

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

Title: Advisory Committee on Reactor Safeguards
Metallurgy & Reactor Fuels Subcommittee

Docket Number: (n/a)

Location: teleconference

Date: Tuesday, November 16, 2021

Work Order No.: NRC-1749

Pages 1-31

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1716 14th Street, N.W., Suite 200
Washington, D.C. 20009
(202) 234-4433

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

DISCLAIMER

UNITED STATES NUCLEAR REGULATORY COMMISSION'S
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

The contents of this transcript of the proceeding of the United States Nuclear Regulatory Commission Advisory Committee on Reactor Safeguards, as reported herein, is a record of the discussions recorded at the meeting.

This transcript has not been reviewed, corrected, and edited, and it may contain inaccuracies.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

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

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

+ + + + +

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

+ + + + +

METALLURGY & REACTOR FUELS SUBCOMMITTEE

+ + + + +

TUESDAY

NOVEMBER 16, 2021

+ + + + +

The Subcommittee met via Video
Teleconference, at 9:30 a.m. EST, Ron Ballinger,
Chairman, presiding.

COMMITTEE MEMBERS:

- RONALD G. BALLINGER, Chair
- CHARLES H. BROWN, JR. Member
- VESNA B. DIMITRIJEVIC, Member
- GREG HALNON, Member
- JOSE MARCH-LEUBA, Member
- DAVID PETTI, Member
- JOY L. REMPE, Member
- MATTHEW W. SUNSERI, Member

ACRS CONSULTANT:

STEVE SCHULTZ

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

DESIGNATED FEDERAL OFFICIAL:

CHRISTOPHER BROWN

ALSO PRESENT:

TIMOTHY LUPOLD, NRR

SCOTT MOORE, Executive Director, ACRS

TOM SCARBROUGH, NRR

JAMES STECKEL, RES

EDWARD STUTZCAGE, NRR

IAN TSENG, NRR

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

AGENDA

<u>Item</u>	<u>Page</u>
Opening Remarks and Objectives, Professor Ron Ballinger, ACRS.....	4
Staff Opening Remarks Ian Tseng, Acting Branch Chief, NRR.....	8
Reason for the Revision James Steckel, RES/DE/RGPMB.....	8
Key Changes and Response to Public Comments on Proposed Revision 6 to Regulatory Guide 1.26-Draft Regulatory Guide 1371 Thomas Scarbrough, NRR/DEX/EMIB.....	12
Edward Stutzcage, NRR/DRA/DRCB.....	18
Timothy Lupold, NRR/DANU/UTB1.....	22
Committee Discussion Ron Ballinger, ACRS.....	23

P R O C E E D I N G S

9:30 a.m.

CHAIR BALLINGER: Good morning. It's 9:00. And we'll start our meeting. The meeting will now come to order.

This is a meeting of the Advisory Committee on Reactor Safeguards Subcommittee on Metallurgy and Reactors Fuels. I'm Ron Ballinger, chairing this subcommittee meeting.

The ACRS members in attendance are Charles Brown, Dave Petti, Dennis Bley, Greg Halnon, Jose March-Leuba, Joy Rempe, and Vesna Dimitrijevic.

MEMBER SUNSERI: Hey, Ron. This is Matt.

CHAIR BALLINGER: Say again.

MEMBER SUNSERI: Matt Sunseri --

CHAIR BALLINGER: Oh, how did I manage to do that? Well, you're not on the list. Okay. Sorry, sorry.

The purpose of today's meeting is to discuss Reg Guide 1.26, Revision 6, Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants.

By way of background, the Committee has previously reviewed Revision 5 of Reg Guide 1.26. And

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 as a result of this review, we made the following
2 recommendation, in quote, the next revision of Reg
3 Guide 1.26 should be broadened to include a set of
4 basic principles for assignment of components to each
5 quality group.

6 Revision 6 of this Reg Guide is largely
7 responsible, responsive to our recommendation. It now
8 includes an appendix, Appendix A, Alternative
9 Classification of Components in Light-Water-Cooled
10 Nuclear Power Plants, and expands the discussion of
11 component classifications. This represents a
12 substantial expansion.

13 Revision 6 also provides an expanded
14 discussion of the use of risk-informed input to the
15 classification of components.

16 The subcommittee will gather information,
17 analyze relevant issues and facts, and formulate
18 proposed positions and actions as appropriate.

19 The ACRS was established by statute and is
20 governed by the Federal Advisory Committee Act, FACA.
21 The NRC implements FACA in accordance with its
22 regulations found in Title 10 of the Code of Federal
23 Regulations, Part 7.

24 The committee can only speak through its
25 published letter reports. We hold meetings to gather

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 information and perform preparatory work that will
2 support our deliberations at a full committee meeting.

3 The rules for participation in all ACRS
4 meetings, including today's, were announced in the
5 Federal Register on June 13, 2019.

6 The ACRS section of the U.S. NRC public
7 website provides our charter, bylaws, agendas, letter
8 reports, and full transcripts of all full and
9 subcommittee meetings, including slides presented at
10 the meetings. The meeting notice and agenda for this
11 meeting were posted there.

12 As stated in the Federal Register notice
13 and in the public meeting notice posted to the
14 website, members of the public who desire to provide
15 written or oral input to the subcommittee may do so
16 and should contact the designated federal official
17 five days prior to the meeting as practical. And I
18 might add the designated federal official for this
19 meeting is Christopher Brown.

20 Time is provided in the agenda after
21 presentations are completed for this oral statement
22 and for spontaneous comments from members of the
23 public attending or listening to our meetings.

24 Today's meeting is being held over
25 Microsoft Teams, which includes a telephone bridge

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 line allowing participation of the public over the
2 computer, over their computer using Teams or by phone.

3 A transcript of today's meeting is being
4 kept. Therefore, we request that meeting participants
5 on Teams and on the Team call-in line identify
6 themselves when they speak and to speak with
7 sufficient clarity and volume so they can be readily
8 heard.

9 Likewise, we request that meeting
10 participants keep their computer and/or telephone
11 lines on mute when not speaking.

12 At the end when we ask for public
13 comments, you'll need to use star 6 I believe to
14 activate your participation, if you will.

15 At this time, I ask the Teams attendees to
16 make sure they are muted so we can commence the
17 meeting.

18 We'll now proceed and call on Ian Tseng,
19 I hope I'm pronouncing that right, Acting Chief for
20 Mechanical Engineering and Inservice Testing Branch,
21 for opening remarks. Ian?

22 MR. TSENG: Hello, everybody. Thank you
23 all for gathering and thank you for your time. Thank
24 you to the ACRS for your time and your inputs for
25 Revision 5 and into Revision 6 of Reg Guide 1.26.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 You know, based on your recommendations
2 and other input, we feel that Reg Guide 1.26
3 represents, and Revision 6 represents a substantial
4 improvement, as you discussed earlier. And we look
5 forward to your further feedback and discussion on
6 this topic. Thank you.

7 CHAIR BALLINGER: Thank you. One last
8 thing, I would ask the members as part of the
9 observing the presentation to consider whether or not
10 we should write a letter based on this review.

11 We haven't scheduled a meeting, a
12 presentation at a full committee for December. But we
13 could schedule it at a later date. So please keep
14 that in mind for our discussion at the end.

15 Okay. I think it's -- is it Jim Steckel
16 that's going to do the presentation?

17 MR. STECKEL: Yes, it is. Good morning to
18 the committee members. This is Jim Steckel. I've
19 been the designated project manager for actually close
20 to the two years now that it's taken to bring this to
21 fruition. And as was pointed out a moment ago, Ian
22 Tseng is the branch chief.

23 And the other members that had significant
24 input to this technically are shown, Tom Scarbrough,
25 Ed Stutzcage, Tim Lupold, Nick Hansing. Nick Hansing

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 was the original technical lead on this, and he's come
2 back to help support the presentation, and Tuan Le.

3 I'd like to move forward then with the key
4 changes summarized in just this one slide here.
5 Revision 5 was an administrative update. And the
6 proposed Rev. 5 was presented to ACRS in October 2016.
7 The ACRS letter from that time stated the Rev. 5
8 should be issued. The next revision should be
9 broadened to include basic principles for assignment
10 of components to each quality group.

11 The EDO responded indicating that Rev. 5
12 would be issued, and Reg Guide 1.26's next revision
13 would address the ACRS recommendations.

14 And the NRC issued proposed Rev. 6 to Reg
15 Guide 1.26, which happened to be Draft Guide 1371, for
16 public comment in April of this year. Some comments
17 were received back. And those comments have attempted
18 to be answered as well in this revision.

19 The key changes include a new appendix,
20 which is the alternative classification. And it
21 discusses component classification methods described
22 in the ANSI Standard 58.14 from 2011.

23 The updated NRC staff position on
24 classification of Quality Group C components was also
25 reflected in the latest guidance on systems that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 contain radioactive material. And the NRC staff
2 improved proposed Revision 6 in response to public
3 comments.

4 We'll be switching to different speakers
5 as we go through the slides. Of course, if you have
6 any comments or questions at any time, you may go
7 ahead and ask.

8 The Appendix A to Revision 6 indicates the
9 applicant or licensee may propose use of the
10 classification method in ANSI 58.14 subject to
11 considerations discussed in Reg Guide 1.26, Appendix
12 A.

13 ANSI 58.14 scope is broader than that
14 indicated in Reg Guide 1.26 to apply to pressure
15 integrity for water, steam, or radioactive material
16 components.

17 ANSI 58.14 does not include a radiological
18 criteria in Reg Guide 1.26 to complement application
19 of ANSI 58.14 with regard to Reg Guide 1.26. We will
20 hear clarifications on these items as we go through
21 the slides.

22 Based on terminology differences, ANSI
23 58.14 users should consider full scope of 10 CFR Part
24 50, Appendix A when preparing their applications.

25 Continuing with Appendix A, specific

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 guidance provided for ANSI 58.14 users in developing
2 Class 1 to Class 4 Quality Group A to D is included.
3 The user should apply applicable ASME Boiler and
4 Pressure Vessel Code, Section 3, Subsection NF for
5 snubbers. ANSI 58.14 users should review plant-
6 specific design in comparison to Reg Guide 1.26.

7 Because specific Reg Guide 1.26 topics
8 such as the spent fuel pool are not addressed in ANSI
9 58.14, users should ensure that containment
10 penetration regulations are all met. And applicable
11 users may include 10 CFR 50.69, risk-informed
12 categorization and treatment as part of
13 classification.

14 In Quality Group C, the modification is
15 that systems other than radioactive waste management
16 not covered by regulatory positions 2(a) to 2(c) that
17 contain or may contain radioactive material and whose
18 postulated failure could result in conservatively
19 calculated potential offsite doses that exceed 0.1 rem
20 total effective dose equivalent, only single component
21 failures need be assumed for those systems located in
22 Seismic Category I structures.

23 And no credit should be taken for
24 automatic isolation from other components in the
25 system or for treatment of released material unless

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 the isolation or treatment capability is designed to
2 the appropriate seismic and quality group standards
3 and can withstand loss of offsite power in a single
4 failure of an active component.

5 I believe Tom Scarbrough is designated to
6 step in and go --

7 MR. SCARBROUGH: Yes --

8 MR. STECKEL: -- through some of the
9 technical components.

10 MR. SCARBROUGH: Thanks, Jim. This is Tom
11 Scarbrough. I'm in the Mechanical Engineering and
12 Inservice Testing Branch in NRR.

13 The next slide, if you want to, Jim, move
14 us down to the next slide. Yeah, so in response to
15 all the comments, we received a few comments, not
16 really a significant amount.

17 The first one had to do with our reference
18 to the regulations in the introductory part of the Reg
19 Guide. And the public comments suggested that we
20 include references to 10 CFR 50.54, which is
21 conditions of licenses.

22 And it discusses, you know, the SSCs
23 subject to the codes and standards in 55, 10 CFR 50.55
24 Alpha must be designed and fabricated, erected,
25 constructed, tested, and inspected to quality

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 standards commensurate with the importance to safety
2 and the safety functions performed. And we agreed
3 with that. So we include that in the introductory
4 portion.

5 And also another, the comment also
6 suggested that we reference 10 CFR 50.55, which is
7 conditions for construction permits, combined
8 licensees, et cetera. And that's a similar
9 requirement that you meet the requirements of 10 CFR
10 50.55 Alpha. And so we included that as well. So we
11 agreed with those comments.

12 Another public comment had to do with the
13 reference to 50.69. Now, the ANS standard does refer
14 to 50.69 and indicate that that is another
15 classification approach that you could use.

16 And the public comment suggested that we
17 include some more detail regarding table 1, which sort
18 of breaks up the classification in Reg Guide 1.26 into
19 several different classes. And so we added that.

20 It's a rather long footnote. But it
21 describes sort of the concept of 50.69 and references
22 back to some of the statements that the Commission
23 made in the Federal Register notice when 10 CFR 50.69
24 was issued finally.

25 And it talks about RISC-3 equipment, which

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 is safety-related but low safety significant, and
2 RISC-4, which is nonsafety-related, low safety
3 significant.

4 But basically it talks about the fact that
5 even though you're not applying the detailed, some of
6 the detailed special treatment requirements, there's
7 still an expectation that the equipment is designed to
8 be able to perform its safety function.

9 It still has to have environmental
10 capability. It still has to have seismic capability.
11 But the amount of sort of special treatment QA could
12 be reduced for that, those types of components.

13 So that's sort of the message there that's
14 in that footnote for those. So we added that. Jim,
15 next slide, please. Another -- I think we went too
16 far.

17 MR. STECKEL: Going the wrong direction.
18 Can we go down?

19 MR. SCARBROUGH: There we go.

20 MR. STECKEL: And --

21 MR. SCARBROUGH: There we go. Great.
22 Thank you.

23 Another one had to do with a reference to
24 Quality Group C components. And it was asking about,
25 you know, it sort of was thinking that we were making

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 all important safety equipment that goes beyond
2 safety-related in Quality Group C. And we weren't
3 really.

4 What we were talking about was if it was
5 such that it had radioactive material and things of
6 that nature, we added a statement in Reg Guide 1.26
7 that if the component's failure could result in a
8 significant offsite release they should be included in
9 Quality Group C.

10 We weren't trying to say that all
11 important safety equipment is Group C. And so we
12 explained that in the response about the comments.

13 So we were mostly talking about spent fuel
14 pools, because the ANS standard doesn't really discuss
15 the concept of spent fuel pools very, what we thought
16 in much detail. But they are covered in Reg Guide
17 1.26.

18 So we wanted to make sure there wasn't a
19 disconnect between the ANS standard and the guidance
20 that's in Reg Guide, you know, 1.26. So that was --
21 we explained that in the response to public comments.

22 MEMBER HALNON: Hey, Tom?

23 MR. SCARBROUGH: Yes.

24 MEMBER HALNON: Tom, this is Greg Halnon.
25 Just a quick question. Something got my interest.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 When you talk about systems with
2 radioactive materials, is that by design or by actual
3 condition, because -- the reason I ask is because I
4 know I worked in a plant where we backed up a lot of
5 radioactive fluid into the nitrogen system, which was
6 not supposed to be radioactive but then forever now it
7 was in the radioactive system. Does that change the
8 classification, or do you just go by what it's
9 designed to do?

10 MR. SCARBROUGH: Well, this is the design
11 aspect, right. So this is -- at this point, it's
12 still in the design phase. I mean, that would
13 definitely have the licensee go back and rethink
14 whether or not this might need to be reclassified.
15 But this is the initial design, you know,
16 qualification, sort of classification for the
17 components.

18 MEMBER HALNON: Okay. Because, you know,
19 some of these things are in situ. I mean, some of
20 these plants will be trying to -- for instance, 50.69
21 classification system is being done after 30 years of
22 operation.

23 So I guess you'd have to start with where
24 you're at. I mean, you can't go back and say, well,
25 it was never supposed to be radioactive, so I can

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 classify it as something else.

2 MR. SCARBROUGH: Right. And it should --
3 I'm not sure if licensees would go back and try to
4 revamp their Reg Guide 1.26 classification if they're
5 going to use 50.69. They might start from where they
6 are and move forward --

7 MEMBER HALNON: Okay. That's what I
8 figured.

9 MR. SCARBROUGH: Yeah. I think where this
10 might come in handy was for the new small reactors
11 that have very few valves and maybe sometimes no pumps
12 at all, this ANS standard might be very helpful for
13 them, because it's more of a holistic approach than
14 maybe what was done in the past for the very large
15 light water reactors.

16 So I think, you know, in this case, you
17 know, some small reactors might think that this is a
18 more straightforward approach for them than what maybe
19 has been used in the past.

20 MEMBER HALNON: Okay. Thanks. Appreciate
21 it.

22 MR. SCARBROUGH: Thank you. And then the
23 next bullet here has important to safety. I know
24 there's a lot of discussion going on with important to
25 safety and that, and there's a whole different staff

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 effort looking at important to safety.

2 But from the Reg Guide 1.26 perspective,
3 we did not feel we needed to go back and address that
4 aspect for Reg Guide 1.26. You know, that's a whole
5 different effort to look at that area. So we
6 explained that, you know, we were not going to try to
7 tackle that issue as part of this Reg Guide. Okay.
8 So next slide, please, Jim.

9 MR. STECKEL: It's a little sluggish.

10 MR. SCARBROUGH: Okay. No problem. Yeah,
11 I know how that is.

12 The next slide has to do with the change
13 in the threshold for classification of systems
14 containing radioactive material of Quality Group C.

15 And if Ed is on the phone, Ed, do you have
16 anything to add? Do you want to add regarding the
17 change we made regarding the Quality Group C for
18 radioactive material?

19 MR. STUTZCAGE: Yeah, I could do that. No
20 problem, Tom. Thanks. Yeah, this is Ed Stutzcage
21 with the Radiation Protection and Consequence Branch.

22 So we made the change to this section. So
23 Reg Guide 1.26 always had this criteria on the
24 radiological dose criteria for Quality Group C. And
25 the criteria since Rev. 1 in 1974 has been 500

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 millirem whole body or its equivalent to any part of
2 the body.

3 And as you know, that was tied to the, I
4 mean, the regulation for the public dose limit. And
5 that regulation was changed in the 1990s.

6 And the majority of our guidance that had
7 used 500 millirem in the past, for example, for liquid
8 and gaseous tank failures in BTP 11-5 and 11-6, that
9 has long been updated from 500 millirem to 100
10 millirem. And there's a few other guidance, too.

11 So we thought it was appropriate to update
12 that from 500 to 100 millirem. And also the whole
13 body criteria is obviously the old dose methodology,
14 which the majority of guidance and regulations and
15 stuff have been updated to TEDE. So we changed that
16 to 100 millirem TEDE.

17 And the other piece of that was it
18 referenced meteorological information from Reg Guide
19 1.3 and 1.4, which are, have been withdrawn reg
20 guides. So we wanted to remove that reference. So
21 that's really what we did in regard to that.

22 MR. SCARBROUGH: Okay. Thanks, Ed. So
23 the next bullet had to do with the reference to, so
24 the guidance for 50, the 10 CFR 50.69. There was a
25 discussion there of the public comments said, you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 know, should we go back and revise Reg Guide 1.201,
2 which is the guidance document for 10 CFR 50.69.

3 And we replied, what we did was we
4 expanded the discussion or we have a discussion in Reg
5 Guide 1.26, Appendix A to talk about that there's this
6 other alternative approach for classification 50.69,
7 and the guidance for that is in Reg Guide 1.201.

8 But we didn't feel that we should try to
9 go in and start adding guidance that would be more
10 applicable to 1.201 in Reg Guide 1.26. That's really
11 more appropriate to put that right into 1.201.

12 Now, in the future, there might be some
13 update to Reg Guide 1.201, because we do have
14 licensees who are implementing 50.69. There's been
15 feedback on that approach, on how that is. And
16 there's some new approaches that are actually being
17 discussed regarding classification for 50.69.

18 So I can definitely see in the future
19 there would be, you know, a consideration to update
20 Reg Guide 1.201 to include that new information. But
21 we didn't want to try to do that here. We're going to
22 try to keep that separate and have that applied right
23 in Reg Guide 1.201.

24 Then the last bullet there just had the
25 total suggestion. We know, for example, there was a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 place where in the subcategory of Quality Group C we
2 had and, then we had or between the subparagraphs.

3 And we decided we'd just go back to the
4 original language in one of the initial reg guide
5 revisions to just not have any and, the word and, or
6 the word or in between them. It just was adding
7 confusion.

8 So we just went back to the original
9 language from the Reg Guide, which everyone had used
10 in the past. So we made that clarification. And we
11 thought that was a good clarification.

12 So basically that was our, the public
13 comments. It was a very, relatively short list of
14 public comments that we had. We didn't seem to have
15 people have any real concern with what we were saying
16 in Appendix Alpha. So that was good to see.

17 And then if we go into the next slide, it
18 has to do with high temperature reactors. One of the
19 discussion items we had way back in 2016 with ACRS was
20 how do we deal with non-light water reactors.

21 And we did explore that effort. And we
22 actually made some initial efforts in drafting some
23 things. But it was determined that it was really more
24 appropriate for, you know, the advanced reactor group.

25 And so Tim Lupold, if you're there, can

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 you talk about this slide?

2 MR. LUPOLD: I am here, Tom. Thank you.
3 Yes, originally we had intended to include the
4 standards related to advanced reactors, high
5 temperature reactors in Reg Guide 1.26.

6 But as that Reg Guide went through the
7 reviews and the various divisions within the NRC, the
8 Division of Advanced Reactors and Non-Power
9 Utilization Facilities decided that it was more
10 appropriate to separate the requirements for the
11 advanced reactors from those requirements from light
12 water reactors.

13 Therefore, the decision was made, take
14 that information and put it into the next revision of
15 Reg Guide 1.87, which is the reg guide which was being
16 used to assess the acceptability of the ASME Code,
17 Section 11, Division 5 for high temperature reactors.

18 That was brought, that reg guide was
19 actually brought to ACRS back in July. It was on July
20 20th. And Appendix A to that draft guide contained
21 the criteria and the categorization for components
22 listed in that.

23 So that's about all I really have, if
24 there are any questions. If not, we can move on to
25 the next slide.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 MR. SCARBROUGH: Okay. Jim, do you want
2 to take it from here?

3 MR. STECKEL: Yes, yes, I shall. So this
4 latest revision of 1.26 has been through NRC E
5 concurrence review. And the NRC staff will address
6 NRC management and ACRS recommendations when we are
7 finalizing everything.

8 Remember, it's been through public comment
9 already. And we plan to issue Rev. 6 of 1.26 by early
10 sometime next year. You know, we just wrap up a few
11 more things, and it should be available and published
12 early next year. And basically that concludes our
13 presentation.

14 CHAIR BALLINGER: Thank you. I'm not sure
15 whether we've established a record. But we've got to
16 be pretty close for time.

17 We'd like to open the discussion for
18 members, particular remember the question that I asked
19 about earlier, should we consider a letter or not for
20 this.

21 MEMBER BLEY: Hey, Ron, it's Dennis.

22 CHAIR BALLINGER: Yeah.

23 MEMBER BLEY: By the way, you're on a roll
24 after yesterday.

25 CHAIR BALLINGER: Yeah, I know. That's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 right.

2 (Laughter.)

3 CHAIR BALLINGER: Well, we'll mess that up
4 tomorrow.

5 MEMBER BLEY: I'd just say, I really
6 appreciated the staff's presentation. It was well
7 organized and discussed. And I don't know if they
8 were just responsive to us or if this was always their
9 intent. But I am pleased that they've addressed those
10 things we brought up previously.

11 So, you know, a letter might be
12 appropriate but very short to address, say, that we
13 agree they've responded to our previous comments. But
14 I don't think it's really necessary. I don't know if
15 the staff has said whether they'd really like one or
16 not.

17 So I kind of leave it back to you. I
18 think it would be reasonable to write a very short
19 letter. If we want to, I'd support that.

20 CHAIR BALLINGER: Other members?

21 MEMBER HALNON: Yeah, Ron, this is Greg.
22 I agree with Dennis. You know, normally when I read
23 through these things, I get a page of notes and
24 questions and whatnot. And I don't even have two
25 lines of questions that I had.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 And so I think it's a good job. I, you
2 know, wasn't here for the first subcommittee when this
3 was discussed. But the new document looks good. So
4 I support what Dennis said.

5 CHAIR BALLINGER: Yeah, this is one case
6 at least in my memory, not many before this, where we
7 have a one-to-one correlation almost exactly between
8 our recommendations and the next revision. So that I
9 think was very well done.

10 MEMBER REMPE: So this is Joy. And this
11 seems like a good candidate for this alternate
12 process, where it's discussed at P&P, and you'd make
13 the comment that at the subcommittee meeting all
14 members thought the staff did a good job and addressed
15 our prior comments, and we didn't think a letter was
16 necessary, but we thought it was a good job and have
17 it as a memo that's documented, unless the staff wants
18 a letter.

19 CHAIR BALLINGER: Well, let me ask Ian if
20 he's still there.

21 MR. TSENG: I'm here. This is Ian. Tom,
22 do you have any thoughts? I mean, I could kind of go
23 either way.

24 MR. SCARBROUGH: Yeah, this is Tom
25 Scarbrough. You know, we had significant discussion

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 at the previous meeting in terms of the direction.
2 And the ACRS provided very strong, good direction on
3 what we should do with Reg Guide 1.26. And we
4 followed through on that.

5 And since we did have, you know, an EDO
6 letter going back, I mean, it was kind of elevated in
7 that sense. So it seemed, to me it seemed like
8 elevated.

9 So, if it was agreeable to ACRS to have a
10 brief letter going back, I think that would help sort
11 of close the loop. But it's really up to ACRS.
12 Thanks.

13 CHAIR BALLINGER: Of course, knowing, of
14 course, that we don't speak except as a committee in
15 the whole (audio interference) and that would have to
16 be a brief presentation, I don't know how you could
17 get much briefer than the one you gave, but at that
18 meeting, and then we would produce a letter. So that
19 would be the procedure for doing a letter.

20 For doing a P&P, the P&P option that Joy
21 mentioned, that could happen in December. But the way
22 I'm reading it is that the staff would appreciate a
23 letter, as short as it might be. And so that would be
24 at least my thought.

25 So we have a number of other members

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 listening in. And I'd appreciate if they could chime
2 in and provide their opinion, because this has got to
3 be a sort of a consensus.

4 MEMBER MARCH-LEUBA: Yeah, this is Jose.
5 A question for the staff, considering that this letter
6 will not be able to be issued until at least the first
7 week of February of next year, is your opinion that
8 the letter will be valuable still stand?

9 MR. SCARBROUGH: Well, I think -- this is
10 Tom Scarbrough again. I think the fact that the
11 letter might not come out until, you know, February,
12 I know Jim was hoping to have this out in early
13 January.

14 So maybe the memo might be an acceptable
15 alterative, because it will close the loop on this.
16 So there will be a documented close-out. So, with
17 that understanding, I would be fine with the
18 memorandum approach.

19 MR. TSENG: And this is Ian. I support
20 that path forward as well.

21 MEMBER MARCH-LEUBA: So I don't know if
22 we're voting, Ron. But my vote is to do the memo in
23 the first week of December.

24 CHAIR BALLINGER: That is fine with me.

25 (Simultaneous speaking.)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 CHAIR BALLINGER: Dennis, what do you
2 think?

3 MEMBER BLEY: I agree. Let's do the memo.

4 CHAIR BALLINGER: Okay.

5 MEMBER SUNSERI: Hey, just as a, I mean,
6 I don't -- I support -- this is Matt. I support the
7 memo kind of approach.

8 But I'm looking at the December agenda
9 right now. And presuming that this is a short
10 presentation, I mean, as short as it was today, it was
11 pretty short, and if we had the letter well drafted
12 and it was short, there's time in December to get it
13 out.

14 MEMBER REMPE: Matt, would it have to be
15 reposted in the Federal Register?

16 MEMBER SUNSERI: We could do it as part of
17 P&P I believe, because we would be doing the memo as
18 part of P&P anyway. So --

19 MEMBER REMPE: A presentation by the
20 staff, you could have a full letter in P&P.

21 MEMBER SUNSERI: I mean, I was trying to,
22 I'm just trying to create the opportunity, Joy, you
23 know.

24 MEMBER REMPE: I just am wondering about
25 the rules of the game here. This is more about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 process than -- I understand what you're saying. But
2 I thought that would be hard to bring in a new topic.

3 MEMBER BLEY: No, we're more than two
4 weeks out. They can do an addenda. We've done that
5 many times.

6 MEMBER REMPE: Okay. That's what I
7 thought you'd have to do.

8 CHAIR BALLINGER: Okay. So let's be --
9 let me make sure we're clear. The December letter
10 would require a presentation by the staff. The memo
11 does not require, would not require a presentation by
12 the staff.

13 So I guess I'm now rereading for the third
14 time the thoughts. And that is that should we be able
15 to adjust the schedule that we would ask the staff for
16 a presentation, as brief as it might be, in December,
17 and we would produce a letter.

18 MEMBER SUNSERI: Okay. I'm going to
19 withdraw my comment. We're making it way too
20 complicated. Let's just --

21 CHAIR BALLINGER: Yeah, yeah.

22 MEMBER HALNON: So, to be clear, we're
23 talking about the memo that Scott would write as part
24 of the P&P, correct?

25 CHAIR BALLINGER: Yeah. What would happen

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 is I would produce a short paragraph or so for
2 including in P&P. We would have a discussion. And at
3 that point, if we're in agreement, then there would be
4 a memo that Scott would produce.

5 MEMBER HALNON: Right.

6 MEMBER BLEY: Hey, Ron, it's Dennis. Last
7 thing, because I agree with Matt on this, you are
8 chairman of the subcommittee. Matt's chairman of the
9 full committee. If you and Matt could chat offline
10 after this, you could pick the best path forward.

11 And we all seem supportive of either
12 approach. So, I mean, that's -- we don't need to
13 negotiate crossing the Ts and all that here.

14 CHAIR BALLINGER: That's fine. That's
15 fine as well. Okay. Unless there are other comments
16 from members suggesting a different path forward, that
17 would be what I would propose.

18 The five-second doughnut and committee
19 member rule. Hearing none, then that's what we will
20 do. I will get together with Matt. And we'll make a
21 decision.

22 Now, we need to also -- unless there are
23 other comments from members, we need to now take, ask
24 for public comments. If there are members of the
25 public that would like to make a comment, I think you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

1 need to use star 6 and then make your comment, please.

2 I guess the comment and doughnut rule
3 applies to public comments. So, having, hearing no
4 public comments, unless there are other last minute
5 comments, we appreciate, I can speak for the committee
6 and they can speak as well, the presentation.

7 Once again, it was a case where the staff
8 in large part responded directly to a committee letter
9 for Revision 5. And we appreciate that greatly.

10 So, unless there are other comments, then
11 I would say that this meeting is adjourned.

12 (Whereupon, the above-entitled matter went
13 off the record at 10:09 a.m.)

14

15

16

17

18

19

20

21

22

23

24

25



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NRC Regulatory Guide 1.26, Revision 6

Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste- Containing Components of Nuclear Power Plants

NRC Staff

ACRS Presentation

November 16, 2021



NRC Staff Team Members for RG 1.26 Revision

- James Steckel, RGPMB/DE/RES
- Ian Tseng, Acting Branch Chief, EMIB/DEX/NRR
- Thomas Scarbrough, EMIB/DEX/NRR
- Edward Stutzcage, DRCB/DRA/NRR
- Timothy Lupold, UTB1/DANU/NRR
- Nicholas Hansing, MSB/DFM/NMSS
- Tuan Le, UNPO/DANU/NRR

Reason for Revision

- Revision 5 to RG 1.26 was an administrative update
- Proposed Revision 5 presented to ACRS in October 2016
- ACRS letter dated 10-17-2016 stated:
 - Revision 5 to RG 1.26 should be issued
 - Next revision to RG 1.26 should be broadened to include basic principles for assignment of components to each quality group
- EDO responded on 12-13-2016 that Revision 5 to RG 1.26 would be issued, and next revision to RG 1.26 would address ACRS recommendations
- NRC issued proposed Revision 6 to RG 1.26 (DG-1371) for public comment in April 2021

Key Changes

- New Appendix A, “Alternative Classification for Components in Light-Water-Cooled Nuclear Power Plants,” discusses component classification method described in American National Standards Institute (ANSI)/American Nuclear Society (ANS) Standard 58.14-2011, “Safety and Pressure Integrity Classification Criteria for Light Water Reactors.”
- Updated NRC staff position on classification of Quality Group C components to reflect latest guidance on systems that contain radioactive material.
- NRC staff improved proposed Revision 6 to RG 1.26 in response to public comments.

Appendix A to Revision 6 to RG 1.26

- Applicant or licensee may propose use of the classification method in ANSI/ANS-58.14-2011 subject to considerations discussed in RG 1.26, Appendix A
- ANSI/ANS-58.14 scope is broader than RG 1.26 to apply to pressure integrity for water, steam, or radioactive material components
- ANSI/ANS-58.14 does not include radiological criteria in RG 1.26 to complement application of ANSI/ANS-58.14 with RG 1.26
- Based on terminology differences, ANSI/ANS-58.14 users should consider full scope of 10 CFR Part 50, Appendix A

Appendix A to Revision 6 to RG 1.26

(continued)

- Specific guidance provided for ANSI/ANS-58.14 users in developing Class 1 to 4 (Quality Group A to D)
- User should apply applicable *ASME Boiler and Pressure Vessel Code*, Section III, Subsection NF, for snubbers
- ANSI/ANS-58.14 users should review plant-specific design in comparison to RG 1.26 because specific RG 1.26 topics (such as spent fuel pool) not addressed in ANSI/ANS-58.14
- Users should ensure that containment penetration regulations are met
- Applicable users may include 10 CFR 50.69 (risk-informed categorization and treatment) as part of classification

Quality Group C Modification in RG 1.26

- Systems, other than radioactive waste management systems, not covered by Regulatory Positions 2.a through 2.c that contain or may contain radioactive material and whose postulated failure would result in conservatively calculated potential offsite doses that exceed 0.1 rem total effective dose equivalent; only single component failures need be assumed for those systems located in Seismic Category I structures, and no credit should be taken for automatic isolation from other components in the system or for treatment of released material, unless the isolation or treatment capability is designed to the appropriate seismic and quality group standards and can withstand loss of offsite power and a single failure of an active component.

Response to Public Comments

- Comment: Include 10 CFR 50.54 and 10 CFR 50.55 in list of regulatory requirements.
 - Response: Complete
- Comment: Clarify applicability of ANSI/ANS-58.14 and 10 CFR 50.69
 - Response: Added detailed footnote to Table 1 in RG 1.26 discussing 10 CFR 50.69

Response to Public Comments

(continued)

- Comment: Add technical basis for including “important to safety” items in Quality Group C or delete
 - Response: Explained ANSI/ANS-58.14 provides consensus recommendation for Class 3 components (Quality Group C) and that applicants/licensees may propose a different classification method for those components
- Comment: Term “important to safety” is ambiguous
 - Response: NRC staff does not consider a safety need to develop a specific definition of “important to safety” at this time

NRC Response to Public Comments

(continued)

- Comment: Explain change to threshold for classification of systems containing radioactive material as Quality Group C
 - Response: RG 1.26 updated to clarify reason for change to threshold for classification of systems containing radioactive material
- Comment: Appendix A to RG 1.26 contains information that should be included in RG 1.201
 - Response: RG 1.26, Appendix A, revised to clarify reference to RG 1.201 with consideration of future improvements to RG 1.201
- Comment: Specific editorial suggestions
 - Response: Complete

High Temperature Reactor Quality Group Classification

- Proposed Revision 2 to RG 1.87, Acceptability of ASME Code, Section III, Division 5, “High Temperature Reactors,” (DG-1380) issued for public comment in August 2021.
- Appendix A, “High Temperature Reactor Quality Group Classification,” in DG-1380 establishes quality group assignments for mechanical systems and components for non-light-water reactors.
- DG-1380 discussed with ACRS on July 20, 2021.
- RG 1.26 relies on DG-1380 for high-temperature reactor quality group classification.

Next Steps

- NRC staff has distributed proposed Revision 6 to RG 1.26 for NRC management review
- NRC staff will address NRC management and ACRS recommendations when finalizing Revision 6 to RG 1.26
- NRC plans to issue Revision 6 to RG 1.26 by early 2022



QUESTIONS?