. NGUYEN: I don't think we got him
10 back.

11 CHAIRMAN STETKAR: We didn't get him back.
12 Pete, if you're listening in, you've been
13 disenfranchised.

14 (Laughter)

15 MEMBER BLEY: Send an email.

16 CHAIRMAN STETKAR: Yes, if you have a
17 burning concern or question or comment, please send
18 it to Quynh, now. Or Joy. Joy has email up.

19 Now, Mary, path forward.

20 MS. DROUIN: Okay. Well, we were
21 scheduled to come in September, so I do believe
22 we're now scheduled to come in October.

23 CHAIRMAN STETKAR: We have you, right now,
24 preliminarily slotted for October.

25 MS. DROUIN: Okay. And we've committed to

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1 send you the document three weeks prior to that,
2 which we will do.

3 CHAIRMAN STETKAR: Given what you heard
4 this morning, is that a feasible path forward?

5 The reason that we need, I'd like a little
6 bit of clarity, and I don't want to put you on the
7 spot to make decisions, Mike or Mary or anybody
8 today, but I think we'd really like to know by
9 middle of next week whether that October briefing
10 seems to make sense or should we push it to
11 November?

12 We have scheduling problems for the Full-
13 committee.

14 MEMBER BLEY: We're okay in October
15 though?

16 MR. CHEOK: Mary said, and Donnie said the
17 same thing, we will look at all the comments that we
18 got today and we will determine how much changes we
19 will have to make, as a result of the comments, and
20 we will come back to you by next week --

21 CHAIRMAN STETKAR: Yes, okay.

22 MR. CHEOK: -- to tell you if we need more
23 time to make those changes.

24 CHAIRMAN STETKAR: We just need to know a
25 little bit for planning over the next two or three

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1 months.

2 MR. CHEOK: And so I think the sensitivity
3 we have is that we, at this point, have a commitment
4 to the Commissioners that we will have the final
5 product out by March. So if we back things up, in
6 October Full-committee meeting would be doable,
7 November kind of pushes the limits --

8 CHAIRMAN STETKAR: Yes.

9 MR. CHEOK: -- but we'll take everything
10 into consideration.

11 CHAIRMAN STETKAR: Take it into
12 consideration and see if you can get back to us.
13 Would it, let me just ask you, I don't know how many
14 Donnie and Mary --

15 MS. DROUIN: I took quite extensive notes.

16 CHAIRMAN STETKAR: Do you need an
17 expedited transcript or do you think you have enough
18 notes?

19 MS. DROUIN: I mean, that always helps.

20 CHAIRMAN STETKAR: Okay. We'll see if we
21 can get an expedited transcript. That though means
22 sort of middle of next week anyways, so.

23 MS. DROUIN: Well, I don't think we're
24 going to wait until the middle of next week.

25 CHAIRMAN STETKAR: Yes, no. Okay.

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1 MR. CHEOK: I think we got a --

2 CHAIRMAN STETKAR: You think you have --

3 MR. CHEOK: -- of the major comments that
4 we need to address.

5 CHAIRMAN STETKAR: Okay. Okay. We'll try
6 to get an expedited transcript, just so it will
7 help. Make sure, Quynh, we make that happen.

8 MS. DROUIN: Okay then, resolve the
9 feedback that we've heard. We were not asking for a
10 letter, but my understanding is you all are going to
11 provide a letter.

12 CHAIRMAN STETKAR: Well we, yes. I can't
13 speak for the Committee, the Committee decides --

14 MS. DROUIN: And I know we're talking
15 about --

16 CHAIRMAN STETKAR: -- but given the fact
17 that Rev Guide 1.174, in my opinion, it's a very
18 visible, highly referenced regulatory guide. And I
19 think because of its visibility, I would expect that
20 the Committee will decide to write a letter on it.
21 But again, I can't --

22 MEMBER BLEY: And we've been heavily
23 involved since its origin, so I can't imagine we
24 won't --

25 MS. DROUIN: I'd like to ask you a

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1 question.

2 CHAIRMAN STETKAR: Sure.

3 MS. DROUIN: Putting aside the comments
4 that you gave us --

5 CHAIRMAN STETKAR: Yes.

6 MS. DROUIN: -- then I would assume that
7 you pretty much like this rev guide and what we've
8 done.

9 CHAIRMAN STETKAR: I will tell you, this
10 is a Subcommittee meeting, so my personal opinion, I
11 think that the way that you've addressed defense-in-
12 depth in particular, and that's the big change --

13 CO-CHAIR SUNSERI: Yes.

14 CHAIRMAN STETKAR: -- flows very well now.
15 I think the context is there. Again, I had a couple
16 of minor comments, but the, I think that should be
17 very, very helpful to users. Both applicants and
18 the Staff.

19 And I think that was, in my opinion, done
20 very, very well. And I would have, you know, I
21 would have whined about things in that area more if
22 I had any particular heartaches.

23 And not hearing any comments from the
24 other Subcommittee Members I'd presume that there is
25 a general agreement in that area.

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1 MS. DROUIN: Okay.

2 CHAIRMAN STETKAR: So the big chunk of the
3 change, Rev 2 to Rev 3 --

4 MS. DROUIN: And I didn't want to walk
5 away with that impression --

6 CHAIRMAN STETKAR: No, no.

7 MS. DROUIN: -- so I'm glad that you
8 verbalized that.

9 CHAIRMAN STETKAR: I went back, I looked
10 at the draft of that section, what's now 2.1, that
11 we saw a year ago, the comments that we had on that,
12 that we had, Subcommittee comments on that draft, I
13 looked at the public comments, I looked at, pretty
14 well scrutinized the words in the final version that
15 we had and I think you did a really good job on
16 them. Really good job.

17 MS. DROUIN: I mean, you know, we ended up
18 writing a little bit more, I think, than we had
19 planned when we started this, but I think we ended
20 up going the route we went because of the numerous
21 public meetings we had and the feedback we were
22 getting from the public and the questions that we
23 were being asked, we really felt this kind of
24 additional text and the way we broke it up between
25 explaining what the factors and then here's the

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1 guidance, was necessary.

2 CHAIRMAN STETKAR: In a big picture, I
3 mentioned where I hung-up on that common cause one.
4 That was the only one --

5 MS. DROUIN: Right.

6 CHAIRMAN STETKAR: -- that sort of got me
7 a bit off kilter. I think the rest of the stuff
8 flows very well.

9 The expectations, how you might be able to
10 address them, the philosophy of the fact that you do
11 not need to meet specific criteria, if you will, for
12 each of the seven. That reinforces this notion of
13 integrated decision making and addressing an issue
14 as a whole.

15 It does make the point that you can use
16 insights from the risk assessment, the PRA, to help
17 bolster your arguments about maintaining, enhancing
18 defense-in-depth or if you have a reduction, if you
19 will, in defense-in-depth providing a good argument
20 that despite the fact that you might consider it a
21 reduction, it's not a significant reduction. I
22 think all of that flows really, really, well.

23 And it's consistent with this notion of an
24 integrated decision making. It sort of tells you
25 that you need to consider defense-in-depth. But it

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1 is not a standalone requirement that you must met in
2 a clear pass/fail criterion, that it's part of the
3 process.

4 I, again, that's my opinion. The rest of
5 the Committee might think differently, but you have
6 a pretty cross-section of the Full-committee here
7 today.

8 MEMBER BLEY: Yes.

9 MS. DROUIN: Right. So, bearing that no
10 one is saying anything, that pretty much people
11 liked what we did, so that's good to know.

12 So once we come to you guys we're going to
13 then start our final review and go into the
14 concurrence. And we're looking to meet our March
15 2018 publication date.

16 CHAIRMAN STETKAR: Okay. Anything else?
17 If not, are there any members of the public in the
18 room who would like to make a comment? If so, come
19 up to the microphone and do so. Oh?

20 MEMBER REMPE: While you're waiting for
21 that, I did hear from Pete and he said he doesn't
22 have any comments.

23 CHAIRMAN STETKAR: Oh, good.

24 MEMBER REMPE: He left the discussion
25 about 9:30.

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1 CHAIRMAN STETKAR: Oh, okay. That's more
2 stamina then I credited him for.

3 (Laughter)

4 MEMBER REMPE: Oh, actually he's back
5 though, I guess, on the line.

6 CHAIRMAN STETKAR: Sorry, Peter.

7 MEMBER REMPE: He couldn't get in at 9:30
8 so anyway --

9 CHAIRMAN STETKAR: I got to stay away from
10 Pete next time. Are there any members of the public
11 on the bridge line who would like to make a comment?
12 If there are, please speak up, state your name and
13 make your comment.

14 MEMBER RICCARDELLA: This is Pete, can you
15 hear me now?

16 CHAIRMAN STETKAR: Yes, Pete, hi. Sorry.

17 MEMBER RICCARDELLA: I was on the regular
18 bridge line. Yes, I've been on since about 9:30 --

19 CHAIRMAN STETKAR: Oh, okay.

20 MEMBER RICCARDELLA: -- but I wasn't able
21 to talk the last time you asked. But I'm interested
22 and I think that I concur with what you just stated.

23 CHAIRMAN STETKAR: Okay. Thank you very
24 much. Are there any members of the public on the
25 bridge line who would like to make a comment? If

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1 not -- Pete? Mute your phone, Pete.

2 MEMBER RICCARDELLA: Okay.

3 CHAIRMAN STETKAR: Hearing no public
4 comments, as we always do in a Subcommittee meeting,
5 I like to go around the table and see if there are
6 any final comments that any of the Members would
7 like to make. Ron.

8 MEMBER BALLINGER: Yes. I mean, it's
9 obvious I'm not up on the nuances of what you've
10 been discussing, but when I read it I thought it was
11 damn good. Compared to the, really. I mean, very
12 good. Thank you.

13 CHAIRMAN STETKAR: Thank you. Matt.

14 MEMBER SUNSERI: I concur. There's a lot
15 of hard work been done on this and we look forward
16 to the final revision. Thanks.

17 CHAIRMAN STETKAR: Dick.

18 MEMBER SKILLMAN: Yes. Mary and Donnie,
19 thank you very much. I appreciate the collaboration
20 between NRR and RES. So, Michael and Joe, thank
21 you. Thank you.

22 CHAIRMAN STETKAR: Dana.

23 MEMBER POWERS: No.

24 CHAIRMAN STETKAR: Thank you. Dennis.

25 MEMBER BLEY: Since you ask, I was a

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1 little uncomfortable the last time we looked at
2 this. I think you've come along way, it's really
3 good.

4 The one piece, and John had brought it up,
5 that makes me nervous are having things that aren't
6 risk informed in a few places, tacked in here, and I
7 hope you get rid of that.

8 CHAIRMAN STETKAR: Jose.

9 MEMBER MARCH-LEUBA: I like the guide and
10 I like the defense-in-depth section of the guide and
11 I like the fact that the defense-in-depth section is
12 there.

13 CHAIRMAN STETKAR: Walt.

14 MEMBER KIRCHNER: I concur with some of
15 the other comments. I would strike the Latin lesson
16 in the beginning.

17 And I agree, although the containment
18 requirements are nice, they probably don't belong in
19 this document. I would strike the CCF examples
20 because you were striking some of them and not all
21 of them, and you don't do examples for defense-in-
22 depth, which I like, why do it for CCF. Because
23 you're getting in the weeds. And I think it looks
24 pretty good. Thank you.

25 CHAIRMAN STETKAR: Joy.

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1 MEMBER REMPE: I don't have any additional
2 comments, but thank you for your efforts and
3 presentations.

4 CHAIRMAN STETKAR: Thank you. And I don't
5 have any more. Again, you what heard what I said
6 earlier. I think with the exception of the nits,
7 some of them not maybe so nits, but you can figure
8 that out.

9 But I mentioned earlier, I think that the
10 major effort, you did a heck of a lot of good work
11 to fold the defense-in-depth considerations in. And
12 I know that you had a lot of discussions with the
13 public on this.

14 More than, probably more than I would have
15 expected, and I think on balance you have made a
16 real fine improvement from the previous version of
17 the guidance. And we certainly look forward to
18 having the final version available for the Full-
19 committee, whenever we decide to do that.

20 And, Mike and Joe, appreciate you being
21 here. And with that, we are adjourned.

22 MS. DROUIN: Thank you.

23 (Whereupon, the above-entitled matter went
24 off the record at 10:46 a.m.)

NEAL R. GROSS

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Regulatory Guide 1.174, Revision 3 Status Briefing for the Advisory Committee on Reactor Safeguards Subcommittee on Reliability and PRA

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Overview

- Background
- Process
- Recent accomplishments
- Modifications to Regulatory Guide (RG)
- Public comments
- Path forward

Background

- SRM–SECY–11–0014 (2011): Revise defense-in-depth (DID) guidance in RG 1.174
- Proposed draft of RG 1.174, Revision 3, was published in 2012 as DG–1285 for public review and comment
 - RG 1.174, Revision 3, was delayed due to ongoing work on DID
 - Public comments were received but not dispositioned
- SRM–SECY–15–0168 (2016): Expeditiously complete the revision to RG 1.174

Process

- Inter-Office Working Group formed (RES, NRR, NRO, and OGC; NMSS, NSIR observing)
- Effort overseen by Inter-Office Division-Level Steering Committee (RES/DRA, NRR/DRA, and NRO/DSRA)
- Frequent public meetings, including briefings for the ACRS and both the internal/external Risk-Informed Steering Committees

Recent Accomplishments

- April 7, 2017: Revised DG–1285 issued for public comment
- May 11, 2017: Briefed the Commission on status of changes to RG 1.174
- July 2017: Completed revision of DG-1285 to address public comments (including comments from 2012)

RG 1.174, Rev. 3 – Modifications

- Described each of the seven DID considerations (formerly known as factors) and reverted to original structure of DID guidance
- Removed DID examples
- Provided guidance on how to address each DID consideration
- Included guidance on risk aggregation with a stronger tie to NUREG–1855, “Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking”
- Emphasized that the acceptance guidelines’ boundaries are gradual transitions
- Adopted relevant and useful language from other NRC guidance documents (e.g., the Standard Review Plan)

RG 1.174, Rev. 3 – Modifications (cont')

- Developed language on transitioning from large release frequency and conditional containment failure probability to large early release frequency for new reactors (SRM–SECY–10–0121; SRM–SECY–12–0081 Option 2C)
- Developed language on containment performance expectations for new reactors (SRM–SECY–12–0081 Option 2C)

RG 1.174, Rev. 3 – Modifications (cont')

- Changed language related to the terms PRA acceptability, technical adequacy, quality etc.
 - DPO–2016–001 raised issues on inconsistent language usage
 - EDO supported RES OD decision that the staff should adopt the term “PRA acceptability” rather than “PRA quality” or “technical adequacy”
 - RIS under development to communicate staff’s plan to implement EDO resolution across the agency’s guidance to licensees

Public Comments from 2017

- Public comments resulting in changes
 - Numerous editorial changes
 - Examples of where language was clarified:
 - Small impacts to all DID considerations can result in an overall significant impact on DID
 - Modeling of compensatory measures
 - Regarding submission of closed peer review Facts and Observations
 - Risk insights can be used to help inform the DID evaluation
 - Clarification related to defense against human errors

Public Comments from 2017 (cont')

- Public comments not resulting in changes
 - Reversing terminology changes related to “PRA acceptability”
 - Removing the DID consideration on maintaining the intent of the plant’s design criteria
 - Related to submittal of past plant changes

Public Comments from 2012

- Public comments resulting in changes
 - Confusion over hierarchical framework of DID considerations
 - Additional clarification on relative terms (e.g., reasonable, significant)
 - Types of licensing basis changes
 - Inclusion of relevant language from SRP
 - Removal of examples

Public Comments from 2012 (cont')

- Public comments not resulting in changes
 - Relationships between risk-informed decisionmaking principles
 - Limitations on when DID should be addressed

RG 1.174, Rev. 3 – Path Forward

- Upcoming ACRS Full Committee Meeting
- Staff resolves ACRS feedback
- Final Reviews/Concurrence
- March 2018: Final publication