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Issue Summary 2002-22, Supplement 1

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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 PUBLIC MEETING REGARDING DRAFT REGULATORY ISSUE
5 SUMMARY 2002-22, SUPPLEMENT 1, "CLARIFICATION ON
6 ENDORSEMENT OF NUCLEAR ENERGY INSTITUTE GUIDANCE IN
7 DESIGNING DIGITAL UPGRADES IN INSTRUMENTATION AND
8 CONTROL SYSTEMS"

9 + + + + +

10 FRIDAY,

11 JANUARY 26, 2018

12 + + + + +

13 ROCKVILLE, MARYLAND

14 + + + + +

15 The public meeting convened in Room 03B04
16 at the Nuclear Regulatory Commission, One White Flint
17 North, 11555 Rockville Pike, at 9:00 a.m., Harold
18 Chernoff, Moderator, presiding.

19
20 PRESENT:

21 HAROLD CHERNOFF, NRC NRR, Moderator

22 KATHERINE AUSTGEN, Nuclear Energy Institute

23 STEVEN ARNDT, NRC NRR

24 MARIA ASSARD, Westinghouse *

25 DAVID BEAULIEU, NRC NRR

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2 JANA BERGMAN, Curtiss-Wright
3 ROB BURG, EPM *
4 MARK BURZYNSKI, NuClear Day *
5 JERRI BYERS, Southern Nuclear *
6 ROBERT CALDWELL, NRC NRO
7 NORBERT CARTE, NRC NRR
8 JOHN CAVES, Duke Energy
9 DONALD CHASE, Curtiss-Wright *
10 SHELDON CLARK, NRC OGC *
11 GORDON CLEFTON, INL *
12 JOHN CONNELLY, Exelon
13 NICHOLAS DiFRANCESCO, NRC RES
14 VIC FREGONESE, Frammatome *
15 WEST FREWIN, NextEra *
16 ISMAEL GARCIA, NRC NRO *
17 LOU GAUSSA, Westinghouse *
18 PAREEZ GOLUB, Excel Services *
19 TEKIA GOVAN, NRC NRR
20 JARED HANSON, Nuclear Energy Institute
21 RAYMOND HERB, Southern Nuclear *
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10 M. CHRISTOPHER NOLAN, Duke Energy

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13 TEDD QUINN, Technology Resources *

14 DAVID RAHN, NRC NRR

15 CHRIS RIEDL, TVA *

16 JASON REMER, Nuclear Energy Institute

17 TY ROGERS, GE *

18 WILLIAM ROSCO, Member of the Public *

19 KEN SCAROLA, Nuclear Automation Services, LLC *

20 BRIAN THOMAS, NRC RES

21 LYNNEA WILKINS, NRC NRR *

22

23 * present via telephone

24

25

P R O C E E D I N G S

9:00 a.m.

MS. GOVAN: Good morning everyone. It is 9:00 a.m. and we're ready to get started.

On the line, can you hear me and see the webinar? One person can just shout, yes, I can hear you and I can see the webinar, that'll be great.

PARTICIPANT: Yes, we can hear you and see the webinar.

MS. GOVAN: Thank you so much.

Good morning everyone. My name is Tekia Govan. I am the Generic Communications Project Manager for RIS 2002-22 Supplement 1 entitled Clarification on Endorsement of Nuclear Energy Institute Guidance in Designing Digital Upgrades in I&C Systems.

This meeting is being held to provide an opportunity for discussion of the current draft RIS Supplement between NRC and our public stakeholders.

This is a Category 3 meeting. Public participation is actively sought during this meeting to have full engagement with the public. So, that just means that we're having open discussion during this meeting and encourage you to chime in when necessary.

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1 But, I should also note that, even though
2 we're holding this meeting to discuss the RIS, we'll
3 have no position being taken on behalf of the NRC
4 staff and no decisions will be made at this meeting as
5 well.

6 There are a few meeting logistics that I
7 would like to get out of the way before we go to
8 introductions.

9 This meeting is being hosted via webinar
10 and teleconference. We also have a transcriber, Mr.
11 Charles Morrison, in the room. He's over here. So,
12 that's why you see two different devices on the table
13 of the ones that look similar to a record is for the
14 court reporter.

15 And then, these are for the teleconference
16 line.

17 With that being said, please speak up and
18 before speaking, please identify yourself, first, last
19 name and affiliation so that the court reporter can
20 write you down accordingly.

21 For those in the room, the agenda calls
22 for one break. However, we will take them as needed
23 for the guests in the room.

24 If you go out these doors, straight ahead
25 are the restrooms, the ladies to the right, men to the

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1 left. So, feel free to move through the room. We
2 just ask that you do so as quietly as possible not to
3 disturb those on the phone and the recording of the
4 court reporter.

5 Let's see, if there's a fire, please take
6 the hand of one NRC employee and head out of the
7 building. Make sure that you find me because I'm
8 responsible for making sure that we account for all
9 the visitors in the building.

10 Mobile devices, I'd like to ask that you
11 please turn your mobile devices on silent or off,
12 vibrate is even a disturbance, so silent or off.

13 And, so the people on the bridge line, if
14 you could mute your phones when you're not engaging in
15 a conversation in the meeting, that would be --

16 MR. HANSON: I'm sorry to interrupt, I
17 just got feedback from one of our stakeholders that
18 the bridge line has reached capacity.

19 MS. GOVAN: It's 20 people on there.

20 Let me finish my introductory remarks.
21 I'll step out and get more lines added. We had 20
22 lines on there, so this is a very popular meeting.
23 So, I'll do that as soon as we finish.

24 Well, I guess I am. With that being said,
25 I'm going to turn it over to Harold Chernoff who will

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1 provide us with some opening remarks.

2 MR. CHERNOFF: And just -- Tekia, we do
3 need to escort you so we'll have people, you know, go
4 out in the hallway. Some of these need to leave while
5 we're still in session.

6 And, I'm going to just kick it over
7 quickly. I'll be running most of the logistics of the
8 discussion as we go forward.

9 My name's Harold Chernoff. I'm the Chief
10 of the ROP Support and Generic Communications Branch.

11 But, I want to let one of our Division
12 Directors have a few opening remarks.

13 Chris, you're going to do that?

14 ~~PARTICIPANT~~MR. MILLER: Yes.

15 MR. CHERNOFF: Okay.

16 MS. GOVAN: Chris, before you do that, one
17 quick important thing.

18 Let's go around the room and introduce
19 ourselves.

20 Again, I'm Tekia Govan, Project Manager in
21 the Generic Communications Branch.

22 And, we'll just start with Norbert and
23 work our way around the room. And then, start on the
24 phone.

25 MR. CARTE: Norbert Carte, NRC NRR.

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1 MR. BEAULIEU: Dave Beaulieu, NCR NRR.

2 MR. CAVES: John Caves, Duke Energy.

3 MS. AUSTGEN: Katie Austgen, Nuclear
4 Energy Institute.

5 MR. HANSON: Jared Hanson, NEI.

6 MR. MORTON: Wendell Morton, NRC NRR.

7 MR. MILLER: Chris Miller, NRC and the
8 Director of the Division of Inspection and Regional
9 Support and we have 50.59 and that's why we're kind of
10 a newer player in the game here.

11 MR. RAHN: I'm David Rahn. I'm with the
12 Office of NRR in the Division of Engineering.

13 MR. CALDWELL: Bob Caldwell, NRO.

14 ~~PARTICIPANT~~ MR. JUNG: Ian Jung (phonetic),
NRO.

15 MR. REMER: Jason Remer, NEI.

16 MR. NOLAN: Chris Nolan, Duke Energy.

17 MR. DIFRANCESCO: Nick DiFrancesco,
18 Technical Assistant for Office of Research. I'm here
19 listening for ~~a student here~~ CRGR.

20 MR. BENNER: Eric Benner, NRR Division of
21 Engineering.

22 MR. KING: Mike King, NRR DIRS.

23 MR. JENKINS: Ronaldo Jenkins, Research.

24 MR. THOMAS: Brian Thomas Office of
25 Research.

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1 MS. BERGMAN: Jana Bergman, Curtiss
2 Wright.

3 MR. ARNDT: Steven Arndt, NRR.

4 MS. GOVAN: Okay, we'll start on the line
5 with NRC staff. Are there any NRC staff members on
6 the line? Can you please identify yourself?

7 MR. GARCIA: Ismael Garcia, NRC NRO.

8 MS. GOVAN: Anyone else from NRC staff?

9 (NO RESPONSE)

10 MS. GOVAN: All right. It's a lot of
11 people on the bridge line, so if you could introduce
12 yourself without talking over each other?

13 (Unintelligible introductions)

14 MR. CONNELLY: John Connelly, Exelon.

15 MS. GOVAN: That was Al Connelly?

16 MR. CONNELLY: No, John Connelly, Exelon.

17 ~~PARTICIPANT~~MR. HITE: Al Hite
(phonetic),

18 Westinghouse Licensing.

19 MR. NOVAK: Frank Novak, GEH.

20 MR. HERB: Ray Herb, Southern Nuclear.

21 (SIMULTANEOUS SPEAKING)

22 MS. GOVAN: Can you try that one more
23 time?

24 PARTICIPANT: John, can you start?

25 MR. HERNANDEZ: John Hernandez, Palo

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1 Verde.

2 (Unintelligible introductions)

3 MS. GOVAN: Okay, has everyone on the line
4 identified themselves?

5 PARTICIPANT: That was only 16.

6 MS. GOVAN: Okay, well, I'll turn it over
7 to Chris for opening remarks.

8 MR. MILLER: Okay, thank you.

9 And, welcome to everyone here and folks on
10 the phone.

11 I appreciate your getting together and
12 also a fairly short time frame request.

13 We're happy to have this meeting because
14 it's been a while since we've talked about this RIS
15 and the changes to it.

16 Since we have last had a public meeting
17 and a public comment period, we've worked on the
18 public comments. We've, you know, addressed many of
19 the pieces that go into qualitative assessment and how
20 that fits into 50.59 framework.

21 And, frankly, we're getting pretty close
22 to where we think we could issue RIS in short
23 order.

24 But, before we did that, we wanted to have
25 one last touch with the public so that we could ~~let~~

1 meet.

2 This is not a public comment period, but
3 we do solicit in this meeting format, you know, your
4 thoughts on it and if there are any, you know,
5 significant areas that we can address based on this
6 meeting, we would look to do so as we're finalizing
7 this product.

8 But, I think it's a good chance for us to
9 look at the product and to see if there are any
10 significant comments.

11 And, from our standpoint, to walk through
12 what are the changes, what's the nature of the
13 changes.

14 The document's going to look different
15 because we did some formatting changes, so it's going
16 to look different. You know, in my opinion, there's
17 not any significant changes, but you may feel
18 differently. So, we'd like to hear your feedback on
19 that.

20 And, with that said, again, thank you. We
21 look forward to a productive meeting going through
22 this and I appreciate it because that'll -- let me
23 just state it up front very clear.

24 This is -- this RIS is a part of NRC's
25 overall plan to have an integrated way of addressing

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1 digital licensing issues, modifications, the whole
2 suite. This is one important step in it.

3 It's not the only step, and it's probably
4 a minor step in the whole suite of things, but it's
5 one way to get some clarity on digital modifications
6 and we look forward to getting this part out.

7 And then, continuing to work on that whole
8 integrated suite of changes.

9 So, with that being said, I'll turn that
10 back to --

11 MR. CHERNOFF: Thank you, Chris.

12 Remind everybody, as Tekia mentioned, we
13 have two audio systems running and, for the people in
14 the room, it's going to be really important that you
15 speak up if you're not right by both of the recording
16 systems. So, do that in advance.

17 And, for the people on the phone, of
18 course, we ask that everybody stay on mute unless
19 you're speaking.

20 We have a large group and we have a
21 limited amount of time. So, let me explain how we'd
22 like to step through this.

23 I've got a few areas that I want to
24 highlight just to give a flavor of the types of
25 changes that have been made.

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1 They -- as they get -- I'll go through
2 them, but they in no way should be construed as the
3 most significant changes necessarily. But, we tried
4 to present a spectrum of the type of things that have
5 changed rather.

6 The next thing, we'll do that.

7 After that, we'll basically step through
8 the document and solicit feedback section by section.
9 I don't think we have the ability, time to do it in a
10 line by line manner.

11 And, I want everybody to appreciate one of
12 our goals here is to give everybody a chance to weigh
13 in. So, there may be an occasion -- I would just ask
14 people to be succinct and our goal here is not to
15 resolve or debate, but to listen from the staff's
16 point of view mostly.

17 We may ask questions because we want to
18 make sure we understand what's being brought up. And,
19 we're going to try to stay focused in that regard.

20 It's generally a roomful of engineers and
21 a phone booth full of engineers and it's hard for us
22 all not to slip into solution mode. But, I ask that
23 you, you know, we all exercise a little bit of
24 discipline so that everybody will have a chance to
25 provide some input that they want to.

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1 With that, if there are no questions, if
2 you'd turn to slide 3, we'll go through and highlight
3 some of the areas that have changed.

4 In the room here and on the web, you have
5 the latest review version which is -- has a watermark
6 that says Draft for Discussion.

7 There's some extra copies in the corner if
8 you don't have one.

9 We will have that up on the webinar and on
10 the screen.

11 Also provided is a copy of the version
12 that went out with the Federal Register Notice in June
13 for reference.

14 With that, the first area I just wanted to
15 highlight is, we went in and one of the things that
16 changed, certainly visually and also content wise was
17 probably one of the key areas going in and reworking
18 the discussion of the relationship between the
19 terminology sufficiently low likelihood that's
20 presented in 0101~~and the IO 101~~, NEI 0101, and now that
21 flanges
22 up and can be used to address the criterion 1, 2, 5
23 and 6 of 10 CFR 50.59.

23 And, I think one of the key improvements
24 we made there is, I would call it bridging the
25 terminology when we're talking about possibility and

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1 frequency, et cetera and how that can directly, in our
2 eye, relate to sufficiently low likelihood and be used
3 as building blocks for the quantitative, qualitative
4 assessments in that regard.

5 We also went into the overall structure of
6 the document and we now have the qualitative
7 assessment 50.59-related part of the discussions,
8 primarily in Sections 2, 3 and 4 of the document.

9 Section 5 of the document is now primarily
10 devoted to engineering design process, engineering
11 modification process discussions.

12 So, we felt there was some clarity added
13 by a little bit of separation so it's clear when we're
14 talking about 50.59 process and when we're talking
15 about the engineering design process.

16 Section 6 is now limited to a discussion
17 of 10 CFR 50.59 documentation. There is embedded in
18 Section 5 some discussion of our thoughts on
19 documentation of the engineering work, the engineering
20 process and engineering modifications.

21 If you turn to page 4, in Section 2.2,
22 again, this is in the qualitative assessment
23 discussion. There's been an expansion of the process
24 discussion both in the number of steps described and
25 the sub-bullets within the steps.

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1 And, also, an area that we spoke to
2 directly was the analysis or re-analysis of results.
3 And, we want to emphasize that when you're analyzing
4 results, this is a criteria 6 discussion primarily.

5 You need to do that consistent with your
6 current design and licensing basis.

7 And, I think for most of the people that
8 are familiar with 50.59, if you're using a different
9 methodology, that's a different question and a
10 discussion for a different day.

11 But, there was a little bit of lack of
12 clarity in that regard with regard to assessing CCFs
13 with best estimate methods and we want to try to clear
14 that up. That doesn't give you the ability to go in
15 and change your licensing and design basis analytical
16 methods.

17 We also -- you also see there -- in the
18 summary draft that went with the Federal Register
19 Notice, there was a process for determining safety
20 significance. That's been removed in its entirety.

21 We also added some explicit discussion
22 that we did add a few things into the engineering
23 process discussions that are not already described in
24 0101 and part of this is a reflection -- our staff
25 felt it was warranted. 0101 obviously is a, you know,

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1 more than a roughly ten-year-old document and endorses
2 a Branch Technical Position that is also about ten
3 years old and about four Revs behind the current.

4 So, there are a couple of areas that were
5 added to try to address what our staff believes is the
6 current thinking in some of the engineering areas.

7 And, I think we tried to be very direct
8 that that was done.

9 The other thing which, just to give the
10 spectrum is, there was a decision tree flow chart in
11 the June draft. And, at this point, that's been
12 removed.

13 One of the things it did at that time, it
14 reflected the way the document was written and
15 included a mix of 50.59 and design information and
16 processes.

17 At this point, that's not in the current
18 draft.

19 Any questions on any of those items? And,
20 obviously, when we step through the document, each of
21 those sections will come up. So, specific comments or
22 thoughts, we can hit as we go through the sections.

23 MS. SCAROLA: Yes, this is Ken Scarola
24 from Nuclear Automation Engineering.

25 I have a comment about definition

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1 sufficiently low which you address on the previous
2 slide. Do you want me to hold that comment until
3 later? I'm not sure what format you want to use those
4 comments.

5 MR. CHERNOFF: Yes, that might be -- Ken,
6 that might be best as we get into that section. It'll
7 may be more apparent to people because they'll see it
8 on the screen while you're talking about it.

9 MR. SCAROLA: That's fine.

10 MR. CHERNOFF: Okay?

11 Okay, so there are two areas moving
12 forward, we'll go through section by section. We will
13 kind of monitor the time. We want to make sure we get
14 through the whole document.

15 So, if we're urging you on a little bit,
16 you understand why.

17 And, hopefully, we'll have some time at
18 the end for some general feedback. If we have extra
19 time beyond those things, we can entertain a little
20 more detailed discussions of what looks like maybe
21 some of the more significant topics that people bring
22 up.

23 Any questions? All right.

24 MR. REMER: Let me mention one thing.

25 Jason Remer, NEI.

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1 We've had this document since Wednesday.

2 MR. CHERNOFF: Understood.

3 MR. REMER: And so, we haven't had a
4 chance to fully vet the document. So, a section by
5 section review, we want to hear what y'all think about
6 it, for sure.

7 There'll be some who have had -- we've got
8 some comments, but it's drastically a different
9 document than what we saw in July.

10 And so, we're trying to struggle with --
11 and there wasn't a Rev thing that we can go from one
12 part to another, so we're kind of struggling to kind
13 of put everything together and figure out where it is
14 and where it goes.

15 MR. CHERNOFF: Understood. It's a lot of
16 information, yes.

17 MR. REMER: So, a line by line or a
18 section by section --

19 MR. CHERNOFF: Well, we're -- I just want
20 to clarify, staff does not intend to talk through the
21 document.

22 MR. REMER: Yes, yes.

23 MR. CHERNOFF: Okay? So, our focus here
24 is on getting feedback from you folks.

25 If there is some need for additional

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1 exchange, more time, we can talk a little bit about it
2 towards the end of the meeting to see where people
3 are.

4 MR. HANSON: This is Jared Hanson with
5 NEI.

6 To that note, we do have some people on
7 the line that are going to be providing some feedback
8 for certain sections of the document.

9 But, just to reemphasize what Jason said,
10 we've only had this for three days.

11 MR. CHERNOFF: I understand.

12 MR. HANSON: So, I think you are going to
13 hear some significant comments on part of this
14 document, but, again, that's only after three days.

15 And, all things considered, I think it
16 would be better to have a little bit more time to look
17 at this document and review it to --

18 MR. CHERNOFF: Noted.

19 MR. HANSON: Okay.

20 MR. CHERNOFF: Yes.

21 MR. HANSON: Thanks.

22 MR. CHERNOFF: Yes, and we -- as Chris
23 mentioned, I mean, we understand there's a large
24 volume of paper here, 30-plus pages. And, while we
25 talk about a lot of content is the same, it's not

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1 intuitively obvious until you sit down and study it.

2 And, there are areas of change as well.

3 So, understood.

4 MR. HANSON: Just one thing -- one comment
5 I'll make on that is this is something I think has
6 been discussed in numerous other meetings with
7 numerous other products is that, if it does require
8 that much interpretation to people who have been on
9 board with the development of a document, if you
10 really think you need to put that much work into
11 explaining what something means, that could be -- that
12 could indicate that there is potentially a problem.

13 I just want to throw that out there
14 because if the people that are involved in the
15 development of it have that much of a problem
16 understanding something, then what would we expect
17 from someone working out at the plant that would
18 suddenly have this document in their hands and is
19 supposed to turn around and use it?

20 So --

21 MR. CHERNOFF: And, you're speaking with
22 regard to the volume and the amount of discussion?

23 MR. HANSON: Yes, not -- the volume and
24 perhaps some additional clarity that may be needed on
25 some sections.

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1 MR. CHERNOFF: Okay, understood, okay.

2 MS. GOVAN: Before we dive into the
3 document, I apologize, but I want to make sure that
4 everyone on the line has an opportunity to actually
5 hear the meeting.

6 We had 20 lines set up and we reached
7 capacity. So, I need to step in with the operator and
8 actually add more lines to this bridge.

9 MR. CHERNOFF: So, we'll hold for just a
10 couple minutes?

11 MS. GOVAN: Yes, please.

12 MR. CHERNOFF: Okay.

13 (Whereupon, the above-entitled matter went
14 off the record at 9:22 a.m. and resumed at 9:24 a.m.)

15 MR. CHERNOFF: Okay. So, we'll step into
16 this.

17 Okay, so, the RIS itself is the first part
18 of the document. And, I guess what I would like to
19 suggest and we'll let anybody if they have anything
20 substantive, but, recognize that it's intended to
21 reflect the body of the document and we'll end up
22 making it conform at the end of the road.

23 But, anything specific on the RIS itself?

24 (NO RESPONSE)

25 MR. CHERNOFF: Okay. One thing to note

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1 here, probably may or may not have constituents on the
2 line, but, this was expanded to apply also as an
3 addressee to non-power facilities as well.

4 Okay, getting into the beginning of the
5 document, Section 1, purpose section.

6 Any thoughts, comments on that?

7 MR. FREGONESE: ~~Nick~~Vic Fregonese has joined.

8 MR. CHERNOFF: Okay, thank you.

9 Hopefully, you can see the webinar and
10 we're currently stepping through the body of the
11 attachment.

12 MR. FREGONESE: Okay.

13 MR. HANSON: Sorry, this is Jared Hanson,
14 NEI.

15 Vic~~Dave~~, did you want to make a
general
16 comment about the RIS?

17 MR. FREGONESE: Yes, I don't know if the
18 ~~NCOs~~others have made any comments about it. Jared, I'm
just
19 trying to catch up because I couldn't get on the
20 phone.

21 MR. HANSON: So, we're at the point now
22 where we're making general comments about the RIS.
23 We're just beginning the section by section review.

24 But, Harold has asked if there are any

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1 general comments now would be the time to make those.

2 MR. FREGONESE: Yes, I could do that, if
3 that'd be okay.

4 MR. CHERNOFF: Yes, and I know some of the
5 folks may have missed the introduction but we are
6 having this court recorded, transcribed record. So,
7 please state your name and affiliation so the recorder
8 can get it properly captured.

9 MR. FREGONESE: Okay, Harold.

10 This is Vic Fregonese. I'm with
11 Frammatome.

12 I'll make a couple general comments.

13 The first is that there appears to be a
14 lot of material that was cited or quoted that was
15 pulled in from NEI 0101 into the document that's
16 actually increased the size quite a bit.

17 And so, the first thing I'd like to
18 understand is why that is necessary if there's another
19 way to handle that? It just makes the document
20 somewhat unwieldy.

21 So, that would be my first question. I'll
22 await your response.

23 MR. CHERNOFF: Well, one of the other
24 things we talked about in the introduction is, the
25 structure of this meeting is, we want to solicit

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1 feedback and I think I understand your comment in this
2 area.

3 But, we're not, at this juncture, going to
4 try to solve or debate issues. We want to try to make
5 sure we allow time to understand all the things that
6 people want to bring to the table.

7 And, you know, I certainly understand your
8 comment, but with the interest of getting through the
9 entire document with all the people and the limited
10 amount of time, we're going to try to stay in that
11 mode of listening and making sure we understand what
12 people are saying rather than trying to answer
13 questions specifically.

14 MR. FREGONESE: Okay. So, the question
15 would be then, there's material in NEI 0101 that's
16 been quoted that does not necessarily align with the
17 current direction of say 96.07 Appendix D.

18 And, in some cases, it may not even agree
19 with 96-07. So, that's my comment -- my first
20 comment.

21 MR. CHERNOFF: Okay, thank you.

22 MR. FREGONESE: The second comment that
23 we, in the attachment, and you still divide?

24 MR. CHERNOFF: We are just starting the
25 attachment. We're on Section 1 of the attachment.

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1 MR. FREGONESE: Okay, I don't have any
2 comments until page 7, so I'll hold those until we get
3 to page 7.

4 MR. CHERNOFF: Okay.

5 Anybody else in Section 1 of the
6 attachment?

7 MR. SCAROLA: Yes, this is Ken Scarola.

8 I don't understand why did you skip to the
9 attachment and not first start in the body of the RIS?

10 MR. CHERNOFF: Well, actually, we didn't
11 skip, we asked for feedback on the body, paused a few
12 moments and then moved on.

13 But, we're happy to go back, Ken, if
14 you've got some items in the body of the RIS.

15 MR. SCAROLA: I'm sorry, I guess I missed
16 that. You know, when you said you have to get more
17 ~~aligned~~lines, I went and I got a cup of coffee. I'm sorry,
18 I didn't catch that.

19 I do have a comment.

20 MR. CHERNOFF: The challenges of
21 teleconferences, yes.

22 MR. SCAROLA: Yes, I'm very sorry.

23 MR. CHERNOFF: No, no problem. So, I'll
24 go back to the RIS.

25 MR. SCAROLA: All right.

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1 The main body of the RIS, on page 3 you
2 provide a footnote which is a quote from NEI 01 on
3 sufficiently low. I have no problem with that.

4 Where I do have a problem comes later
5 where you have other inconsistent definitions of
6 sufficiently low, definitions that are not consistent
7 with this.

8 So, I just sort of ~~blew~~want to bring it up
at this

9 point that this definition of sufficiently low makes
10 sense. It did not -- it's in the NEI 0101 and we've
11 used it for a long time.

12 And, I'll focus on the words, and
13 comparable to other common cause failures that are not
14 considered in the FSAR.

15 Later, we talk about being able to exclude
16 failures if they are not as likely to happen as those
17 in the FSAR. This is a very different threshold.

18 As likely to happen are things like single
19 failures. Things that we don't consider at all are
20 things like seismic events that exceed the EQ
21 envelopes.

22 In between that, there's a big gap and we
23 have much NRC guidance that exists and aid to address
24 that gap.

25 So, I just want to point out that we need

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1 to address this. I'm okay with it in the body, we
2 need to address it later.

3 MR. CHERNOFF: Okay. Could I ask a
4 clarifying question? You reference much NRC guidance
5 to address said gap, can you give me an example or
6 two?

7 MR. SCAROLA: SECY-93-087 says that the
8 design defects in digital systems are not as likely as
9 things we consider in the FSAR. Therefore, we
10 consider them as beyond design basis.

11 They do require further consideration
12 because they are not as unlikely as things we don't
13 consider in the FSAR.

14 BTP-7-19 has similar language as we
15 consider design defects for the same reasons. We
16 consider them as beyond design basis, we don't not
17 consider them.

18 MR. CHERNOFF: Which revision of the BTP
19 are you speaking to?

20 MR. SCAROLA: The latest revision SECY.

21 MR. CHERNOFF: All right, thank you.

22 Okay, anything else in the RIS body?

23 (NO RESPONSE)

24 MR. CHERNOFF: All right.

25 MR. SCAROLA: Excuse me, this is Ken

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1 Scarola again. I have one more comment.

2 In the RIS body on page 4, when we talk
3 about the RIS being applicable to things of lesser
4 importance than the reactor protection system and the
5 engineered safety feature system, but we don't give
6 any examples here of things that are as important, but
7 are not reactor protection system and engineered
8 safety feature systems.

9 So, my concern is that someone reading
10 this might say, well, look, this is not RPS and ESF~~AS~~,
11 this RIS applies.

12 But, there are other things that are as
13 important as RPS and ESF~~AS~~ that this RIS does not apply
14 to.

15 Very deep in the attachment, you refer to,
16 for example, load sequencer. I think someplace else
17 in the attachment, you refer to controls that support
18 credited manual actions.

19 These are all as important as RPS and ESF~~AS~~
20 and it should be pretty clear that this RIS is not
21 applicable to them. Or, if it is applicable, if
22 that's your intent, then the RIS should clarify that.

23 Right now, we have contradictions in the
24 RIS that are very confusing.

25 MR. CHERNOFF: Okay, thank you.

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1 And, I hesitate to ask one more time,
2 anything else on the body of the RIS?

3 (NO RESPONSE)

4 MR. CHERNOFF: All right, let's move on,
5 please.

6 All right, so we had talked about the
7 purpose and I did not hear anybody identify a comment
8 in this area. One last call before we move on to
9 Section 2.

10 MR. REMER: One, yes.

11 MR. CHERNOFF: Yes?

12 MR. REMER: One comment on purpose and we
13 started the process off last January and basically
14 we're at January 2016 that we would need an easier
15 process, an easier more efficient process to do
16 changes to upgrade our plans.

17 Using digital technology, it would be
18 easier than the current process.

19 And so, that's the stated goal and some of
20 the things we're seeing in here, though, are somewhat
21 confusing at this point. And, it doesn't appear to be
22 easier.

23 And so, our comments that you'll here are
24 going to reflect that. We got rid of the flow chart.
25 Why?

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1 You know, we had run through a couple of
2 examples on the draft RIS in July that worked. It
3 doesn't work anymore with this.

4 So, as we roll out the comments, you're
5 going to hear how it's actually, I'm wondering if it
6 meets the intent of what we started to do here.

7 So, that's my only comment.

8 MR. CHERNOFF: Okay. And, just a
9 reminder, please identify yourselves.

10 MR. REMER: Jason Remer, NEI.

11 MR. CHERNOFF: Sorry, it just --

12 MR. REMER: That's okay.

13 MR. CHERNOFF: -- helps a lot in the end
14 product of the transcript.

15 MR. FREGONESE: What page are we on in the
16 attachment? I'm just trying to keep up.

17 MR. CHERNOFF: We are on page 9.

18 MR. FREGONESE: Okay, so in -- I had a
19 comment on page 7 of the attachment.

20 MR. CHERNOFF: Page 7 is actually part of
21 the RIS, but that's okay.

22 MR. FREGONESE: Oh no, okay, I'm sorry,
23 then I'm looking at the wrong thing.

24 MR. CHERNOFF: Hey, if you're on the
25 webinar, it should be up on the screen and you can

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1 follow along.

2 MR. FREGONESE: Yes, okay. The version
3 that we got I believe before just had page 7 of 27,
4 now we're looking at page 7 of 25, 7 of 35.

5 MR. CHERNOFF: Yes, I'm not sure what
6 version you got or who you got it from because this is
7 exactly the same version we pushed out.

8 MS. AUSTGEN: This is Katie Austgen.

9 I think I understand Vic's confusion.
10 Even the handouts --

11 MR. CHERNOFF: Is there a numbering
12 problem?

13 MS. AUSTGEN: They don't have the same
14 numbering. So, the numbering that you're showing on
15 the screen has sequential numbering from the very
16 beginning of the document all the way through the
17 attachment.

18 MR. CHERNOFF: Got you.

19 MS. AUSTGEN: The numbering on the --

20 MR. CHERNOFF: So, the headers show --

21 MS. AUSTGEN: -- handouts, yes, the
22 numbering on the handouts starts over again. So,
23 there actually is no page numbers --

24 MR. CHERNOFF: Okay.

25 MS. AUSTGEN: -- on the first page of the

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1 attachment. And then --

2 MR. CHERNOFF: So, I understand the issue.

3 MR. FREGONESE: So, what was posted was a
4 PDF and the attachment is -- the numbering's just
5 different. So, I'm just going with what was posted on
6 the public access.

7 MR. CHERNOFF: Yes, we'll call them out so
8 we can make sure people are on the same wavelength
9 here. I understand the problem.

10 Okay.

11 MR. SCAROLA: Yes, I'm sorry. This Ken
12 Scarola, again.

13 And, I'm having similar confusion. I have
14 a comment on page 6, but I guess I'm on page 6 of the
15 RIS.

16 And, this is the very first paragraph
17 where it talks about a licensee may use the
18 qualitative assessment. And, I have no argument with
19 that. That's certainly consistent with prior NRC
20 guidance.

21 But, what it goes on to say, that you can
22 use that assessment to reach a conclusion of
23 sufficiently low and then you previously defined
24 sufficient low to say, requires no further
25 consideration.

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1 That is not consistent with prior NRC
2 policy in the SRM/SECY-93-087 or BTP 7-19. Those
3 documents say you can use the qualitative assessment
4 to conclude that the likelihood is sufficiently low to
5 be considered beyond design basis and, therefore, can
6 be further analyzed using best estimate methods.

7 The previous NRC policy does not say
8 sufficiently low to require no further consideration.

9 So, we have an inconsistency in this RIS
10 with regard to previous NRC policy. And, I'm -- it's
11 somewhat confusing to me as to how this RIS can change
12 that policy without sufficient basis?

13 The previous policy says you can get to no
14 further consideration but it requires deterministic
15 factors, not just qualitative factors.

16 So, I have a concern about that, about the
17 inconsistency with current policy.

18 MR. CHERNOFF: Okay, I understand what you
19 said. We're switching to pull up the PDF copy that
20 was pushed out so we're working from the same
21 document. Give us just a second that should eliminate
22 our numbering conundrum.

23 (OFF MICROPHONE COMMENTS)

24 MR. SCAROLA: So, on the PDF, my comment
25 for change to the first paragraph on page 6 of 8.

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1 (OFF MICROPHONE COMMENTS)

2 MR. CHERNOFF: All right, what was that,
3 again, Ken? I'm sorry.

4 MR. SCAROLA: Page 6 of 8, first
5 paragraph.

6 MR. CHERNOFF: And, let me just make sure
7 I think we're now have the same version on the screen
8 as what you guys are working from, that should help
9 us.

10 All right, go ahead.

11 MR. SCAROLA: So, the issue here is the
12 conflict in the definition of sufficiently low. If
13 you believe in this paragraph sufficiently low means
14 sufficient to be considered as a beyond design basis
15 condition and is further considered as a beyond design
16 basis condition, I'm perfectly okay with it.

17 But, based on the previous definition of
18 sufficiently low, sufficiently low means requires no
19 further consideration. And, that's a conflict.

20 MR. CHERNOFF: Okay, thank you.

21 All right, now, let's make sure
22 everybody's on the same page, we're on page 7 of the
23 RIS. It has about the middle of the page the
24 backfitting and issue finality discussion.

25 Anybody having a configuration issue that

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1 we're on a different page?

2 MR. FREGONESE: No, this it. I have a
3 comment actually on the attachment, so I'll hold my
4 comment.

5 MR. CHERNOFF: Okay, all right. Well,
6 we've solved one small thing anyway. We've got the
7 same versions now.

8 All right, so, as we go back into the
9 attachment, I believe we were done with the purpose
10 and we were trying to get started on Section 2 which
11 is getting into the application of qualitative
12 assessment and 50.59.

13 Let me open it up for thoughts on any part
14 of Section 2.

15 MR. HERB: This Ray Herb, Southern
16 Nuclear.

17 If you look at the sentence right above 18 2.1 --

18 MR. CHERNOFF: Okay.

19 MR. HERB: -- it says, when discussing
20 CFR 50.59 criteria, the word met or satisfied means
21 that a yes or affirmative answer has been achieved and
22 an amendment is required.

23 It doesn't make sense at all specifically
24 because there's not really anywhere in the document
25

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1 where the words met or satisfied are even used.

2 MR. CHERNOFF: Okay, we can look at that.

3 I will explain in one area here that this
4 convention is taken out of NEI 96-07. We wanted to
5 make sure that we're consistent with the use of those
6 terms if the terms have been edited out. So, we'll
7 deal with that, good thought.

8 But, I want to make sure people understood
9 what was getting out there because in colloquially
10 when we speak about something being met, it certainly
11 isn't obvious whether or not it means you need an
12 amendment or you don't need an amendment. Which way
13 are you meeting the criteria?

14 So, we wanted to be consistent with 96-07.
15 I think that's -- yes.

16 Other thoughts?

17 MR. SCAROLA: This is Ken Scarola.

18 In the paragraph right above the heading,
19 Likelihood Thresholds, the 10 CFR 50.59, there's the
20 same discussion of using qualitative measures to reach
21 sufficiently low. I just want to point out the same
22 issue that I pointed out --

23 MR. CHERNOFF: Okay. And, Ken, I would
24 ask --

25 MR. SCAROLA: I just point it out again

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1 because it shows up in many, many places.

2 MR. CHERNOFF: I was just going to ask
3 you, I think we understand the comment and I was just
4 going to ask that exactly. So, it applies to various
5 parts of the document.

6 Anything else in Section 2 that people
7 want to discuss?

8 MR. FREGONESE: This is Vic FREGONESE, I
9 have a issue if we go to page 5 and I can -- is Katie
10 in the room, I assume?

11 MR. CHERNOFF: She is.

12 MR. FREGONESE: Okay. So, page 5, there's
13 a step 3, do you see that at the bottom of Section
14 2.2?

15 MR. CHERNOFF: It's on the screen.

16 MR. FREGONESE: Yes, correct.

17 So, step 3, the second bullet and it talks
18 about -- it pulls a quote out of NEI 0101 or Section
19 ~~1010~~of 0101 and it talks about the
level of detail to
20 consider which is design functions described in the
21 FSAR.

22 We've had a lot of discussions with the
23 staff about this topic. And, here, it talks about
24 design functions assigned to the system level and it's
25 appropriate to evaluate the effects of malfunctions at

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1 this level.

2 I guess my question is, number one, is
3 this consistent with the direction that 96-07 Appendix
4 D is going?

5 And, number two, is this referring to a
6 technical evaluation or the 50.59 evaluation?

7 I'm concentrating on the word, you know,
8 evaluation. So, I wanted Katie to fill in the blanks.
9 That would my comment on this section.

10 MS. AUSTGEN: Thanks, Vic. This is Katie
11 Austgen from NEI.

12 Vic raises an excellent point. This is a
13 key item in the ongoing discussions on NEI 96-07
14 Appendix D.

15 It is not clear whether it is consistent
16 with the direction that the industry has proposed in
17 Appendix D.

18 If it's not consistent with it, then it's
19 cutting off the discussion that we have been having in
20 those public meetings. And so, that is a concern for
21 us.

22 MR. CHERNOFF: I will try to clarify. This
23 document is rooted in clarifying NEI 0101 and the
24 associated Branch Technical Position that was
25 referenced in that.

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1 It cannot -- we cannot issue a document,
2 a priori of decision making related to documents that
3 are currently under review.

4 But, it also does not and wasn't intended
5 to prohibit or predetermine the outcome for other
6 parallel activities that are underway.

7 So, unfortunately, we can only deal with
8 things one at a time. And, that's the challenge we've
9 got.

10 Certainly, we've had some of those same
11 internal discussions and the intent is to clarify the
12 existing documents that have been on the street for
13 quite a number of years and stop at that juncture for
14 this document.

15 And, recognizing there's an overall
16 integrated plan with, as Chris said, you know, and you
17 mentioned, additional pieces, additional work is
18 underway.

19 And, I mean, we understand the issue.
20 We've had those discussions internally.

21 MR. FREGONESE: This is Vic Fregonese.

22 I'll make a follow up comment on that.

23 So, I'm not sure whether this is consistent with NEI
24 96-07 Rev 1 which has been endorsed by the NRC.

25 So, if there is any inconsistency between

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1 NEI 0101 and 96-07 Rev 1, it should be at least
2 addressed. That's my comment.

3 MR. CHERNOFF: I understand.

4 MR. RAHN: This is David Rahn of NRR.

5 I'd like to ask Vic a question. Can you
6 be a little bit more specific in step 3, the clauses
7 that you're concerned about?

8 MR. FREGONESE: It's the second bullet.
9 This is Vic Fregonese.

10 It's the second bullet and it was just a
11 comment on the level of detail at which design
12 functions are described in the FSAR.

13 And, it talks about assignment can be a
14 relevant design function at the system level. It's a
15 quote out of NEI 0101.

16 And so, the question is, when you evaluate
17 the malfunction results, we've had a lot of discussion
18 about kind of what level do you do that at? That's
19 the nature of my comment.

20 MR. RAHN: Great, yes, thank you very
21 much, Vic.

22 MR. HERB: This is Ray Herb, Southern
23 Nuclear.

24 I'd also like to point out that NEI 0101
25 was developed I think at a time before 96-07 was

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1 finalized. And so, some of these inconsistencies are
2 a result of that disconnect at that time.

3 And, I think that it's inappropriate to
4 call out the specific section of NEI 1010 that I
5 believe is directly in conflict with 96-07 Rev 1.

6 MR. CHERNOFF: Well, so there -- 0101
7 certainly might have been being worked on somewhat at
8 the same time frame as parts of 96-07 but 96-07 was
9 finalized in I believe '99, a couple of years before
10 the finalization of 0101.

11 MR. BEAULIEU: This is Dave Beaulieu.

12 Could you clarify the specific statement
13 in 96-07 that it's in conflict with?

14 MR. HERB: I think we're talking about the
15 level of detail. Just, again, I just want to
16 reiterate the same thing that Vic said, that Appendix
17 D, the level of detail has nothing that's in the
18 function -- I mean, that's in the FSAR, that's not the
19 issue.

20 It's the impact on the system level
21 analyses. And, some of my fleet FSARs have a lot of
22 level of detail and some of them have very little
23 level of detail.

24 Are you suggesting that I don't have to do
25 a LAR for my plant ~~hatch~~Hatch, but I might have to do a
LAR

1 for my plant Vogtle?

2 MR. CHERNOFF: Well, clearly, 50.59 is
3 pinioned off of the level of information in the UFSAR.
4 So, you possibly may not get the same results for two
5 facilities that have two different FSARs with
6 different level of details. That's a known.

7 MR. HERB: I think that that was the whole
8 purpose of that discussion in 96-07 Rev 1 was to
9 eliminate that disparity.

10 MS. AUSTGEN: This is Katie Austgen.

11 So, I'll say I agree with Ray, but I
12 recognize that we may be getting into problem solving
13 space. This is part of why I said this is -- sorry,
14 I'm with NEI.

15 This is part of the active dialogue that
16 was ongoing with Appendix D. We were tying back to
17 NEI 96-07 Rev 1. That's why, you know, we understand
18 this is a little confusing to -- as the guidance is
19 evolving.

20 We want to be mindful of where we've been
21 and where we're going.

22 So, I think, in short, our point here is
23 that, while we all recognize these words that have
24 been quoted in step 3 are, in fact, in NEI 0101, it
25 has become apparent that we do not all view those

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1 words in the same light.

2 So, repeating them in this RIS does not
3 necessarily provide any clarity.

4 MR. CHERNOFF: Thank you, Katie.

5 Anything else in Section 2?

6 MR. FREGONESE: Yes, this is Vic Fregonese
7 again.

8 I'm going to go to page 7 unless there's
9 some comments on page 6.

10 I'll make some general comments about some
11 of the wording in this section that I'd like to get
12 some clarification on and it may be -- it may go to
13 Katie's area again.

14 In this section, there is descriptions of
15 what's called implicitly described either design
16 functions or implicitly modeled safety analyses.

17 And, I'm not really sure what that means,
18 because implicit is the type of word that leads you to
19 believe it's something that was done perhaps and not
20 described.

21 And, I'm trying to understand why that was
22 used in that section. Or, if it's going to continue
23 to be used, and specifically, it's under, for
24 instance, number one on this page and down in the last
25 paragraph right before two, it talks about safety

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1 analyses that may have been explicitly or implicitly
2 modeled the equipment performed in design functions.

3 So, then, up above in one bravo, it talks
4 about functions -- design functions either explicitly
5 or implicitly described in the final safety analysis
6 report.

7 So, I don't know how you have a design
8 function that's implicitly described in the final
9 safety analysis report and wanted to know, perhaps,
10 there's some clarification needed on that or some
11 comments from perhaps our 50.59 folks.

12 That's my comment.

13 (OFF MICROPHONE COMMENTS)

14 MR. CHERNOFF: I think we -- I was just
15 consulting with Dave Rahn here, we understand the
16 point.

17 Okay, was there any --

18 MR. RAHN: It's not a 50.59 issue, it's a
19 documentation in the FSAR issue.

20 MR. FREGONESE: Yes, this is Vic
21 Fregonese.

22 Once again, I think that the term design
23 function clearly is a 50.59 issue.

24 MR. RAHN: It's a 50.59 term.

25 MR. FREGONESE: In the document, the RIS

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1 seems to focus on equipment rather than design
2 functions. And, that's something that has to be
3 sorted out because it goes back to the level of detail
4 in the FSAR that Ray described.

5 And, there's been a lot of discussions on
6 the 50.59 side about, you know, what design functions
7 mean in the context of the qualitative evaluation?

8 So, that's the end of my comment.

9 MR. CHERNOFF: Thank you, Vic.

10 MR. SCAROLA: This is Ken Scarola.

11 On page 3, actually, the bottom of page 2
12 and then the top of page 3, you have a statement that
13 says the increase in the likelihood of single failures
14 results in an increase in the likelihood of common
15 cause failures for redundant SSCs.

16 That's just technically incorrect.
17 Redundant SSCs have --

18 MR. CHERNOFF: Hang on for just --

19 MR. SCAROLA: -- resources.

20 MR. CHERNOFF: Hang on for a second. Can
21 you -- because we're going back again, help me with
22 exactly where you are.

23 MR. SCAROLA: I'm at the bottom of page 2
24 of 27 and the top of page 3 of 27.

25 MR. CHERNOFF: All right, I'm there now,

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1 thank you.

2 MR. SCAROLA: By the way, you're going
3 through this so fast, you know, Section 2, you're
4 asking for comments on Section 2. Section 2 is a lot
5 of pages of material.

6 It might be better if you go through
7 Section 2 by subsections or by pages because, yes, we
8 are jumping all around because Section 2 is so big.

9 Anyway, my comment is that we need to fix
10 the technical correctness of this idea. If you -- the
11 single failures are random failures.

12 You can increase the likelihood of a
13 single failure a 100 fold and not increase the
14 likelihood of a common cause failure if the single
15 failure is not a shared resource.

16 And, this particular -- this specific
17 sentence refers to redundant SSCs where there are no
18 shared resources between redundancies.

19 And, if there are, then you don't meet the
20 single failure criteria or the independence
21 requirements.

22 MR. CHERNOFF: Yes, I understand, please
23 comment.

24 MR. RAHN: You know what? This is -- Ken,
25 this is Dave again.

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1 I'm not really following the -- your
2 point. So, could you try it one more time for me?

3 MR. SCAROLA: Yes. If I have two
4 independent relations, these are the redundant SSCs.
5 So, I have a Division A and Division B.

6 And I increase the likelihood of a single
7 failure in Division A. So, I use a power supply with
8 a shorter MTBF, I've increased the likelihood of a
9 single failure in that system.

10 MR. RAHN: Okay.

11 MR. SCAROLA: Well, that power supply in
12 that division is not going to cause a common cause
13 failure in Division B.

14 MR. RAHN: Okay.

15 MR. SCAROLA: There's no compliment at
16 all. These are redundant independent SSCs.

17 MR. RAHN: I understand now, yes. Yes,
18 thank you, yes. Yes, thank you.

19 MR. SCAROLA: Yes, that was just a
20 technical comment.

21 I'll tell you what my biggest comment is
22 in this section. Let me get the page number so we're
23 all in the same place. Excuse me one second.

24 On the bottom of page 5, we have a quote
25 from NEI 0101 that uses the word result and bounded.

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1 There are no two other words that have caused more
2 inconsistency in 50.59 evaluations than those two
3 words.

4 And, this document does little to nothing
5 to help clarify what those two words mean.

6 What is the result that we're talking
7 about? And, what does it mean for that result to be
8 bounded?

9 We've had this problem for years and we
10 identified this problem back in 2012 when we first
11 started all these discussions. And, I don't see that
12 this RIS takes this any further along the path of
13 really understanding what those two words mean.

14 MR. RAHN: I understand that.

15 MR. CHERNOFF: Okay.

16 (OFF MICROPHONE COMMENTS)

17 MR. KING: Hi, this is Mike King.

18 Did the previous version of the RIS have
19 language that helped to clarify? I'm just trying to
20 understand if you thought that there was something
21 taken out.

22 MR. RAHN: No, no, no.

23 MR. SCAROLA: No, I don't recall we solved
24 this in the previous version ~~here~~either. But, I have
25 no more comments on the previous version.

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1 MR. CHERNOFF: Realistically, it's not
2 within the initial scope of what we were trying to
3 accomplish with the RIS. Notwithstanding the point
4 that Ken is bringing up, the intent of the RIS was to
5 focus on the ability to do a qualitative assessment in
6 the 50.59, not to correct understandings of all the
7 terminology that's created confusion over the 20 years
8 of using 96-07.

9 I totally understand your point in the
10 varied understandings and usage of those terms, Ken.

11 MR. SCAROLA: But, don't you believe that
12 the purpose of this RIS is to clarify those
13 misunderstandings?

14 MR. CHERNOFF: Not at all.

15 MR. SCAROLA: Isn't that --

16 MR. CHERNOFF: Totally -- that is not the
17 intent of the RIS, that was not published in the FRN,
18 it was limited. And, that's in the bigger picture, we
19 have other activities going on, but that's a
20 fundamental 96-07 issue, it's not a digital I&C issue.

21 So, I don't disagree that it's been an
22 issue, it continues to be an issue. I was, you know,
23 involved in the original drafting of 96-07 and it was
24 an issue then as to the clarity and what the meaning
25 of that was.

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1 It doesn't mean that it wouldn't merit
2 some work down the road, but it wasn't within the
3 scope of what we were trying to do with this
4 particular RIS as published in the FR.

5 MR. SCAROLA: Well, in the very first
6 paragraph of this RIS, it says purpose of this RIS
7 supplement is to clarify RIS 2002-22 which remains in
8 effect.

9 MR. CHERNOFF: And, the scope of that RIS
10 was limited to an endorsement of NEI 0101. It was not
11 --

12 MR. SCAROLA: But, these words are in NEI
13 0101.

14 MR. CHERNOFF: Okay.

15 MR. SCAROLA: These are the words from NEI 16 0101.

17 MR. CHERNOFF: We understand your point.

18 MR. FREGONESE: Yes, this is Vic
19 Fregonese.

20 I'll just add some comments, extended
21 comments.

22 In the SECY letter that was written to the
23 staff recently, from the Commission to the staff about
24 the use of this RIS, the scope of the utilization of
25 the RIS in that letter, you describe that this RIS

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1 would clarify how licensees can develop and document
2 a qualitative assessment.

3 The use would provide reasonable assurance
4 that a digital modification will exhibit a low
5 likelihood of failure.

6 So, the clarification part, I think is
7 important to the industry, and that's the end of my
8 comment with respect to that.

9 But, if you look at the SECY letter that
10 was written, it described what the conditions were at
11 the time and it's SECY17-0096, it was written
12 September 21st, 2017 and it went to the Commissioners
13 from Victor McCree.

14 So, you can read that and see in there
15 what the kind of view was and what the RIS was trying
16 to accomplish. And, we're just talking about this
17 clarification aspect.

18 So, thanks for that. That's the end of my
19 comment.

20 MR. CHERNOFF: Thank you, Vic.

21 MR. HERB: This is Ray Herb.

22 I'd like to add also to the discussion,
23 these are sections that are new in this current
24 version. The previous version did not pull out quotes
25 from NEI 0101 that talked about bounding.

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1 This is -- and, so this is an added
2 obfuscation that was -- that came up as a result of
3 these recent edits. It was not in the original
4 document.

5 MR. CHERNOFF: Okay, thank you, Herb, I'm
6 sorry, Ray. Ray, sorry, my apologies.

7 MR. FREGONESE: This is Vic Fregonese.

8 Ken, do you have any more comments before
9 page 8, Ken?

10 MR. SCAROLA: Yes, page 6.

11 The very first paragraph on page 6, the
12 first sentence is a quote from NEI 0101 that says best
13 estimate methods are permitted.

14 The second sentence changes that and says
15 they are not permitted.

16 And, I would tell you that this is clearly
17 a contradiction in previous NRC policy.

18 Saying now that best estimate methods
19 can't be used contradicts SECY93-087 and BTP 7-19.

20 And, I just don't understand how a RIS can
21 contradict previous policy.

22 MR. CHERNOFF: Well, the issue at hand is
23 the RIS cannot countermand the plant's design and
24 licensing basis.

25 So, we cannot put permission in a RIS or

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1 guidance document that would let a plant deviate from
2 its design and licensing basis.

3 Specifically, we're using -- regarding the
4 analytical methods used to analyze events. And,
5 there's some statements in 0101 that are a little
6 confusing in that area.

7 We certainly, in accordance with the SRM
8 and the BTP, endorse the use of best estimate methods
9 to assess CCFs, that's the language out of the SRF.

10 MR. SCAROLA: Okay, so I completely agree
11 with you. A new analysis method cannot be introduced
12 during a 50.59 evaluation.

13 But, every FSAR employs best estimate
14 methods, not a new analysis method. We employ them
15 for things like --

16 MR. CHERNOFF: Just in the interest of
17 time --

18 MR. SCAROLA: -- I'm sorry?

19 MR. CHERNOFF: I was just going to say,
20 just in the interest of time, if we could move on,
21 that would be wonderful because what you're saying
22 seems to be very consistent with what we are trying to
23 get across which is, you need to stay in conformance
24 for your analytical methods with what's in your FSAR.

25 MR. SCAROLA: But, you're adding -- but my

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1 point is that you're adding confusion because the
2 analytical methods in the FSAR do employ best estimate
3 methods, but this says you can't employ best estimate
4 methods.

5 So, there is a clear contradiction here
6 that's going to confuse licensees.

7 MR. CHERNOFF: Well, I -- and I am doing
8 what I don't want to do, but it literally says in that
9 bullet, unless already incorporated into the design
10 and licensing basis.

11 So, if it is something that was employed
12 in your FSAR, you're clearly meeting that proviso.
13 So, I'm not -- I hear what you said. I guess, in this
14 case, staff might not understand the issue that you're
15 trying to raise because it seems like the words match
16 what you're saying.

17 MR. SCAROLA: But, let me ask a question.
18 Since I employ best estimates for ATWS in mitigation,
19 which can only be the result of a CCF, can I then
20 employ best estimate methods when analyzing CCFs for
21 new digital upgrades?

22 MR. CHERNOFF: The SRM is very clear on
23 this that you can use best estimate methods of
24 assessing CCFs broadly.

25 What it doesn't say is that you can use a

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1 best estimate analytical method to analyze an event.

2 MR. SCAROLA: Yes, but, the CCF is going
3 -- well, this gets back to what is the result that
4 we're looking for? It's back to the lack of a good --

5 MR. CHERNOFF: I think --

6 MR. SCAROLA: -- definition of results.

7 MR. CHERNOFF: And I --

8 MR. SCAROLA: You have a CCF, you clearly
9 need to understand the result on the plant and the
10 only way to understand the result on the plant is to
11 analyze the transient.

12 MR. CHERNOFF: Yes, with --

13 MR. SCAROLA: But best estimate methods
14 would apply to that transient analysis.

15 MR. CHERNOFF: Okay. With all due
16 respect, I think we need to move off of this issue
17 because we have a lot of ground to cover.

18 MR. RAHN: This is David Rahn.

19 This is a key message that we've been
20 struggling with as part of this RIS development. And,
21 so, to me, it's a topic that does require further
22 visiting.

23 The question is, are we going to fix it in
24 the RIS or is it going to be some other venue for
25 doing it?

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1 And, I think that's something that we need
2 to discuss. And, so, we'll talk about this with our
3 management.

4 MR. CHERNOFF: Okay, page 6, moving
5 forward.

6 MR. HERNANDEZ: This is John Hernandez
7 from Palo Verde.

8 I have a comment along the slightly
9 different line, back on page 3 under the qualitative
10 assessment section, second paragraph.

11 MR. CHERNOFF: Go ahead.

12 MR. HERNANDEZ: It states that, for
13 example, for a digital device that is simple and
14 highly testable, thorough testing may provide
15 additional assurance or low likelihood of failure that
16 helps compensate for a lack of operating experience.

17 And, my comment is, it's really a question
18 whether this potentially provides endorsement for
19 platforms that have greater market share?

20 So, if we're saying that a lack of
21 operating experience on a digital system is
22 compensated for by that system being central and
23 highly testable, does this potentially mean that more
24 complex systems with less operating experience are
25 going to be hindered to compete in the market?

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1 And, that's the end of my comment.

2 MR. CHERNOFF: Okay, thank you.

3 MR. RAHN: Could I ask again, who was that
4 that made the comment?

5 MR. HERNANDEZ: This is John Hernandez
6 from Palo Verde.

7 MR. RAHN: Thank you, thank you, John.

8 MR. CHERNOFF: Okay, I would like to make
9 one final call for anything up until page 6 of Section
10 2.

11 And then, I would ask everybody's
12 indulgence that we not go back because we will not
13 complete our FAS today if we don't move forward a
14 little bit.

15 MR. HERNANDEZ: This is John Hernandez
16 from Palo Verde.

17 The only reason I went back --

18 MR. CHERNOFF: No, it's fine, John.

19 MR. HERNANDEZ: -- to page 3, so I would
20 just recommend if we're going to employ that rule,
21 could we just call out then page number by page number
22 to ensure that we capture comments on that page?

23 MR. CHERNOFF: Yes, that -- I think that's
24 what we've started trying to do here, appreciate the
25 thought.

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1 And, no -- there's not a rule here, we
2 want to keep this relatively informal like we've been
3 doing it, but we also kind of want to push to make
4 sure we get done.

5 MR. HERNANDEZ: Appreciate that, thank
6 you.

7 MR. CHERNOFF: Okay, anything else up
8 until page 6?

9 (NO RESPONSE)

10 MR. CHERNOFF: Okay, anything on page 6?

11 MR. SCAROLA: This is Ken.

12 I just want to point out that the words
13 result and bounded appear probably 20 different times
14 on this page with no definition of what they mean.

15 MR. CHERNOFF: Okay, thank you.

16 Okay, let's move on to page 7.

17 MR. FREGONESE: Yes, this is Vic
18 Fregonese.

19 I have a comment on page 7. At the bottom
20 of the page, there's a number two, and I'll ask for
21 some input from others on the team as well.

22 But, this states that reduction in any
23 aspect of independence or separation single failure
24 tolerance or diversity credited in the UFSAR, it
25 includes non-safety related functions.

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1 I'm not so sure that, in the previous
2 discussions and examples that we exchanged that there
3 was a complete understanding about this non-safety
4 related functional aspect be included in the scope of
5 the RIS.

6 So, I'll look for some clarification of
7 that.

8 But, any aspect is a pretty broad brush
9 and I'm concerned about interpretation of that.

10 MR. CHERNOFF: Okay, I understand that,
11 thank you.

12 Other comments on page 7?

13 MR. HERB: Yes, this is Ray Herb, Southern
14 Nuclear.

15 And, along those same lines, in the top
16 paragraph underneath 3 at the top of the page, the
17 last sentence says NRC assessed and determined that
18 proposed digital I&C modifications having all the
19 characteristics that will likely result in a
20 qualitative assessment results support a determination
21 of license amendment not required.

22 And, when you throw in non-safety systems,
23 many of those items, you know, are even not applicable
24 in some cases.

25 But, and also, it seems like there's not

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1 really a graded approach there and it kind of makes it
2 dependent of you have apply all those.

3 MR. CHERNOFF: Well --

4 MR. HERB: All those DLRs.

5 MR. CHERNOFF: And, I appreciate your
6 comment. I think clearly our intent here was to say,
7 in the cases where all these attributes are met,
8 you'll clearly have a sufficiently low situation.
9 But, I do not believe we intended to imply the inverse
10 that you had to meet all those criteria.

11 So, that's -- we understand that comment,
12 I think.

13 MR. MORTON: Ray, this is Wendell Morton,
14 NRC.

15 So, I believe in the previous version of
16 the RIS, we actually had a subsection in here
17 specifically about non-safety related SSC mods.

18 MR. HERB: Yes.

19 MR. MORTON: As an example, that was moved
20 to the new Section 5 of this version. So, take a look
21 at that, I think it's Subsection 5.4 when we start
22 talking about that.

23 MR. CHERNOFF: And, we may get to it.

24 MR. MORTON: And, we'll get to it. That's
25 where that information will be recognized, the

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1 consideration for non-safety related SSC modules are
2 captured there.

3 MR. CHERNOFF: I think we understand the
4 point you're making, though, as well here.

5 MR. MORTON: And, we understand your
6 point. Thank you.

7 MR. HERB: Thank you, Wendell.

8 MR. FREGONESE: This is Vic Fregonese.

9 As we transition to page 8, my comment
10 actually applies to number three at the bottom of page
11 7 and it goes into page 8.

12 MR. CHERNOFF: Okay, go ahead.

13 MR. FREGONESE: And, there's some
14 terminology here and it's -- and under bravo under
15 three, it says, adequate internal or external
16 systematic diversity.

17 That also appears in one of the tables.
18 I don't believe this was discussed previously in the
19 examples we used or in the meetings. And, I think it
20 warrants a further explanation about what exactly that
21 means.

22 (OFF MICROPHONE COMMENTS)

23 MR. RAHN: This is David Rahn.

24 So, Ray, yes, my thought was to that I
25 think that wording was there, but it's true, we did

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1 not specifically discuss it during the workshops.

2 MR. MORTON: Right. This is Wendell
3 Morton, NRC.

4 So, the examples that were put together
5 just simply didn't incorporate internal or systematic
6 diversities, one of the design attributes that would
7 be decided as part of the qualitative assessment.

8 MR. FREGONESE: Yes, this is Vic.

9 Wendell, thanks. I'm not sure that
10 appeared in the table. I didn't do a word search in
11 the previous version, I just don't know what that
12 means.

13 MR. CHERNOFF: The internal and external
14 systematic diversity, is that what you're specifically
15 referring to?

16 MR. FREGONESE: Yes, I'm just trying to
17 understand whether that's a reference to NUREG-6303 or
18 D3 analysis or what exactly it is.

19 Because, it has the word adequate in front
20 of it and that's somewhat judgmental what's adequate
21 or what's not. And, I was just trying to understand
22 what exactly that was about.

23 So, I'll go back and look at the previous
24 version, but my comment -- that's my comment.

25 Thank you.

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1 MR. CHERNOFF: All right, thank you.

2 MR. MORTON: Thanks, Vic.

3 MR. HERNANDEZ: This is John Hernandez
4 from Palo Verde.

5 I had a few definition questions on this
6 page.

7 MR. CHERNOFF: On page --

8 MR. HERNANDEZ: The first --

9 MR. CHERNOFF: -- 8?

10 MR. HERNANDEZ: Oh, sorry, page 7 still.

11 MR. CHERNOFF: Okay.

12 MR. HERNANDEZ: The first is in 1a and 1b.
13 I could not find the definition for what vulnerability
14 meant, specifically, CCF vulnerability.

15 And so, I was wondering if maybe someone
16 could point me to somewhere where that is clarified.

17 MR. CHERNOFF: Okay.

18 MR. HERNANDEZ: And then, the second
19 question I had was at the bottom of item 3 where it
20 states malfunction due to a design defect.

21 Earlier in the document on a footnote, it
22 reference the NEI 0101 and states that the common
23 cause failures that are not considered in the FSAR,
24 for example, design flaws.

25 So, my question was, is there a difference

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1 between the design flaw and a design defect? And, if
2 there is not, then aren't these malfunctions already
3 considered non-credible?

4 That's the end of my comments.

5 MR. CHERNOFF: Okay, thank you.

6 MR. SCAROLA: This is Ken Scarola.

7 I had a comment on the same item 3 at the
8 bottom of page 7.

9 So, here, we're saying that the only way
10 that you can preclude further consideration of a
11 malfunction due to a design defect is through these
12 specific attributes, a 100 percent testing or
13 demonstration of diversity or through further
14 analysis.

15 In the previous sections, and there are
16 several, we say that we can reach the threshold of
17 sufficiently low which requires no further analysis
18 through a qualitative assessment of design process and
19 operating experience.

20 So, we clearly have a contradiction here.
21 This paragraph, although very conservative, is
22 consistent with the current NRC policy.

23 So, we have to decide can this RIS change
24 the policy as in the previous paragraph?

25 MR. CHERNOFF: So, let me --

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1 MR. SCAROLA: But, either way, the RIS
2 itself should be consistent and right now, it's not.
3 This paragraph contradicts the previous paragraph.

4 MR. CHERNOFF: Let me ask, and I'm going
5 to restate what I heard, so paragraph 3 includes a
6 discussion of precluding and you're saying that
7 conflicts with the discussion that you can establish
8 a sufficiently low likelihood?

9 MR. SCAROLA: Right. Sufficiently low
10 likelihood the way you define it means requires no
11 further consideration.

12 MR. CHERNOFF: But, it does not preclude
13 it.

14 MR. SCAROLA: Well, what else preclude
15 mean? Preclude means --

16 MR. CHERNOFF: Preclude means it will not
17 happen. Okay? Sufficiently low likelihood as
18 described in the document means that it's acceptable
19 for making a qualitative assessment under 50.59.

20 MR. SCAROLA: I think you're splitting
21 hairs and just adding confusion to the industry.

22 MR. CHERNOFF: Okay, I see heads in the
23 room are shaking no with regard to that, but we'll
24 move on.

25 MR. FREGONESE: Yes, this is Vic

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1 Fregonese.

2 On this point number 3, I'm kind of with
3 the previous commenters, I'm not so sure it's
4 consistent with the way the document was structured
5 for qualitative assessment in this 100 percent testing
6 combination testing was discussed before.

7 And, you know, the 100 percent testing is
8 just something that's not really possible. So,
9 there's other approaches I thought that could be used,
10 but I'm not so sure it's consistent with the use of
11 the table which has other adjectives.

12 MR. CHERNOFF: Yes, in Section 5, there's
13 some additional discussion about alternative things
14 that could be acceptable beyond a 100 percent
15 testability.

16 MR. SCAROLA: Yes, let me make a comment
17 about the use of the word precluded. That word is
18 actually not the word that's in BTP 7-19. BTP 7-19
19 says if you have these attributes of a 100 percent
20 testing or diversity, the CCF or the malfunction
21 requires no further consideration.

22 It doesn't say precluded, it says requires
23 no further consideration which is exactly your words
24 that you get to through the qualitative assessment.

25 So, you can split hairs on the use of the

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1 word precluded or not, and if you use the correct
2 words from BTP 7-19 would clearly have an
3 inconsistency.

4 MR. CHERNOFF: Okay. Can we move on to
5 page 8 now?

6 MR. CONNELLY: Yes, this is John Connelly
7 from Exelon.

8 I've got one particular comment. If you
9 look at the first major paragraph on page 8, and it
10 goes through and enumerates conditions.

11 One of those which didn't exist in the
12 previous version of the RIS, item 2, proposed
13 modification is not an extension of ESF actuation such
14 as emergency power of load sequencers.

15 If you go back in time, you know, as we
16 were working through these tabletop demonstrations,
17 there were a number of systems that we had pretty
18 broad agreement that we would be able to do a digital
19 modification to them under 50.59.

20 That included things like diesel
21 sequencers, relays, chillers. This seems to take that
22 completely off the table and that was the principle
23 focus of this entire exercise.

24 MR. FREGONESE: This is Vic Fregonese.

25 I guess the terminology that says an

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1 extension of an ESF actuation, that interpretation is
2 something that has to be clarified because we did
3 actually talk about sequencers and we did actually
4 present a tabletop on a diesel generator voltage and
5 reference adjusters.

6 So, there are words that say is not, so is
7 not means it's not. So, it doesn't say might be or
8 might not be.

9 That's my comment on this section as well.

10 MR. CHERNOFF: So, let me ask to clarify
11 what you're stating.

12 So, you're looking for a better
13 understanding of what an extension of an ESF actuation
14 is meant to mean?

15 MR. FREGONESE: I would prefer that that
16 language not be there at all. Because, it will talk
17 about your safety related components, right, and you
18 can always draw a nexus back to, in many cases, you
19 can draw a nexus back to ESF actuation.

20 And, that takes a lot of these components
21 completely off the table and we can't -- the RIS loses
22 significant value.

23 MR. CHERNOFF: With that bullet 2?

24 MR. FREGONESE: With that bullet 2.

25 MR. CHERNOFF: Okay. Thanks, that helps

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1 understanding, my understanding anyway.

2 MR. SCAROLA: Yes, this is Ken Scarola
3 from the Nuclear Automation Engineering.

4 This issue gets back to the words that are
5 in the introductory sections of the RIS where we say
6 this RIS is not applicable to things that have equal
7 importance to RPS and ESFAS.

8 So now, the issue is, well, what are
9 equally important? Is a load sequencer as important?
10 Well, you know, you can probably look in your PRA and
11 find out what's equally important.

12 But, it very clearly, as John is saying,
13 brings a lot of confusion and ambiguity.

14 MR. CHERNOFF: Okay, thank you.

15 So, we're on page 8, other thoughts on
16 page 8?

17 MR. FREGONESE: Yes, this is Vic
18 Fregonese, Frammatome.

19 The end of the page under the qualitative
20 assessment paragraph 4, the last full paragraph,
21 there's an expansion of what is viewed to be
22 engineering judgment here with a bunch of bullets
23 underneath which may be a great idea.

24 But, as you know, engineering judgment is
25 something that's used in a lot of different areas.

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1 And, there are accepted, I would say, definitions or
2 approaches to engineering judgment, particularly in
3 the PRA world.

4 I'm not so sure why it was necessary to
5 include things in here like, you know, that the
6 utilities will use qualified people and use qualified
7 procedures. I think that's just part of the entry
8 into the business.

9 So, I'm not sure why this expansion was
10 needed, number one.

11 And, number two, it's consistent with
12 other definitions and I didn't look, but I know there
13 are some.

14 And, I don't know if Craig Krieger is in
15 the room, Jared or Neal or Katie, but --

16 MR. HANSON: He is not.

17 MR. FREGONESE: Craig Krieger has a view
18 of this. Because, there is -- are some accepted
19 practices. So, I'm questioning why this is needed and
20 what -- or if it adds any value for the purposes of
21 the RIS?

22 That's the end of my comment.

23 MR. CHERNOFF: Okay. And, I -- just to
24 clarify, you said it talked about qualified reviewers
25 and I know that was in the previous version, I, quite

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1 honestly, I thought that had been removed. Is it
2 still in there?

3 MR. FREGONESE: It talks about the
4 technical qualifications of the personnel performing
5 the evaluations be appropriate and preferential in
6 reviews.

7 MR. HANSON; The first bullet.

8 MR. FREGONESE: And the appropriate
9 technical personnel for the judgment. Well, no
10 kidding.

11 MR. CHERNOFF: Okay, okay.

12 MR. FREGONESE: I was wondering why --

13 MR. CHERNOFF: It's still the generalized
14 statement in there. I understand, they were in the
15 previous revisions and specific qualification
16 statements, those were removed. Okay, I understand,
17 thank you.

18 MR. FREGONESE: I don't understand why the
19 term engineering judgment needs to be defined in this
20 document.

21 That's my comment.

22 MR. CHERNOFF: Got it, thank you.

23 Okay, anything else on 8 before we move to
24 9?

25 MR. SCAROLA: Yes, this is Ken Scarola.

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1 In the paragraph right before the heading
2 of Section 4, you have the words using digital data
3 communications.

4 And, I just don't understand the basis of
5 this exclusion. If you have a new digital device that
6 has errors and it's communicating to the engineered
7 safety feature actuation system or the RPS, even
8 through hard wires, if it's sending erroneous data,
9 whether it's digital data communication or hard wires,
10 it has the potential to adversely affect the RPS and
11 engineered safety features.

12 So, I just technically don't understand
13 the basis of those words.

14 MR. CHERNOFF: Okay.

15 MR. RAHN: Yes, we captured it.

16 MR. CHERNOFF: All right.

17 Last call on page 8.

18 (NO RESPONSE)

19 MR. CHERNOFF: Moving on to page 9.

20 (NO RESPONSE)

21 MR. CHERNOFF: Okay, hearing nothing,
22 let's move on to page 10.

23 MR. SCAROLA: This is Ken Scarola.

24 In the second paragraph, you talk about
25 limiting failures from occurring or mitigating the

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1 consequences of failures.

2 But, this whole section is about reaching
3 this threshold of sufficiently low likelihood.

4 Well, limiting failures or mitigating
5 failures has nothing to do with their likelihood. So,
6 I think this paragraph just adds confusion.

7 MR. CHERNOFF: Okay, I understand that
8 comment.

9 Other things on page 10?

10 MR. HERB: Yes, this is Ray Herb, Southern
11 Nuclear.

12 Below in the quality of the design
13 process, we used to have words in the previous section
14 about a non-safety system. Now, this seems, I mean,
15 we've included non-safety systems in the scope of
16 this, but this -- the development process in the last
17 paragraph seems specifically to only talk to Appendix
18 D processes or commercial grade dedication of non-
19 safety equipment.

20 It says --

21 MR. CHERNOFF: So, your point is, it
22 doesn't speak to just non-safety?

23 MR. HERB: Well, if we've included that
24 now in the scope of this RIS, then I don't think it
25 gives enough leeway for non-safety components.

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1 I think ~~late in~~later when you get into
the

2 tables, it makes it even more difficult, but I'll wait
3 until we get there.

4 MR. CHERNOFF: Yes, and the difficulty
5 here, obviously, is from a 50.59 perspective, it's
6 50.59 is agnostic with regard to safety related, non-
7 safety related terminology.

8 On the design side, it obviously makes
9 quite a bit of difference.

10 MR. HERB: Exactly right.

11 MR. CHERNOFF: Yes. So, I think -- I
12 understand the comment and hopefully guys also
13 recognize the challenge in writing about the two
14 topics in a single document.

15 MR. HERB: Yes, but I understand, but, you
16 know, my concern here is that this draft RIS will be
17 utilized by inspection branch to grade my 50.59s going
18 forward.

19 MR. CHERNOFF: Yes, and let me speak to
20 that for just a minute.

21 I was going to do this at the end, but
22 since you've brought it up, do recognize that one of
23 our overall action plan items, and we clearly
24 recognize the need for that, is to go out and get
25 inspector contact time and training.

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1 And so, that's one of the elements that is
2 in our overall plan. And, it'll be near and dear to
3 my heart because that responsibility is in my group as
4 well.

5 So, that is a key element. We want to
6 try the best we can to make sure that the inspectors
7 understand the purpose and when they're looking at
8 things are well versed in the intent and direction
9 that the RIS is trying to set.

10 MR. HERB: I appreciate that, but you need
11 to understand from a perspective of the industry, is
12 that there's a lot of consternation and there's a lot
13 of issues right now with our reluctance to do general
14 designs in safety and that would just increase this to
15 include non-safety.

16 So, if the purpose is for the digital
17 action plan to have a greater implementation of
18 digital technologies in the nuclear industry, I think
19 that this RIS may drive that in the other direction.

20 This is just a general comment.

21 MR. CHERNOFF: And, I would -- I
22 appreciate the comment. I just -- a perspective is we
23 definitely -- our intents here are to make things as
24 direct and simple as possible, but not simpler.

25 So, yes, we are trying to remove

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1 unnecessary confusion and remove unnecessary burden in
2 what we're doing, and this one small part of that.

3 MR. CARTE: Norbert Carte, NRC.

4 Just a quick question, when you read the
5 last three lines on the screen right now, why is that
6 not sufficient to address your concern?

7 MR. CHERNOFF: Norbert, you're pointing
8 out that it talks about for safety related equipment,
9 commercial grade dedicated or non-safety related?

10 MR. CARTE: Equipment basically -- the
11 quality capturing process may not be readily available
12 and you rely on other things.

13 So, does that not address your concern or
14 why does that not address your concern?

15 MR. HERB: Again, I'm going to point out
16 that we've gotten this document for just two days and
17 so, my concern is a general concern.

18 And, once maybe we've had time to digest
19 this over a period of more than a couple of days, then
20 it may not be a concern, but I'm telling you, it is a
21 concern right now.

22 MR. RAHN: Yes, so, this is David Rahn.

23 So, Ray, this is a section where we go
24 into a little bit of detail on what we mean by design
25 attributes, quality of the design process and

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1 operating experience.

2 And, later on in this document, it says,
3 you're going to weigh the aggregate of information
4 available from all three of these sources.

5 So, this section here is just describing
6 the kind of things you would think about when you are
7 trying to identify what is the quality of the design
8 process.

9 Recognizing that you may not have as much
10 information on things like non-safety related systems
11 to go by, in which case, you would be relying a little
12 more heavily on design attributes and operating
13 experience.

14 MR. HERB: And, I hear what you're saying,
15 David. And, I appreciate that.

16 But, this document doesn't read clearly
17 that way.

18 MR. RAHN: Okay.

19 MR. HERB: It really does not. It seems
20 to be an all or nothing document. It says here's all
21 the things you've got to do. The more things you do,
22 the better off you reach the same conclusion as the
23 NRC inspector may reach, that you know you do not
24 require a LAR.

25 The less you do, the more, I guess, it

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1 draws into question your assessment of all these
2 failures going forward.

3 And then, it just leaves us open for, I
4 think, an opinion of an inspector or the training
5 level of an inspector or the training level of people
6 doing the 50.59.

7 I understand that we're trying to provide
8 additional detail on how to do these 50.59s. And, in
9 some cases, for -- that's appropriate.

10 But, because the fact that we've stated
11 earlier in this RIS that all digital things will
12 screen in because of the screening criteria that says
13 you have to consider -- I mean, all you have to
14 consider are common cause failure or a software defect
15 and so that's always going to adverse impact means
16 that everything screens into an evaluation going
17 forward.

18 And, if we don't, because of the policy
19 that we can't eliminate defects in software,
20 everything has to screen in that that increases the
21 burden.

22 And then, now, we have this additional
23 criteria that inspectors will use to grade the 50.59s.
24 A 50.59 is a roll-up document. And, in some cases,
25 this engineering judgment adds more or less detail

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1 based on the actual risk and complexity of the design
2 mod.

3 It looks like we're going to make
4 everything fit into this same box, which I think,
5 again, to my point earlier, will cause a significant
6 reduction in the industry of implementing digital
7 designs going forward.

8 MR. CARTE: Norbert Carte.

9 One question, what in the RIS leads you to
10 believe that everything screens in?

11 MR. HERB: I have -- I read in here, it
12 says, it specifically calls out 96-07 in the screening
13 criteria, actually quote it. It says, bear with me,
14 Katie, maybe you can help me with this.

15 MR. CHERNOFF: Everybody in the room is
16 looking through documents.

17 MR. RAHN: What are the buzz words?

18 MR. SCAROLA: This is Ken Scarola.

19 I have the same conclusion that Ray has,
20 that everything screens in and there are definitely
21 words. I've got to hunt for them.

22 MR. CHERNOFF: Yes, you, too.

23 (SIMULTANEOUS SPEAKING)

24 MR. CHERNOFF: It's an important point.

25 Let's take a minute and do this because --

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1 MR. MORTON: I can say -- Wendell Morton,
2 NRC.

3 So, I can say, well, we specifically
4 mention screening because the goal was not to get into
5 any screening criteria in the guidance and the RIS.

6 In the second paragraph of the attachment
7 in the purpose section --

8 MR. FREGONESE: Page 5.

9 MR. MORTON: Page 5?

10 So, in the second --

11 MR. FREGONESE: Page 5 of the second
12 paragraph. It talks about adverse effects, the change
13 should be screened in, is that what you're talking
14 about?

15 MR. SCAROLA: It says, if you use software
16 that's adverse and you have to screen it in. That's
17 every digital device.

18 MR. FREGONESE: Yes, that's right.

19 MR. CHERNOFF: Help me out just a little
20 bit on page -- I'm on page 5, it took me a little bit
21 to get there. Where on page 5?

22 MR. FREGONESE: It's going to be the
23 second paragraph, it's like the next to the last
24 sentence. It talks about positive --

25 (SIMULTANEOUS SPEAKING)

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1 MR. FREGONESE: -- screened in. And, it
2 mentions software. Is that where you're talking
3 about?

4 MR. CHERNOFF: Hang on for a second,
5 you're --

6 MR. SCAROLA: Yes.

7 MR. CHERNOFF: You're actually in the body
8 of RIS?

9 MR. SCAROLA: Yes, body of the RIS.

10 MR. CHERNOFF: Okay, just a minute.

11 MR. FREGONESE Yes, I'm sorry.

12 MR. CHERNOFF: Okay.

13 MR. FREGONESE: It says -- you can see
14 that paragraph right below the sentence says, this RIS
15 supplement emphasizes the staff's paragraph above.

16 It basically says, if you have software,
17 since there's no -- there is no way to determine
18 whether it's accurately for reliability of software,
19 then basically everything's screened in.

20 MR. CHERNOFF: Okay.

21 MR. BEAULIEU: Do you want me to -- this
22 is Dave Beaulieu with the NRC.

23 The idea is that since this attachment
24 deals with likelihood that that's the focus of the
25 evaluation section is it has to do with the evaluation

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1 and the magnitude of it.

2 Screening deals with the direction of the
3 change, whether it's positive or negative. So, that
4 -- so, what we're just saying in that paragraph,
5 you've already determined that the direction of the
6 change is adverse and that you've screened it in and
7 that, now, you're assessing likelihood to determine
8 whether it needs NRC approval.

9 MR. CHERNOFF: Dave, so what you're saying
10 is, the writing is presumptive on, you're in the
11 evaluation process?

12 MR. BEAULIEU: Yes.

13 MR. CHERNOFF: Okay.

14 MR. MORTON: Also -- Wendell Morton, NRC.

15 MR. CHERNOFF: But, obviously, there's a
16 point of confusion here that's not going to cause --

17 MR. MORTON: We understand.

18 But, in the second paragraph of the
19 attachment, Section 1, the purpose, we actually say
20 that the qualitative assessment guidance in this
21 attachment presumes you've already screened in.

22 We do not make any assumptions on the
23 point of whether you screened in because of a common
24 cause failure specifically or not as well. Just to
25 tie into that paragraph that Dave Beaulieu was

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1 referring to.

2 MR. CHERNOFF: Okay, and the feedback
3 we're getting is that that's not coming through
4 clearly. Got it, okay.

5 MR. FREGONESE: Yes, this is Vic
6 Fregonese.

7 One more time, page 5 of 8, I think what
8 Ray was saying is in that second paragraph of the RIS
9 body, it almost implies that if it's software, it's
10 adverse.

11 Maybe Katie, I'm not reading that
12 correctly, but that's kind of what I'm hearing.

13 MR. CHERNOFF: All right. I mean, you're
14 hearing from staff that wasn't the intent. So, we'll
15 look at that.

16 MR. GARRETT: Hey, this is Ron Garrett
17 from TVA.

18 Hey, I got in late because I couldn't get
19 on the bridge.

20 But, I got a more overall global issue
21 with the inclusion of non-safety. I really don't want
22 the 50.59 process ~~to tell me~~ dictating my selection of
23 product and that's what the current policy is right
24 now doing in the area of safety related.

25 I have now had three air wall (phonetic)

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1 chiller designs which I don't feel would be as
2 reliable as the digital chiller control system.

3 And, if by inclusion this -- this was
4 supposed to free us up on some less safety significant
5 safety systems.

6 I feel this RIS, by including non-safety
7 in the scope will now push us toward, because of the
8 licensing risk, potential licensing risk or perceived
9 licensing risk towards less reliable design and
10 products.

11 With my safety -- digital safety systems
12 and non-safety are very reliable. But, my non-safety
13 systems are ten times more reliable than my safety
14 systems.

15 I had more products I can fit to. I can
16 fit the product that makes sense for me and is better
17 for that design.

18 So, that's all I wanted to say.

19 MR. REMER: Jason Remer, NEI.

20 Just to sort of highlight the previous
21 version of the RIS, our comments, I think we had a 100
22 comments. One of the show-stoppers was inclusion of
23 non-safety.

24 If this thing makes it harder for our
25 companies to do non-safety more at risk, you may say,

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1 oh, that's not a risk, it's okay. If a perceived risk
2 is there, we've been working on this two years.

3 And, two days a review of this is coming
4 out with people that operate the plants are saying,
5 this is exposing us to risk. We've got mods going on
6 right now that a question is in their mind, if this
7 comes out, will that put this mod at risk?

8 That is a show-stopper for the industry.
9 So, we have to figure out how to make it clear, maybe
10 you didn't mean it, but that's the way it's coming
11 across.

12 I understand 50.59 doesn't care, I
13 understand that. I've been at the plant 18 years.

14 But, Appendix D requirements don't apply
15 to non-safety. And so, we have to be clear about
16 that. So, ~~how do~~however we do it? We're going to bow
up at
17 this because non-safety can't be included.

18 MR. CHERNOFF: Can't be included or --

19 MR. REMER: It will harm us.

20 MR. CHERNOFF: Cannot be included in the
21 what?

22 MR. REMER: In having to do requirements
23 for digital modifications.

24 MR. CHERNOFF: The design --

25 MR. REMER: Or the design.

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1 MR. CHERNOFF: The design basis? Yes, I
2 understand that.

3 MR. REMER: 50.59 absolutely, everything's
4 looked at, but it's got to be clear and that's what we
5 said earlier and we just want to reemphasize that.

6 Maybe you didn't mean for that to happen,
7 but that's the way it's coming across. So, end of my
8 comment.

9 Thank you.

10 MR. CHERNOFF: Thank you.

11 MR. RAHN: This is David Rahn.

12 Just to clarify for the record, we're in
13 our tenth month of developing this document and we
14 have not been working at it for two years.

15 MR. REMER: I understand, yes, ten months.

16 MR. CHERNOFF: Okay, let me suggest --

17 MR. FREGONESE: For the record, it's two
18 years in the making.

19 MR. CHERNOFF: Yes, let me suggest that
20 it's 10:42. This seems like a good time for a short
21 break.

22 Let's try to make sure everybody is back
23 ready to go within ten minutes. So, I've got 10:42 on
24 the computer clock now, so ten minutes from 10:42.

25 MS. GOVAN: Before the people on the line

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1 break, there were quite a large amount of beeps after
2 we got started. If you haven't identified yourself on
3 the line, can you please do so, so we'll know who's
4 listening in?

5 (NO RESPONSE)

6 MR. CHERNOFF: Dave, could you do hall
7 monitor duty?

8 MR. RAHN: Sure.

9 MR. CHERNOFF: Thank you.

10 MS. GOVAN: Any new people on the line?

11 MR. CHERNOFF: Okay. I want to thank
12 everybody for getting back basically on time. That's
13 pretty good for a big group. We were on page ten. I
14 think we kind of had just gotten started on page ten,
15 so let me open it back up. I recognize we're a little
16 bit behind but, hopefully, we can catch up time-wise
17 here.

18 So page ten. Any other comments or
19 thoughts on page ten that want to be brought up?

20 MR. SCAROLA: This is Ken Scarola. The
21 last paragraph above the heading "quality of the
22 design process," that paragraph is not related to
23 design attributes that reduce the likelihood of
24 failure. It's about how you tolerate the failure.
25 This seems like it's completely out of place.

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1 MR. CHERNOFF: Okay. Anything else on
2 page ten? Okay. Let's move on to page 11. It starts
3 off with operating experience. All right. Last call
4 on that page.

5 MR. HERB: This is Ray Herb, Southern
6 Nuclear. I just want to make the comment that the
7 format of this document is very confusing. It looks
8 like you have drop quotes from NEI 01-01 and there's
9 no numbering anywhere on these bulleted sections. It
10 makes it difficult to provide comments, but it also
11 makes it a little bit more difficult to figure out
12 where the information comes from. If you look at the
13 top of page 11, you have the operating experience
14 bullet and Section 5.3.1 of NEI 01-01 states, and then
15 it gets a quote, and then below that has also an
16 indented piece. It looks like it's, I'm not sure if
17 that's also a quote from NEI 01-01 or it comes from
18 amplifying the information and why is it indented for
19 the same quote, whereas before it looks like quotes
20 were indented.

21 MR. CHERNOFF: Understood, yes.

22 MR. HERB: It's just a general --

23 MR. RAHN: It should not have been
24 indented.

25 MR. CHERNOFF: Formatting issues, yes.

1 Okay. Ready to move on to page 12 then, I think,
2 which is providing some examples, qualitative
3 assessment examples in the three bins.

4 MS. AUSTGEN: This is Katie Austgen.
5 Sorry. I was pulling up something to verify.
6 Understanding what you've said about this section that
7 we're in is intended to be more focused on the 50.59
8 process, yet some of these most recent quotes that
9 were pulled from NEI 01-01 or from the section that is
10 more technically focused versus 50.59 process, so just
11 the understanding of --

12 MR. CHERNOFF: The challenge here is in
13 01-01 it's blended together, and in 01-01 the somewhat
14 analogous terminology of dependability is used in lieu
15 of what we're trying to establish as a standard for
16 writing up the 50.59, the sufficiently low likelihood.
17 So you see in the quotes we're pulling the
18 dependability language from 01-01, which is in much
19 more detail than the few references to sufficiently
20 low likelihood. In 01-01, it clearly defines those
21 two things as equivalent in the explanations in 01-01.

22 Overview. It doesn't probably completely
23 answer your question but kind of the challenge we're
24 dealing with was to pull in enough information to
25 support where we were trying to explain how the

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1 qualitative assessments could be done using
2 information that was in 01-01, not creating something
3 out of the ether.

4 MR. MORTON: Wendell Morton, NRC. We've
5 had this conversation a number of times with our
6 Appendix D review. It's very difficult to completely
7 segregate all technical information for 50.59, so this
8 version of the RIS represents the best cut at doing
9 that and still maintaining sensible, reasonable
10 information in there for each portion of the RIS,
11 whether it's 50.59 specific or technical specific.
12 You're still going to see some when you get into
13 Section 5. You'll see some small amounts with the
14 opposite effect, so just a general comment on sort of
15 the context of the RIS now.

16 MR. CHERNOFF: I think we're certainly
17 open to improvements that are suggested, you know, in
18 that context.

19 MR. RAHN: And this is David Rahn. So one
20 of the things that we did with this revision was, in
21 the main body of the RIS, we clarified what within NEI
22 01-01 we're really helping to clarify and we
23 specifically stated it's Sections 4, 5, Appendix A,
24 and Appendix B of NEI 01-01.

25 Now, the other thing that we did with this

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1 is, you know, formatting concern, was that we wanted
2 to be very particular about the language that we use
3 for accomplishing a qualitative assessment in a way
4 that can be used within a 50.59 environment but
5 knowing that the qualitative assessments rely heavily
6 on all the engineering evaluations that are done. So
7 what we did is we segregated out the discussion about
8 engineering evaluations, and we have sections in there
9 that have parallel sections within NEI 01-01 regarding
10 those engineering evaluations. That's what we call a
11 Section 5. And then you need the information that's
12 in Section 5 to help contribute to the information you
13 need for forming a qualitative assessment, which is
14 the earlier section. So that's part of the thinking
15 behind why it's divvied up like it was.

16 MR. CHERNOFF: I think we're on page 12
17 then, which is the table that I referred to. Any
18 thoughts on that that want to be provided would be
19 appreciated.

20 MR. SCAROLA: This is Ken Scarola. The
21 word "acceptable" at the top of this table has me
22 troubled because I don't know what that means to be
23 acceptable. Does it mean I need all of these
24 attributes, I need some of these attributes? So I can
25 tell you that there are some applications where maybe

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1 none of these attributes --

2 MR. CHERNOFF: Just to be very clear, the
3 intent was not all of these attributes, and we can
4 deal with that. This was --

5 MR. SCAROLA: I think you just cite
6 examples. These are examples.

7 MR. CHERNOFF: These are groups and
8 examples. Okay. Anything else on the table?

9 MR. SCAROLA: This is Ken. In the next
10 section, I think there's a typo in 107339. Shouldn't
11 that be 30, 107330?

12 MR. RAHN: Yes, it should be 107330.

13 MR. CHERNOFF: Thank you. Okay. Let's
14 move on to page 13 then, which has the tail-end of the
15 table.

16 MR. HERNANDEZ: This is John Hernandez
17 from Palo Verde, and I have two questions on the table
18 that's at the top. The first one is with regards to
19 operating experience, and it's the last sentence of
20 the second bullet. It states it may be necessary to
21 delay major application software use and software
22 revision until the software version has sufficient
23 operating experience. And my question is how does
24 this impact or relate to other regulations associated
25 with cybersecurity and the potential patching of

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1 digital assets at nuclear stations?

2 And the second question I have is is there
3 some way in this section that we could clarify or
4 distinguish between software that is, for instance,
5 part of an operating system, like a Windows system,
6 and software that is control logic software so the
7 specific software that's used by a particular digital
8 asset to perform a design function?

9 MR. CHERNOFF: And so in this section, you
10 might be looking for examples of either of those or is
11 that a more general comment about what we're talking
12 about operating experience other places than the table
13 examples?

14 MR. HERNANDEZ: I suppose it's more
15 general, and I think examples may help to clarify. So
16 what I wanted to avoid is an unintended impact to
17 other regulations that I think are still even in flux,
18 for instance cybersecurity patching, you know,
19 associated with networking systems or user interfaces
20 like a Windows-based human-machine interface.

21 MR. CHERNOFF: Okay. I think we got that.

22 MR. RAHN: Yes, I've written it down. I
23 don't know if you do, but I wrote it down.

24 MR. CHERNOFF: We understand. Okay.
25 Other things on this page, page 13.

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1 MR. HERB: This is Ray Herb, Southern
2 Nuclear. We read the preamble to table one as just
3 exceptional examples, may consider additional design
4 attributes, qualities, or design processes, blah,
5 blah, blah. And from that, that discussion we talked
6 about, it seems that a lot of these things are just
7 examples. How much of the rest of this document is
8 just examples or is recommended and not mandatory
9 versus this table?

10 MR. CHERNOFF: Okay. So this --

11 MR. HERB: You see, my confusion is that,
12 like, we started out in Sections 1, 2, and 3, and it
13 seems like, very pointed, this is what you have to do,
14 and then we get into the qualitative assessment and we
15 say here's a list of suggestions, things that you can
16 do, and then, from hearing Dave and everybody, these
17 aren't set in stone, you get to pick and choose. How
18 much of these do I need to reach that level? I guess
19 that's an engineering judgment. And then, when we get
20 further in the document, they talked about very
21 specific things in your key engineering evaluations
22 and, again, you say this is just a suggested format
23 and all of that going forward. So are you saying that
24 everything from Section 4 on, including this table, is
25 just nice to know, here's what we would like to see?

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1 MR. CHERNOFF: Well, in the biggest
2 context, I mean, this is a RIS, so we're not conveying
3 or inferring requirements in any regard in this
4 document. We do speak with some more specificity, as
5 you pointed out, regarding the qualitative assessments
6 because, on our side anyway, we saw that as the area
7 where us explaining an approach that we found could
8 work would definitely be at least one hurdle that
9 could be addressed.

10 And as you pointed out, as you move
11 further back in the document, you'll see pointed
12 disclaimers regarding anybody's need to do anything
13 more than consider these, think about it, and that's
14 on purpose because they're not laying out
15 requirements. And when we get to working with our
16 inspectors, we want to be very clear with them that
17 these are not things to go pick up, say, Section 5 and
18 try to find in someone's design work every attribute
19 in Section 5.

20 So I'm just trying to, what I'm saying is
21 intended to be amplifying what you said that is the
22 way the document is laid out, there is that transition
23 to less prescriptive and more these are approaches
24 that could be used, these are things that could be
25 considered. Does that help at all?

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1 MR. HERB: It does, but it keeps saying
2 these words several places, this is an acceptable
3 method or this is an acceptable set or one acceptable
4 set. And when you say words like acceptable, that
5 reminds me of regulatory guides, and so some of that
6 wording almost says you either do it this way or have
7 a good reason why you didn't.

8 MR. CHERNOFF: And, in effect, I mean,
9 your comment is well taken because the original 2002-
10 22 was, in effect, a RIS trying to affect what a reg
11 guide would normally have done. And so we are
12 extending upon that foundation, and it has that same
13 attribute of the original that, you know, in
14 hindsight, you know, a regulatory guide would have
15 been the normal way to endorse that document 01-01.
16 So I guess I'm agreeing with you.

17 All right. Anything else on page 13?

18 MR. SCAROLA: This is Ken Scarola. In the
19 first paragraph under 431, you talk about introducing
20 failure modes. I think you mean postulating them, not
21 introducing them. Later in the paragraph, you talk
22 about identifying vulnerabilities. Well, if you've
23 got vulnerabilities, then you can't possibly reach
24 sufficiently low likelihood. So I think you mean
25 identifying potential vulnerabilities and then

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1 explaining how you mitigated that potential. I think
2 you just need to fix some wording in this paragraph.

3 MR. CHERNOFF: Okay. Thank you.

4 MR. SCAROLA: And in the second paragraph
5 in that section, the last sentence, the last line says
6 would be evaluated under 50.59. Does that mean would
7 be screened in? I'm a little confused. If it means
8 it would be screened in, it would certainly be a lot
9 clearer and less confusing to the industry if you just
10 said that.

11 MR. RAHN: Yes, it should have said would
12 need to be.

13 MR. CHERNOFF: I guess -- could you
14 clarify what's confusing here? Because I'm not
15 understanding it. It's --

16 MR. SCAROLA: The last words that say
17 would be evaluated under 10 CFR 50.59.

18 MR. CHERNOFF: Okay. So we're already in
19 the evaluative process in this write-up. We're in the
20 evaluative process. And this is just saying the
21 results, malfunctions with different results would
22 need to be evaluated. So you're dealing with the
23 second part of the criteria, if you would. You've got
24 the --

25 MR. SCAROLA: You're missing the first

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1 part of the sentence. The first part of the sentence
2 says if you have certain attributes in your upgrade,
3 for example, control room with a common digital
4 component or employing the same software in separate
5 digital devices, then these would be evaluated under
6 50.59. That sounds like screening criteria. It
7 sounds like if I have a common digital component or I
8 use common software, I screen in.

9 MR. RAHN: I understand what he's saying.
10 I know how to fix it.

11 MR. SCAROLA: Which, very frankly, for me,
12 is fine. I think they should screen in. But if
13 that's what you meant, then it would certainly be a
14 lot clearer if you just said that.

15 MR. ~~BEAULIEUBOLLYER~~: _____ This
is Dave BEAULIEUBollyer. I

16 think the wording that 50.59 process would be applied
17 is more accurate because, otherwise, you're right,
18 using the word evaluation infers that it screens in.

19 MR. CHERNOFF: We'll look at this. In the
20 context of the write-up here, you already passed the
21 screen point, so you're dealing with where you haven't
22 achieved sufficiently slow likelihood and you have to
23 deal with the second part of the criteria, and it was
24 just saying you have to do the results evaluation
25 under --

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1 MR. SCAROLA: Right. Therefore, you have
2 automatically screened in is what this says.

3 MR. RAHN: That's the intent of this
4 section is that you are already screened in.

5 MR. MORTON: The attachment to the RIS
6 presumes that you've screened in. So everything
7 within the attachment itself is written from this
8 standpoint that you already entered the 50.59 process
9 and you have screened in to an evaluation and all the
10 guidance in there is tailored towards that effect.

11 MR. CHERNOFF: Okay.

12 MR. CAVES: Can I ask a question? John
13 Caves, Duke Energy. Again, at the last sentence about
14 4.3.1.1, if these individual SSCs are combined with,
15 and one of the examples is employ the same software in
16 separate digital devices, then the potential for
17 malfunction with a different result or accidents of
18 different type would be evaluated under 50.59. To me,
19 what that's saying is that, you know, just like we
20 talked about earlier, there's kind of two thresholds.
21 There's a probability, a likelihood threshold, and
22 that's what the qualitative assessment is talking
23 about. And then if you don't pass that, then you're
24 over in the other side.

25 What this tells me is that if you have the

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1 same software in separate digital devices, then you're
2 forced into taking a look at whether you've got the
3 different result. And to me, that's a showstopper.

4 MR. CHERNOFF: Okay, got it.

5 MR. RAHN: Now we get it.

6 MR. CHERNOFF: Thanks, John. Anything
7 else on the 13?

8 MR. HERB: Yes, this is Ray Herb, Southern
9 Nuclear. 4.3.3.1.1, diversity in common cause failure,
10 there's a sentence in there that says design of
11 certain SSCs is required to include diversity to the
12 extent practical. I think that, for example, for
13 protection systems and we've already stated in the RIS
14 beginning that, like, we've excluded those from this
15 process. Why are we bringing them back in here? It
16 just adds confusion.

17 MR. CHERNOFF: Okay. Understand the
18 comment. Kind of redundancy, adding confusion by
19 repeating something already stated, correct?

20 MR. HERB: That's not what I said. I said
21 --

22 MR. CHERNOFF: I'm sorry.

23 MR. HERB: -- said that you're required to
24 include diversity to the extent practical, and the
25 example is protection systems and protection systems

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1 have already been excluded from this RIS. And so why
2 are you, are you saying that diversity is required for
3 something that's not covered by the RIS?

4 MR. CHERNOFF: Okay.

5 MR. CARTE: So do you equate reactor trip
6 and ESF~~AS~~ actuation systems as being the only
7 protection systems, or do you think there are other
8 systems besides those that are part of the protection
9 system?

10 MR. HERB: Are you asking me that --

11 MR. CARTE: Right. Because I think you're
12 equating reactor trip in ESF~~AS~~ with protection systems
13 and --

14 MR. HERB: Yes.

15 MR. ~~FREGONESE~~CARTE: Just look at IEEE
279 or

16 50.55(a)(h) defines what a protection system is,
17 right?

18 MR. HERB: Yes.

19 MR. CARTE: That would be the definition
20 that applies.

21 MR. FREGONESE: Right. Which is
22 everything but the actuation device, the final
23 actuated device. So I guess there's some clarity
24 about what is a protection system that we can deal
25 with later.

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1 MR. ~~FREGONESE~~CARTE: For the purposes of
2 the RIS, I think Ray's comment is, like, the reactor
3 protection has been excluded, we shouldn't have a lot
4 of reactor protection system discussion.

5 MR. CHERNOFF: Vic, can you identify
6 yourself?

7 MR. FREGONESE: This is Vic Fregonese.
8 And my other comment on this section is the first
9 sentence says exhibit a low likelihood. Throughout
10 the document, there's a couple of places where it will
11 say, like, really low, sufficiently low, kind of low,
12 low, and there should be kind of a reason why they're
13 different. It's not that widespread but --

14 MR. CHERNOFF: Yes, we got it. We'll
15 double check that. But you use sufficiently low,
16 obviously, for the criteria and try to have a reason
17 to use the word likelihood otherwise that made sense.
18 So we'll go through that.

19 MR. FREGONESE: Thank you.

20 MR. SCAROLA: This is Ken Scarola. I have
21 a comment similar to Ray Herb's about the reference to
22 the diversity quote from GDC-22. Over the years,
23 historically, GDC-22 diversity has been accepted to
24 refer to functional diversity, not implementation
25 diversity. We have control rods, and we have boron.

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1 That's functional diversity. But they can both be
2 implemented on the same hardware. There has never
3 been a requirement for different hardware diversity in
4 these applications.

5 This whole RIS, when we talk about
6 diversity, is referring to implementation diversity,
7 not functional diversity. So any discussion of GDC-22
8 in this RIS is out of place. It shouldn't be there.
9 It just adds confusion.

10 MR. CHERNOFF: All right. Let's move --

11 MR. SCAROLA: I'm agreeing with Ray it
12 should be taken out but for a different reason.

13 MR. CHERNOFF: Let's move on to page --

14 MR. FREGONESE: I agree with you. That
15 just didn't point out the criteria of 22.

16 MR. HERNANDEZ: This is John Hernandez
17 from Palo Verde. I have one more comment on this page
18 before we move on.

19 MR. CHERNOFF: Go ahead, John.

20 MR. HERNANDEZ: The second paragraph of
21 4.3.1, it talks about systems being coupled to each
22 other and gives the example by digital communication.
23 I was wondering if we could add perhaps an example or
24 some clarification of what by digital communication
25 meant because a lot of our systems in the plant, for

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1 instance, would be technically coupled together by
2 digital communication by virtue of plant computer
3 systems, and I think every nuclear plant in the United
4 States has a plant computer system, a general display
5 system of information for the operations staff, and I
6 think that's not the intent of what this is trying to
7 say.

8 MR. CHERNOFF: Okay. Thank you. Page 14.

9 MR. SCAROLA: This is Ken Scarola. In the
10 first line, it's an extension of the previous sentence
11 which refers to BTP 7-19 in establishing the design
12 basis of certain SSCs. Well, BTP 7-19 is all about
13 what's beyond design basis, so those words "design
14 basis" should be the licensing basis of certain SSCs,
15 not the design basis. Common cause failure is a
16 beyond design basis event, so we design -- so the
17 attributes that we need to fulfill for these certain
18 SSCs in the licensing basis, not the design basis.

19 MR. CHERNOFF: So I'm going to ask, just
20 to make sure I understand, if the word basis were not
21 in that sentence, would that improve the clarity?

22 MR. SCAROLA: That would work, too, if you
23 just say establishing the design of certain SSCs.
24 That's fine.

25 MR. CHERNOFF: Okay. That helps me

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1 understand the comment. Thank you. Okay. Anything
2 else on 14?

3 MR. FREGONESE: This is Vic Fregonese. On
4 digital communications, I want to follow-up with the
5 first sentence of 4.3.1.2. It talks about SSC
6 independence credited or assumed in the FSAR and
7 reduction in independence may cause the possibility of
8 new failure. Once again, independence is a concept
9 that's generally in the design world in the context of
10 safety is around safety-related systems. So I'm not
11 sure about independence assumed in the FSAR. That's
12 kind of hard to draw a circle around, so there's
13 several areas where we've talked about assumed or
14 implicit things and that may need some clarification.
15 That's the end of my comment.

16 MR. CHERNOFF: Okay. That's pretty clear,
17 I think. Additional comments?

18 MR. SCAROLA: This is Ken Scarola. In the
19 first paragraph on this page, you have discussions
20 about licensees have commitments to diversity. No,
21 licensees have committed to adequate defense against
22 common cause failure vulnerabilities. That may have
23 been through diversity, but it may have been through
24 other means. Diversity is not a requirement.

25 MR. CHERNOFF: Well, commitments are not

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1 requirements so . . .

2 MR. SCAROLA: Yes, but they committed,
3 okay? So they committed to defense against common
4 cause failure.

5 MR. CHERNOFF: Well, I --

6 MR. SCAROLA: That's all this should say
7 because this implies, well, the only commitment that's
8 important is diversity. No. The other commitments
9 may have been equally important.

10 MR. CARTE: Ken, this is Norbert. Don't
11 use the word commitment, say if it's in their
12 licensing basis the staff gets -- you understand it's
13 a very specific term for commitment, that is a
14 regulatory commitment as communicated in a certain
15 manner. Other things are part of the licensing basis.
16 There are things that are obligations. Try not to use
17 the word commitment.

18 MR. SCAROLA: Norbert, your words in this
19 paragraph are committed. I'm only using your words.
20 I don't care what that particular word is. All I'm
21 saying is that what they did to provide adequate
22 defense against common cause failure may not have been
23 diversity. It could have been something else. We
24 know that. It could have been 100-percent testing.
25 It could have been some other mechanical stops on a

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1 valve. There are a lot of ways to protect against
2 common cause failure. We should not be focusing on
3 diversity and implying that that's a commitment.

4 MR. MORTON: Well, Ken, this is Wendell
5 Morton. Just for context, this particular subsection
6 is only referring to diversity in solving common cause
7 failure. That's why other aspects weren't referred to
8 or specifically written about or inclusive with that.
9 This is context for that particular subsection.

10 MR. CHERNOFF: Let's please move on.
11 Other things on 14? Okay. Page 15, please.

12 MR. SCAROLA: Excuse me. This is Ken
13 Scarola. I'm sorry. On 4.3.1.3, we talk about
14 integrating echelons, but it is acceptable to
15 integrate echelons. We've been through this many,
16 many times, ISG-02, Oconee. You can integrate the
17 echelons reactor protection system and safety
18 features. I don't think this RIS should open that
19 discussion at all. I think all discussion of
20 maintaining independence of echelon defense is just
21 opening up a can of worms in this RIS because it's
22 addressed by other NRC guidance, and you don't always
23 need to keep them independent. You can integrate
24 them.

25 MR. RAHN: But I think all this statement

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1 is saying is that it makes it more difficult to
2 analyze or to evaluate when you do that. I'm sorry.
3 This is David Rahn.

4 MR. SCAROLA: Well, in some cases, it may
5 if you're taking credit for the independence. But we
6 don't typically take credit for independence between
7 reactor trip and engineered safety between echelons.
8 They work together. One without the other is not
9 effective. That's what ISG-02 is all about.

10 MR. CHERNOFF: Okay. Into page 15. Thank
11 you, Ken.

12 MR. SCAROLA: Well, I have one more
13 comment. I'm sorry. The second paragraph on 4.3.1.3
14 which says the qualitative assessment needs to weigh
15 the risks. I'm sorry. Risks? We're not talking
16 about risks here. 50.59. Do we create a new
17 malfunction? It's not a risk assessment.

18 MR. CHERNOFF: Okay.

19 MR. FREGONESE: Are we on 15 now?

20 MR. CHERNOFF: I would appreciate if we
21 would be on page 15.

22 MR. FREGONESE: Under 4.3.3, in the middle
23 of the paragraph, it says, the third sentence, it
24 looks like it says in all cases. And any time I see
25 that, that kind of raises a concern with me about do

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1 we really mean that?

2 MR. CHERNOFF: The absolute in all cases
3 language?

4 MR. FREGONESE: Yes. However, it says
5 help in all cases, and then it says however, you know,
6 it should be substantially similar. I think that's
7 really the key is that, you know, if you're going to
8 use the operating experience, it should be something
9 that's similar to what you're talking about in your
10 design. So that's my comment.

11 MR. CHERNOFF: Got it. Other comments on
12 15?

13 MR. SCAROLA: This is Ken Scarola. In the
14 second paragraph, I'm sorry, the third paragraph, you
15 have the words about design processes that do not need
16 to be solely those endorsed by the staff. Yes, well,
17 I agree 100 percent for non-safety systems. But for
18 safety systems, even commercial-grade dedicated items
19 need to demonstrate that they are equivalent to the
20 endorsement by the staff or compensating measures are
21 provided. This was a little misleading. I think it
22 opens the door to what is commercial-grade dedication.
23 I clearly agree with the words for non-safety, but
24 when you use those words and apply them to safety
25 they're not accurate.

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1 MR. CHERNOFF: Okay. I understand your
2 comment. Anything further on page 15? Okay. Let's
3 slide into the Section 5 engineering evaluation
4 discussions. We'll start at the bottom of 15 and then
5 16.

6 MR. SCAROLA: This is Ken Scarola. I have
7 a general comment about this entire section. Very
8 simple. These evaluations seem to be completely
9 redundant to the evaluations that are discussed in
10 Section 4 that add significant additional length to
11 the document. I don't understand why we need it. We're
12 adding 11 more pages to say, from what I think, what
13 was already said in Section 4. And if we're going to
14 scare licensees away, we often just scare them away
15 with the length of the guidance that they have to try
16 and follow. What value are we adding here in this
17 entire section?

18 MR. CHERNOFF: Okay. Understand the
19 general comment. Additional --

20 MR. FREGONESE: This is Vic Fregonese. On
21 this page, on page 16, once again, there's several
22 spots where it says low likelihood and one says very
23 low likelihood.

24 MR. CHERNOFF: Well, we've got that
25 flagged as a global to go through. Okay. Other

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1 things on this page?

2 MR. HERNANDEZ: Sorry. Are we on page 16?

3 MR. CHERNOFF: We are, sir.

4 MR. HERNANDEZ: So this is John Hernandez
5 from Palo Verde. I had a question, it's the second to
6 last paragraph, item B, performance of adequate
7 deterministic failure analysis. I was wondering if we
8 could perhaps add some clarification here on whether
9 this is different or the same as a failure mode in
10 effects analysis which is referenced earlier in this
11 document, as well as enlist the component level,
12 system level, and plant level analysis. But earlier
13 in the document, we talk about analyzing at a system
14 level for malfunction and how that potentially impacts
15 this section.

16 MR. CHERNOFF: Okay.

17 MR. HERNANDEZ: Thank you.

18 MR. CHERNOFF: Thank you.

19 MR. FREGONESE: This is Vic Fregonese.
20 The bottom of the page going into the next page, 17,
21 there's a RIS discussion, and at the beginning of, at
22 the end of page 16, the last sentence goes into page
23 17. There's an emphasis-added section to this. I'm
24 just trying to understand what the emphasis is that
25 we're trying to get across here.

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1 MR. RAHN: This was a section that we're
2 amplifying within Section 3 of NEI 01-01, and we're
3 just pointing out the part of the quotation that ~~there~~
4 applies to engineering evaluations being used. We've
5 had some internal discussions as to whether there
6 needs to be anything like this in here at all so --

7 MR. FREGONESE: You know, I'm thinking in
8 50.59 space, and what it says here is that, by the
9 time a proposed change is ready for implementation, it
10 will always lie in the region of negligible or
11 acceptable risk. I'm just questioning, you know, why
12 that's here. Maybe, Katie, do you have a comment on
13 that in terms of how that fits into the . . .

14 MR. CHERNOFF: I mean, this is the
15 engineering design section, so the intent is that
16 that's speaking about the engineering design process.
17 And when you're done with that process, you're going
18 to either be negligible or acceptable. But, I mean,
19 you're bringing up the point that that's not coming
20 across clearly.

21 MR. FREGONESE: Yes, that's right. I
22 don't have NEI 01-01 open here, so I don't know what
23 Section 3.2 says.

24 MR. CHERNOFF: Yes.

25 MR. FREGONESE: Anyway, that's the end of

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1 my comment.

2 MR. RAHN: Yes. This is David Rahn again.
3 So as I stated earlier, any of the discussions
4 regarding qualitative assessments are supposed to be
5 clearly linked to a 50.59 function, and any
6 discussions regarding engineering evaluations are
7 related to the design process. And so at some point,
8 at the conclusion of all the engineering evaluations,
9 you're going to have information that can be used to
10 feed into the qualitative assessment. So in the flow
11 of this document, I can see that it doesn't stand out
12 to everyone the way we thought it would, so that's
13 something we'll take into consideration.

14 MR. FREGONESE: Thank you.

15 MR. CHERNOFF: Thank you, Vic. Okay. I
16 think we're ready to move to page 17. Okay. I
17 propose we move on to 18.

18 MR. HERNANDEZ: So just to emphasize a
19 comment that I made earlier -- sorry. This is John
20 Hernandez from Palo Verde. If you look at the first
21 bullet under the NEI quote, it states identification
22 of potential system-level failures and undesirable
23 behavior, but earlier we talked about component-level
24 failures. So to me, there needs to be some
25 clarification, potentially some clarification here on

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1 the level of analysis of a failure analysis.

2 MR. CHERNOFF: Okay. Thank you, John.

3 MR. SCAROLA: This is Ken Scarola. The
4 first paragraph on page 18, you talk in the middle of
5 the paragraph about software CCF potentially reducing
6 redundancy, separation, or independence. There is no
7 NRC criteria that requires consideration of software
8 CCF in the context of redundancy, separation, or
9 independence. You can have the same software, and you
10 can have a CCF, and you don't adversely affect
11 redundancy, separation, or independence. Those are
12 different criteria because common cause failure, when
13 you have those other things, there's a beyond design
14 basis event.

15 I think we're mixing things together here.
16 We're mixing deterministic criteria for design basis
17 events with beyond design basis.

18 MR. FREGONESE: This is Vic Fregonese. I
19 have a similar comment. One of the reasons I thought
20 about this is the ending sentence to this paragraph
21 talks about the CCF vulnerabilities considered to have
22 such a low risk. So, once again, we have adequacy
23 based on risk when we're talking about deterministic
24 criteria, like separation, in a sentence with software
25 failure. I'm not sure what you're trying to get to

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1 here because the following sections are just quotes
2 out of NEI 01-01, so I'm trying to figure out what the
3 punch line is for this section. What are we supposed
4 to take away from this?

5 MR. SCAROLA: This is Ken again. The
6 problem I'm having is that you can reach a conclusion
7 of adequate redundancy, adequate separation, and
8 adequate independence even if there is a potential for
9 a software CCF. That's what BTP 7-19 says. You just
10 have to analyze that CCF as a beyond design basis
11 condition. It doesn't reduce any of those independent
12 attributes.

13 MR. CHERNOFF: All right. Okay. Let's
14 move to 19.

15 MR. SCAROLA: Excuse me. Before you go on
16 to 19, the last section, the last paragraph on page 18
17 talks about a transient that could challenge safety
18 systems. I think it's equally important that we
19 recognize that the transients that have never been
20 analyzed are the ones that we're also very concerned
21 about. Whether they challenge the safety systems or
22 not, we don't know because we haven't analyzed them.
23 So we should, so any place where we talk about
24 vulnerability, especially in this paragraph, we really
25 should be talking about unanalyzed conditions.

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1 MR. CHERNOFF: And the paragraph you're
2 referring to is a quote, right?

3 MR. SCAROLA: It doesn't have quotes
4 around it, but maybe it is.

5 MR. CHERNOFF: I just want to make sure
6 we're on the same place you are. Towards the bottom
7 of the page above an indented paragraph where it says
8 "NEI 01-01 Section 5 also states," and then --

9 MR. SCAROLA: Right.

10 MR. CHERNOFF: -- the paragraph starts "a
11 variety;" is that correct?

12 MR. SCAROLA: Yes. And then the last
13 words are "or transients that challenge safety
14 systems."

15 MR. CHERNOFF: Yes, yes.

16 MR. SCAROLA: And what I'm trying to point
17 out is this is one of the shortcomings in NEI 01-01 is
18 it fails to address on the analyzed transients that
19 you don't know challenge or don't challenge or just
20 unanalyzed.

21 MR. CHERNOFF: Okay. All right. That is
22 literally the last sentence on page 18, so let's go to
23 19.

24 MR. HERNANDEZ: This is John Hernandez
25 from Palo Verde. I had a question on the last

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1 paragraph of the 5.2.1 just above the title
2 "dependability evaluation."

3 MR. CHERNOFF: Got it.

4 MR. HERNANDEZ: It says modifications that
5 employ effective design attributes and features such
6 as internal or external systematic diversity, and I
7 was wondering could we get a clarification of what
8 internal systematic diversity was? Because it wasn't
9 readily apparent to me.

10 MR. RAHN: Yes, thank you, John. This is
11 David Rahn. I think Vic asked a question about that
12 earlier, so we'll try to come up with an appropriate
13 way to handle that.

14 MR. HERNANDEZ: Thank you.

15 MR. CHERNOFF: Other items on page 19?

16 MR. FREGONESE: Yes, this is Vic
17 Fregonese. We use the term -- I'm trying to find it.
18 I lost it. We use the term simple and then indented
19 paragraph above is talking about simple software
20 architecture systems that are sufficiently simple. Is
21 this a quote? Why --

22 MR. CHERNOFF: Yes, it is a quote from
23 Section 4.1.2.

24 MR. FREGONESE: Okay. Yes, I'm not so
25 sure. I'm trying to think whether simplicity appears

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1 in the table. I guess it still does. What simple
2 actually means, simple, in some people's views, means
3 that it's 100-percent testable. We've talked about
4 the 100-percent testable criteria. So I guess my
5 comment is what's our current view of what simple is
6 maybe defined somewhere else in the document?

7 MR. MORTON: Well, it's in Table 1.

8 MR. FREGONESE: Yes, I couldn't hear that
9 comment.

10 MR. MORTON: I'm sorry. Vic, this is
11 Wendell Morton. It's referenced in Table 1 on the
12 fourth bullet under design attributes.

13 MR. FREGONESE: I'm looking. Right. So
14 my comment still kind of stands that if the only
15 definition, we may have another definition of simple.
16 Table 1 is not a requirement, it's just an example.
17 But simple can't just be 100-percent testing. So I
18 think my comment still stands. We'll have to figure
19 out whether simple, I don't know if anybody else has
20 any comments about that.

21 MR. CHERNOFF: Okay.

22 MR. FREGONESE: This is Vic Fregonese.
23 I'm going to take it as a quote and move on. Thank
24 you.

25 MR. CHERNOFF: I heard someone try to

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1 break in there.

2 MR. HERNANDEZ: Yes, sorry. John
3 Hernandez from Palo Verde. Another clarifying
4 question on the second paragraph of page 19. The
5 second line states that non-safety related designs
6 have been assumed in a safety analysis to remain
7 functional, and my question was is there a timing
8 aspect to the word "remains?" So for instance, in my
9 safety analysis, there's a part -- I'll give you a
10 very practical example. There's a small delay between
11 my feedwater isolation valves going closed when my
12 main steam isolation valves go closed. But if I were
13 to have a system that combined these in such a way
14 that they went closed at the same time or the timing
15 of that closure were to change, is that timing part of
16 this remain functional? I know that's maybe a safety-
17 related example in a non-safety question. Hopefully,
18 you get the meaning of my question.

19 MR. RAHN: Yes, this is David Rahn. So my
20 thinking on this one is that the analysis identifies
21 specific systems that either function properly or are
22 misfunction. And there are other systems in the plant
23 that aren't even mentioned in the analysis and that
24 might have some commonality to the system that is part
25 of an analysis. And the assumption being that those

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1 other systems, because they weren't even mentioned,
2 there's an implicit assumption that they're still
3 functioning during that event.

4 MR. HERNANDEZ: So I think I understand.
5 So the remain functional is throughout the event, not
6 in the immediate initiation of the event?

7 MR. RAHN: Correct.

8 MR. CHERNOFF: This is Harold. I would
9 add maybe a little further. It's as used or as
10 assumed in the analysis as far as the duration. So
11 it's not trying to add a duration or a concept of
12 mission time or anything like that. It's trying to
13 match up with what was analytically done.

14 MR. CARTE: And the point is -- Norbert
15 Carte. The point is be careful about violating the
16 assumptions of your accident analysis. That's a
17 different way of saying it.

18 MR. CHERNOFF: And maybe that would be a
19 better way because -- yes, yes, because that's what is
20 trying to be brought to attention here is that in some
21 accident analysis things are explicitly very obviously
22 credited and used and sometimes not so much in other
23 analyses.

24 MR. HERNANDEZ: And I would very much
25 agree with that and perhaps we can take this

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1 discussion as the comment to somehow clarify that.

2 MR. CHERNOFF: Yes, got it. Thank you.
3 Okay. Other things on 19? All right. We will boldly
4 go ~~to~~ to page 20.

5 MR. HERB: This is Ray Herb, Southern
6 Nuclear. I hate to skip ahead in page but 5.2.3,
7 defense-in-depth analysis, the second paragraph says,
8 "Although a formal D3 analysis is not required for
9 non-protection systems, a defense-in-depth analysis
10 should also be considered for complex digital
11 modifications of non-protection systems to determine
12 the impact of any new potential vulnerabilities." I
13 don't think that whole paragraph has any place in this
14 document. It's not a requirement to do that, and we
15 certainly are not going to provide a diverse control
16 system or modifications to our control system that has
17 digital. I think it's inappropriate.

18 And in the paragraph above that, it talks
19 about the defense-in-depth for protection for reactor
20 trip and ESFAS, once again just obfuscating the
21 document purpose because we've already stated that
22 reactor trip and ESFAS are not included in the scope
23 of this. So I'm not sure what value this defense-in-
24 depth analysis section even has beyond just a simple
25 statement or a paragraph that says . . .

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1 MR. CHERNOFF: Could you repeat the last
2 part of what you said?

3 MR. HERB: I'm not sure what the value of
4 having this section here is other than beyond a few
5 sentences that state that you can use defense-in-depth
6 analysis to determine whether or not you have
7 sufficient diversity. Again, the sufficient diversity
8 typically is in response to reactor trip and ESFAS and
9 not to control systems, and so, since we've excluded
10 reactor trip and ESFAS and we've now included control
11 systems, I'm not sure why we have this section at all,
12 especially related to high-quality non-safety systems.

13 MR. CAVES: And, in fact, you know, what
14 I'm saying is that --

15 MR. CHERNOFF: John Caves from Duke.

16 MR. CAVES: John Caves, Duke Energy. If
17 it is to be included, one of the things that would be
18 useful is clearly limiting its scope and not expanding
19 it.

20 MR. CHERNOFF: Not expanding beyond
21 protection systems.

22 MR. CAVES: Beyond the protection systems.

23 MR. CHERNOFF: Okay.

24 MR. CAVES: But there, again, based on the
25 fact that, you know, protection systems are not, you

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1 know, precluded on the front end, then you need them.

2 MR. SCAROLA: This is Ken Scarola. I have
3 a comment in the same paragraph but from a different
4 perspective. As defined in BTP 7-19, a D3 analysis
5 has two parts. The first part is an assessment of CCF
6 vulnerabilities, and then the second part is
7 determining your defenses against those
8 vulnerabilities. Well, to say that a formal D3
9 analysis is not required really contradicts everything
10 that this says because the first part documenting your
11 vulnerabilities is required by this RIS. So it is a
12 formal requirement for non-protection systems for
13 everything that's covered by this RIS.

14 So I think the problem is really the
15 ambiguity in the label D3 analysis. If you break D3
16 analysis into its two parts, the first part is clearly
17 required to be formally documented here. So I think
18 we just have contradictions here that have to be
19 fixed.

20 MR. CHERNOFF: Okay.

21 MR. FREGONESE: This is Vic Fregonese. I
22 have a comment on the paragraph above, still on page
23 20. This sufficiently dependable concept that's been
24 introduced here, and I know it's in quotes so I think
25 it's just that it's documented, the last sentence in

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1 the second full paragraph on this page says, it has
2 the words "staff believes that judgments regarding the
3 quality design process" and so forth. So I'm not
4 sure, I know it's important to understand what the
5 staff believes, but I think what it's trying to say is
6 that use engineering judgment, that you still have to
7 consider design features and attributes, I can't just
8 use quality in operating experience because for a non-
9 safety systems, you know, I could add some design
10 features, but I may not want to do that. So I'm not
11 sure what the last sentence, how I should take that,
12 what I'm reading. I believe you understand my
13 comment.

14 MR. CHERNOFF: And I guess we would point
15 out the sufficient dependability is in quotes. It
16 comes out of 01-01.

17 MR. FREGONESE: Okay. That's fine.

18 MR. CHERNOFF: Yes, it's just a minor
19 clarification and doesn't affect your comment really.

20 MR. FREGONESE: Yes. And the other thing
21 is the staff believes or the staff's view is on
22 judgment. I made a previous comment on that, so
23 that's the end of my comment here. Thank you.

24 MR. CHERNOFF: Thank you. Okay. I think
25 we need to move on to page 21. This is really just a

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1 very short section.

2 MR. SCAROLA: This is Ken Scarola. Item
3 B of this paragraph on page 21 gets back to the issue
4 of allowing best estimate methods. The only way that
5 you can prevent crediting high non-safety systems is
6 if you consider the event a beyond design basis event
7 allowing best estimate methods. If you do not allow
8 best estimate methods, you cannot take credit for non-
9 safety systems because if it's a design basis event it
10 must be mitigated by safety systems by definition.
11 That's what safety systems do, and those are the rules
12 for demonstrating mitigation of design basis events.

13 So we have this serious contradiction in
14 this RIS where we're not allowing best estimates but,
15 yet, later on we're saying you can take credit for
16 non-safety. We've got to fix this contradiction and
17 permit the use of best estimate methods.

18 And my second comment relates to Item C.
19 We state here that manual action cannot be credited if
20 they were not credited in the original FSAR. Well,
21 what's the basis of that? That is a really powerful
22 statement that's going to squash digital upgrades
23 significantly because manual actions are significant
24 in mitigating ~~CTFs~~CCFs. What's
the basis of that? There
25 is certainly no basis in SECY-93-087 or in BTP 7-19.

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1 MR. CHERNOFF: Now, this gets back, that
2 part of this discussion gets back to this distinction
3 between your licensing and design basis, your FSAR
4 analysis and what can be used and credited in there.
5 And there may be some confusion here with regard to
6 that and D3 assessments that are done to, if you
7 would, accept a digital approach. But that's the C
8 paragraph is related, was intended to be related to
9 the licensing design basis of record.

10 MR. SCAROLA: Well, clearly, we take
11 credit for manual actions for design basis events for
12 --

13 MR. CHERNOFF: But those are previously
14 reviewed and approved and staff has been very clear
15 over history that manual actions cannot be done under
16 50.59 outside of the small scope that we've identified
17 in information notice with special controls. But
18 there may be some mixing of, in this paragraph, of
19 licensing basis analysis methods and D3 discussion
20 that --

21 MR. SCAROLA: Well, I would certainly
22 agree that new manual actions could not be credited
23 for a design basis event. But if you're in beyond
24 design basis event, we have many instances, many
25 precedences for crediting manual actions that the

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1 staff has not reviewed. We've credited them for fire,
2 for SBO. There's a lot of history here.

3 So I would take issue -- you know, I think
4 this all gets back to the problem of are we in design
5 basis or beyond design basis space. If we're in
6 beyond design basis space, I think the rules are
7 entirely different than what you're describing here.

8 And, again, I view this as a showstopper.
9 If you're looking to expand the application of digital
10 technology, this is going to put a damper on it. It's
11 not going to expand it at all.

12 MR. CHERNOFF: Okay. Thank you, Ken.
13 Let's move on to page 22.

14 MR. HERB: Wait, wait. This is Ray Herb,
15 Southern Nuclear. I would like to expand upon, like,
16 Ken's comment on Section C. I would like to reiterate
17 my earlier assumption that I think parts of this
18 document step upon Appendix D going forward and I know
19 that none of this can be predicated on the assumptions
20 of what happens in Appendix D, but I would caution us
21 to not go forward with something that may counter the
22 things that we do in Appendix D. Specifically, in
23 Criterion 6, we talk about new FMEAs may be required,
24 and so part of that, in answering question six to get
25 to the higher level safety analysis, we would be

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1 necessarily possibly crediting some manual actions.
2 That would be allowed if that were to go forward, and
3 so it's basically --

4 MR. CHERNOFF: You're talking about if
5 Appendix D were to go forward?

6 MR. HERB: Yes.

7 MR. CHERNOFF: Okay.

8 MR. HERB: And so I would caution us to
9 not put these types of words in there that may
10 counter-man that and maybe even wait on this document
11 until we get a little further clarification on the
12 Criterion 6 part, which is what this really goes to.
13 The defense-in-depth analysis really, I guess, credits
14 new accidents.

15 MR. SCAROLA: Just to expand a little bit
16 -- this is Ken Scarola again -- there's a big
17 difference between using manual actions on equipment
18 that the staff has never reviewed. But if the staff
19 has reviewed the equipment and the equipment has
20 always had the capability for manual actions, then, in
21 essence, the staff has reviewed those manual actions
22 because the equipment has the capability. Now,
23 whether we actually credited those manual actions is
24 a different story, but if the equipment has been
25 reviewed by the staff then I see no basis for

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1 excluding the manual actions --

2 MR. CHERNOFF: There is a distinct and
3 important difference between things that are looked at
4 and things that are credited. But I really feel we
5 need to move on. We only have an hour left, and I
6 would like to save a little time for some general
7 discussion at the end. So page 22, please.

8 MR. HERNANDEZ: This is John Hernandez
9 from Palo Verde. I have a question at the very bottom
10 of the page.

11 MR. CHERNOFF: Okay.

12 MR. HERNANDEZ: It says we could
13 potentially satisfy 50.59 criteria using an
14 alternative approach, and it gives an example of an
15 alternative approach is a deterministic conclusion
16 that your likelihood is less than comparable failures
17 in the EFSAR. And my question is what does this
18 deterministic conclusion look like? My confusion
19 comes from the fact that we've stated previously in
20 this document that quantitative analysis is not
21 possible for digital system, and, if the qualitative
22 analysis was supposed to get you to this point and
23 didn't, what is the alternative analysis method?

24 MR. CHERNOFF: Dave, correct me if I'm
25 wrong here, I thought our thought in this regard was

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1 to not foreclose future advances or possibilities that
2 deterministic methods could address some things down
3 the road, even if we don't currently have that
4 capability?

5 MR. RAHN: Yes, so we're trying to open
6 the door for things other than 100-percent testing and
7 required diversity to be used as means for directly
8 addressing CCF in a way in which you could reach a
9 sufficiently low determination.

10 MR. HERNANDEZ: Thanks. I understand now
11 and agree. Thanks.

12 MR. CHERNOFF: Additional thoughts on this
13 page, which is page 22?

14 MR. CAVES: Yes, just based on that
15 information, you might consider that instead of saying
16 deterministic conclusion that likelihood is less than
17 possible to just go ahead as deterministic conclusion
18 that also supports sufficiently low likelihood or
19 keeps consistency in --

20 MR. CHERNOFF: With the other terminology
21 we're using? Okay. Thanks, John.

22 MR. CAVES: That was John Caves of Duke
23 Energy. Sorry.

24 MR. FREGONESE: The Section 5.2.3, my kind
25 of takeaway is that, for the majority of modifications

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1 that are being done, you have to ask yourself how does
2 this apply in the context of the rest of the
3 modifications we're doing. And if it does, we get
4 kind of mixing and matching between acceptance
5 criteria and methods that isn't even called D3 and
6 what's the basis for it, so I think some more thought
7 needs to be put into this 5.2.3 section.

8 MR. CHERNOFF: Thank you for that.

9 MR. SCAROLA: This is Ken Scarola. In
10 previous sections, we talk about RPS and ESFAS and
11 other things of equal importance. On this page, we
12 exclusively discuss RPS and ESFAS. I don't understand
13 the inconsistency. I think we've got to clarify it. Does this
14 page equally apply to the other things of equal
15 importance to RPS and ESFAS, or is it only intended --

16 MR. CHERNOFF: Ken, are you --

17 MR. SCAROLA: -- RPS and ESFAS?

18 MR. CHERNOFF: Ken, are you talking about
19 the paragraph that starts "for RPS and ESFAS" or some
20 other --

21 MR. SCAROLA: I'm talking about every
22 instance of RPS and ESFAS on this page.

23 MR. CHERNOFF: Well, a number of them are
24 quotes, so I'm just trying to narrow down. So the
25 first section is all quotes out of 01-01. Then the

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1 first paragraph where we, in something that's being
2 written uniquely here is right after that quote for
3 RPS and ESFAS.

4 MR. SCAROLA: Well, let me give you an
5 example. When we get to the third paragraph, the
6 third paragraph talks about RPS and ESFAS. Then in
7 the middle of paragraph, it says for other systems.
8 I think that would imply that anything else that's not
9 RPS and ESFAS you can do these other things.

10 MR. CHERNOFF: That was what was intended.

11 MR. SCAROLA: That leaves out the systems
12 that are equally important to RPS and ESFAS, such as
13 load sequences. So that's -- I'm trying to understand
14 the scope of what we mean by other systems compared to
15 what we said in previous sections.

16 MR. CHERNOFF: Okay. Thank you. I
17 understand that. Okay, all right. And just to draw
18 people's attention in that paragraph, that for RPS and
19 ESFAS, this is one of the areas where we're drawing on
20 the current BTP, not the one that 01-01 was pinioned
21 on.

22 MR. FREGONESE: This is Vic Fregonese. We
23 had a discussion early on about the inclusion of BTP
24 7-19 information in this document, and I thought that
25 where we wound up was that BTP 7-19 doesn't apply the

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1 activities that are done under 50.59, that it applies
2 activities that are done under license amendment and
3 that's what the guidance was intended for. But just
4 getting back to my original comment about this section
5 about what criteria applies to what systems or what
6 functions, and I'm not going to repeat the comment but
7 I think that --

8 MR. CHERNOFF: Okay.

9 MR. SCAROLA: This is Ken Scarola. At the
10 bottom of the page, you have a footnote that says an
11 example of an alternative approach. Well, this is not
12 an alternative approach. This is your definition of
13 sufficiently low. Therefore, this is a pre-requisite,
14 not an alternate. You can't --

15 MR. CHERNOFF: This section is not talking
16 about sufficiently low. This section is talking about
17 approaches you might use to disposition identified
18 failures, and it's presenting some options that could
19 be used. So, again, we're in the design section.
20 We're not in the qualitative assessment to support
21 50.59 write-up, per se. And what's intended here is
22 to provide that here are some step-wise approaches
23 that could be used in the design process.

24 MR. SCAROLA: Yes, I understand. But your
25 second bullet says "satisfies 50.59 using an alternate

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1 approach." Well, an alternate approach from what?
2 From what is described in this document, right?

3 MR. CHERNOFF: This is a discussion we
4 just had a few moments ago with Mr. Caves from Duke,
5 and what we were clarifying in that discussion was
6 that there may be other approaches, we wanted to leave
7 the door open that things that are not known now could
8 become viable in the . . .

9 MR. SCAROLA: Yes, I understand. I don't
10 think I'm explaining myself well. I agree with John
11 Caves. There are other approaches to 50.59. But the
12 approach that you describe in this document is
13 predicated on the conclusion that failure likelihood
14 is less than comparable failures in the FSAR. That's
15 not a good example of an alternate because that is
16 what is described in the RIS. If you want to --

17 MR. CHERNOFF: It's not being given here
18 as an alternate. That is --

19 MR. SCAROLA: An example of an alternate.
20 That's what the footnote says.

21 MR. CHERNOFF: Okay. We're going to have
22 to, time-wise, move on.

23 MR. CARTE: Norbert Carte. I think the
24 distinction is between the method to get to the answer
25 and what the right answer is. I think the criteria is

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1 the same however you get there. So what we've
2 described in the body is how to arrive at a particular
3 answer. If you can get that same answer in a
4 different way, that's what we were trying to say.

5 MR. CHERNOFF: There's no way an intent
6 here that a qualitative assessment is the only
7 possible way to answer the 50.59 questions so that you
8 reach a conclusion that prior approval is not
9 necessary. There are certainly possibly other
10 options. This is one way that we see as workable.

11 MR. CARTE: But I think we understand how
12 that quote could be ambiguous, how that phrase could
13 be ambiguous.

14 MR. CHERNOFF: Okay. Page 23.

15 MR. SCAROLA: I'm sorry. This is Ken
16 Scarola. In the middle of this page, you refer to
17 Section 5.1.4 of NEI 01-01, and you say you can rely
18 on existing backups. Well, this gets back to the
19 issue of best estimates. If you're using best
20 estimates, you can rely on existing backups. Backups
21 don't provide the same protection as the design bases
22 systems. But if you don't allow best estimate
23 methods, then you can't rely on backups. So, again,
24 we have a contradiction and, again, that will put a
25 significant damper on -- and it's a contradiction to

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1 NEI 01-01. NEI 01-01 says you can rely on backups.
2 But now we're saying but you can't use best estimate
3 methods, so you can't rely on backups. It's not
4 hanging together.

5 MR. CHERNOFF: Okay. Anything else on
6 page 23? Page 24. I appreciate everybody's patience
7 and endurance. It's a long path we're on here for a
8 day altogether, so hang in there. As soon as we get
9 done with the document, we'll take a short break and
10 then come back and talk about some generalities.

11 MR. HERNANDEZ: John Hernandez from Palo
12 Verde. On page 24, the two bullets, first two bullets
13 on the page, the word postulated. I think the intent
14 may be to use something like credible or likely
15 because I think just because it's postulated that a
16 new --

17 MR. CHERNOFF: Yes, understand exactly.
18 We probably won't use likely because we're trying to
19 minimize the use of that term but understand the
20 point.

21 MR. HERNANDEZ: And then the second
22 question/comment I have is, again, on the use of
23 communications among two or more different non-safety
24 related SSCs.

25 MR. CHERNOFF: Help me with where you are

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1 exactly.

2 MR. HERNANDEZ: The first bullet.

3 MR. CHERNOFF: Okay, okay.

4 MR. HERNANDEZ: I've got two more
5 questions on this first bullet. So the first one is
6 with respect to communication because it's been listed
7 several times in the document, and I'm wondering can
8 we get a clarification of what communications means in
9 non-safety systems?

10 And then an add-on to that is, if you read
11 the sentence in its entirety, there's a little bit of
12 a mismatch. So the sentence says "postulated new
13 failure modes do not result in concurrent failures,"
14 and then it lists some things and then says "such as
15 combining of different design functions that were
16 previously separate." But to me, combining different
17 design functions is not a result of a concurrent
18 failure. If you just take a second to read the whole
19 sentence, it sort of, the beginning and the end, I
20 think, don't quite match.

21 MR. CHERNOFF: Okay. Appreciate that.
22 You had an additional thought, I think, also.

23 MR. HERNANDEZ: That was it. Those were
24 the two, the communications and then the sentence --

25 MR. CHERNOFF: And then the structure of

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1 the sentence. Yes, okay.

2 MR. HERNANDEZ: Thank you.

3 MR. CHERNOFF: Thank you. All right.

4 Page 25? I'm sorry. Anything else on page 24 before
5 we move to 25?

6 MR. CARTE: Norbert Carte. I had a
7 question on this communications. I almost don't
8 understand the question. So if you have two analog
9 systems that are at the plant and then you replaced it
10 with two digital systems and then you communicate, use
11 digital communication between the two systems, do they
12 have the same level of independence? Do you believe
13 they have the same level or that connection between
14 the two systems in no way affects any constructed
15 independence between the systems or what is it about
16 communications that you believe doesn't somehow affect
17 independence? This was for John Hernandez.

18 MR. HERNANDEZ: Oh, sorry. Yes, so my
19 question was just to get a clarification on what is
20 meant by communications. So, for instance, let's say
21 you have multiple SSCs on the same network that we're
22 sending communications to a plant computer system, for
23 instance. Is this considered that all the systems are
24 now communicating with each other even though they may
25 not be utilizing any data from different systems, but,

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1 because they're on the same network and they both use
2 the same communication protocols and they're both
3 communicating with a common system, is this now --

4 MR. CARTE: Right. Norbert Carte. So I
5 guess you've got grades of independence, and there are
6 more and less robust ways to construct networks and
7 segment networks so that the failure of either the
8 network or a broadcast storm doesn't affect more than
9 two components. And then if you put everything in the
10 plant on one segment, you're obviously going to have
11 problems.

12 So there's various levels of robustness in
13 communications that can be implemented. But just the
14 fact that you have implemented a connection that
15 didn't previously exist implies some sort of need to
16 evaluate that you didn't create a malfunction that
17 didn't exist previously.

18 MR. HERNANDEZ: So the connection may have
19 existed before in an analog form and now exists in a
20 digital form.

21 MR. RAHN: Well, if it's talking to the
22 plant computer, is it still, did you replace the
23 analog communications with a digital form of
24 communications?

25 MR. HERNANDEZ: And there are instances

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1 where, for instance, let's say a transmitter signal
2 goes into one system in an analog form and then in
3 analog form is then sent from that system to a second
4 system, but now that communication is turned into a
5 digital communication rather than an analog, is this
6 different?

7 So I'm not trying to debate whether it's
8 correct or incorrect or we should do it differently.
9 I'm just trying to understand or maybe get a little
10 more discussion or clarification in this document as
11 to what is meant by communication.

12 MR. RAHN: Yes, I think we should have
13 inserted the word digital in front of the word
14 communication.

15 MR. CARTE: I think we understand the
16 concern, but, honestly, there's a different mechanism
17 involved in that, too, and a lot of times when you do
18 digital you have more than one signal per wire. So
19 there's a lot of different things that go on. It's
20 not just an abstract analog to digital in most cases.
21 So if we understand the point . . .

22 MR. MORTON: Wendell Morton. Just to top
23 this point off, the context by which we reference
24 communications or in digital communications is simply
25 to identify one type of shared resource that could be

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1 between one or more SSCs. It wasn't intended to bring
2 any detailed information on whether you have one-way
3 communication or bi-direction of communication between
4 different nodes on a network, it was just to highlight
5 that's one form of shared resource that could
6 facilitate a fault or failure. They need to think
7 about considering your engineering violation. So
8 that's the general context.

9 MR. FREGONESE: This is Vic Fregonese. I
10 think the punch line here is the second bullet. The
11 details in the first bullet don't matter if the second
12 bullet is true, so it doesn't matter because some of
13 this hardware is common in these systems now and it's
14 failing. That's why we're replacing it. As long as
15 you don't in an analyzed condition, it doesn't matter.
16 That's the bottom line.

17 So you can have shared resources. In
18 fact, shared resources makes a system more reliable,
19 rather than less reliable. So I think the shared
20 resource communication, I understand what John is
21 saying, there's a broad term. I think the real
22 acceptance of this would be to make sure that you
23 don't put the plant in a place where it's not been
24 properly analyzed, and that should be the emphasis,
25 not on sharing because, as you know, sharing, in some

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1 cases, is a way to make systems more reliable.

2 MR. CARTE: All right. Thank you.

3 MR. HERNANDEZ: You know, I'll just add in
4 one small comment, and that's that when I read through
5 this I struggled a lot with the idea of shared
6 resources. And this may sound silly, but I'll give
7 you an example that comes to mind, something like the
8 turbine building grating, right? So if I have two
9 different systems mounted on the same grating of a
10 turbine building floor, I consider that a shared
11 resource. I know that sounds silly, but the general
12 term shared resource I feel brought around a lot of
13 questions to me as I was reading this document,
14 communications being one of the bigger ones.

15 MR. CHERNOFF: Thank you.

16 MR. SCAROLA: This is Ken Scarola. I have
17 a problem with that same paragraph, the one that
18 starts "postulated new failure modes," but for a
19 different reason. My problem is that this paragraph,
20 the words concurrent failures and shared resources
21 implies that we have to consider concurrent failures
22 of multiple things. This should say concurrent
23 malfunctions due to a failure in a single shared
24 resource. We don't have to consider the current
25 failures and shared resources. We have to consider

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1 concurrent malfunctions due to a failure of a single
2 shared resource.

3 MR. CHERNOFF: Thank you, Ken.

4 MR. SCAROLA: And my second comment is, in
5 any discussion of shared resources, software should
6 come out. The software is not a shared resource,
7 unless, of course, you also share the hardware. If
8 you share the hardware that the software resides in,
9 well, then you have a shared software resource. But
10 it's different when the software resides in different
11 hardware. Then it's not a shared resource. Then we
12 have the potential for a design defect leading to now
13 multiple concurrent malfunctions, but not a shared
14 resource. And the reason that's significant is a
15 failure of a shared resource is a single failure that
16 we need to treat as a design basis event. A design
17 defect in software that resides in multiple places we
18 don't need to treat as a design basis event. It's a
19 beyond design basis event.

20 MR. CHERNOFF: Okay. Let's move on.
21 Sorry, I didn't mean to cut you off.

22 MR. SCAROLA: I was just saying I'd like
23 you to scrub the document and make sure software is
24 not described in the context of a shared resource.

25 MR. CHERNOFF: Okay. Let's please move on

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1 to Table 2 on page 25. So this is presenting an
2 outline of engineering documentation. It is -- I'll
3 just anticipate some of the questions. Obviously,
4 there is not an intent that each of the bullets and
5 sub-bullets always need to be addressed. It's
6 basically intended to create a think through this kind
7 of list and consider. And, of course, there's no
8 requirement here. It is just one way of looking at
9 this.

10 There's a couple of pages of table, but
11 any thoughts on the table or specific comments on the
12 table in its entirety?

13 MR. FREGONESE: This is Vic Fregonese. I
14 think we're not going to repeat all the comments we
15 just heard about, but there are terms in here, like
16 software, shared common hardware, take those all in
17 the context of the previous comment.

18 MR. CHERNOFF: Understood. Thank you.
19 Anyone else on the table?

20 MR. SCAROLA: This is Ken Scarola. ON
21 page 26, you talk about annunciating failures, I'm
22 sorry, annunciating failures on misbehaviors. Well,
23 misbehaviors don't actually require annunciators.
24 They can often be detected without annunciators just
25 through the transients that they cause. There are

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1 words in BTP 7-19 that talk about self-announcing.
2 Those are the right words. Self-announcing can be
3 many different ways. It doesn't require an
4 annunciator.

5 MR. CHERNOFF: Okay. I'd like us to move
6 to Section 6 which was just talking about, focused
7 right in on the qualitative assessments and the
8 documentation for the 50.59 evaluation, and we'll
9 entertain any thoughts on that writeup.

10 MR. FREGONESE: This is Vic Fregonese. We
11 had, there's a lot of documentation that's required as
12 a result of NEI 01-01, a lot questions that have to be
13 answered. I think my view of all this is that this
14 would be kind of a stand-alone document, and then the
15 50.59 would reference this in terms of qualitative
16 assessment. You'd wind up with a 100-page --

17 MR. CHERNOFF: No, no, and this is exactly
18 the point we want to try to make sure we're clear on
19 is so this paragraph is just talking about what you
20 would want to see in your actual 50.59 evaluation.
21 And so in the discussion what you see there is there
22 is a lot of other discussion in 01-01 and in this RIS.
23 Obviously, none of that stuff is a requirement. And
24 what we are trying to convey is a little bit of
25 information specific to the qualitative assessments in

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1 the middle paragraph and that the overall standard of
2 how much information needs to be in the 50.59
3 evaluation itself is really not changing, save you
4 need to have a good clear explanation of how you
5 reached your qualitative assessment conclusion.

6 So the message we're trying to convey here
7 is we're not creating a new standard of 50.59
8 documentation. We would not expect or desire to see,
9 like you referred to, a 100-page 50.59 evaluation.
10 But same standard that's been used since the rule
11 changed in 2000 or 1999 that someone can follow the
12 logic and would be able to reach similar conclusion
13 with the information that's there and also clarifying
14 everything does not need to actually be in the 50.59
15 evaluation. It's still okay to reference things, but
16 we ask that, if you reference, it's most helpful to
17 include specific location of that information.

18 And just so everybody is clear, the point
19 is sometimes people reference a mod package and a mod
20 package may be 250 - 300 pages, and it saves your
21 independent reviewers and our staff a tremendous
22 amount of time to just, when you're referencing, it's
23 right in front of you, focus in and just page,
24 section, you know, yes, yes. That's just a, I mean,
25 that's a suggested approach. Does that help a little

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1 bit?

2 MR. FREGONESE: Yes, thank you.

3 MR. CHERNOFF: Okay. Anything else on
4 Section 6? Okay. Let's do this. I appreciate
5 everybody working through this. It's been a long day.
6 It's 12:25 by my clock. Let's take ten minutes, take
7 another break, and come back, and I guess I would
8 specifically ask people to kind of think about if
9 there are any generalities and any thoughts about
10 moving forward that you want to add to what's already
11 been said. I mean, we'll have an actual record of
12 everything that's been said, so we don't need to
13 repeat everything, but kind of maybe take it to the
14 5,000-foot level when we come back and have a short
15 discussion for the rest of the time.

16 Okay. Thank you. So let's be back in ten
17 minutes. That would be 12:35 by this clock. Thank you.

18 (Whereupon, the foregoing matter went off
19 the record at 12:25 p.m. and went back on the record
20 at 12:36 p.m.)

21 MR. CHERNOFF: Okay. Thank you,
22 everybody. I appreciate everybody being timely in
23 coming back. So as I said on my way in to Jared,
24 let's try to finish strong. And so I want to kind of
25 open things up for more generalized thoughts that

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1 folks have, and, you know, I think feel free to
2 include recommendations. I think that's fair game.
3 Jared?

4 MR. HANSON: This is Jared Hanson with
5 NEI. I do have a general comment I'd like to make
6 after everything that we've heard today. So just to
7 reiterate what was said earlier, we've only had two to
8 three days to look at this, and, as you can conclude
9 from this meeting, there are a lot of significant
10 comments that stakeholders have made on the document.
11 And you made the comment of finishing strong, and, to
12 that point, I think we have an opportunity to do that
13 because I think what we've been through in the last
14 few days, particularly with this, it shows kind of the
15 challenges that we've been experiencing in digital
16 I&C.

17 This is supposed to be what hopefully in
18 the near term will be our first real major milestone
19 in digital I&C and producing usable guidance for the
20 industry. And what we don't want to happen is for the
21 future MPs we have coming, we have Appendix D, we have
22 NEI 16-16, ISG-6, we don't want this to create kind of
23 a shadow or for industry stakeholders and even the NRC
24 to lose confidence in this process. And if we turn
25 around and we push this RIS out just because we're so

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1 anxious and we have a need and there's a lot of
2 pressure to get something finished and get something
3 across the finish line, this could potentially hurt us
4 in the long run.

5 So I think we have an opportunity right
6 now to stop, look at what we're doing, determine how
7 we should make some changes, and move forward so we
8 can put that confidence back in our process, so we can
9 look at our upcoming objectives with more light.

10 So what I recommend in how we move forward
11 with the RIS is we would like to have a three-week
12 period to produce or to give you further feedback.
13 Also, we'd like to recommend that another public
14 meeting be held to discuss this. Also, based on, I
15 think, a very positive experience we had in the past
16 with the RIS in October I believe it was, we had a
17 public meeting where we did, we took a couple of
18 examples and we tabletopped it. And when we finished
19 with that, we had a lot of confidence in how the RIS
20 was going to work and the fact it was going to work
21 for us. Now, we've had just a couple of days and
22 we've lost a lot of that certainty. When we schedule
23 that public meeting, let's plan on running those
24 examples through again so before this even gets issued
25 we have that confidence back. And once we get it,

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1 we're going to be able to turn around and we're going
2 to be able to use this.

3 MR. CHERNOFF: So from a meeting
4 perspective, you're suggesting really more, not like
5 this but a working meeting --

6 MR. MORTON: Yes. Similar to what we had
7 August 2nd.

8 MR. MILLER: To work through the examples,
9 is that what you mean?

10 MR. HANSON: Yes, yes. So, basically,
11 what we did last time, we ran the examples, we
12 tabletopped it, taking the guidance from the RIS, and
13 saying, okay, here's two scenarios where we would use
14 this. We worked through it and we walked away, yes,
15 this will work, we can use this. I think we need to
16 do that again with the final product that we're going
17 to have so that the NRC, industry, we walk away
18 knowing we're going to produce something that we know
19 the industry can use. That's what we really want. We
20 want that for the RIS, and we want that for every
21 other modernization plan we have going in the IAP.
22 That's how we want all of them to work.

23 MR. CHERNOFF: So what would you suggest
24 with regard how to get to that point? In other words,
25 you know, like you said, there's only been a few days

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1 to look at this thing and it's changed a lot from the
2 last time we looked at it officially, so what would
3 you suggest as a way to get to a product that would be
4 suitable for that kind of a meeting?

5 MR. HANSON: Sure. So what we're asking
6 for is we need three weeks to get you some quality
7 feedback to help you, from this point, increase the
8 quality of the RIS right now. So how much time do you
9 need to work to incorporate that I think dictate when
10 we would need to schedule the public meeting. So we
11 provide feedback, make the necessary adjustments, and
12 we schedule the public meeting to tabletop those
13 examples of when we feel we're ready.

14 MR. CHERNOFF: It would seem like there
15 might be a need for another face-to-face interaction
16 before that in order to basically potentially, in a
17 public forum, hammer out diverse opinions on
18 particular language.

19 MR. HANSON: I agree with you.

20 MR. CHERNOFF: Because it's hard to do,
21 and you said those comments and we do our best to try
22 to understand and address them, but there's no surety
23 that we've closed that.

24 MR. HANSON: I think, based on what we
25 heard today, I think that would be a very good idea,

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1 and I'd like to recommend that.

2 MR. THOMAS: Yes, this is Brian Thomas.
3 Okay. I think I understand, you know, the logic and
4 the scope of the activities going forward. I was
5 wondering if you --

6 MR. HANSON: Sir, can you speak up or come
7 to the table?

8 MR. THOMAS: I think I understand very
9 much what you are suggesting going forward. I was
10 going to ask have you thought at all of what's the
11 time frame that's involved with that? I'm hearing a
12 ~~3D-3-week~~ time frame for you to give us some better
comments,

13 right? Beyond this session. And in my mind, I'm
14 trying to envision what's the time frame involved with
15 the staff incorporating those comments into, you know,
16 the version we're working with.

17 And then the staff, too, has some
18 internal, you know, reviews and concurrences, if you
19 will, that it has to arrive at. And then what I'm
20 hearing is then we'll have another session or we'll
21 have another face-to-face over what is produced. And
22 then, beyond that, what I'm hearing is that you will
23 then go through some sort of a tabletop, at least work
24 through some components in preparation for a tabletop
25 type workshop type setting. And so in my mind, I'm

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1 looking at time frames. Have you thought at all --

2 MR. HANSON: Yes. Here's what comes in my
3 mind when you say that. So we did these tabletops
4 several months ago. We provided our comments, over a
5 hundred comments, several months ago, and it's been
6 five - six months. And just in the last three days of
7 what we've seen, there's a big difference between
8 where we left off and where we're at now, and it's my
9 opinion, my position, that we need to get back to
10 where we were. In that time frame, it seems like the
11 scope of the guidance that's provided in this has
12 expanded, and, based on the comments we're hearing and
13 I think what you will receive from us within the next
14 three weeks can help get us back to that level of
15 confidence.

16 So, yes, of course, it's going to take
17 more time. But the end result I think we need to be
18 focused on is that the industry has guidance that
19 they're ready to use. And I want us to get back to
20 that point.

21 MR. THOMAS: Right, right. And I agree
22 completely, you know. Err on the side of quality and
23 produce a quality document. What I hear you proposing
24 logistically going forward I think will help us get
25 there and would improve quality. But concurrently

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1 with that, and I agree with that, concurrently with
2 that, I'm trying to, in my mind, get a sense of what
3 sort of time frame are we talking about to get to an
4 end product? And, you know, from what I just went
5 through here with my hands and so forth in terms of
6 the time frames, I see easily something on the order
7 of three months, maybe even more. When I think in
8 terms of three weeks, think in terms of time frame for
9 the staff to digest those comments and incorporate
10 them into, you know, what will be an improved version,
11 then time frame needed for us to then have another
12 face-to-face interaction. Then we'll have something
13 solid in terms of a version that goes through our
14 internal review circuit cycle, if you will, and get,
15 you know, different folks to weigh in on the quality
16 of it, for example, you know, we have to have a legal
17 review of it, we have to make determinations about
18 whether or not there's an OMB review that's needed,
19 etcetera, etcetera.

20 So, you know, I agree, from a quality
21 standpoint, to have something that's usable and it's
22 all done. That's the ultimate goal here, and it's
23 better to err on the side of having something that
24 both the staff and the industry is in full agreement
25 with and it's implementable and we'll have some good

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1 results, but also I'm thinking of what's the time
2 frame involved, and that's why I was asking. Maybe
3 you need some time to think about what that time frame
4 would be.

5 MR. HANSON: I mean, that's . . .

6 MR. THOMAS: But I'm sensing, just based
7 on what you said, easily beyond a two-month time
8 frame, let's put it that way, is what I'm getting out
9 of this and maybe more.

10 MR. BENNER: This is Eric Benner. And I
11 agree that, you know, you would need to do a little
12 more extensive review to provide the full state of
13 comments. But I felt I heard even from initial
14 comments today a coherence between what some of the
15 fundamental concerns are with the language in the
16 document.

17 So while I think your comprehensive review
18 may result in more comments, I think there are at
19 least some sort of generic things that came out of
20 this. So I guess my plea would be would it be possible
21 to get the comments in tiers? Could you, in a shorter
22 time frame, say, hey, these are some of the more
23 fundamental or generic concerns we have in the
24 document, and we could get that sooner and we can
25 start working that. And then there's, you know, here

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1 is where we did the complete scrub, and we see --

2 MR. HANSON: So the first tier, how long
3 are you thinking? When would you need that?

4 MR. BENNER: Well, I'm just proposing the
5 tiers as, you know, a way to not have this be truly
6 sequentially that we do -- that you guys have a time
7 block where we're not doing anything and then we have
8 a time block, I think -- again, I thought I heard from
9 a number of stakeholders comments that had a fair
10 amount of coherence that I think we could sort of, you
11 know, try to summarize and encapsulate and work on and
12 probably, you know, go a long way towards addressing
13 at least the concerns that hit our constituents on
14 first reading of this document. But I'm just throwing
15 that out as a possibility.

16 MR. HANSON: Okay, all right.

17 MR. CHERNOFF: If I could, let's make sure
18 we give others an opportunity to weigh in here. And
19 one overarching thing that we'll have to just think
20 about is, you know, are we in a mode where we have to
21 reconsider a solicitation of comments. Those are
22 things we'll have to think about.

23 MR. NOLAN: So I'm Chris Nolan. I'm
24 Director of Regulatory Affairs for Duke Energy.
25 First, I align very much with NEI's comments, and I'm

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1 encouraged by, Brian and Eric, your feedback.

2 From our perspective, this is an important
3 issue. We received the NCB on the SSPS at Harris
4 where the NRC started changing their position through
5 the enforcement process, and we've been following
6 along. There was a comment made during the meeting
7 that we've only been working on the RIS for 11 months,
8 but I think we've been working on the issue for a lot
9 longer.

10 I'm encouraged by the staff's
11 acknowledgment that we're kind of pushing the bounds
12 with the RIS. We very much view this as guidance
13 that's going to be used by inspectors in the field,
14 and so we would hope that you would take our comments
15 about clarity and brevity to heart because we have a
16 lot of experience dealing with inspectors. And that's
17 where the real issues with this RIS are going to be.

18 And so, you know, I think, in many ways,
19 less is more. I think the staff tried to incorporate
20 all 50.59 about digital where there were other
21 guidance documents and other issues, and I refer to
22 operator manual actions. There was a rulemaking on
23 that that the staff backed away because of the
24 controversy and the disagreements on that. I don't
25 know why we would incorporate it into this document.

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1 You're just carrying those issues forward. They're
2 understood, they're workable. We've been, you know,
3 executing with operator manual actions for many years.
4 So from our perspective, I think we need to solve the
5 lack of clarity on the digital aspect and not solve
6 50.59 generic issues.

7 Regulatory risk. When we're faced with a
8 modification in the field, we have three options. We
9 can choose a non-digital solution, we can go through
10 50.59, or we can submit a license amendment. Right
11 now, with the regulatory instability, we're not
12 submitting license amendments and we're only applying
13 50.59 in the most basic simple and obvious cases. So
14 this current RIS right here would only
15 institutionalize that impediment and institutionalize
16 that practice going forward.

17 So I heard a lot of discussion about time
18 and, you know, the industry only having three days to
19 review the document, not enough time to get through
20 this during the meeting, how much time -- I don't
21 think time is the issue. We've been dealing with this
22 for years. I think we need to get success, and I
23 think institutionalizing the problem would only make
24 success harder to achieve.

25 So, you know, Brian, from your standpoint,

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1 we could notice the next meeting right now and knowing
2 that there would be another one and that would solve,
3 and, Eric, that would address some of your concurrent
4 problems. So I think the industry is anxious to
5 support and I don't think we would be an impediment in
6 terms of time. I understand you have noticing and
7 comment periods and process issues that you have to
8 address, but if you want to expedite this dynamic I
9 think you'd...

10 MR. CHERNOFF: Thank you.

11 MR. REMER: Jason Remer, NEI. I want to
12 first of all acknowledge and thank all of you guys and
13 others that have been working really hard on this.
14 And anything we said, we are not trying to imperil
15 your honesty and desire to make this better. We all
16 believe that. That's what we're all trying to. We
17 all think that.

18 Now, we've got some problems. We've got
19 a RIS, we got an issue, maybe a little late. But I
20 remind us of what the Commission said, that NRC
21 requirements and guidance should not pose unnecessary
22 impediment to advancement in nuclear applications of
23 digital technologies. We believe right now if this
24 thing came out it would actually be an impediment to
25 us and actually cause great harm to our industry. I

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1 think we can get this fixed. I think we can address
2 a few issues. Let's make the non-safety thing clear
3 so that's not a worry. Let's kind of tighten up some
4 of the language. I've heard today all the comments.
5 They do kind of come together. I haven't heard the
6 staff say absolutely not, that's a crazy idea. I
7 heard, like, okay, I understand what you think.

8 It's a very complex issue, right? My dad
9 used to say if it was easy somebody else would have
10 done it, okay? No, here we are today. We've got to
11 fix this, so let's get some time. When is the best
12 time to plant a tree? Yesterday. We needed this. We
13 got guys, we got mods that are out there not getting
14 put in. Our plants are not getting safer as they
15 could have if we had better guidance.

16 So let's get this done as fast as we can.
17 I'm confident that we can get it done. Run those
18 examples. If the examples check out, let's issue the
19 sucker. So end of my comments. Thank you.

20 MR. CHERNOFF: I want to make sure we give
21 an opportunity for people on the phone, if somebody
22 wants to bring to bear some thoughts.

23 MR. HERNANDEZ: This is John Hernandez
24 from Palo Verde. Sorry. This is John Hernandez from
25 Palo Verde. I wanted to echo a bit of what Jason

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1 said. So one thing I've seen today from everyone,
2 from all the folks who have spoken is a significant
3 amount of passion. To me, when I see passion, even
4 sometimes when it's turned against each other, tells
5 me that people care. So seeing the fact that not only
6 the industry but the NRC cares about this issue, to
7 me, as a member of a utility, is extremely important
8 and also uplifting. It gives me hope that we can
9 solve this in the future.

10 We've been living with the current set of
11 regulations for a while and sort of struggling through
12 them. And so I would just like to throw my hat in the
13 ring behind the idea of getting this right, and I
14 think we can do that.

15 So thank you very much to the folks at the
16 NRC who worked hard on this. Clearly, there's been a
17 lot of work put into it and then also to my peers in
18 the industry for helping us to make sure we get this
19 right. Thank you.

20 MR. CHERNOFF: Thank you, John. Other
21 people on the phone, please.

22 PARTICIPANTMR. RIEDL: I think the document
has
23 come a long way, and I do have a concern on what is on
24 my side on the instrumentation. And, you know, I've
25 been involved in several RISs in the past and

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1 implementing those, and those were very simple RISS.
2 This is what I view as a complex RIS, and, you know,
3 a lot of the discussion today was among industry
4 experts and there was a lot of confusion, differing
5 opinions on what this did and what that did.

6 So when I roll this down to our working-
7 level engineers, our working-level engineers at the
8 site, even the NRC inspectors that will be doing the
9 reviews, you know, normally we will roll out the
10 tabletops to that level. The people that actually use
11 this and have to, you know, how can we get their
12 feedback, you know. Doing the tabletop with a bunch
13 of experts is not necessarily the way to do a
14 tabletop. You need the actual users that are going to
15 go forward with this. You know, we're doing this in
16 our new design, standard design processes. We are
17 using our site engineers to just document this
18 process.

19 So I throw that out there. It's a concern
20 to me on the actual implementation.

21 MR. CHERNOFF: This is Harold Chernoff.
22 I guess what you said resonates strongly with me with
23 regard to who we involve in the tabletop, and I think
24 back, in some cases, to how we did some of the
25 security tabletops where we made sure we got field

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1 people, not people that have been fully inculcated
2 necessarily, to make sure that we got a spectrum of
3 people involved. Good observation. I think that's
4 very useful.

5 Other comments? We're about out of time,
6 and I'm afraid the webinar/bridge might terminate, so
7 I want to make sure anybody else on the phone gets an
8 opportunity.

9 MR. CONNELLY: Yes. This is John Connelly
10 with Exelon. I just want to add on to a couple of
11 comments and try and bring them all together. It's no
12 secret that a lot of our plants are under significant
13 economic pressure, and they may not survive. We're
14 fighting a very harsh economic reality here. And for
15 us to be able to make it through these market
16 conditions, we have to innovate, we absolutely have to
17 innovate. You know, we've got to be able to apply
18 technologies, and we've got to be able to make the
19 plants more viable. Without that, we're in trouble.

20 So we view this, the work that's being
21 done here on the RIS and the work that's being done
22 under ISG-6 as probably the most critical things for
23 the industry. This really is going to define our
24 long-term viability.

25 So to amplify a previous, an earlier

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1 comment, you know, I'm much less concerned about
2 getting it fast than I am about getting it right
3 because this really is a lynchpin of what we're going
4 to have to do going forward. We've absolutely got to
5 get this correct.

6 MR. CHERNOFF: Thanks, John.

7 MR. SCAROLA: This is Ken Scarola. I'd
8 like to add a comment. Throughout my comments, I've
9 pointed out inconsistencies internal to this document
10 and also inconsistencies between this RIS and existing
11 NRC guidance. These inconsistencies create different
12 guidance for operating plants and new plants, and that
13 difference in guidance is directly contrary to the
14 Commissioner's direction in the SRM, the SECY-16-0070.

15 So I hope we do not pursue this path. I
16 hope we can find common guidance that works for both
17 new and operating plants because, in the longer term,
18 we are creating a much bigger debacle if we have
19 inconsistent guidance.

20 And, of course, you know, I spoke about it
21 many times, not the least of these inconsistencies is
22 the preclusion of best estimate methods. That is a
23 cornerstone of dealing with common cause failure on
24 new plants. There's a good technical basis for it.
25 It should be the cornerstone of dealing with common

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1 cause failure on operating plants, as well. Thank you.

2 MR. CHERNOFF: Thank you, Ken.

3 MR. FREGONESE: This is Vic Fregonese of
4 Framatome. We've been rolling along with the folks
5 working on this for the past six or eight months.
6 Let's keep rolling. I think we should get the next
7 meeting scheduled.

8 One request I do have is to get the
9 document in the form that we can comment on it
10 effectively. So perhaps a Microsoft Word version with
11 some kind of, I'll say, legal type numbering in the
12 margins or something so we can look more for comments.
13 And perhaps consider a, you know, rolled-sleeve,
14 shoulder-to-shoulder meeting to walk through some of
15 the sections to expedite this.

16 So I don't think we're really that far
17 off. I do think there's some top ten issues or eight
18 issues that need to be resolved so we can get the
19 words to align with those key points. So we're ready
20 to move forward to support it, and, Jared, you and
21 Jason and Eric set the meetings up and we'll continue
22 to stay engaged. Thanks.

23 MR. HANSON: Thanks.

24 MR. CHERNOFF: Okay. We are basically out
25 of time. I know, from my perspective, it's been a

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1 long day. I'm sure the rest of you feel the same way.
2 I think it's been productive and illuminating. It's
3 an opportunity we don't get enough to just, you know,
4 get a large spectrum of people together to talk
5 through an issue and put steering currents on how
6 we're addressing it from both perspectives. So I
7 appreciate everybody's efforts, and we vividly
8 recognize the short time frame, and I hope you all
9 recognize that, you know, that's being driven by the
10 overall intensity to try to finish these products.

11 So any other -- Chris, I don't know if --

12 MR. MILLER: No. Real short. We heard
13 you. We've got some actions to take. We'll notify
14 you on how we're going forward with it coming out of
15 it, and we'll make it better. So thank you for all
16 participating. Good meeting.

17 MR. CHERNOFF: Okay. Charles, do you have
18 all the information you need about the people that
19 participated? Do you have any gaps?

20 MR. RAHN: We're working on it.

21 MR. CHERNOFF: Okay, all right. Okay,
22 thank you. Thank you for your time. Appreciate it.
23 That will close the meeting.

24 (Whereupon, the foregoing matter went off
25 the record at 1:02 p.m.)

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